



# **Proposed re-aggregation of Verve and Synergy**

REPORT PREPARED FOR THE WA INDEPENDENT POWER ASSOCIATION INC.

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## Executive summary

Over the past decade, reforms have been progressively implemented in the Western Australian electricity sector, in a bid to develop the conditions for competition and for private investment. Both competition and private investment have been seen as means to achieve wider public policy aims, in particular, the promotion of economic efficiency through cost minimisation and least cost supply, more cost-reflective pricing, and a reallocation of risk away from the state and to the private sector.

The disaggregation of Western Power, and the creation of separate wholesale and retail entities in the form of Verve Energy and Synergy, respectively, was one of the mechanisms selected to achieve the objectives pursued by reform. The decision is consistent with the approaches adopted in other jurisdictions in Australia and overseas, where the unbundling of the incumbent state-owned monopolist was a necessary first step in the reform process. Given the specificities of the Western Australian market, including its size and remoteness, a number of other specific mechanisms were also adopted as part of the reforms. These included the implementation of a displacement mechanism, under which Synergy ran an annual tender process to procure wholesale supply of energy and capacity to replace defined annual reductions in energy and capacity provided by Verve under the Vesting Contract between it and Synergy. This tender process resulted in competition between generators (including Verve, which was free to participate in the tender) to supply Synergy. A cap on Verve's capacity was also implemented, along with prohibitions on the ability of Synergy to invest in generation and Verve in retail.

Under the reforms, some \$2.6 billion had been invested in new generation capacity as at 2010, and Verve's share of generation capacity declined from close to 90 per cent to below 60 per cent. At the same time, various reviews conducted by successive governments and the Economic Regulation Authority (ERA) are clear that competition is still a work in progress, notably in the retail sector. The ERA has also evinced concerns about the impact of recent policy decisions on the future development of competition, notably the termination of the displacement mechanism under the new vesting contract between Verve and Synergy.

Recent proposals made concerning the re-aggregation of Verve and Synergy thus come at a time when WA is seeking to build on the progress achieved to date through the reform process, but also where the fragile nature of competition and private sector participation have been highlighted. In particular, a decision to re-aggregate would remove one of the central elements of the reform process to date.

The motivations underpinning the proposals for re-aggregation have not been formally articulated, and are therefore not always clear. Various pronouncements

by proponents of re-aggregation suggest that that the vertical separation of Verve and Synergy has led to various inefficiencies, notably in the use of Verve's capacity; that vertical separation is at least partly responsible for higher electricity prices and that re-aggregation would moderate other sources of pressure on prices; and that vertical separation has been financially detrimental to Verve and Synergy, and thus by extension to the state, as the shareholder, and the general public.

However, none of these claims stand up to scrutiny. The central reason explaining the underutilisation of Verve's capacity relative to other generators is the high-cost and ageing nature of Verve's plant. This is exacerbated by the entry of more competitive baseload generation, partly in response to ambitious demand forecasts by the Independent Market Operator and retirement forecasts by Verve, and the role that Verve has played in the provision of market balancing services. More accurate forecasts and reforms to balancing arrangements can in future address these last two issues. But vertical integration per se will not transform the underlying economics of Verve's plant, which will continue to remain at a competitive disadvantage relative to that of independent producers. It is possible, of course, that under re-aggregation, Synergy would favour Verve's plant over cheaper sources, but this would be an inefficient outcome with poor public policy consequences.

The main factors explaining rising electricity prices have been network charges and rising fuel prices, particularly gas prices. None of these are connected to vertical separation, and vertical re-aggregation would not address them. Neither would re-aggregation create any material scope for efficiencies that could offset these broader drivers of prices. This is because identifiable savings in corporate costs through re-aggregation are estimated at \$5 million per year. But this represents a very small fraction of the total cost of supplying electricity, meaning that even if the entire estimated reduction in corporate costs were passed on to residential customers, the savings would amount to less than 0.4 per cent of a typical residential electricity bill, or around \$5 per customer per year.

The main factors explaining the poor financial performance of the state-owned enterprises, and Verve in particular, in the period between 2004/5 and 2008/9 were:

- increasing underlying costs of supplying electricity, particularly fuel costs for generation, in the absence of corresponding increases in retail tariffs;
- the effects of the Varanus Island explosion, and the resulting gas shortage, on Verve's fuel costs; and
- performance issues with Verve's plant (increasing forced plant outages and high maintenance costs).

None of these factors are associated with vertical separation. The concentration of losses in Verve in this period is explained by the net-back pricing

arrangements between Synergy and Verve implemented under the Vesting Contract. Since 2009, increases in retail prices have led to improvements in financial conditions for Verve and Synergy, and new pricing arrangements under the Vesting Contract have apportioned risks more evenly between the two parties.

While the re-aggregation of Verve and Synergy would not address any of the issues raised by the proponents, it is likely to have an adverse impact on the pursuit of wider public policy objectives that are of interest to the government, notably economic efficiency. This is principally because of the potential impact of the re-aggregation on the prospects for competition. While vertical integration between wholesale and retail activities has not been shown to be anti-competitive in the National Electricity Market (NEM), the re-aggregation of Verve and Synergy may create competitive issues because of the particular conditions prevailing in Western Australia.

For example, in circumstances in which there is effective competition in both retail and wholesale markets, it would not be tenable for Synergy to favour Verve's capacity following vertical integration, given the high cost nature of this capacity. But under current circumstances, the weak nature of competition in retail could allow these higher costs to be passed on as higher prices. Moreover, if independent generators are less able to find retail counterparties, competition in wholesale markets may also be affected.

Higher prices that are the consequence of inefficient practices by the re-aggregated entity are socially wasteful. They are precisely the opposite of the outcomes that have been sought through the reform process pursued to date. More broadly, such practices are likely to weaken the prospects for private sector participation, and assign greater responsibility to the state in managing the supply of electricity and the risks associated with it. This in turn would signal a significant reversal in the approach to electricity sector policy in WA compared to the last decade.





# 1 Introduction

## 1.1 Context and objectives of this report

Frontier Economics has been retained by the WA Independent Power Association Inc. to advise it on its response to the potential re-aggregation of Synergy and Verve Energy (“Verve”). While no formal policy decision has been taken to this effect, the Premier Colin Barnett and (more recently) the Energy Minister Peter Collier, have publicly stated their intention to ensure that the re-aggregation takes place.<sup>1</sup>

Because no formal policy proposals have been developed to date by the government, the objectives sought through any re-aggregation have not been explicitly stated. On the basis of public pronouncements made to date, the issues that have been raised both by the Premier and the Energy Minister are that the disaggregation of Verve and Synergy has led to various forms of inefficiencies. By inefficiencies, the proponents of re-aggregation appear principally to have in mind:

- that the competition between Verve, on one hand, and independent producers on the other, has been undesirable since it has led to Verve’s capacity lying idle, at a time of rising prices; and
- that more generally, Synergy and Verve do not take into account each other’s interests (for example, when bidding for gas contracts) leading to financial detriment to both state-owned enterprises.

In the view of the proponents of re-aggregation, the inefficiencies they claim to have identified in current arrangements have contributed to increasing electricity prices in Western Australia. In their view, the current arrangements also adversely affect the financial position of Verve (especially) and Synergy, which, given their status as state-owned enterprises, is seen as against the public interest.

The proponents claim that re-aggregation would not jeopardise competition and private sector investment in Western Australia<sup>2</sup>. But the likelihood is that the proposals for re-aggregation, would, in conjunction with changes in policy settings that have been implemented or are under consideration, amount to a reversal of the direction of reforms undertaken in WA over the last decade.

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<sup>1</sup> See for example See for example, “WA power prices to rise 5%, says Premier,” Sydney Morning Herald, 8 February 2012; and “Energy shake-up imminent: Collier Power shift on the cards” in The West Australian, 12 March 2012.

<sup>2</sup> For example, the Energy Minister is reported as saying that “But the real issue is if you remerge do you knock out the private sector? No, you don't.” (*West Australian*, 12 March 2012).

Indeed, the thrust of these reforms was to secure efficiency (in the sense of lower-cost production, and in the sense of economic efficiencies resulting from cost-reflective pricing) precisely through the vertical disaggregation of Verve and Synergy, supported by a number of other arrangements. These other arrangements included, notably: the introduction of retail contestability for larger customers; the displacement mechanism through which increasing volumes under Synergy's vesting contract are exposed to competitive procurement; restrictions on investment by Verve beyond a limit of 3000 MW; and limiting Verve from entering the retail market and Synergy from entering the generation market.

Consequently, the propositions that need to be examined are:

- whether the disaggregation between Verve and Synergy has led to inefficiencies, which in turn have contributed significantly to high prices, and more generally to poor policy outcomes;
- the wider impacts of the proposed re-aggregation on competition and private sector involvement in the WA electricity sector; and
- whether the overall policy objectives sought by government are better achieved by pursuing the re-aggregation of Verve and Synergy; or whether, to the contrary, these policy objectives are better sought by keeping Verve and Synergy separate as a basis for developing contestability in the supply of electricity.

## 1.2 Structure of this report

The report is structured as follows

- Section 2 provides the policy context for current proposals for the re-aggregation of Synergy and Verve. It includes a description of reforms undertaken in the context of the WA electricity market, with a focus on the disaggregation of Verve and Synergy and the supporting mechanisms that have been put in place to develop contestability in the supply of electricity.
- Section 3 analyses the question of whether the disaggregation of Synergy and Verve has led to inefficiencies, and consequently to higher prices, and whether it has contributed to the poor financial performance of these entities.
- Section 4 examines some of the consequences of re-aggregating Synergy and Verve, in the current market and policy settings, on competition and the ability of the government to secure policy objectives and benefits to the wider community.

## 2 The policy context for the proposed re-aggregation

### 2.1 What are the policy objectives that matter to government?

As already observed, current arrangements in Western Australia are the outcome of a series of deliberate decisions and purposive reform processes implemented over more than a decade. While the nature of some of these decisions and processes has reflected the specific characteristics of electricity supply in the particular context of Western Australia (see section 2.2 below), the objectives sought through them are the same as those that have been pursued in jurisdictions that form part of the National Electricity Market (NEM) in Australia, and indeed in other jurisdictions. Table 1 provides a brief description of these objectives, and the instruments that are used to achieve them.

Table 1: Summary of policy objectives pursued through reforms and instruments used to achieve them

Objectives	Instruments
<p>Economic efficiency:</p> <ul style="list-style-type: none"> <li>- least-cost supply (productive efficiency);</li> <li>- cost-reflective pricing (allocative efficiency); and</li> <li>- new investment over time in response to needs of users (dynamic efficiency).</li> </ul>	<p>Changes to market structure to promote competition.</p> <p>Economic regulation where competition not sufficiently developed or not economically desirable/ feasible.</p> <p>Better allocation of risk between public sector and private sector.</p> <p>Ensuring investors are able to recover costs and have certainty around government policy decisions.</p>
<p>Reliability and security of supply.</p>	<p>Technical regulation and upstream fuels policy.</p>
<p>Affordability, and equity and distributional concerns.</p>	<p>Regulation and use of state funding through community service obligations (CSOs).</p>

Economic efficiency has been the central objective of reform processes. As can be observed from the Table 1, economic efficiency is a multi-faceted notion. Productive efficiency requires that demand be served by the least-cost sources of supply, and that there be incentives for producers to achieve least-cost supply

through a better management of cost drivers. Allocative efficiency requires that prices reflect costs. The reason is that the more prices are marked-up over costs – specifically the cost of supplying an extra unit of power to customers – the more customers there are who would be willing to pay the cost of electricity supply but who are prevented from doing so because the actual price charged by the producer exceeds their willingness to pay. Dynamic efficiency is achieved when investment in the supply of electricity over time matches the requirements of users and society.

Competition is an important instrument for securing these various forms of efficiencies. In particular, it can create pressures for operational efficiencies within firms that reduce costs, and also is a means of ensuring that prices are aligned with costs. A particular issue in WA, and in many other electricity markets, was that vertically integrated entities under government ownership, and with access to exclusive franchises of customers, were able to disguise their inefficiencies by passing them off through higher prices or letting the state absorb the losses in their financial accounts. Competition has been usually promoted by the break-up of former monopolies, notably through the separation of ownership and/or operation of contestable and non-contestable activities (with the latter subject to regulation).

The implementation of a more competitive market structure, to secure efficiencies, has often gone hand in hand with changes in the ownership of assets from the state to the private sector. Indeed divestment, following the disaggregation of state-owned entities, was often seen as a direct route through which to promote new entry and competition, by encouraging the acquisition of assets by competing investors. Where the divestment of dominant state-owned entities has not been pursued, other mechanisms have been required to promote private entry and competition (as in the case of WA; see section 2.2 for further details.)

More generally, the transition towards a more private-sector led model of the electricity sector has been motivated by the view that:

- the private sector was better placed to manage risks associated with investments than the state, given the propensity of the latter to invest on a non-commercial basis. Conversely, states have shown a preference not to take on the financial risks associated with electricity markets, and focus their fiscal resources on social infrastructure spending (such as on health and education); and
- the non-commercial operation of state-owned enterprises created obstacles to future investment and entry by the private sector, because of concerns that

government decisions on a non-commercial basis would strand assets. This is a concern that has been re-iterated on a number of occasions.<sup>3</sup>

The overall logic of reform can be summed up in terms of the relationship between market structure, conduct and performance. Changes to the market structure, including the encouragement of private sector investment and/ or divestment of state owned assets, were designed to influence the conduct of firms as measured in terms of cost management, pricing behaviour and investment decisions. This in turn was intended to have an effect on performance as measured by policy objectives, and in particular the achievement of economic efficiency and affordability.

## 2.2 Overview of reforms

In 2001 the Western Australia Government established the Electricity Reform Task Force (ERTF) to make recommendations on reform of the electricity sector in Western Australia.

The Terms of Reference of the ERTF included the following, and are consistent with the objectives generally pursued through electricity sector reform, as described in section 2.1:

- the main objective was to achieve, where practicable, sustainably lower prices for all customers while maintaining adequate reliability, security, quality and safety of electricity supply;
- the uniform electricity tariff was to be provided as a safety net in a transparent manner to residential and small business customers; and
- wherever possible, impediments to effective competition in the electricity sector were to be removed.

In October 2002 the ERTF submitted its final report to Government, recommending the disaggregation of Western Power and the establishment of the WEM.

The intention of these recommended reforms was to promote a more competitive electricity supply sector. The ERTF noted that, ultimately, the reform process should include full retail contestability, which would deliver benefits to all customers.

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<sup>3</sup> See for example, Commonwealth of Australia, Energy Reform Implementation Group (2007), *Energy Reform- The Way Forward for Australia*.

## 2.2.1 Electricity Reform Implementation Unit

To implement the recommendations of the ERTF, the Government established the Electricity Reform Implementation Steering Committee (ERISC) and the Electricity Reform Implementation Unit (ERIU).

The work of the ERISC/ERIU resulted in a number of substantial changes to the electricity sector.

- The disaggregation of Western Power Corporation. Prior to the reform process, Western Power Corporation had been an integrated State-owned generation, transmission, distribution and electricity retail business. On 1 April 2006 Western Power Corporation was disaggregated into four separate entities:
  - Verve, the generation business in the SWIS;
  - Western Power, the transmission and distribution business in the SWIS;
  - Synergy, the retail business in the SWIS; and
  - Horizon Power, which is an integrated electricity supplier to areas outside the SWIS.
- The introduction of the Wholesale Electricity Market (WEM). Prior to the reform process, there was no formal wholesale electricity market in Western Australia. The WEM was introduced in September 2006 in order to facilitate greater competition and private investment in the electricity sector.

In addition to these key reforms, a number of other arrangements were put in place in order to support the objectives of the reform process.

### **Restrictions on Verve and Synergy**

As part of the reform process, a number of restrictions were placed on the activities of Verve and Synergy in order to mitigate their market power.

- Verve is prohibited, under Section 38 of the *Electricity Corporations Act 2005*, from retailing electricity until 2013 (extendable to 2016).
- Verve is restricted, under Section 37 of the *Electricity Corporations Act 2005*, to generating within the SWIS (except for generation from renewable sources).
- Verve is prohibited, by Ministerial Direction, from investing in additional generation plant beyond 3,000 MW.
- Synergy is prohibited, under Section 47 of the *Electricity Corporations Act 2005*, from undertaking any generation activities in the SWIS until 2013 (extendable to 2016).
- Synergy is prohibited, under Section 46 of the *Electricity Corporations Act 2005*, from retailing outside the SWIS.

**The policy context for the proposed re-aggregation**

## ***Vesting Contract between Verve and Synergy***

Alongside the disaggregation of Verve and Synergy, a set of transitional arrangements were put in place to govern the initial supply of energy and capacity by Verve to Synergy. These transitional arrangements were established in the Vesting Contract between Verve and Synergy.

The original Vesting Contract between Verve and Synergy was intended to support the development of the WEM. The intention was to provide for the supply of energy and capacity to Synergy to meet Synergy's inherited customers while providing incentives for both Verve and Synergy to progressively negotiate electricity supply agreements on commercial terms outside the Vesting Contract.

### ***Contract volume***

To ensure that Verve and Synergy had incentives to negotiate electricity supply agreements outside the Vesting Contract, the original Vesting Contract provided for the amount of energy and capacity provided to Synergy to decrease over the contract term. The amount of energy and capacity under the Vesting Contract declined over time due to:

- the expiry of Synergy's inherited retail contracts;
- contestable customers accepting new contract offers; and
- the operation of the Displacement Mechanism.

The Displacement Mechanism under the original Vesting Contract required Synergy to run an annual tender process to procure wholesale supply of energy and capacity to replace defined annual reductions in energy and capacity provided under the Vesting Contract. Synergy was required to publish an Annual Displacement Statement of Opportunities (ADSOO) to provide information to the market on the energy and capacity that Synergy was seeking to displace.

Before the original Vesting Contract was replaced by the Replacement Vesting Contract (as discussed below) Synergy ran a number of tenders under the Displacement Mechanism. This tender process resulted in competition between generators (including Verve, which was free to participate in the tender) to supply Synergy. Ultimately, Synergy entered into a number of long-term supply agreements with Independent Power Producers (IPPs) in the WEM.

### ***Contract price***

To mitigate the potential market power of both Verve and Synergy, the original Vesting Contract established the price at which Verve would supply energy and capacity to Synergy.

The pricing under the original Vesting Contract was a netback price, under which Synergy paid a number of charges based on a netback calculation. The netback calculation meant that Synergy paid to Verve an amount equal to Synergy's

revenues minus Synergy's cost. The result was that Verve received the equivalent of:

the revenue that Synergy received from the relevant tariff and inherited retail contract sales;

*less*

a defined allowance for Synergy's costs, including an efficient profit margin;

network costs paid to Western Power; and

other specified market and regulatory costs.

The implication of these netback arrangements was that Verve faced the risk that tariffs were below cost-reflective levels: any shortfall in Synergy's tariff revenue would ultimately find its way to Verve through lower contract payments.

This made the level of regulated tariffs an important determinant of Verve's financial performance.

## **2.2.2 Office of Energy's Electricity Retail Market Review**

Shortly after the disaggregation of Western Power Corporation and the commencement of the WEM, the Office of Energy commenced its Electricity Retail Market Review (ERMR). A key focus of the ERMR was a review and assessment of the existing electricity tariff arrangements.

At the time of the ERMR, retail tariffs had been constant (in nominal terms) for many years. Business tariffs had not increased in nominal terms since 1991/92 and residential tariffs had not increased in nominal terms since 1997/98. As a result, the Office of Energy's ERMR found that regulated retail tariffs were significantly below cost reflective levels, and needed to increase by between 30 and 50 per cent (depending on the tariff) to achieve cost-reflective levels (not accounting for the expected introduction of a carbon price).

Since the Office of Energy completed the ERMR the Government has implemented a number of increases in electricity tariffs. However, as long as the network pricing arrangements under the original Vesting Contract remained in place, the cost of this glide path from existing tariffs to cost-reflective tariffs was ultimately borne by Verve.

## **2.2.3 Proposals contained in Oates Report regarding pricing arrangements between Verve and Synergy**

As a result of a number of years of poor financial performance by Verve, the Government appointed Mr Peter Oates to undertake a review of the financial position of Verve and to present options that might improve Verve's financial outlook.

**The policy context for the proposed re-aggregation**



The Oates Review found that the losses incurred by Verve resulted from a number of factors including the impact of low regulated tariffs, significant maintenance and other costs, increased network charges and the consequences of the Varanus Island gas plant explosion. However, the Oates Report also noted that the financial performance of Verve was expected to improve, particularly as a result of increases in regulated tariffs.

The Oates Report made a number of recommendations. Key recommendations included:

- **tariffs should be set to commercial levels.** In particular, regulated tariffs in the contestable sector should be increased to cost reflective levels as soon as possible; and
- **the Vesting Contract requires urgent revision.** In particular, the Oates Report recommended that the displacement schedule should be amended so that the displacement requirement does not apply to Synergy's non-contestable and price protected customers and that the netback arrangements should be reconsidered.

Ultimately, the Government determined that the original Vesting Contract be replaced by the Replacement Vesting Contract from 1 October 2010. The Replacement Vesting Contract is structured more like a bilateral contract than the original Vesting Contract. In particular, the Replacement Vesting Contract does not have an equivalent of the Displacement Mechanism under which Synergy is required to tender for replacement energy and capacity. As a result, Verve is guaranteed the contracted volumes under the Replacement Vesting Contract, and does not need to compete with IPPs to supply these volumes. Moreover, the new arrangements do not have an equivalent of the netback pricing arrangements, meaning that Verve does not have to bear, on its own, the risks of tariffs being below cost-reflective levels.

## 2.3 Summing up

The objectives pursued by reforms in WA resonate closely with those pursued across other jurisdictions, notably through the creation of the NEM. There are also points of resonance with the instruments chosen to secure these objectives, notably the desire to introduce a greater level of competition in the supply of electricity, and to encourage private sector investment in electricity activities.

The main point of difference between WA and other jurisdictions is that both competition and the role of the private sector appear to be much more of a work in progress in WA. In particular, both competition and private sector investment have been reliant on specific measures, given the presence of dominant state-owned entities. These specific measures have included, in addition to the vertical disaggregation of Verve and Synergy, the use of the Displacement Mechanism, caps on Verve's capacity, and moratoria on investment by Synergy into

generation and by Verve into retail. In particular, the Displacement Mechanism provided a clear route to market for IPPs: a number of IPPs were able to invest in generation capacity following their successful participation in the Displacement Mechanism. Coming after the discontinuation of the displacement mechanism, the re-aggregation of Verve and Synergy would remove an important “prop” that has contributed to such developments in competition and private sector participation as there have been since the initiation of the reform process.

Various reviews have commented on the outcomes achieved to date. The main conclusion that can be drawn is that competition and private sector investment are still a work in progress, particularly in retail. The Economic Regulation Authority, for example, has observed that under the arrangements initiated through the reform process, some \$2.6 billion had been invested in new generation capacity as at 2010.<sup>4</sup> This has resulted in a significant change in the generation mix. Since the commencement of the reform process, Verve’s share of generation capacity has fallen from close to 90 per cent to below 60 per cent. In large part this can be attributed to the prohibition on Verve investing in generation capacity in excess of 3,000 MW. Since the commencement of the reform process, Verve’s capacity has not increased materially (aside from the recent recommissioning of Muja A/B), while there has been significant investment by IPPs, including Alinta, Griffin and NewGen.

However, it is also clear from various reviews, that there are persistent sources of inefficiency in current arrangements. These have included the non-commercial nature of retail tariffs. This has hampered the development of retail competition. In combination with the specific pricing arrangements implemented between Synergy and Verve, they have contributed to the concentration of financial risks and losses in Verve.

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<sup>4</sup> Economic Regulation Authority (2011), *2010 Annual Wholesale Electricity Market Report for the Minister of Energy*, p vi.

### 3 Has vertical disaggregation led to inefficiencies and poor policy outcomes

In this section, we address the question as to whether vertical disaggregation has caused inefficiencies, and, more generally, poor performance as measured against the public policy objectives described in section 2.1. By inefficiencies we mean both productive inefficiencies (i.e. a failure to minimise costs) and allocative inefficiencies, reflecting non cost-reflective prices, or a mis-allocation of risk between the state and the private sector.

The question of the allocation of risk between state and private sector ties in with the issue of the financial performance of Verve and Synergy. If vertical disaggregation has contributed to poor financial performance by increasing the level of risk faced by the state, as shareholder of both enterprises, then that would represent a poor public policy outcome.

#### 3.1 Has vertical disaggregation led to an inefficient use of Verve's capacity?

The claim that vertical disaggregation has led to an inefficient use of Verve's capacity is motivated by the observation that Verve's plant has at various times remained idle. In particular, there have been instances in which Verve's low cost baseload plant has been shut down over night. There are a number of causes of Verve's low cost baseload plant being shut down over night:

- the increase in wind generation in the SWIS, combined with the treatment of wind generation under the Market Rules, has changed the supply-demand balance overnight when wind generation is operating; and
- the Market Rules, to date, have required Verve to balance the market.

In addition, there is some evidence of excess investment in the SWIS.

We examine each of these factors in turn.

##### 3.1.1 Increase in wind generation

The recent increase in commissioned wind generation in the SWIS is a direct response to Federal Government policies to displace fossil fuelled generation plant with cleaner renewable generation. This has resulted in the commissioning of approximately 400 MW of wind generation in the SWIS over the last five years.

Wind generation is intermittent in nature, with generation depending on wind conditions. In the SWIS wind generation often reaches high levels overnight, when system demand is at its lowest. This can significantly change the supply-

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demand balance over night, because there can be insufficient demand to meet the generation levels of both the wind generators and the baseload plants in the system. In these circumstances, there is effectively competition among generators to stay operating: wind generators so that they can continue to create Renewable Energy Certificates and baseload generators so that they do not incur the costs and operational difficulties of shutting down, and then restarting, their plant.

Currently, the Market Rules allow wind generation to spill into the market whenever it is generating, including in preference to base-load generation. As a result, baseload generators are more likely to have to shut down overnight to accommodate the operation of wind generators.

### **3.1.2 Balancing the market**

Currently, the design of the market results in Verve having to provide balancing services to the market. This means that Verve is responsible for adjusting its generation levels to account for any unexpected variations in demand or in the generation levels of other plant. Overnight, when wind generation can account for a substantial proportion of total demand, this can impose a significant burden on Verve's plant. Not only may the baseload plant have to shut down, but Verve may also be required to operate gas-fired generation in order to be in a position to quickly respond to unexpected changes in the operation of wind generators.

Verve is remunerated for the balancing services that it provides but, to date, this remuneration has not necessarily reflected the competitive price of providing balancing services. This has exposed Verve to the risk of losses in the provision of balancing services. While the market rules allow Verve to enter into contracts for other generators to provide balancing, Verve has not to date entered into any of these balancing support contracts.

Because Verve is currently solely responsible for balancing the market, it is Verve's plant that is responsible for adjusting to account for the operation of wind generators. This can result in Verve's plant having to operate in a way that it would not consider to be optimal.

However, the design of the market is set to change shortly with the introduction of competitive balancing. This will mean that all generators will be in a position to adjust their generation levels to account for any unexpected variations in demand or in the generation levels of other plants. This would be expected to somewhat reduce the need for Verve's baseload plant to adjust its operation to account for the operation of wind generators and would also be expected to result in a competitive price for balancing services.

### **3.1.3 Independent Market Operator (IMO) demand forecasts**

Investment in generation plant in the WEM occurs, at least in part, in response to demand forecasts by the Independent Market Operator (IMO). Each year, the

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IMO forecasts the demand-supply balance in the SWIS for the following 10 years. These demand forecasts are used to determine the requirement for capacity in the SWIS. Through the operation of the Reserve Capacity Mechanism the IMO then ensures that this required capacity is available: retailers are required to secure capacity in proportion to the demand of their customers, and can secure this capacity either through bilateral contracts with generators and Demand Side Management providers or through a capacity auction administered by the IMO.

In forecasting future demand, the IMO considers the likely timing and size of new loads, using the information available at the time of publication. However, the resulting forecasts will always suffer from some level of inaccuracy. Since 2008, the IMO has incorporated in its forecasts large new loads from four major mining projects. While one of these loads has now commenced operation, the remaining loads have yet to do so. The IMO has viewed these projects as having been well advanced and subsequently included them in its forecasts. However, large, capital-intensive projects such as these are inherently exposed to delays due to external factors.

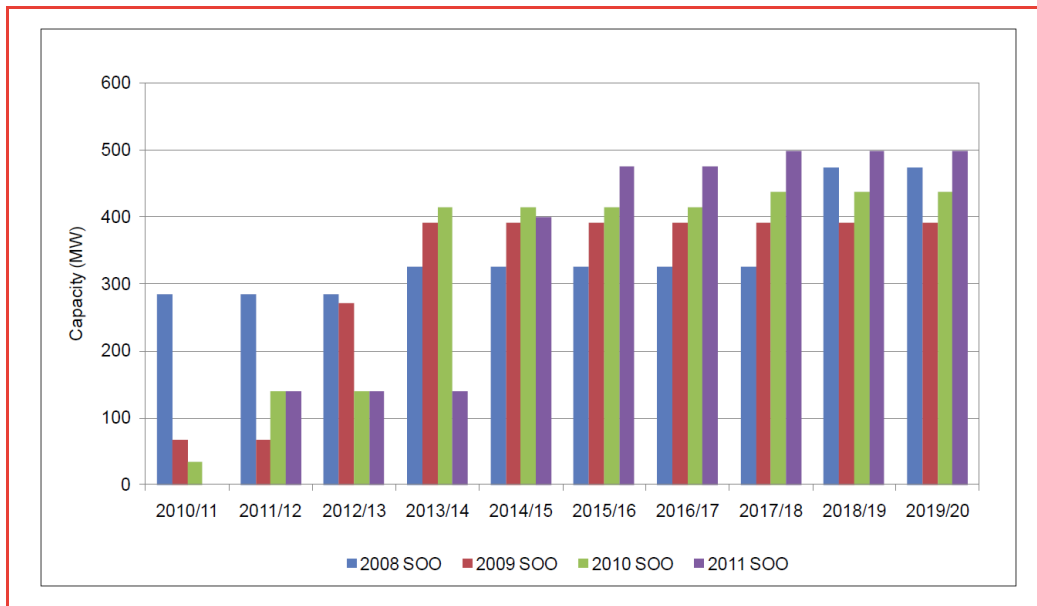
The impact of these delays on the peak demand forecasts is shown in Figure 1:

- the 2008 forecasts included an allowance of more than 250 MW for the three projects, commencing in 2010/11;
- at the time of the 2009 forecasts, these projects had been postponed. The forecasts then included 200 MW commencing in 2012/13 and a further 80 MW in 2013/14; and
- the 2010 and 2011 forecasts have included an allowance for new load to utilise spare capacity in the existing Mid West network. However, delays in project schedules and the schedule for the Mid West Energy project southern section have led to the postponement to 2014/15 of approximately 250 MW for these projects.

In other words, the expectation that capacity would be required to supply these loads during the period from 2010/11 to 2013/14 has been revised. Given that investment decisions are made a number of years in advance, and that the Reserve Capacity Mechanism operates two years in advance, these revised forecasts have likely resulted in capacity being available that is not required to meet actual demand.

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Figure 1: IMO peak demand (MW) forecast variations between 2008 and 2011



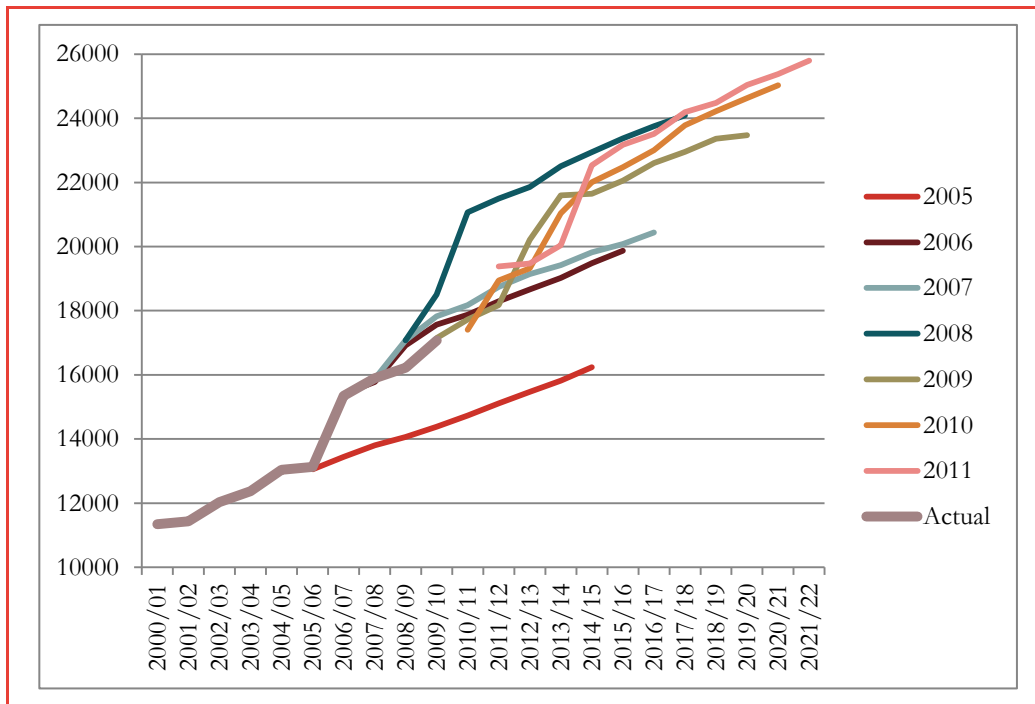
Source: IMO Statement of Opportunities 2011

A similar pattern can be seen from the IMO's expected forecasts of annual demand. Figure 2 illustrates the accuracy of IMO's expected annual sent-out energy forecasts from various Statement of Opportunities, compared with actual annual sent-out energy between 2000/01 and 2009/10.

If we compare actual demand to IMO's expected forecast two years prior, we see that the IMO has, in a number of cases, over-forecast sent-out energy by hundreds of megawatts. For instance, in 2009/10 actual sent-out energy was 17,067 GWh. In July 2007 the IMO was forecasting sent-out energy in 2009/10 to be 17,822 GWh, an over-estimate of 755 GWh. Even 12 months later, in July 2008, the IMO was still over-forecasting annual sent-out energy for 2009/10 by 1,437 GWh. By contrast, the comparison between forecast and actual sent out energy for 2010/11 shows that actual demand was under-forecasted.

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Figure 2: IMO expected forecasts and actual sent-out energy (GWh)



Source: IMO Statement of Opportunities and ESAA, Electricity Gas Australia, various annual publications.

The IMO forecasts of energy act as a signal to potential investors of the future need for new generation investment to supply the planned and forecast new loads. The observed differences suggest that:

- in the years in which investment decisions were being made that related to current plant, over-forecasting of demand led to over-investment in generation capacity; and
- if it had been the case that forecast errors – which are only observed in retrospect – were systematically on the side of overstating demand, investors could in future adapt by revising their own projections downwards. However, as observed above, the latest figures suggest that forecasts under-estimated demand. This adds to uncertainty faced by investors.

From the point of view of this analysis, the important issue is that the investment in excess capacity ultimately has consequences for Verve because of the high-cost nature of its plant, an issue to which we now turn.

### 3.1.4 High cost nature of Verve's plant

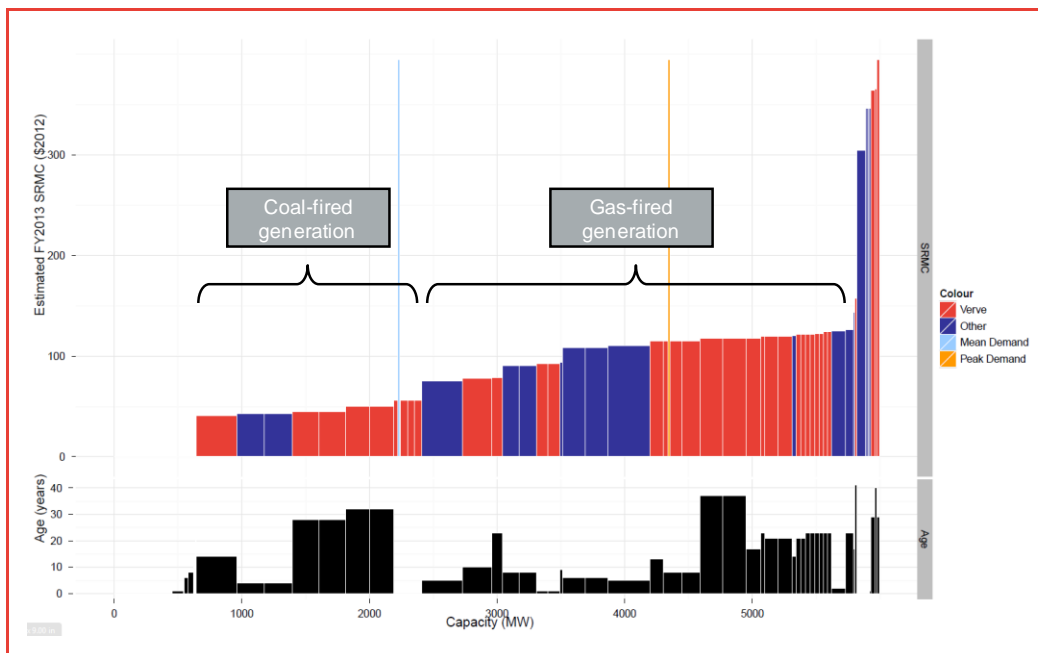
Verve's plant is older and tends to be less efficient than the generation plant that Independent Power Producers have commissioned since market commencement. The result of this is that Verve's plant tends to be more costly to operate than equivalent generation plant owned by Independent Power Producers. This can be

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seen in Figure 3, which shows a merit order (or supply curve) for the SWIS in 2012/13. The top panel of Figure 3 shows the capacity and short-run marginal cost of each generation plant in the SWIS. Costs have been calculated on the assumption of a carbon price at \$23 per tonne of CO<sub>2e</sub> and assuming that all plants face the same well-head gas price of \$6.18 per GJ (with transport to Perth taking this to a delivered price of around \$8.00 per GJ).<sup>5</sup>

Verve's generation plant is shown in red, the generation plant of Independent Power Producers is shown in blue. Figure 3 shows that for both coal-fired generation and gas-fired generation the generation plant of Independent Power Producers tends to be lower cost than Verve's generation plant. The bottom panel of Figure 3 shows the age of each generation plant in the SWIS. This shows that Verve's plant tends to be older than the generation plant of the Independent Power Producers. The age of Verve's plant accounts for its lower efficiency and higher operating costs.

Figure 3: Western Australian electricity generation merit order and plant age, 2012/13



Source: Frontier Economics.

<sup>5</sup> These gas prices are based on inputs into the IMO's calculated of specific market prices. See: SKMMMA, *2011 Margin Peak and Margin Off-Peak Review*, Assumptions and Methodology Report, October 2011. Ultimately, the level of gas prices and coal prices does not change these results: Verve's plant is higher cost because, in general, it is older and less efficient than other plant.

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This merit order suggests that Verve's plant will always find it challenging to compete with the more efficient plant owned and operated by Independent Power Producers. The result of this is that dispatch from Verve's plant would be expected to decline over time, as it is increasingly displaced by newer and more efficient plant. A merger between Verve and Synergy might enable the merged entity to continue to operate Verve's plant at high levels, but the merger cannot overcome the underlying economics of these generation plant: a decision to continue to operate Verve's plant in preference to newer and more efficient plant will necessarily come at higher cost to the merged entity (a cost that will ultimately be borne by its shareholder or by electricity customers through higher regulated tariffs).

### 3.1.5 Summing up

The analysis suggests that the use of Verve's capacity is the logical outcome of institutional arrangements (including those governing balancing), excessively high demand forecasts, and the relatively uncompetitive nature of Verve's plant.

Some of these factors may be addressed in the short-to-medium term. In particular:

- the introduction of competitive balancing will provide Verve with an opportunity to compete to have its baseload generation plant remain operational overnight. The introduction of competitive balancing also would be expected to result in balancing prices that are more reflective of the cost of providing balancing services. This may result in Verve having to bid negative prices over night in order for its plant to remain operating, but this would simply reflect the underlying supply-demand balance; and
- excess base-load generation would be expected to be absorbed as load grows.

Importantly, from the perspective of this analysis, none of these factors that would improve Verve's position are related to the issue of re-aggregation between Verve and Synergy. More specifically, neither of the two factors mentioned above, nor a re-aggregation of Verve and Synergy, will change the fundamental issue of the underlying economics of the mix of generation plant in the SWIS. Moreover, it is important to emphasise that we would expect to see, under arrangements that are designed to secure efficiencies through competition, outcomes in which relatively high cost plants were used less often than cheaper competitors.

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## 3.2 Has vertical disaggregation contributed to higher prices?

We observe that proponents of the vertical re-aggregation of Verve and Synergy sometimes argue that vertical disaggregation has contributed to higher energy prices, borne by end-users in WA.<sup>6</sup>

Retail electricity prices have recently increased, but this is unrelated to the institutional structure of Verve and Synergy. The recent increases in residential retail electricity prices commenced in 1 April 2009 following the Office of Energy's ERMR. These were the first increases in residential tariffs since 1997/98 (even in nominal terms). This meant that there had been significant real reductions in electricity tariffs and significant increases in tariffs were necessary simply to keep up with inflation. Furthermore, there had been recent increases in the underlying costs of supply, particularly in network costs and in wholesale gas prices faced by generators. Frontier Economics advised the Office of Energy on retail tariffs for the purpose of the ERMR. It is clear from Frontier's report to the Office of Energy<sup>7</sup> that the increases required to get tariffs back to regulated levels were unrelated to the structure of Verve and Synergy; comparable increases in retail tariffs would have been required even if Verve and Synergy had been aggregated at the time.

While residential retail tariffs have now increased by almost 60 per cent since 1 April 2009, these tariffs remain below cost reflective levels. With increasing input costs to supply electricity to end-users, it is likely retail tariffs will need to increase further in the future, particularly as a result of the introduction of a carbon price.

These input cost pressures, and the resulting need for increases in retail tariffs, are present regardless of the structure of Verve and Synergy. The proposed merger of Verve and Synergy would not lead to lower retail tariffs as the underlying electricity supply cost pressures remain present. Certainly there may be some saving in corporate overheads in the event that Verve and Synergy are re-merged. The Oates Report quantified the savings from amalgamated support functions at approximately \$5 million per annum.<sup>8</sup> But these savings are unlikely to be material in comparison to the costs from:

- network costs;<sup>9</sup>

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<sup>6</sup> The West Australian, *Energy Shack Up Imminent: Collier*, 12 March 2012.

<sup>7</sup> Frontier Economics, *Electricity Retail Market Review – Electricity Tariffs*, Final Recommendations Prepared for the Western Australian Office of Energy, December 2008.

<sup>8</sup> Deloitte and Oakley Greenwood, *Verve Review*, August 2009, page 11. Referred to as the Oates Report.

<sup>9</sup> For example, in 2010/11 Synergy incurred an increase of 36 per cent on the previous year just in network access charges, with a total cost of \$860 million. Synergy, Annual Report 2010/11.

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- higher priced contracts procured by Synergy from Verve rather than IPPs;<sup>10</sup>
- increases in upstream industry costs with respect to power station capital and fuel costs;
- the introduction of a carbon price;<sup>11</sup> and
- renewable energy policies.<sup>12</sup>

Of the underlying costs of supplying electricity to retail customers, it is the substantial increases in network costs and in fuel costs for generation that are the dominant reason for higher retail prices since vertical disaggregation. Savings of \$5 million per annum in corporate costs would, at best, result in a reduction in the retail operating cost component of electricity tariffs. For an average residential customer, the retail operating cost component of electricity tariffs is about 5 per cent of the total tariff. A \$5 million per annum reduction in retail operating costs, even if entirely passed through to residential customers (and not to other customers) would result, at best, in savings of less than 0.4 per cent of a typical residential bill, or around \$5 per customer per year. This in comparison to increases in recent years of around 60 per cent.

### 3.2.1 Network tariffs

Network tariffs charged by Western Power, which are determined by the Economic Regulation Authority, have increased substantially over recent years. Given that network tariffs typically account for around 50 per cent of the retail tariffs that electricity customers face, these increases in network tariffs have created substantial increases in the cost of supplying electricity to retail customers.

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<sup>10</sup> For example, Synergy report that its “... energy procurement activities in 2009/10 [such as through competitive tendering and use of IPPs] has contributed to a growth of \$31 million in gross profit ...” from 2008/09. Synergy, Annual Report 2009/10, page 10. Synergy’s portfolio has in excess of \$20 billion worth of energy procurement and so a discount of 0.025 per cent in energy procurement would offset the savings from amalgamated support functions. Frontier Economics is aware that Synergy has procured contracts from IPPs at significantly larger discounts than what could otherwise be sourced from Verve.

<sup>11</sup> For example, Verve alone forecasts its carbon liability under a \$23 per tonne carbon tax at around \$200 million per year, which Verve reports as a 20 per cent increase in the cost of producing electricity.

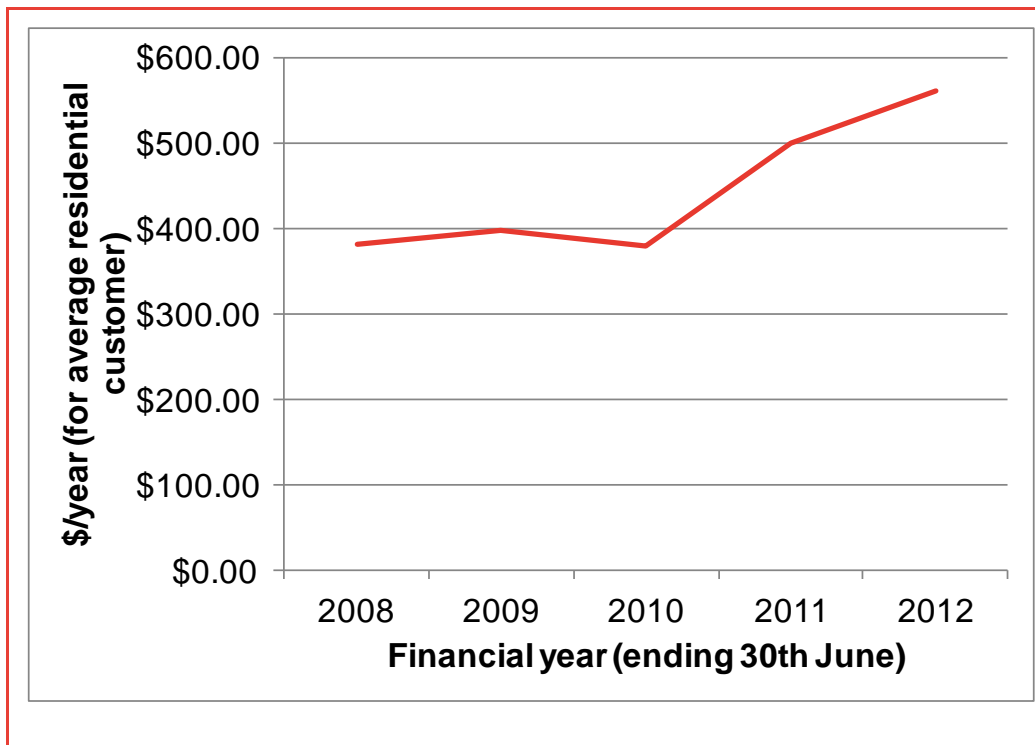
<http://news.smh.com.au/breaking-news-national/no-carbon-tax-subsidy-for-verve-barnett-20110504-1e7ns.html>

<sup>12</sup> For example, Synergy report a substantial increase in 2010/11 in renewable energy costs, with expenditure on Renewable Energy Certificates (RECs) increasing to over \$65 million from approximately \$25 million the previous year. The main driver behind this was the requirement to purchase RECs generated by the Federal Government’s Small-Scale Renewable Energy Scheme (SRES).

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Figure 4 shows annual network tariffs for an average residential customer in the SWIS.<sup>13</sup> This annual network tariff includes both the fixed component of network tariffs (in c/day) and the variable component of network tariffs (in c/kWh). Annual tariffs have increased substantially since 2007/08, with the total increase from 2007/08 to 2011/12 amounting to around 50 per cent.

Figure 4: Network tariffs for residential customers (real \$2011/12)



Source: Western Power's price lists

### 3.2.2 Gas prices

An Economics and Industry Standing Committee (Committee) was charged in 2011 with the task of investigating wholesale domestic gas prices in WA. The Committee noted several important factors that have impacted on the price of domestic natural gas. These include:

- the watering out of Apache Energy's East Spar field earlier than expected in 2005;

<sup>13</sup> Assuming annual consumption of 5,200 kWh.

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- higher prices in response to the explosion at Apache's Varanus Island gas processing facility in 2008;
- increases in upstream industry costs over the last six years, increasing by at least 100 per cent; and
- a tightening of domestic gas processing capacity since around 2004.<sup>14</sup>

The Committee noted that the average price of all wholesale domestic gas contracts in WA as at 2009/2010 was around \$3.70 per gigajoule.<sup>15</sup> The Committee noted that this average is biased downwards because of the competitive prices of the early establishment contracts underpinning the development of the North West Shelf and the early Apache contracts.<sup>16</sup> The Committee recognises that the environment for wholesale domestic gas prices has changed. These changes include:

- prices on new wholesale domestic gas contracts in WA have been negotiated in a range of approximately \$5.55 to \$9.25 per gigajoule;<sup>17</sup>
- prices for new wholesale domestic gas contracts in WA are twice that of recent prices in eastern Australia;<sup>18</sup>
- the recent rise in local gas prices has created an environment where domestic prices can exceed LNG netback equivalent levels; and<sup>19</sup>
- a tightening of domestic gas processing capacity since around 2004.

These changes are clearly indicated in Figure 4, which reports the implied average price of gas per gigajoule between 1981 and 2009 in real 2009/10 dollars.

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<sup>14</sup> WA Legislative Assembly, Economics and Industry Standing Committee, Inquiry in to Domestic Gas Prices, Report No. 6 in the 38<sup>th</sup> Parliament, 2011, page xviii.

<sup>15</sup> WA Legislative Assembly, Economics and Industry Standing Committee, Inquiry in to Domestic Gas Prices, Report No. 6 in the 38<sup>th</sup> Parliament, 2011, page xix.

<sup>16</sup> Three joint venture projects (the Woodside-operated North West Shelf and the Apache-operated John Brookes and Harriet projects) supply over 97 per cent of WA's local gas.

<sup>17</sup> WA Legislative Assembly, Economics and Industry Standing Committee, Inquiry in to Domestic Gas Prices, Report No. 6 in the 38<sup>th</sup> Parliament, 2011, page xix.

<sup>18</sup> WA Legislative Assembly, Economics and Industry Standing Committee, Inquiry in to Domestic Gas Prices, Report No. 6 in the 38<sup>th</sup> Parliament, 2011, page xix.

<sup>19</sup> WA Legislative Assembly, Economics and Industry Standing Committee, Inquiry in to Domestic Gas Prices, Report No. 6 in the 38<sup>th</sup> Parliament, 2011, page xix.

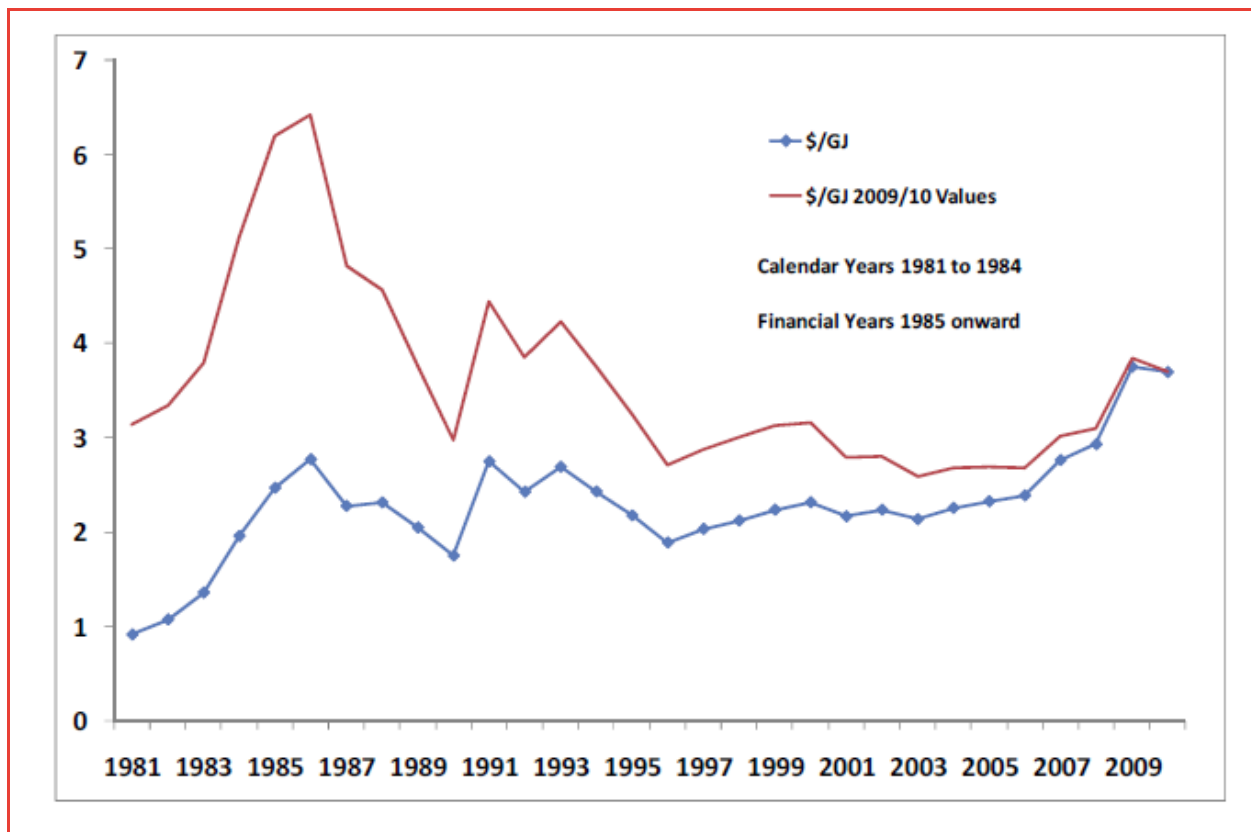


Figure 5: Average gas price per gigajoule (2009/10 dollars) in Western Australia

Source: WA Legislative Assembly, Economics and Industry Standing Committee, *Inquiry in to Domestic Gas Prices, Report No. 6 in the 38<sup>th</sup> Parliament, 2011, page 50.*

It is evident in Figure 5 that in 2006, immediately prior to the disaggregation, average real gas prices were approximately \$2.50 perGJ (well-head). More recently prices are averaging \$3.70 perGJ (well-head), around a 50 per cent increase from 2006, even though a number of early low priced contracts remain on foot.

As far as gas-fired generators are concerned, the real question is the price at which gas contracts are currently available. The Independent Market Operator (IMO) recently commissioned research to investigate the likely gas prices faced by gas fired electricity generators in the WA Wholesale Electricity Market for 2012-13. The cost of gas (well-head) has been estimated by ACIL Tasman at between \$5.24 per GJ and \$12.08 per GJ, with a mean price of \$8.23 per GJ.<sup>20</sup> These price estimates are for spot market gas and therefore tend to be at the higher end of the price range when compared with longer-term firm supply

<sup>20</sup> ACIL Tasman, Gas Prices in Western Australia, February 2012, page 1.

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contracts. The Committee investigating gas prices observed that new wholesale domestic gas contracts in WA are being signed at prices between \$5.55 per GJ (well-head) and \$9.25 per GJ (well-head).<sup>21</sup> This suggests that the price at which gas contracts are currently available is around three times higher than it was in 2006.

The analysis of gas prices for WA confirms the higher cost of new supplies and increases in the price of existing contracts.

Similar, though perhaps less pronounced, price pressures are occurring for coal. Over recent years there has been a push by coal suppliers in WA to achieve export-parity prices. Higher coal prices constitute a significant cost increase for generators.

### 3.2.3 Summing up

The analysis in the preceding section suggests that the re-aggregation of Verve and Synergy will not alter the underlying input cost pressures for generation and as such, not lower retail electricity prices. Indeed, a re-aggregation of Verve and Synergy may cause retail prices to increase. This could happen if under integration, Synergy favours higher-cost contracting with Verve. This possibility is explored further in section 4.1.2.

## 3.3 Has vertical disaggregation contributed to lower profits?

We note it has been suggested by the WA Premier that the financial performance of some state-owned energy corporations, particularly Verve, has declined since disaggregation of Western Power. The suggestion appears to be that merging Verve with Synergy will rectify this perceived decline in financial performance.

Figure 6 shows the real historical pre-tax profit results (in 2010/11 dollars), contrasting the results for Western Power Corporation (FY2001 – FY2005) with the results for Synergy, Verve, Western Power and Horizon Power (FY2007 – FY2011).

In aggregate the returns to the State as the owner of the electricity entities did fall sharply from 2004/05, but this was well before the disaggregation of Western Power. Since about 2008/09, pre-tax profits of the combined state-owned energy entities have recovered and now exceed that recorded prior to disaggregation.

The dramatic decrease in financial performance between 2004/05 and 2008/09 was unrelated to the corporate structure of the state-owned energy entities (i.e.

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<sup>21</sup> WA Legislative Assembly, Economics and Industry Standing Committee, Inquiry in to Domestic Gas Prices, Report No. 6 in the 38<sup>th</sup> Parliament, 2011, page xix.

disaggregation). The primary drivers for declining financial performance between 2004/05 and 2008/09 were:

- increasing underlying costs of supplying electricity, particularly fuel costs for generation, in the absence of corresponding increases in retail tariffs;
- the effects of the Varanus Island explosion, and the resulting gas shortage, on Verve's fuel costs; and
- performance issues with Verve's plant (increasing forced plant outages and high maintenance costs).

It is clear that the financial performances of both Verve and Synergy have improved since April 2009, when retail tariffs were increased. The improved financial performance is most readily noticed in relation to Verve. This is because the netback pricing arrangements under the previous Vesting Contract led to a concentration of losses in Verve at a time of rising costs and fixed retail tariffs. The implementation of Replacement Vesting Contract apportioned risk more evenly between Synergy and Verve, and have coincided with the increase in tariffs. In short, keeping tariffs fixed at a time of rising costs will result in poor financial performance somewhere in the supply chain. Prices that allow for the recovery of efficient costs are a requirement for good financial performance.

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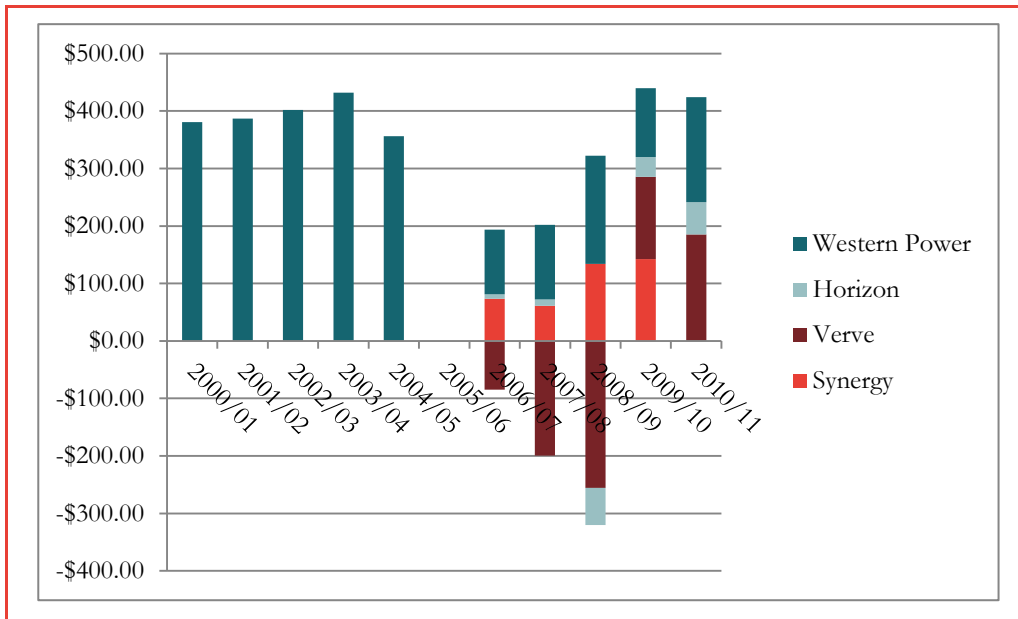


Figure 6: Pre-tax profit (\$m, real 2010/11 dollars) 2000/01 to 2010/11

Source: Western Power, Horizon, Synergy and Verve annual reports and financials reports 2005/06 to 2010/11; and Western Power Annual Reports 2000/01 to 2004/05.

Note: Results for 2005/06 are not reported in the figure as this Financial Year Western Power was disaggregated in to Horizon, Synergy and Verve Energy.

Note: Synergy’s pre-tax result for 2010/11 has not been included as its Financials Report was not publicly available on its website as at 22 March 2012 and its Annual Report only quotes after-tax profits.

Note: Synergy and Horizon received Tariff Adjustment payments totalling \$142 million in 2009/10 and Synergy received a further payment in 2010/11. It is unclear whether these payments are included in the revenues reported by the corporations and therefore pre-tax profits. Nevertheless, these payments are not material to our findings, which is that the profitability of the state-owned businesses has improved since the introductions of new Vesting arrangements (and the displacement mechanism) and retail tariff increases.

This analysis suggests that vertical disaggregation is not related to poor financial performance. Indeed, proceeding with the reform process, including by continuing to increase retail tariffs towards more cost-reflective levels, will promote continued improvements of Verve’s and Synergy’s financial performance. Furthermore, continuing with the reform process is likely to obviate the need for further commitment of government funds to investment in generation assets.

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## 4 Relative merits of re-aggregation versus disaggregation

### 4.1 Adverse effects of vertical re-aggregation

#### 4.1.1 Are there efficiency gains?

One channel through which the re-aggregation of dominant entities such as Verve and Synergy could lead to greater efficiency, for the perspective of society as whole, is if it addresses the problem of “double marginalisation”. Double marginalisation occurs when an upstream entity with some degree of market power supplies a downstream entity with some degree of market power. Under privately optimal behaviour when both parties are separate firms, both apply a mark-up over marginal costs. If both parties were integrated, the upstream entity would take into account its pricing decisions on the downstream entity, and this double marginalisation would not occur. Prices would be lower, and thus efficiency (in the allocative sense) would be served by vertical integration.

But as reported in section 2.2.1 the mechanisms established on the separation of Verve and Synergy have meant that double marginalisation has not been an issue of concern following disaggregation. The arrangements that prevailed under the previous version of the Vesting Contract were based on a net-back calculation. This precluded Verve from monopoly pricing – indeed, as documented in section 3.3, the arrangements led to a concentration of losses in Verve at a time when Synergy’s retail tariffs were fixed and not cost-reflective. Under the new Vesting Contract, pricing arrangements mimic a bilateral contract and allow for a more even spreading of risks between Verve and Synergy.

Efficiency, from the point of view of both Verve and Synergy (but not necessarily from the point of view of society) could be enhanced by vertical integration if it improves the ability of both Verve and Synergy to manage risk. Both generators and retailers face financial risks reflecting the volatility of electricity prices. For generators, the danger is that spot wholesale prices will be too low to allow the recovery of fixed costs; while for retailers, the danger is wholesale spot prices will be too high given fixed retail prices. While both parties can mitigate these risks through contracting, in the view of some businesses it is not possible to contract to an extent that mitigates these risks to an acceptable level, because information about future price outcomes is not complete. Vertical integration provides a means of managing these risks by internalising them between the retail arm and generation arm of the integrated entity.

The benefits that vertical integration can bring, in the form of improved risk management, to the firms that have become vertically integrated, are well documented and have been an important driver of vertical integration across the

NEM and in overseas jurisdictions. But the key question is to what extent these benefits are applicable to WA in the context of the proposed Verve-Synergy transaction. The main factors to take into account are that:

- vertical integration per se does not obviate the fact of Verve's relative uncompetitive position as a supplier of wholesale energy. As long as this remains the case, any gains hypothetically attributable to contracting efficiencies are likely to be overwhelmed by these broader cost factors. Any attempts by Synergy to contract preferentially with Verve would be internally inefficient, unless the higher costs could be passed on in the form of higher tariffs, in which case it would be socially inefficient; and
- moreover, the integrated entity is likely to be long in retail (i.e. have a larger retail position than generation position). This requires that Synergy, as the retail arm, procure part of its wholesale energy needs from independent sources. In the past, under the displacement contract, Synergy would have not been concerned about the source of its energy needs, provided this came from low cost sources. But with the ending of the displacement mechanism, Synergy may stay contracted (or source) its energy from Verve to a greater extent than efficient.

In sum, there is only very limited scope for efficiency gains from vertical integration, viewed either from the perspective of operational efficiencies of Synergy and Verve, or from the perspective of allocative efficiencies that benefit society as a whole.

#### **4.1.2 Effects on contestability and independent power supply**

There is no inherent logic linking vertical integration between generation and retail activities, on one hand, and negative effects on competition on the other. However, concerns may arise where vertical integration interacts with aspects of market structure and policy arrangements that affect the operation of the market. This is of particular importance in WA, where (as observed before) competition in both generation and retail is still a process under development.

The integration of Verve and Synergy may cause both parties to favour each other in contracting arrangements. The fact that integrated parties favour each other is not in and of itself a cause for concern in terms of competition. This is because if, the retail arm were to contract more with the upstream generator, that would free up the capacity of other generators to contract with other retailers. If under vertical integration, the retail arm favours its upstream generation arm, when the latter is relatively high cost, it would place itself at a competitive disadvantage, with the consequence that retail sales would be displaced (assuming sufficient contestability in the retail sector).

The difficulty in WA stems from the particular context within which Synergy and Verve operate. First, if the contestability of retail activities remains weak because

of a combination of Synergy's continued access to an exclusive franchise of customers, and tariffs that are not full cost reflective, independent generators will not be able to find retail counterparties which could dampen new entry or force exit.

Secondly, the government, as shareholder, may be willing to tolerate the short-run financial costs that might arise if Synergy contracts with Verve Energy even when it is not efficient, in the sense of minimising costs, to do so. It may tolerate this situation because of the weak state of competition in retail; and the possibility that preferential contracting between Synergy and Verve dampens competition in generation. In the long run, weaknesses in competition would allow the integrated entity to increase prices to recover any initial losses associated with inefficient contracting. To the extent that this recovery of initial losses comes on the back of a reduction in competition, society would be worse off through a loss of allocative efficiency.

From the perspective of the future development of competition, the re-aggregation could lead to a worsening of conditions for private sector participation, especially if other developments are taken into account. This includes the termination of the displacement mechanism. The Economic Regulation Authority has noted that:

The Authority has concerns about the Replacement Vesting Contract between Synergy and Verve. This contract lacks the pro-competitive features included in the original Vesting Contract, in particular the Displacement Mechanism and the associated information provision by Synergy to the market, i.e. the Displacement Statement of Opportunities. A significant proportion of new generation investment over recent years has been effectively underwritten by Synergy under the Displacement Mechanism. However, there is no such mechanism for private sector generation to tender for Synergy's load under the Replacement Vesting Contract. This will affect further private investment in electricity generation in the South West interconnected system (SWIS).<sup>22</sup>

The adverse effects of re-aggregation on competition would be further exacerbated if it is combined with a relaxation of Verve's capacity cap. It is not clear that this particular restriction will be relaxed. But it is possible that if Verve and Synergy are vertically integrated, the government could have stronger incentives to push for this relaxation if its prime concern is to improve the financial situation of Verve and Synergy.

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<sup>22</sup> ERA (2011), op.cit, p vii

## 4.2 Conclusion: proposals and public policy outcomes

The decision to disaggregate Western Power Corporation was undertaken in tandem with a number of other decisions aimed at developing competition and private sector participation in electricity sector activities in WA. The overarching motivation was to pursue a series of public policy objectives. These objectives have much in common with objectives pursued in other jurisdictions, even though some of the methods taken to achieve these objectives in WA have differed from those adopted in other markets, by virtue of the specific characteristics of WA.

These public policy objectives remain relevant today, and most of the concerns recently articulated by the Premier and some of his cabinet colleagues can be expressed in terms of these objectives. Thus, concerns about high prices can be expressed as concerns about allocative efficiency, and in terms of concerns about distributional and equity impacts. Similarly, concerns about the appropriate use of generation capacity can be expressed in relation to concerns about productive efficiency (i.e. is demand met from least-cost sources), and allocative efficiency.

The analysis in this report has found that when compared against the key public policy objectives sought by government, the disaggregation of Verve and Synergy is not a significant factor in explaining issues that have become matters of policy concern. It is not responsible for increasing prices, nor is it a factor in the poor financial performance of either Verve or Synergy. Indeed, to the extent that Verve's generation plant is relatively old and high cost compared to other plants, then the relative under-use of Verve's generation capacity relative to that of other plants is an efficiency-enhancing outcome. That outcome has been stimulated by the implementation of such mechanisms as the displacement mechanism in tandem with vertical integration.

It is therefore unlikely that the re-aggregation of Verve and Synergy will achieve public policy outcomes that are of interest to the government. Moreover, there is a strong likelihood that the re-aggregation could lead to worse public policy outcomes. This is not because vertical integration is bad per se, but rather because of the specific context in which the re-aggregation would take place.

The main concern is that vertical integration may lead to inefficient power procurement and contracting behaviour by Synergy, if it favours Verve despite the latter's high cost structure. In markets characterised by effective competition, such inefficient decisions would be penalised through competitive forces. The difficulty in the WA context is that, absent such competition, it is likely that the higher costs will be passed on as higher prices. This outcome could be exacerbated to the extent that re-aggregation dampens the prospects for competition in generation activities – because, for example, independent producers cannot find retail counterparties. While higher prices in these

circumstances may improve the financial performance of the integrated entity, they would also leave society as a whole, and energy users in particular, worse off.

It is also possible that the re-aggregation would have adverse consequences for the further development and deepening of competition and private sector participation in electricity supply activities, if combined with other policy measures. These include the termination of the displacement contract, and the relaxation of various restrictions on investment decisions by Verve and Synergy. Viewed from this perspective, the decision to re-aggregate Verve and Synergy should not be viewed in isolation from a decision as to what future development model is envisioned for the electricity supply industry in WA.

More specifically, given current policy and institutional settings, it is likely that vertical integration would herald a shift towards a more statist model of development, driven by public finance rather than private investment. This in turn implies that state finances would take on substantially more risk than at present. Given that one of the central motivations for reform was to improve the allocation of financial risks between state and private sector, the implications of a reversal of direction need to be closely scrutinised. These implications include the potentially adverse impact on ability of the state to finance and support the delivery of other public services that are less amenable than electricity to private provision.

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## Relative merits of re-aggregation versus disaggregation

