Inquiry into the Efficiency of Synergy's Costs and Electricity Tariffs

Issues Paper

11 August 2011

Economic Regulation Authority
WESTERN AUSTRALIA

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For further information, contact:

Economic Regulation Authority
Perth, Western Australia
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Foreword

The Treasurer of the State of Western Australia has requested that the Economic Regulation Authority (**Authority**) undertake an inquiry into the efficiency of Synergy's costs and electricity tariffs.

In accordance with the inquiry's Terms of Reference, the Authority will determine the level of tariffs that reflects Synergy's efficient costs in supplying electricity to its customers over the review period (2012/13 to 2015/16). The Authority must also consider the efficiency of Synergy's procurement of wholesale electricity and renewable energy certificates as these elements comprise a significant proportion of Synergy's overall expenditure.

In addition, the Authority is to determine whether any of the existing tariffs can be amalgamated and if regulated tariffs for large business customers should be phased out and if so, over what timeframe. The Authority is also to develop a methodology to regularly re-determine efficient cost-reflective tariffs and recommend a timeframe for ongoing reviews.

The purpose of this issues paper is to provide background information and outline the issues to be considered. It is intended to assist stakeholders to understand the nature of the issues under review and to facilitate public comment and debate. Throughout this issues paper, questions that may be of particular interest to stakeholders are raised and highlighted in boxes.

Submissions on any matters, including those raised in this issues paper, should be submitted by 4:00 pm (WST) on Friday, 9 September 2011 and addressed to:

publicsubmissions@erawa.com.au

or addressed to:

Inquiry into the Efficiency of Synergy's Costs and Electricity Tariffs
Economic Regulation Authority
PO Box 8469
Perth Business Centre
PERTH WA 6849
Fax: (08) 9213 1999

Section 1.4 of this issues paper provides further information regarding the process for making a submission. Interested parties and stakeholders will have a further opportunity to make submissions following the release of the Authority's draft report.

The final report for this inquiry is scheduled to be delivered to Government on 31 December 2011, following which the Government will have 28 days to table the report in Parliament.

I encourage interested parties to consider the Terms of Reference and matters raised in the issues paper and prepare a submission for the inquiry.

LYNDON ROWE
CHAIRMAN

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Summary of issues for this inquiry

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2) Should uniform tariffs, which are currently subsidised from cost-reflective levels, continue to be available for large, contestable business customers or should these be phased out? Please provide the reasoning behind your response.

3) How should the efficiency of Synergy's wholesale energy procurement be assessed? What are the indicators of an efficient wholesale procurement process?

4) How should the efficiency of Synergy's procurement of renewable energy certificates be assessed? What are the indicators of efficient procurement of renewable energy certificates?

5) What information can be included in Synergy's submissions to assist the Authority in determining efficient levels of operating and capital expenditure for Synergy?

6) What issues and risks should be taken into account when determining an efficient retail margin for Synergy?

7) Do the current service standards against which Synergy has to report provide a comprehensive picture of its retail performance? If not, what additional service standards would be useful and why?

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1 Introduction

The Treasurer of Western Australia gave written notice to the Authority, on 11 July 2011, to undertake an inquiry into the efficiency of Synergy's costs and electricity tariffs. The inquiry has been referred to the Authority under Section 32(1) of the *Economic Regulation Authority Act 2003*. This provides for the Treasurer to refer to the Authority inquiries on matters relating to regulated industries.[1]

1.1 Terms of Reference

The Terms of Reference for the inquiry are presented in Appendix A. The Terms of Reference require the Authority to consider and develop findings on:

- the efficiency of Synergy's operating and capital expenditure;
- the efficiency of Synergy's procurement of wholesale electricity; and
- the efficiency of Synergy's procurement of renewable energy certificates.

The Terms of Reference also require the Authority to determine the efficient cost-reflective level for each regulated tariff listed under the By-laws[2] for the review period 2012/13 to 2015/16, including:

- developing recommendations regarding the number of regulated electricity tariffs and whether any tariffs should be amalgamated; and
- taking into account the competitive markets within which Synergy operates and the current operating subsidy arrangements when considering the cost-reflective level of each tariff.

The Authority is also to develop a methodology to regularly re-determine the efficient cost-reflective level for each tariff and recommend a period for the regular review of cost-reflective tariffs. In doing so, the Authority is also to consider:

- whether regulated tariffs for contestable, large business consumers should be phased out, with reference to the competitive nature of this segment of the electricity market; and
- if regulated, large, contestable tariffs are to be phased out, provide recommendations on which tariffs should be phased out and over what timeframe.

The Terms of Reference require the Authority to prepare and release an issues paper to facilitate public consultation for the inquiry. The issues paper provides background information on Synergy and the issues under review and invites written submissions from industry, government and all other stakeholder groups, including the general community.

The Terms of Reference also provide for a second round of public consultation following publication of a draft report during the timeframe for the inquiry. The final report for the inquiry has to be delivered to the Treasurer by no later than 31 December 2011, after which the Treasurer has 28 days to table the report in Parliament.

[1] Economic Regulation Authority Act 2003, p19

[2] These are the *Energy Operators (Electricity Retail Corporation) (Charges) By-Laws 2006 – Schedule 1*

1.2 Background to the inquiry

Under the current uniform tariff policy, small-use residential and business customers across the State pay the same tariffs for electricity regardless of where they live. However, the revenue collected from these tariffs does not fully cover the costs of supplying electricity in Western Australia. The overall shortfall between uniform tariff revenue and the actual cost of supplying electricity is met through various subsidies.

In 2008/09, the Office of Energy (**OOE**) conducted a review of the Western Australian retail electricity market and published its findings in January 2009. The OOE report noted that, at the time, regulated residential retail tariffs had not increased since 1997/98. This was in contrast to the Eastern States which had, over the period 1997/98 to 2007/08, experienced significant increases in residential electricity prices ranging from 23 per cent to 69 per cent.[3]

The OOE report also considered that the move toward cost-reflective retail tariffs was essential to develop a competitive electricity retail market in the State. The report commented:

> "If retail tariffs do not reflect the cost of supplying electricity (including an appropriate margin), then retailing electricity will not be a viable business activity." [4]

Cost-reflective tariffs and competition in the electricity market help to ensure that energy resources are put to their best use. This is achieved by encouraging enterprise and efficiency within energy suppliers and sending appropriate price signals to customers to enable them to modify their energy usage.

In moving towards cost-reflective retail tariffs, customers have seen considerable tariff increases over recent years. The tariff increases for residential and selected commercial tariffs are shown in Table 1.1 below.

Table 1.1 Tariff percentage increases 2009/10 to 2014/15

Tariff	April 2009	July 2009	2010/11	2011/12	2012/13	2013/14	2014/15
Residential (A1)	10	15	25.9	5	5	12	12
Small business (L1)	5	10	25.9	5	5	12	12

Source: State Budget Paper No. 3 (2009/10 and 2011/12), pp. 276 and 286 respectively

This inquiry will determine cost-reflective tariffs for Synergy and, in doing so, inform the Government on the level of the subsidy required (if any) to meet the shortfall in revenue over the transition period. To determine the level of cost-reflective tariffs, the Authority will need to consider Synergy's operating and capital expenditure, procurement of wholesale electricity and procurement of renewable energy certificates.

1.3 Review process

The issues paper is intended to give sufficient background information to assist stakeholders understand the nature of the issues under review and to facilitate debate for this inquiry. For the first public consultation stage of the inquiry, the Authority invites

[3] Office of Energy (2009), Electricity Retail Market Review, Final Recommendations Report, p6

[4] Ibid.

submissions from stakeholder groups, industry, government and the general community on the matters raised by the Terms of Reference and the issues paper. Submissions are due by 4:00 pm (WST) on Friday, 9 September 2011. Submissions received from stakeholders will be considered by the Authority in its assessment.

Over the next few months, the Authority will review the efficiency of Synergy's operating and capital costs. It will also develop a financial model that collates the individual 'building blocks' that make up the revenue requirement of an efficient electricity retail company. The Authority will engage independent consultants to provide technical advice during the inquiry.

The building block methodology is traditionally used in the economic regulation of utility industries and is explained in more detail in section 4 below. From this analysis, the Authority will review the allocation of costs between different groups of customers to determine cost-reflective tariffs for each of Synergy's tariff classes. Following this, the Authority will combine its findings and comments into a draft report that will be published on the Authority's website. Public submissions will then be invited on the draft report.

The Authority will consider the public submissions received and conduct further modelling and research to finalise its findings and recommendations in the final report. The final report will be presented to the Treasurer by 31 December 2011, after which the Treasurer will have 28 days to table the report in Parliament.

In accordance with section 45 of the *Economic Regulation Authority Act 2003* (**Act**), the Authority will act through the Chairman and members in conducting this inquiry.

1.4 How to make a submission

Submissions on any matters raised in this issues paper or in response to any matters in the Terms of Reference should be in both written and electronic form (where possible) and addressed to:

Inquiry into the Efficiency of Synergy's Costs and Electricity Tariffs
Economic Regulation Authority
PO Box 8469
Perth Business Centre
PERTH WA 6849

Email: publicsubmissions@erawa.com.au
Fax: (08) 9213 1999

Submissions must be received by 4:00 pm (WST) on Friday, 9 September 2011.

Submissions made to the Authority will be treated as in the public domain and placed on the Authority's website unless confidentiality is claimed. The submission, or parts of the submission in relation to which confidentiality is claimed, should be clearly marked. Any claim of confidentiality will be dealt with in the same way as is provided for in section 55 of the Act.

The receipt and publication of a submission shall not be taken as indicating that the Authority has knowledge, either actual or constructive, of the contents of a particular

submission. No duty of confidence will arise for the Authority where the submission, in whole or part, contains information of a confidential nature.

Further information regarding this inquiry can be obtained from:

Bruce Layman
Director, References and Research
Economic Regulation Authority
Ph: (08) 9213 1900

Media enquiries should be directed to:

Richard Taylor
Riley Mathewson Public Relations
Ph: (08) 9381 2144

2 Background information on the electricity industry in Western Australia

In 2003, the Government embarked on a programme to reform the State's electricity industry. These reforms were intended to create a competitive energy market to encourage private sector investment, increase the stability of electricity supply and ultimately improve service for customers.

2.1 Electricity industry structure

One of the Government's key electricity market reforms was to disaggregate Western Power Corporation, the (then) vertically integrated, state-owned electricity supplier, into four Government Trading Enterprises (**GTEs**). Whilst still government owned, a GTE is managed through an independent Board. Typically, GTEs derive a substantial proportion of their revenue from the sale of their product or services and operate in markets increasingly open to competition from private enterprise.

The *Electricity Corporations Act 2005* established the following GTEs to be operational from 1 April 2006:

- Electricity Generation Corporation (Verve Energy);
- Electricity Networks Corporation (Western Power);
- Electricity Retail Corporation (Synergy); and
- Regional Power Corporation (Horizon Power).

Verve Energy, Western Power and Synergy operate predominantly within the South West Interconnected System (**SWIS**). The SWIS is the largest, interconnected electricity transmission and distribution network in Western Australia and stretches from Kalbarri in the north to Kalgoorlie to the east and Albany to the south. The network supplies electricity to homes and businesses in the more densely populated areas of the State. In contrast, Horizon Power manages and is accountable for electricity supply outside of the SWIS.[5]

2.1.1 Verve Energy

Verve Energy is the state-owned electricity generator and Western Australia's largest energy producer. In 2009/10, Verve Energy generated 60 per cent of the electricity produced in the SWIS.[6]

Verve Energy owns and operates four major power stations in Kwinana, Cockburn, Pinjar and Muja. Another power station in Collie is owned by Verve Energy but operated by a private company. Verve Energy also owns a number of smaller power stations located in Mungarra, West Kalgoorlie, Geraldton, and has a joint venture power station at the Worsley alumina refinery near Collie. Verve Energy's power stations in the SWIS have the capacity to produce 2,967 MW of electricity.

[5] The exception is Rottnest Island where the Rottnest Island Authority manages the entire electricity supply process. Background information on Horizon Power can be found in the Authority's Inquiry into the Funding Arrangements of Horizon Power final report

[6] Verve Energy (2010), Annual Report p10

Verve Energy's portfolio also includes renewable energy sources throughout Western Australia with wind farms in Albany, Esperance, Bremer Bay, Hopetoun, Denham, Kalbarri and Coral Bay. It also operates a solar facility in Kalbarri and a pilot biomass plant in Narrogin.[7]

Verve Energy participates in the Wholesale Electricity Market (**WEM**) and competes with privately owned electricity generators in the SWIS to sell electricity to retailers. The majority (90 per cent) of Verve Energy's electricity is contracted to Synergy, the state-owned electricity retailer.[8] Outside the SWIS, Verve sells electricity from wind and wind-diesel systems to Horizon Power.

2.1.2 Western Power

Western Power is responsible for the transmission and distribution of electricity in the south west of Western Australia, including Perth. Consisting of nearly 96,000 km of powerlines within the SWIS, Western Power's electricity network is one of the largest isolated networks in the world. Western Power transports electricity from power stations to towns and cities and then distributes it to 800,000 residential connections, 100,000 small to medium business connections, 85 major commercial customers and the 225,000 streetlights that are connected to the network.[9]

Western Power is responsible for operating and maintaining this network and restoring power after interruptions. It is also tasked with developing and extending the network to meet the needs of customers and developers.

Within the SWIS, companies who produce electricity (generators) and companies who sell electricity (retailers) all have access to Western Power's network. Electricity retailers buy power from electricity generators and pay Western Power a fee for transporting that electricity across the network to their customers. These 'network charges' are determined as part of a regular review of Western Power's network access arrangements.[10] To date, this review has been undertaken by the Authority every three years.

2.1.3 Synergy

Synergy is responsible for purchasing and retailing electricity to approximately one million industrial, commercial and residential customers in the SWIS. It is the largest electricity retailer and sells around 80 per cent of the electricity sold in the SWIS, receiving approximately $2.2 billion in revenue each year.[11] Synergy's key activities include energy trading (purchasing), marketing, sales, customer service, billing and payment processing.

Synergy purchases the majority of the electricity generated by Verve Energy. These purchases are covered by a vesting contract or by commercial contractual arrangements.

Synergy also has to purchase a given percentage of electricity from renewable resources in line with the Federal Government's Renewable Energy Target that requires 20 per cent of Australia's energy to come from renewable sources by 2020.[12] Electricity generated from renewable resources, such as from wind farms, geothermal sources, solar or wave

[7] Verve Energy (2010), website www.verveenergy.com.au

[8] Verve Energy (2010), Annual Report p10

[9] Western Power (2010) Annual Report pp. 3 and 20

[10] ERA website, www.erawa.com.au access arrangements

[11] Synergy (2010), Annual Report p6

[12] This requirement also applies to the other electricity retailers in Western Australia.

technology typically does not involve burning carbon and so avoids generating greenhouse gases. If Synergy cannot buy the required percentage of electricity from renewable resources it is legally obliged to purchase renewable energy certificates to cover the shortfall, or incur a penalty charge.

2.1.4 Horizon Power

Horizon Power is responsible for generating (or procuring), transmitting, distributing and retailing electricity to residential, industrial and commercial customers in regional Western Australia (outside the SWIS). This is achieved through 34 islanded or isolated electricity systems that power towns and two interconnected systems: one in the Pilbara (the North West Interconnected System) and a smaller regional system that connects the towns of Kununurra and Wyndham.[13]

Horizon Power operates from a head office in Karratha in the Pilbara region and has additional offices in Kununurra, Broome, Carnarvon, Esperance and Perth.

Horizon Power generates around 13 per cent of the electricity utilised over its supply area and purchases the remaining energy (87 per cent) from privately owned generators including a small percentage of renewable energy from Verve Energy. Throughout its supply area, energy is generated from various sources including natural gas, diesel and renewable energy such as hydro, wind farms and solar. Horizon Power then distributes and retails electricity to 43,000 customer connections.

Horizon Power's customers range from those in remote, isolated communities with less than 100 people, to residents and small businesses in regional towns to major mining companies in the Pilbara and Mid West.[14]

2.2 The wholesale electricity market (WEM)

In 2006, another key Government reform was to establish a Wholesale Electricity Market to operate within the SWIS.

2.2.1 History of the WEM

The WEM was created with the objectives of:

- promoting the economically efficient, safe and reliable production and supply of electricity;
- encouraging competition amongst generators and retailers;
- facilitating the efficient entry of new competitors (generators and retailers);
- avoiding discrimination against particular types of energy technologies (e.g. renewables);
- minimising the long term cost of supplying electricity; and
- encouraging the management of the quantity and timing of energy consumption.[15]

[13] Horizon Power (2010), Annual Report p6

[14] ERA (2011), Final report into the Funding Arrangements of Horizon Power

[15] IMO (2006), The South West Interconnected System Wholesale Electricity Market: An Overview, pp. 6-7

At the commencement of the WEM, a number of measures were put in place to facilitate the introduction of competition into the SWIS and to mitigate the market power of the incumbent generator and retailer, Verve Energy and Synergy respectively. These measures included:

- The Vesting Contract (2006) with a Displacement Mechanism[16] which had the objective of gradually reducing the level of wholesale electricity supplied from Verve Energy to Synergy;
- Verve Energy's generation capacity was capped at 3000 MW;
- Verve Energy was restricted to operating as an electricity wholesaler and was unable to become an electricity retailer until at least 2013 (extendable to 2016 – the 'Restriction'); and
- Synergy was unable to generate electricity until 2013 (extendable until 2016 – the 'Prohibition').

The original Vesting Contact (2006) was a bilateral contract for the wholesale supply of energy and electricity capacity from Verve Energy to Synergy. The amount of energy and electricity capacity[17] traded under the original Vesting Contract (2006) reduced over time with the operation of the Displacement Mechanism and as contestable[18] customers moved to alternative retailers and Synergy's inherited retail contracts expired. Synergy also had the option to commercially negotiate wholesale electricity supply arrangements outside of the original Vesting Contract (2006) with any generator, including Verve Energy.

From 2007/08 to 2010/11, Verve Energy's share of total supply capacity[19] in the WEM fell from around 77 per cent to 60 per cent while Synergy has sourced an increasing quantity of electricity from private generators.

The Displacement Mechanism also played a role in providing information to the market[20] and facilitated the entry of new private generators. The value of private investment in electricity generation since 2006 is around $2.6 billion.[21]

2.2.2 Operation of the WEM

The operation of the different elements of the WEM is managed by the Independent Market Operator (**IMO**) and monitored by the Authority. The Authority provides an Annual Report to the Minister for Energy commenting on the effectiveness of the market.[22]

[16] Under the Displacement Mechanism, Synergy's electricity load volumes were gradually exposed to competitive sourcing, with Verve Energy and independent power producers able to tender for these volumes.

[17] The supply of energy describes the average power output of electricity over a period of time and is measured in mega-watt hours (MWh). The capacity of a generator describes the maximum instantaneous electricity output that the generator can produce and is measured in mega-watts (MW).

[18] Contestable customers consume more than 50 MWh per annum and can choose their electricity retailer.

[19] Supply capacity includes both generation and demand side management.

[20] The Displacement Mechanism included requirements to publish information about demand, vesting prices, volumes and Synergy's displacement requirements.

[21] Includes private investment by Griffin Energy (Bluewaters 1 and 2), ERM Power (NewGen Kwinana and Neerabup), Perth Energy (Kwinana Swift), UBS International Infrastructure Fund and the Retail Employees Superannuation Trust (Collgar wind farm, Tesl Corporation (diesel units) and Merredin Energy (Merredin Power Station.

[22] ERA website www.erawa.com.au market report

The WEM has two components, an energy market and a capacity market. The energy market includes bilateral contracts, the Short Term Energy Market (**STEM**) and the Balancing market.

Capacity market

The capacity market operates under the Reserve Capacity Mechanism (**RCM**) and is intended to work together with bilateral contracts, the STEM and the Balancing market to promote investment in the optimal quantity of generation capacity to meet demand in the SWIS.

Generating plant investment decisions are based on a host of factors including projected price and quantity values resulting from the RCM, such as the Maximum Reserve Capacity Price (**MRCP**),[23] energy and fuel prices, carbon pricing, other business variables and factors outside the WEM. These factors are designed to work together to provide incentives to investors in generation plant to achieve the right mix, timing and location of new generation capacity and therefore should not be considered in isolation.

The RCM was designed to promote investment in sufficient capacity to meet demand in the SWIS and operates on a two-year-ahead cycle. Each year, the IMO prepares an assessment of the amount of capacity that is required to meet the forecast demand in a future Capacity Year. The RCM provides a guarantee of payment to investors providing certified capacity (Capacity Credits). The capacity payment is based on the MRCP which is proposed annually by the IMO and approved by the Authority. For the 2013/14 Capacity Year, the MRCP is $240,600 per MW.[24] In return for receiving capacity payments, generators (and Demand Side Management (**DSM**) providers[25]) are required to offer their capacity into the market at all times (unless otherwise approved, e.g. undergoing scheduled maintenance).

The overall capacity required for each year, the Reserve Capacity Requirement, is set by the IMO so as to be sufficient to meet the forecast annual peak demand even if the largest single generator was to be unavailable. The IMO assigns Capacity Credits to generators and DSM providers[26] (e.g. Water Corporation, Energy Response) over and above the level of the Reserve Capacity Requirement to meet the energy demands of the SWIS and create a capacity 'cushion'.[27] Generators and DSM providers can trade their Capacity Credits with retailers and in doing so receive a source of revenue. The trade in Capacity Credits occurs regardless of whether the electricity represented by the credits is actually sold. This has the effect of having generation capacity available to provide energy (even when it is only required on a few occasions) and provides a revenue incentive for investment in generators that may only operate for a few hours each year.

[23] If there is a shortage of capacity offered into the market for a given Capacity Year, the IMO can run an auction to procure additional capacity, which would then be paid at the MRCP. An auction has not occurred to date. When there is surplus capacity, the actual capacity payment (per MW) is adjusted to 85 per cent of the MRCP. This capacity price is known as the Reserve Capacity Price.

[24] ERA (2011), Decision on the Maximum Reserve Capacity Price proposed by the Independent Market Operator for the 2013/14 Reserve Capacity Year

[25] Demand Side Management providers are generators or large electricity users who agree to curtail their electricity load by a defined amount upon request and in return for payment.

[26] Capacity payments per MWh are equivalent for the certified capacity of generators and DSM providers.

[27] Independent Market Operator (2009), Reserve Capacity Mechanism Progress Report, p4

In the capacity market, the IMO assigns retailers an Individual Reserve Capacity Requirement (**IRCR**)[28] obligation, based on their loads associated with peak usage. As a retailer (without generation assets), Synergy can procure Credits to settle its IRCR through contracts with generators and DSM providers,[29] or may obtain uncontracted Credits that are traded via the IMO at an administered price, which is set at the MRCP.

Energy market

The majority of electricity traded in the WEM is through bilateral supply contracts negotiated between generators and retailers. These contracts can have terms of a few hours or several years. Generators inform the IMO as to how much energy they will be supplying and how much the retailers will consume for each half hour of the following day. This information is used by System Management for the next day's scheduling of electricity generation. Arrangements for intermittent generators, such as wind farms, are slightly different as their output is less predictable.

The Short Term Energy Market (**STEM**) complements wholesale bilateral contracts by providing a forward (one day) energy market to allow generators to sell any excess capacity and for retailers to purchase additional energy at specified times. The STEM also allows those who do not have bilateral contract arrangements to participate in the electricity market.

The difference between the amount of electricity supplied and demanded at any point in time is settled (physically and financially) in the Balancing market. The IMO undertakes the financial settlement function and transfers payments between market participants.

Overall, the Authority has reported that the WEM has generally operated effectively since commencement and that a number of new entrants are established in the market bringing increased capacity and greater diversity in the sources of electricity generation. The share of capacity provided by independent power producers will have increased from 11 per cent in 2005/06 to 44 per cent in 2012/13.[30] An increased level of competition has also been observed through increased volumes being traded in the STEM and increased bilateral contracting occurring between parties other than Synergy and Verve Energy.

2.3 Electricity industry costs

The costs of supplying electricity within Western Australia are incurred at each stage of the supply chain. Outside of the SWIS, all of these costs are incurred by Horizon Power, which operates as a vertically integrated electricity supplier.[31] Within the SWIS, the supply chain was separated at disaggregation and supply costs are incurred as follows:

- Cost of generation – incurred by Verve Energy and independent power producers;
- Costs of transmission and distribution – incurred by Western Power; and
- Costs of retailing – incurred by Synergy and other retailers.

[28] To fund capacity that is procured through the Reserve Capacity Mechanism, Market Customers are given an IRCR obligation. The IRCR is a quantity of capacity (expressed in MW) which represents that customer's contribution to the total system load during peak times.

[29] Synergy is registered in the WEM for the provision of DSM and has certified Capacity Credits of 40 MW for the 2011/12 Capacity Year.

[30] ERA (2011), 2010 Wholesale Electricity Market Report for the Minister for Energy, p53

[31] This also applies to the Rottnest Island Authority for energy supply on Rottnest Island.

With the move to cost-reflective tariffs (see section 1.2 above) the income from electricity tariff revenue will increase as tariffs are raised. In addition, the State Government introduced a 'tariff adjustment payment' (via a Community Service Obligation (**CSO**)) to Synergy in 2009/10. This CSO is set at a level to cover the shortfall between electricity revenue and supply costs.

Synergy is the main retailer in the SWIS, with around 80 per cent of market share (in terms of energy sold).[32] From the tariff revenue it collects, Synergy covers the costs of its retailing activity, which includes a suitable margin or return on investment.

A significant element of Synergy's operating costs is the wholesale procurement cost of electricity. Although a proportion of Synergy's wholesale electricity requirement is sourced, at competitive rates from the wholesale market, the majority of Synergy's electricity requirement is provided by Verve Energy under the vesting contract.

Another element of the costs incurred by retailers are the network charges payable to Western Power for access to the SWIS transmission and distribution network that delivers electricity to retail customers. The level of these network costs is set by the Authority through an Access Arrangement[33] to cover Western Power's efficient cost of operation that also includes a suitable return on investment.

Western Power's distribution network charge includes the Tariff Equalisation Contribution (**TEC**). The annual amount of the TEC is determined by government and published in the *Government Gazette.* The TEC payments collected through network distribution tariffs are collated within the Tariff Equalisation Fund (**TEF**). This fund was set up in support of the uniform tariff policy so that small use customers in regional Western Australia pay the same electricity tariffs as SWIS customers. The additional costs incurred by Horizon Power in supplying electricity to regional Western Australia are funded from the TEF.

Synergy is the largest of Western Power's wholesale distribution customers. Synergy pays its network distribution charges out of the revenue collected from households and small to medium business customers in the SWIS. In 2010/11, a CSO payment of $282.9 million[34] was made to Synergy and the gazetted TEC amount was $175.7 million.[35]

2.4 Renewable energy generation

Federal and State Government policies are driving the increases in the proportion of electricity generated from renewable sources. This is in order to reduce carbon emissions in accordance with commitments under the Kyoto Protocol.[36] Electricity generated from burning fossil fuels such as coal, oil and gas releases carbonous gases, such as carbon dioxide, which contribute to global warming. In contrast, electricity generated from sources such as wind, solar, geothermal, wave and tidal typically have zero carbon emissions. Therefore, increasing renewable energy as a proportion of all energy produced is intended to reduce overall carbon emissions.

In 2003/04, the consumption of renewable energy in the SWIS was one per cent of the total energy generated. By 2006/07, the renewable percentage had risen to 5.4 per cent.

[32] ERA (2011), 2010 Annual Wholesale Electricity Market Report for the Minister for Energy, pvii

[33] ERA website, www.erawa.com.au access

[34] Department of Treasury and Finance (2011), 20011/12 Budget Paper No. 3, Appendix 8, p293

[35] Government Gazette (2009), No. 208, 17 November 2009, p4639

[36] For more information www.unfccc.int Kyoto

By 2008/09, the percentage of renewable energy in the SWIS was five per cent of total electricity generated.[37]

There are two key Federal Government climate change policy instruments; a Renewable Energy Target (**RET**) and proposed Clean Energy Plan. The Clean Energy Plan proposes a carbon tax from 1 July 2012 for three years before transitioning to a full emissions trading scheme.[38] In 2009, the Federal Government committed to an increased RET of generating 20 per cent of Australia's electricity supply from renewable energy sources by 2020.[39] In January 2011, the RET split into two parts; the Large-scale Renewable Energy Target (**LRET**) and the Small-scale Renewable Energy Scheme (**SRES**).

Under the LRET/SRES framework liable entities[40] are required to:

- procure and surrender annually, Large-scale Generation Certificates (**LGCs**) to meet the Renewable Power Percentage; and
- procure and surrender quarterly, Small-scale Technology Certificates (**STCs**) to meet the Small-scale Technology Percentage.

For 2011, the Renewable Power Percentage (**RPP**) was set at 5.62 per cent of the total estimated electricity consumption in the calendar year, which is equivalent to 10.6 million LGCs. The Small-scale Technology Percentage (**STP**) was set at 14.8 per cent of the total estimated electricity consumption for 2011, equivalent to 27 million STCs. As a liable entity in the SWIS, Synergy is required to procure and surrender LCGs and STCs in line with the published percentages.

Renewable energy generators (who may also be retailers) create certificates and liable entities (typically retailers) procure certificates in various ways including:

- on-line using the Renewable Energy Certificate (**REC**) Registry which is provided by the federal Office of the Renewable Energy Regulator (**ORER**); and
- via bilateral contracts.

Each LGC or STC certificate is equivalent to 1 MWh of renewable energy generated or 1 MWh of fossil fuel energy foregone. The price of certificates varies according to the supply of, and demand for, certificates at any particular time.[41] If liable entities do not purchase and surrender sufficient certificates to meet their liabilities then they incur a penalty of $65 per MWh.

On its website, the ORER comments that:

> "The trade in these certificates thereby provides a financial incentive for investment in renewable energy power stations, and for the installation of solar water heaters, heat pumps, and small-scale solar panel, wind and hydro systems."[42]

In March 2011, the ORER reported that nearly 100 per cent of electricity retailers in Australia complied with the renewable energy target scheme in 2009. Compliance was

[37] Office of Energy (2010), Renewable Energy Handbook Western Australia 2010, p12

[38] Multi-party Climate Change Committee www.pm.gov.au carbon and The $23 tonne/CO2 equivalent was announced 10 July 2011 in the Federal Government's Clean Energy Package

[39] This is equivalent to 45,000 GWh www.climatechange.gov.au

[40] These are usually electricity retailers

[41] Alternatively, STCs can be purchased through the STC clearing house, also managed by ORER, for a fixed price of $40 per certificate

[42] ORER website www.orer.gov.au/publications/lret-sres-basics.html

measured at 99.96 per cent with just 76 liable parties being assessed as failing to surrender sufficient renewable certificates to meet their liability.[43]

Further details on the LRET and SRES are given in Appendix D.

2.5 Renewable energy tariffs

There are additional tariff related incentives to encourage households, non-profit organisations and educational institutions to install renewable energy systems. Synergy offers the Renewable Energy Buyback Scheme (**REBS**) and a Feed-in Tariff to certain groups of customers. To be eligible for both schemes customers are required to have a bi-directional meter fitted[44] at their own expense, which is capable of measuring electricity flowing into and out of the property.

2.5.1 REBS

REBS is available to residential customers, non-profit organisations and educational establishments who have installed renewable energy systems. The scheme enables Synergy to buy net renewable energy from customers. Under the REBS scheme customers are billed for the net amount of energy imported from the SWIS and credited for the amount of net renewable energy exported to the SWIS. The price at which Synergy buys net renewable energy for various tariff classes is shown on its website.[45] REBS is managed by Synergy and the buy back rate offered reflects the wholesale value of electricity to Synergy. The buy back rate is reviewed annually.

2.5.2 Feed-in Tariff

The Feed-in Tariff scheme was introduced by the State Government on 1 August 2010 and is administered by Synergy and Horizon Power. This tariff is only available to residential customers and offers a rate of 20 cents per kWh[46] for the net export of electricity to the SWIS. The rate is offered for 10 years and acts as an additional financial incentive to encourage residential customers to install small-scale renewable energy systems.

The 20 cent per kWh was reduced down from 40 cents per kWh from 1 July 2011. On its website, the Office of Energy comments on the lower tariff level:

> '..the benefit householders receive is more in line with the cost of their renewable energy systems'.[47]

The 20 cent per kWh rate is also commensurate with the discounted weighted average tariff (**DWAT**) for the SWIS calculated by the Authority as part of its recent inquiry into the funding arrangements of Horizon Power. The Authority calculated a DWAT of 19 cents per kWh (real as at 30 June 2009) or 20 cents per kWh (nominal). The DWAT for the SWIS was calculated as an average cost-reflective tariff against which to compare cost-reflective tariffs across Horizon Power's supply area.

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[43] ORER (2011), Media release 'Strong compliance by liable entities'

[44] Some customers may just require their existing meter to be reprogrammed.

[45] Synergy website, www.synergy.net.au/docs/rebs_pricing_schedule.pdf

[46] This is the rate for renewable systems installed after 1 July 2011; for systems installed prior to this date the rate is 40 cents per kWh.

[47] Office of Energy (2011), as at May 2011, www.energy.wa.gov.au feed-in tariff

The Government also announced that the scheme will close when the total capacity of renewable energy systems installed under the Feed-in Tariff scheme reaches 150 MW. Almost 90MW of capacity have been accepted into the scheme so far.[48]

[48] Ibid.

3 Outline of Synergy's operations

This section gives an overview of Synergy's income, costs and current standards of service. Questions on Synergy's operations that may be of interest to stakeholders are shown in boxes throughout the section.

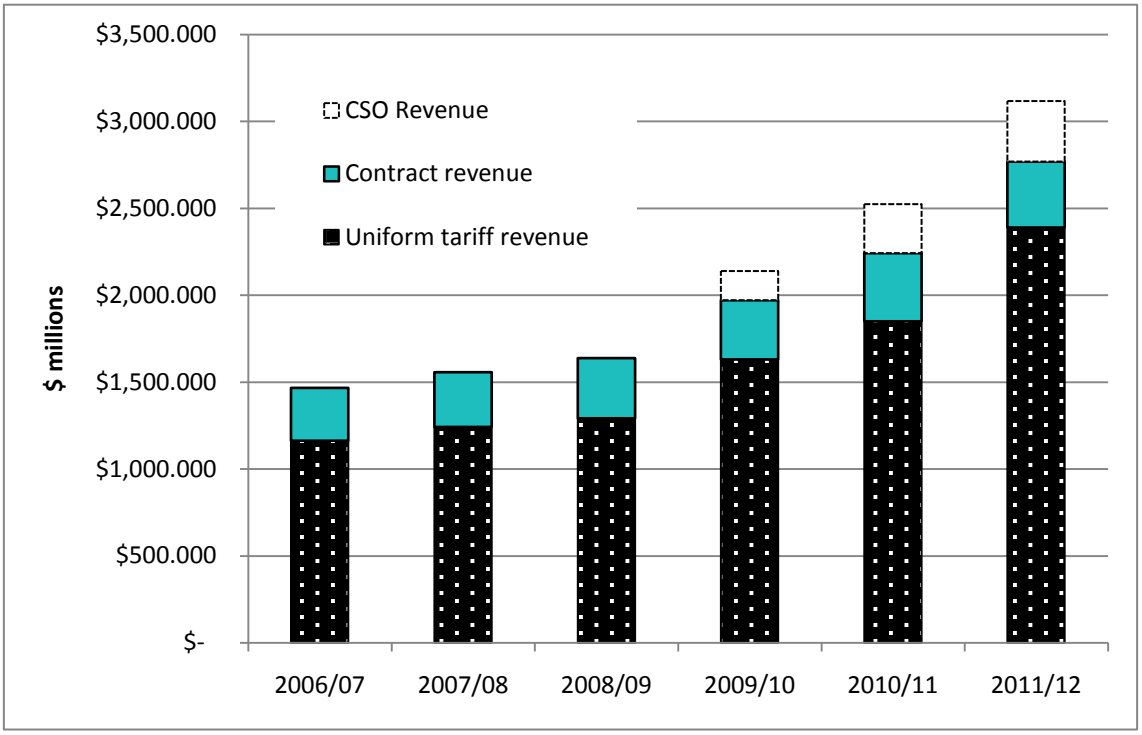
3.1 Sources of income

Synergy currently receives income from a variety of sources including:

- uniform or regulated tariff revenue;
- Community Service Obligation payments (**CSO**);
- revenue from large, commercial electricity contracts;
- other energy revenue, e.g. from gas sales; and
- other income, e.g. interest received.

Each of these elements is discussed in more detail in the following sections. Synergy's actual revenue from 2006 to 2011 and budgeted revenue for 2011/12 is shown in Figure 3.1 below.

Figure 3.1 Synergy's actual and budgeted income (electricity only) ($ million nominal)



Source: Synergy (email 15 July 2011).

Within the Western Australian electricity market customers are grouped by their electricity consumption as follows:

- Customers who consume less than 50 MWh of electricity per annum.
  - These are franchise customers and are charged regulated tariff rates. They are also referred to as non-contestable customers as they cannot choose

their electricity retailer and must be supplied by Synergy. Typically these are residential and small business customers.

- Customers who consume 50-160 MWh of electricity per annum. This quantity of electricity consumption equates to an annual electricity charge of between $12,000 and $40,000.[49]
  - These customers are also franchise customers as they are eligible for regulated tariffs. However, this group of customers are also called contestable customers as they are able to choose their retailer and in doing move out of regulated tariffs.
  - Despite having a choice of retailer, the majority of contestable customers choose to remain on regulated tariffs through Synergy. The main reasons for this are that Synergy is the incumbent supplier and, without clear incentives, customers are unlikely to change supplier. The lack of cost-reflective tariffs in the SWIS also means that it can be more advantageous for customers to remain on subsidised uniform tariffs. As such, Synergy retails to 100 per cent of all contestable residential customers in the SWIS and 86 per cent of contestable business customers.
- Customers who consume more than 160 MWh of electricity per annum. This is equivalent to an annual charge of above $40,000.
  - These customers are not franchise customers as they are not eligible for regulated tariffs.
  - Instead these contestable customers bilaterally negotiate their electricity supply and enter into a customised retail contract with Synergy or any other retailer.

The revenue received from these different customer groups is discussed below.

3.1.1 Uniform tariffs

The tariffs that Synergy charges its customers are listed in the *Energy Operators (Electricity Retail Corporation) (Charges) By-Laws 2006 – Schedule 1*. The amounts for each tariff are set by the Minister for Energy and listed annually in the *Government Gazette*. A full list of the current tariffs and descriptions is shown in Appendix B.

With the exception of the streetlight tariff (W1), uniform tariffs are comprised of a fixed daily charge (regardless of whether electricity is used or not) and a volumetric charge per unit of electricity consumed.

The 13 tariffs can be subdivided into those for residential and commercial customers and also subdivided into those with flat volumetric rates or variable volumetric rates. Flat volumetric rates remain the same regardless of when electricity is consumed. Variable volumetric rates differ depending upon the time of day that electricity is used or the customer's demand for electricity. These groupings are shown in Table 3.1 below.

[49] Synergy (2011), email from Synergy to ERA dated 8 April 2011

Table 3.1 Uniform tariff groupings

Tariff category	Volumetric charge Flat rate	Volumetric charge Varies with time of day or demand
Residential tariffs	A1	B1
Commercial tariffs		
- **Low/medium voltage**	L1, L3	R1, R3, S1
- **High voltage**	M1	T1
Other	C1, D1, K1, W1, Z1	

Source: ERA analysis

Synergy's tariff categories

A1 is the standard residential tariff charged to most households (this assumes the amount of electricity supplied to the premise is less than 50 MWh per annum).

B1 is only available for residential water heating during a six hour period from 11 pm to 6 am.

L1 and L3 are general business tariffs. L1 is applied if the business consumes less than 50 MWh per annum and L3 is applied if consumption is greater than 50 MWh per annum.

M1 is also a business tariff but for those businesses that require electricity supplied at a higher voltage (6.6 kV to 33 kV).

R1 and R3 are time of use tariffs for businesses, compromising a higher volumetric charge for electricity consumed on peak compared to a lower off peak charge. This is beneficial for businesses who consume more than 20-30 per cent of electricity during off peak periods. R1 is applied if the business consumes less than 50 MWh per annum and R3 is applied if consumption is greater than 50 MWh per annum.

S1 is a demand related tariff for larger business customers who utilise electricity more efficiently as measured by a power factor greater than 0.8.

T1 is similar to S1 but is applied to those businesses that require electricity supplied at a higher voltage (6.6 kV to 33 kV).

C1 and D1 are only available for charitable or benevolent organisations.

K1 is used where the premise is dual purpose, for example a residence above a retail premise or a home business, where the wiring is not separate and so residential and commercial electricity use cannot be independently metered.

W1/Z1 is for the electricity consumed by traffic lights/streetlights respectively. This is charged to the relevant Local Council or Main Roads Western Australia depending upon where the traffic lights/streetlights are situated.

The introduction of 'time of use' and 'demand related' tariffs helps to send appropriate price signals to customers regarding the cost of supplying electricity at peak times compared to off peak times. This enables customers to moderate their peak electricity use, for example by residential customers running washing machines or dishwashers in off peak periods.

Synergy operates a 'SmartPower' tariff SM1[50] for residential customers where differential volumetric tariffs are charged at certain times over a 24 hour period. To be eligible for these rates a compatible meter must be installed at the customer's premises which is capable of recording electricity consumption over given periods. This meter is installed at the customer's expense.[51]

The uniform tariffs listed above generate the majority of Synergy's income. However, as uniform tariffs are not yet at cost-reflective levels there is a shortfall between the income received and the cost of supplying electricity. This shortfall has been funded, since 2009/10, by a CSO payment. This is discussed in more detail in section 3.1.2 below.

Under the current uniform tariff policy, regulated tariffs are also available for business customers. These tariffs apply to both non-contestable business customers using less than 50 MWh per year (L1) and also to contestable business customers using 50 to 160 MWh per year (or annual electricity bills of $12,000 to $40,000) (L3). A typical customer in this range would be a medium-sized manufacturing or engineering company.

As a contestable customer can choose their electricity retailer, the retail market for contestable customers is considered competitive. However, Synergy retails to over 80 per cent of contestable business customers and charges uniform tariff rates. Western Australia is the only state that regulates tariffs for large contestable business customers.

The Office of Energy's 2009 Electricity Retail Market Review recommended that tariffs for contestable customers move to cost-reflective levels in the SWIS from 2009/10. The reasons for this were given as:

- large electricity customers are generally in a superior position (compared to small use customers) in terms of the incentive, expertise and capacity to manage their electricity consumption and negotiate preferential terms with alternative electricity retailers;
- removal of the unnecessary costs to government and industry in setting and commenting on price determinations for these regulated tariffs; and
- retailers will have an added incentive to compete for customers that consume significant quantities of electricity.[52]

However, tariffs for medium to large contestable business customers continue to remain on a 'glide path' to cost-reflective levels. These are the cost-reflective levels calculated by the OOE in 2009 and published in its report.[53] The latest assumed glide path for selected contestable tariffs is shown in Table 3.2 below.

[50] The SmartPower tariff has been introduced by Synergy and is not a regulated uniform tariff under the By-Laws.

[51] Synergy (2011), www.synergy.net.au 'Standard Electricity Prices and Charges SWIS Effective 1 July 2010 (in some cases, customers can have their existing meter reprogrammed)

[52] OOE (2009), Electricity Retail Market Review, p34

[53] Ibid.

Table 3.2 Contestable tariff glide path (annual percentage increases) to the cost-reflective tariff levels calculated by the OOE in 2009

	Annual percentage increases			
Tariff	**2011/12**	**2012/13**	**2013/14**	**2014/15**
Medium business (L3)	29.8	6.7	1.9	6.8
Medium business (R3)	19.7	2.9	1.2	5.6
Large business (M1)	19.6	3.2	4.7	6.2
Large business – low voltage (S1)	12.5	3.9	1.0	5.6
Large business – high voltage (T1)	13.9	5.1	0.7	5.5

Source: Department of Treasury and Finance 2011/12 Budget Paper No. 3, Appendix 8, p286

As part of this inquiry and in line with the Terms of Reference, the Authority will consider whether regulated tariffs for large contestable customers should be phased out and, if so, over what timeframe.

3.1.2 Customer Service Obligation (CSO) payments

CSO payments are funds from government to provide for specific rebate schemes or funding shortfalls. A summary of Synergy's CSO's from 2010/11 to 2014/15 is shown in Table 3.3 below.

Table 3.3 Subsidies received by Synergy ($ million nominal)

Subsidies	**2010/11**	**2011/12**	**2012/13**	**2013/14**	**2014/15**
	Estimated actual	**Estimated budget**	**Forward estimate**	**Forward estimate**	**Forward estimate**
Air conditioning allowance	0.1	0.1	0.1	0.1	0.1
Charitable organisation rebate	1.2	1.5	1.6	1.7	1.8
Dependant child rebate	11.6	12.6	13.6	15.7	18.1
Energy rebate	36.4	40.0	43.1	49.5	56.8
Feed-in Tariff	13.0	24.0	29.8	30.3	30.3
Tariff adjustment payment	282.9	349.6	346.5	194.6	101.9
Hardship package	4.3	11.4	13.6	11.2	13.8
Total	**349.6**	**439.2**	**448.2**	**303.1**	**222.8**

Totals may not add due to rounding.

Source: Department of Treasury and Finance, 2011/12 State Budget Paper No. 3 – Fiscal and Economic Outlook, Appendix 8, p293

The total annual subsidy represents around 11 per cent of Synergy's total income (2009/10 to 2011/12).

The largest of the subsidies is the 'tariff adjustment payment' which funds the 'glide path' that moves uniform tariffs to the level of cost-reflective tariffs in the SWIS as calculated by OOE in 2009. According to the 2009/10 Budget Papers, funding this shortfall from the Consolidated Account helps to ensure:

- "..increased transparency, by fully disclosing the financial impact of keeping electricity tariffs below cost;
- improved accountability, by having the financial impact of a less than cost-reflective tariff borne by the State and not the electricity suppliers; and
- market development, through competitively neutral electricity pricing."[54]

Customer related subsidies

The air conditioning allowance provides, upon application, eligible seniors with an electricity rebate equivalent to the cost of 200 kilowatt hours of electricity per applicable month to offset the electricity costs associated with operating an air conditioner in the hottest parts of the State.

The charitable organisation rebate provides for eligible 'not for profit' organisations to be charged a lower electricity tariff.

The dependant child rebate is a rebate against electricity bills and varies with the number of dependant children. This is available to holders of eligible concession cards.

The energy rebate provides an energy subsidy to people who are financially disadvantaged. The subsidy is intended to assist with the costs of buying energy of all types (electricity, gas, fuel oil, wood, etc.). However, for administrative simplicity, the subsidy is paid through Synergy and Horizon Power as a rebate on some electricity costs to residential customers who are holders of eligible concession cards.

The Feed-in Tariff commenced on 1 August 2010. The scheme provides eligible residential system owners with a payment for energy exported to the electricity grid (see section 3.1.1 above). This is typically for energy generated, over and above the needs of the customer, from photovoltaic systems installed on rooftops.

The Hardship Efficiency Programme (**HEP**) is a Government hardship assistance programme that complements the Hardship Utility Grants Scheme (**HUGS**). HEP helps customers in hardship to increase energy efficiency within their home through a combination of energy smart advice and education and appliance upgrades.

3.1.3 Revenue from large commercial customers

As noted in section 3.1 above, Synergy's large commercial customers bilaterally negotiate their electricity supply directly with Synergy and as such, these customers are not charged uniform retail electricity tariffs. The inquiry will seek to assess whether the income received from bilateral retail contracts is fully cost-reflective.

[54] Department of Treasury and Finance (2009/10), State Budget Paper No. 3 – Fiscal and Economic Outlook, Appendix 8, p274

3.1.4 Other energy revenue

Synergy also retails over 35 per cent of the gas sold to contestable customers in the SWIS. Contestable gas customers are those, typically businesses, who consume more than 180 Gj per annum which is equivalent to an annual gas charge of $4,000.[55]

To ensure electricity retail tariffs are cost-reflective it will be important for the inquiry to ensure that the costs of retailing electricity and gas are separately identified, particularly where common billing or customer contact systems are used to service both gas and electricity customers.

3.1.5 Other income

Synergy receives minimal income from other sources such as interest received and asset disposals. In 2009/10 this amounted to $11.4 million.

Issues for this inquiry

1) From the current list of uniform tariffs (shown in Appendix B), which tariffs could be amalgamated and why? What are the benefits (if any) of having fewer uniform tariffs?

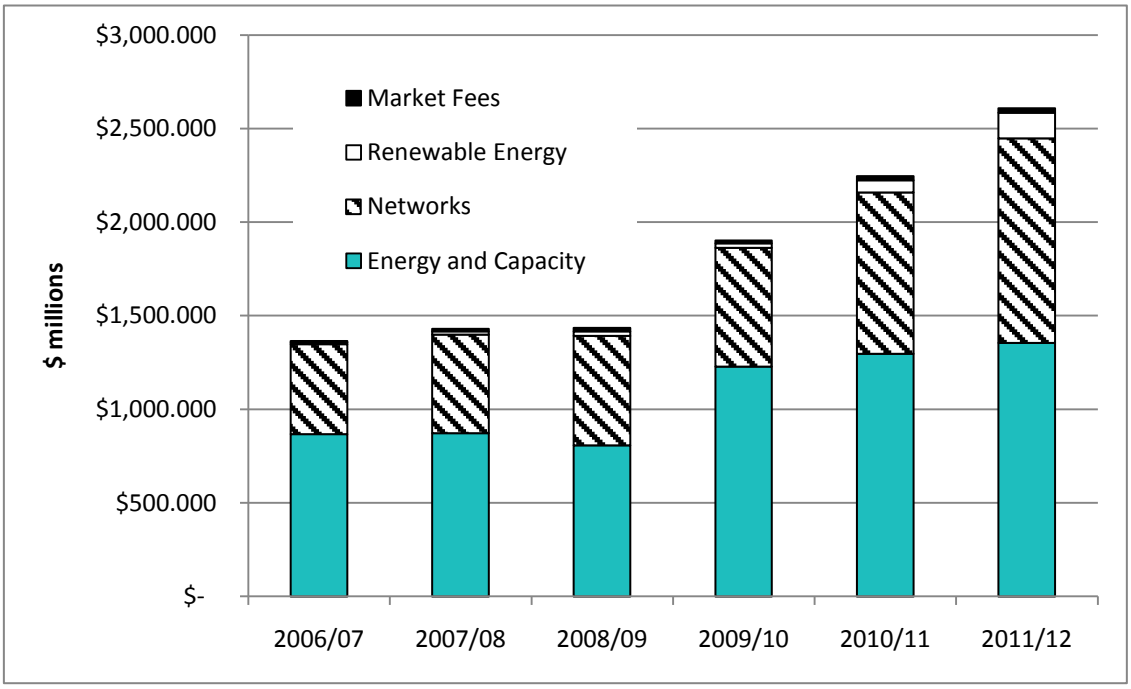
2) Should uniform tariffs, which are currently subsidised from cost-reflective levels, continue to be available for large, contestable business customers or should these be phased out? Please provide the reasoning behind your response.

3.2 Types of retail expenditure

Synergy's expenditure is predominantly associated with wholesale energy and renewable energy certificate procurement, network access costs and delivering its retail services in the electricity market. The main elements of Synergy's (electricity related) actual operating costs between 2006/07 and 2010/11 and budgeted operating costs in 2011/12 are shown in Figure 3.2 below.

[55] Alinta (2011) , verbal confirmation of amount to ERA in April 2011

Figure 3.2 Synergy's actual and budgeted operating costs (electricity only) ($ million nominal)



Source: Synergy (email 15 July 2011)

The Figure 3.2 above shows the high level of wholesale energy purchases (energy and capacity) and network access costs in Synergy's overall operating cost profile. On average, over the six years shown above, energy purchase costs and network access costs account for 58 per cent and 38 per cent respectively. The average percentage of expenditure on renewable energy certificates is 2.5 per cent..

3.2.1 Wholesale energy procurement

Synergy sells approximately 80 per cent of the electricity sold in the SWIS and over 35 per cent of the contestable gas load.[56] In 2009/10, energy purchases represented 67 per cent of sale costs, with network access costs representing the majority of the remaining costs.[57]

In undertaking its wholesale electricity procurement, Synergy has to undertake purchases in separate capacity and energy markets.

The majority of energy is traded through bilateral contracts, with the STEM providing a mechanism to trade energy and allow participants to make short-term adjustments around their bilateral positions. The STEM is operated a day ahead, with an auction determining half hourly prices for the subsequent 'electricity day'. To maintain system security, System Management[58] will then match physical supply and demand in the system through

[56] Synergy Annual Report 2009/10.

[57] Synergy Annual Report 2009/10: Appendix One – Financial Statements. Cost of sales are those costs directly attributable to the acquisition for sale of energy.

[58] System Management is a segregated business unit within Western Power established under the WEM Rules. It has a central role in scheduling of generator and transmission outages and managing the real-time operation of the power system.

real-time Balancing.[59] While participants can choose their relative positions with bilateral contracts and STEM trades, by default they will be exposed to the Balancing Market, with their net position adjusted so that supply equals real-time demand.

The WEM framework presents a number of challenges for a retailer seeking to hedge its risk in purchasing electricity and capacity in the WEM. The key risk factors involve timing and quantity risk.

As previously noted, in the capacity market, the IMO assigns retailers a capacity obligation (the IRCR[60]) based on their loads associated with peak usage. These IRCRs are set both annually and adjusted monthly. This is matched by the total Capacity Credits assigned annually to generators and DSM providers. Currently there is no limit on the amount of capacity that the IMO can certify for each capacity year. With the exception of 2010/11 Capacity Year, procured capacity in the SWIS has exceeded the Reserve Capacity Requirement each year by greater than five per cent.

The Authority will examine how Synergy deals with its IRCR requirements and how Synergy deals with its risk exposure in its procurement of Capacity Credits.

As previously noted, Synergy can procure Credits to settle its IRCR through bilateral contracts with generators (which may not be bundled with energy) or DSM providers,[61] which enables Synergy to forward hedge its anticipated IRCR. Synergy may also obtain uncontracted Credits that are traded via the IMO at an administered price, based on the MRCP for the current year.

The IRCR is set just before the start of the current Capacity Year, while the MRCP is set two years in advance. Retailers are exposed to the current MRCP if they require additional Credits to meet their IRCR. Hedging of this risk is limited if generators/DSM aggregators do not want to enter into forward bilateral contracts which match the retailer's expectation of its future IRCR. This may occur when Capacity providers expect the MRCP to increase in future years. A long term trend is that, with the exceptions of the 2011/12 and 2013/14 Capacity Years, the MRCP has increased significantly each year. There has been a significant increase in the percentage of Capacity Credits being traded through the IMO since October 2010.[62]

The Authority will need to consider Synergy's procurement via the Replacement Vesting Contract, bilateral contracts with independent Power Producers and STEM trading. While there is no regulatory oversight of Synergy's procurement of renewable energy, Synergy does require Ministerial approval if the value of an electricity supply contract exceeds $50 million.[63]

[59] Balancing refers to the process for meeting Market Participant's actual (real-time) supply and consumption energy levels from contracted bilateral and STEM positions. Currently, Verve Energy is the default supplier of Balancing support services.

[60] Individual Capacity Reserve Requirement

[61] Synergy is registered in the WEM for the provision of DSM and has certified Capacity Credits of 40MW for the 2011/12 Capacity Year.

[62] October 2010 was the beginning of the 2010/11 Capacity Year. Reference: Lantau Group, 'RCM Review Issues', Presentation to the Rules Development Implementation Working Group, Meeting 13, 31 May 2011

[63] Synergy requires Ministerial approval, if the value of the contract or agreement exceeds $20 million, or exceeds $50 million for the supply of electricity and/or gas (indexed annually by CPI, commencing 1 July 2009). These thresholds are set under s.68 of the *Electricity Corporation Act 2005* and the *Electricity Corporations (Transactions Exempt from Ministerial Approval) – Order 2008,* Government Gazette No. 137, 8 August 2008.

The majority of electricity sales in the SWIS are undertaken through Bilateral Contracts and the largest bilaterally traded quantities are between Verve Energy and Synergy. Traded quantities in the STEM have increased since the start of the wholesale market and currently represent around 5 per cent of total traded quantities (bilateral plus STEM trades).

With the STEM's current design, retailers determine their trading position, reflecting their demand forecasts, while generators submit their portfolio supply positions, on the scheduling day, which is essentially one day before the real-time electricity day. Unlike retailers supplying industrial loads, Synergy's load is largely temperature dependent (reflecting the demand profile of small use residential or business customers[64]) and the accuracy of its forecast demand (and resulting position taken in the STEM) is reliant on the accuracy of the day-ahead weather forecast.

Retailers whose demand is primarily from franchise customers typically require greater surety of supply for peak demand periods than those supplying industrial loads. If there is a shortfall in the level of contracted energy (relative to forecast demand), retailers can choose to source additional supplies from bilateral contracts (long or short term)[65] or through the STEM. The maximum price that retailers would be willing to bid in the STEM (to ensure supply) will reflect the price specified in bilateral contracts for additional energy supplies. Deviations between a retailers net position (bilateral and STEM) and actual real-time demand will be physically balanced by System Management and financially settled through the Balancing market. There are price and quantity risks associated with being exposed to the Balancing market.[66]

The Replacement Vesting Contract (**RVC**) is substantially a commercial arrangement between Synergy and Verve Energy, except for the price at which the capacity and energy is sold. The contract prices and volumes are confidential and there is no obligation to publish any ongoing documents about the contract. Further details on the RVC are provided in the Authority's recent report to the Minister for Energy.[67]

As Synergy is currently prevented from engaging in generation activities itself,[68] the remainder of the wholesale electricity required by Synergy (outside of the RVC) for its retail customers is procured through commercial means, either bilaterally negotiated commercial contracts or through the STEM. Synergy has noted that the "replacement of

[64] These customers can also be referred to as franchise customers.

[65] Long term bilateral contracts typically have supply tranches (a base 'take-or-pay' tranche and options on additional supply tranches) with differing prices.

[66] If Synergy underestimates its demand relative to its net (bilateral and STEM) position, it must purchase electricity through the Balancing Market at the Marginal Cost Administrative Price (MCAP). This price is set on the basis of a formula that has variability in the inputs and the MCAP used for financial settlement only becomes known to participants the day after the STEM trading day. For retailers, the price is then multiplied by the relevant quantity, known as the Authorised Deviation Quantity (ADQ), to calculate the financial settlement for purchases or sales in the Balancing market. For retailers, ADQ is the deviation between the participants scheduled demand and their actual load. For Synergy, as the primary retailer (which supplies small loads), its ADQ is calculated as the residual between total system load and total metered load for each trading interval. This is known as the 'wholesale notional meter'. Synergy will then be informed of its exact ADQ when the IMO finalises the financial settlement for Balancing, which is typically around six weeks after the trading day. If Synergy overestimates its actual demand, the excess electricity 'spills' into the Balancing market, where it is sold at a discount (given the specified Market Rules formula) to the STEM purchase price. Note that under market design changes (due to be implemented in 2012), 'rebidding' on the day will be allowed with a new competitive market for Balancing.

[67] ERA (2011), 2010 Annual Wholesale Electricity Market Report to the Minister for Energy

[68] Electricity Corporations Act 2005, section 47(1)

the Verve Vesting Contract with the prescribed Vesting Replacement Contract has resulted in increases in the energy and capacity costs charged by Verve".[69]

For energy supply and Capacity Credits not covered by the vesting contract, Synergy procures from the commercial sector. Synergy's supply procurement process may include an expression of interest stage where Independent Power Producers (and/or Verve Energy) are able to engage with Synergy to discuss how Synergy's requirements could be met by available existing capacity and proposed new capacity. Synergy is then able to progress to a tender phase if required. Examples of supply contracts tendered using this process are noted in Synergy's Statement of Corporate Intent (**SCI**), published annually on its website. For example Synergy's 2010/11 SCI, contains details of a contract for 638 MW of Capacity Credits and associated energy from Verve Energy's generation portfolio for a 15 year supply term, commencing late in 2011.

Issues for this inquiry

3) How should the efficiency of Synergy's wholesale energy procurement be assessed? What are the indicators of an efficient wholesale procurement process?

3.2.2 Renewable energy procurement

In past years, Synergy had annual targets for the procurement of (then) Renewable Energy Certificates. In 2009/10, Synergy's REC liability was $24.2 million, representing 1.2 per cent of Synergy's cost of sales.[70]

Under the LRET/SRES scheme introduced in January 2011, Synergy is required to surrender LGCs and STCs to meet its liability. Synergy can manage its liability by entering into bilateral electricity supply contracts with renewable energy power producers (with an associated level of renewable certificates), purchasing certificates in the open market or paying a fixed penalty for not meeting the target liability.[71] STCs can also be purchased from the STC Clearing House at a fixed price (currently $40 per certificate). If there are no STCs available on the Clearing House list when the liable entity applies to purchase STCs, the Regulator must create STCs for the liable entity.

There are price and quantity risks associated with Synergy's management of its renewable certificate liability. The LRET/SRES framework imposes higher risks (and compliance costs) on electricity retailers than the previous scheme due to the need to manage the dual liabilities of LGCs and STCs.

Under the new scheme, annual targets were modified and the target was split into large-scale and small-scale certificates. LGCs are surrendered annually to meet the Renewable Power Percentage (**RPP**), while STCs are surrendered quarterly to meet the Small-scale Technology Percentage (**STP**). Retailers typically obtain a significant amount of renewable certificates through long-term bilateral contracts. In comparison, the actual liability is only known closer to the liability year. Under the regulations, the RPP and the

[69] Synergy Quarterly Report: 1 October 2010 – 31 December 2010

[70] In Synergy's financial statements, the REC's liability is recognised at the average market price of REC purchased for the period.

[71] $65 per REC not surrendered for the 2010 compliance year and $65 per LGC/STC not surrendered for 2011 and future years.

STP must be published by 31 March of the year in which it applies. If this does not occur there is a default formula to calculate these percentages.

Since market commencement, a large proportion of new generation capacity entering the WEM has been supported through bilateral contracts with Synergy.[72] In its 2010/11 SCI, Synergy notes that "in developing an optimised and secure supply portfolio. RET requirements are meet by a range of existing and, if financially viable, new technologies (e.g. wave, geothermal)." Synergy has previously procured RECs from a number of large and small scale renewable projects, and in particular from wind farms.

Synergy faces a risk as a result of the ongoing regulation of tariffs and the ability to pass-through the costs of the LRET/SRES scheme or a future carbon tax scheme. Synergy currently receives an explicit CSO payment to fund the shortfall in revenue whilst uniform retail tariffs increase to a cost reflective rate. The Office of Energy is currently undertaking a review of electricity retail tariffs[73] and investigating the means of achieving equitable cost-reflective retail tariffs. As noted earlier the LRET/SRES framework also imposes higher compliance costs on retailers than the previous RET scheme.

RET and Feed-in Tariff (**FIT**) schemes are designed to promote investment in renewable generation. The Authority has previously noted that these schemes are likely to result in inefficient investment (e.g. over-investment in small-scale solar generation) and a distortion in prices, which represents a cost to consumers.[74] Unless there is pressure on retailers to procure 'green' electricity (e.g. through LRET/SRES or FIT schemes) at the lowest cost, then inefficient costs will be passed onto consumers. Due to the change in the renewable certificate framework, the Authority will assess both the past procurement process under the RET and the current process under the LGC/STC. This will give an understanding of the drivers for Synergy in procuring renewable energy certificates and whether the process places competitive pressure on Synergy to procure these at lowest cost.

The Authority will need to assess the previous and current procurement processes for renewable energy, including whether the process for choosing the preferred option reflects a competitive transparent process, e.g. assessing the tendering process for renewable energy projects. This reflects the approach taken by the Authority in the recent Horizon Power Inquiry, which assessed whether the decision to bring some generation in-house (including renewables), or the particular form of the generation chosen, was the optimal business model for Horizon Power to adopt.

A recent example of renewable energy procurement is also given in Synergy's 2010/11 SCI, e.g. a 15 year contract to underpin the development of the 206 MW Collgar wind farm, near Merredin.[75]

[72] As a result of Synergy's Supply Procurement program required under the Displacement Mechanism in the original Vesting Contract (2006).

[73] The Minister is required by the *Electricity Corporation Act 2005* to review Section 55 which relates to the level of retail contestability in the market.

[74] ERA 2011, 2010 Annual Wholesale Electricity Market Report for the Minister for Energy

[75] Synergy (2010), Statement of Corporate Intent 2010/11, this contract was worth an estimated $1.5 billion.

Issues for this inquiry

4) How should the efficiency of Synergy's procurement of renewable energy certificates be assessed? What are the indicators of efficient procurement of renewable energy certificates?

3.2.3 Billing and customers service management

As an electricity retailer, Synergy is responsible for transforming meter reading data from Western Power into electricity bills for customers within the SWIS and then collecting payments. This includes:

- billing functions, e.g. printing and despatching bills and/or making electronic bills available and answering billing queries;
- payment functions, e.g. collecting payment from customers in a variety of methods including direct debit;
- customer service functions, e.g. providing information to customers on energy usage and how to save energy and managing and resolving complaints;
- management and reporting functions, e.g. internal financial management and reporting to the Government and the Regulator.

Upon disaggregation from the former Western Power Corporation (**WPC**), Synergy inherited WPC's legacy systems to undertake its retail functions. Since then, Synergy has engaged in a process of developing new systems that better meet the needs of a retail service provider.

The main element in Synergy's business transformation process has been the development and implementation of Project Columbus. This project commenced in May 2007 and was launched on 1 September 2009. Columbus replaces around 50 legacy systems and is a single IT platform based on SAP technology. Although generally referred to as a billing system, Columbus covers electricity and gas transactions, billing, customer relationship management and e-business.

Information on Synergy's capital works programme is included in the annual Budget Papers. A summary of Synergy's cumulative budgeted capital programme per year compared to the cumulative actual expenditure is shown in Figure 3.3 below.

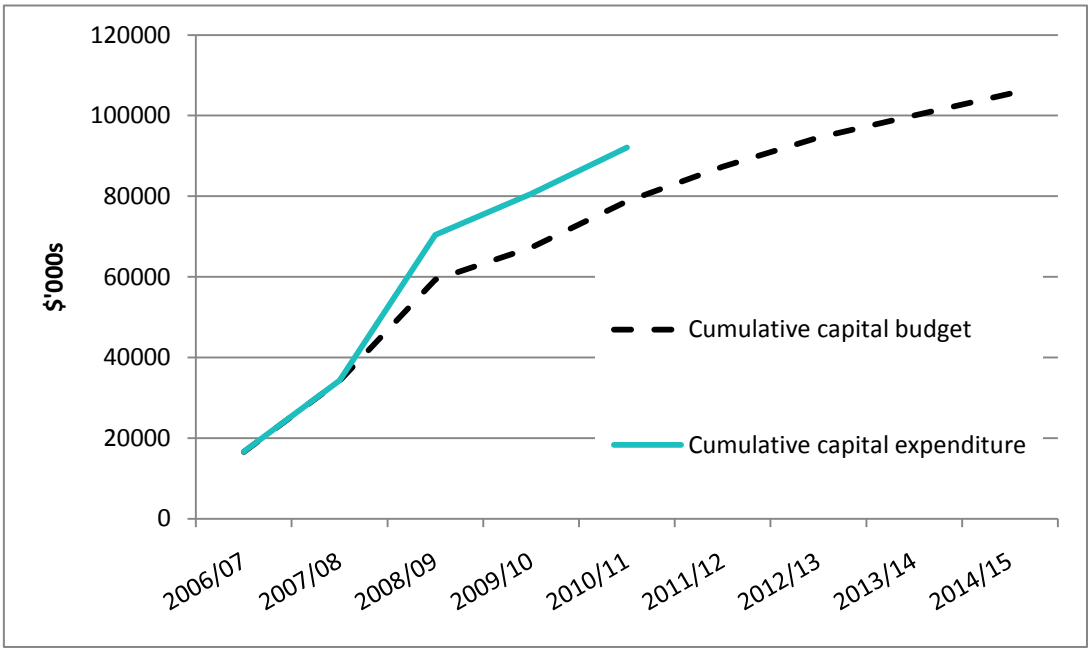
This shows the increase in actual capital expenditure over and above the budgeted amount. By the end of 2009/10, the cumulative capital overspend (compared to the budget) was $13.4 million. This partly results from the problems encountered during the implementation of the billing system, which has increased budgeted and actual costs from original estimates.

Looking at the information for the customer information and billing system in isolation, in 2006/07, the total budgeted cost was $15.5 million[76] and by 2010/11 the total budgeted cost was estimated at $48.8 million,[77] an increase of over 200 per cent. Actual expenditure on the billing system was $6.7 million above budget at 2010/11.

[76] Department of Treasury and Finance (2005), 2006/07 Budget Paper No. 2 – Volume 3, p925

[77] Department of Treasury and Finance (2010), 2011/12 Budget Paper No. 2 – Volume 2, p616

Figure 3.3 Synergy's total cumulative budgeted and actual expenditure for its total asset investment programme ($'000s)



Source: Department of Treasury and Finance Budget Papers 2006/07 to 2011/12 and ERA analysis

3.2.4 Retail margin

A retail margin compensates the retail business and ultimately the investors in the retail business, for the systematic risks that the retail business faces.[78] Systematic risk is generally considered unavoidable and results from exposure to overall economic or market conditions. As an electricity retailer, Synergy faces systematic risks such as rising inflation or changes in interest rates. The retail margin seeks to compensate investors for this systematic risk as it cannot be reduced or eliminated through portfolio diversification.

The original Vesting Contract (2006) included a predetermined and fixed margin on customer sales which Synergy used to fund its retail operations (including an appropriate return on investment in the retail electricity sector). This was included as part of the Netback Mechanism arrangements of the original Vesting Contract (2006). Under the Netback Mechanism, Verve Energy received the residual of Synergy's revenue after all other costs (including the TEC) have been deducted. An assumption regarding Synergy's retail costs and margin was made as part of the current calculations behind the RVC and CSO 'tariff adjustment payment' to Synergy.

The Authority will review Synergy's current and future retail margin to ensure that its investor (the State Government) is appropriately compensated for the systematic risks associated with the electricity retail sector in the SWIS. The Authority will compare this with an efficient retail margin calculated from the methodologies outlined in section 4.3 below. The objective for the Authority in calculating retail margin is to estimate the profitability, relative to sales, of Synergy as if it were operating in a competitive environment.

[78] Investors in an electricity retail business will also experience non-systematic risk, e.g. uncertainty over energy costs associated with changing weather conditions, and it is assumed that these risks can be reduced or eliminated through portfolio diversification.

Issues for this inquiry

5) What information can be included in Synergy's submissions to assist the Authority in determining efficient levels of operating and capital expenditure for Synergy?

6) What issues and risks should be taken into account when determining an efficient retail margin for Synergy?

3.3 Service standards

Synergy's service standards predominantly relate to the retail services it provides to its customers and Synergy regularly publishes information relating to its performance in its Annual Report and Quarterly Reports.[79]

However, Synergy's main reporting requirement is undertaken as part of its electricity retail licence obligations.[80] Synergy reports against performance standards covering billing, payment arrangements, answering customer queries and complaints and compensating customers for breaches of particular service standards.[81]

Each year the Authority publishes its report on the performance of electricity retailers, the latest version of which is the 2009/10 report.[82] The report covers four areas:

- affordability, e.g. customers accessing special billing arrangements such as more time to pay a bill;
- access, e.g. customers who are disconnected or who receiving government funded concessions;
- customer service, e.g. complaints; and
- compensation payments, e.g. payments made by retailers for failing to meet the service standards prescribed in the Code of Conduct.[83]

The historical performance of Synergy against a key performance indicator in each of the above areas is given in Table 3.4 below.

[79] For example, Synergy Annual Report 2009/10, p17

[80] As with all electricity retail licences, Synergy's licence includes a condition that it must provide to the Authority any information the Authority requires to fulfil its functions under the *Electricity Industry Act 2004*. The Authority has specified the performance information it requires for Synergy and other electricity retailers in the Electricity Compliance Reporting Manual.

[81] The Code of Conduct includes service standard payments for facilitating customer reconnections (after disconnection), wrongful disconnection and customer complaint handling.

[82] ERA (2011), www.erawa.com.au 2009/10 Annual Performance Report Electricity Retailers

[83] ERA (2010), *Code of Conduct for the Supply of Electricity to Small Use Customers*

Table 3.4 Selected performance indicators for Synergy 2006/07 to 2009/10

	Residential customers				Business customers			
	2007	2008	2009	2010	2007	2008	2009	2010
Affordability								
% granted additional time to pay their bill	7.6	6.5	8.0	9.6	n/a	n/a	2.5	8.1
Access								
% disconnected for non-payment of their bill	0.74	0.58	0.49	0.32	0.28	0.17	0.20	0.20
Customer Service								
Complaints per 100 customers	0.16	0.18	0.22	0.99	0.11	0.10	0.15	0.91

Source: ERA 2011, 2009/10 Annual Performance Report Electricity Retailers

Synergy has reported a steady increase over the last two to three years in the number of customers requesting additional time to pay their electricity bills. These increases coincide with the increases to uniform tariff rates shown in Table 1.1 above. As customers are facing higher electricity bills they would appear to be paying them off over slightly extended periods.

The number of residential customers being disconnected for non-payment has reduced over time whereas the number of business disconnections has remained fairly stable. Synergy has attributed this to a number of factors, in particular the increased flexibility of payment arrangements, the continued administration of hardship schemes on behalf of the State Government and a suspension of disconnections over Christmas and Easter holiday periods and around the implementation of its new billing system. Synergy has warned[84] that this low level of disconnections is not sustainable in the long term due to:

> "..commercial requirements to manage customer arrears."

The number of customers complaining has increased considerably in 2009/10 compared to earlier years. For residential customers, Synergy reported a 343 per cent increase in the number of complaints in 2009/10 compared to 2008/09. This percentage increases to 555 per cent for complaints from business customers. Complaints from both residential and business customers predominantly related to billing issues, including tariff increases, billing delays and billing errors.

Issues for this inquiry

7) Do the current service standards against which Synergy has to report provide a comprehensive picture of its retail performance? If not, what additional service standards would be useful and why?

[84] Synergy (2010), 2009/10 Annual Electricity Retail Licence Performance Report, p6

4 Regulatory approach for the inquiry

The regulatory approach to be taken in this inquiry will follow a staged approach and:

- identify a level of retail service performance for Synergy to deliver;
- estimate the different elements of expenditure required by an efficient retail service provider to deliver this level of service; and
- appropriately allocate efficient costs across the various customer classes to generate cost-reflective tariffs.

Each of these three stages is discussed in more detail below.

4.1 Standards of service

Typically, a key element driving the costs of a company is the level of service the company delivers. For example, a company providing a personalised or highly specialised service or product for its customers could be expected to incur a higher cost per unit than a company that was producing a standardised service or product. Therefore, a prescribed level of service needs to be identified before the costs associated with delivering this level of service can be determined.

As described in section 3.3 above, Synergy is monitored by the Authority on selected performance measures regarding the standard of retail services Synergy delivers to its customers. The Authority also collects and publishes comparable performance information for other electricity retailers in Western Australia. However, there is not a predetermined level of performance that electricity retailers have to meet or be compared against. Consequently, in conducting this inquiry, the Authority needs to identify a specific level of service against which the efficient costs to deliver this service can be determined.

To compare how Synergy performs against other electricity retailers, the Authority has compared Synergy's performance against selected indicators with those of electricity retailers in the Eastern States.

A comparison of selected performance indicators against Eastern States retailers with similar customer bases to Synergy is shown in Table 4.1 below. Details of all companies' customer numbers is given in Appendix C.

Table 4.1 Benchmarking and ranking of selected retail performance indicators in 2009/10 for comparable electricity retailers

Retailer	Complaints* (%)	Rank	Residential disconnections* (%)	Rank	Calls answered with 30 seconds (%)	Rank
Synergy	**0.99**	**4**	**0.32**	**1**	**72.0**	**2**
Country Energy (NSW)	0.30	2	0.50	4	78.6	1
Energy Australia (NSW)	0.10	1	0.60	6	56.4	5
Integral Energy (NSW)	0.90	3	0.40	3	62.9	3
AGL Sales (VIC)	3.50	7	0.51	5	52.0	6
Origin Energy (VIC)	1.41	6	0.32	1	43.0	7
TRUenergy (VIC)	1.01	5	0.62	7	62.0	4

* Complaints and residential connections are shown as a percentage of total residential customers.

Source: Regulator performance reports[85] and ERA analysis

From the comparison in Table 4.1 above, Synergy appears to have performed well against other retailers in 2009/10 and had the lowest percentage of residential disconnections compared to the other retailers in the sample.[86] Synergy's performance regarding complaints at 0.99 per cent was around the average of the sample. Synergy's performance in answering customer calls in less than 30 seconds was above average with it having the second highest percentage of calls answered within the timeframe.

Whilst not conclusive, this analysis suggests that Synergy's historical performance, on average, is in line with other Australian electricity retailers of its size. However, in its annual report, Synergy notes:

> "..the implementation of the new system came with its challenges, with many of our customers experiencing unacceptable delays in receiving their bills, culminating in a significant increase in complaints."[87]

For the review period (2012/13 to 2015/16), the Authority proposes to assume that the change in service levels that has resulted from the implementation of the new billing system will have reverted to pre-implementation levels of service. To establish this, the Authority will be looking at measures of on-time billing and billing accuracy, pre and post implementation of Columbus, the new billing system.

[85] ERA – 2009/10 Annual Performance Report Electricity Retailers, ESC – Energy Retailers Comparative Performance Report Customer Service 2009-10 and IPART – Electricity retail businesses' performance against customer service indicators in NSW 1 July 2006 to 30 June 2010

[86] However, as is noted in section 3.3 above, Synergy has commented that this level of disconnections was unsustainable.

[87] Synergy (2010), 2009/10 Annual Report, p2

Therefore, the Authority intends to determine the level of efficient costs that deliver the same standards of service as Synergy has been delivering, on average, over recent years. This is unless, in the submissions received in response to this issues paper, there is strong support for Synergy's retail service standards to be changed.

4.2 Determining the revenue requirement

Once the appropriate retail service standards have been established, the Authority will determine the revenue requirement to deliver this level of service. The revenue requirement covers the costs that would be incurred by a prudent service provider acting efficiently and in accordance with good industry practice.

The Terms of Reference require the Authority to pay particular attention to the efficiency of Synergy's procurement of wholesale electricity and renewable electricity certificates. Over the past four years these two items have contributed approximately 61 per cent of Synergy's total aggregated operating costs[88] for the period. This is particularly important given that Synergy is predominantly an operating cost driven organisation with total operating costs of approximately $2 billion in 2009/10. The other major element of operating costs are network charges (33 per cent) which are separately determined by the Authority for Western Power, which in turn charges these costs to retailers and generators accessing the SWIN. By way of comparison with its operating costs, Synergy's capital expenditure is relatively low, e.g. approximately $10 million in 2009/10.

In determining efficient costs for the review period, the Authority will review the processes Synergy uses to procure wholesale electricity and renewable energy certificates and also the pricing structure underlying energy contracts and renewable energy certificates. The Authority will engage consultants to provide technical advice for these elements of the review.

A key issue for Synergy will be to present its data in sufficient detail for the Authority to undertake the required modelling for the inquiry. In particular, the Authority will require Synergy to sub-divide its operating costs between its electricity and gas activities and then by electricity tariff class. Within each tariff class the level of efficient costs will need to be separately identified into a cost 'stack', e.g. wholesale electricity costs, network access costs, including the TEF, renewable energy certificate costs and the costs of the carbon tax/Clean Energy Plan and retail cost elements such as the retail margin.

4.3 Cost-reflective tariffs

As noted in section 1.2 above, moving towards cost-reflective tariffs is necessary to develop a competitive electricity retail market in Western Australia and to send appropriate price signals to customers regarding their electricity usage.

To be cost-reflective a retail tariff has to reflect the overall cost of supplying electricity but also how the cost to supply electricity varies with the quantity of energy demanded, e.g. the cost to supply electricity increases in times of peak demand. Therefore, to determine fully cost-reflective tariffs both the level of the overall tariff and structure of the tariff over time needs to be considered.

In line with the Terms of Reference for this inquiry, the Authority will determine the efficient cost-reflective level for each regulated tariff. This information, in turn will inform

[88] The cost of procuring wholesale electricity is included in the term operating costs used here.

the Tariff and Concessions Framework Review (TCF) currently being undertaken by the OOE. The purpose of the TCF is:

> ".. to examine ways to ensure that essential electricity use remains affordable for all West Australians."[89]

Part of the TCF review also will consider alternative ways of charging for electricity or different tariff structures. At the present time, customers generally pay the same rate for electricity at all times, including periods of peak demand, in the summer months and regardless of the total quantity of electricity they consume. If tariffs are cost-reflective then they would increase when the cost to supply electricity rises and be lower when the cost to supply was less.

In determining the overall level of cost-reflective tariffs, the Authority will consider the various different elements of the retail cost stack as listed in section 4.2. A similar exercise was undertaken in 2009 when the OOE conducted a review of the Electricity Retail Market. The OOE determined the level of cost-reflective tariffs for existing tariff classes based on the following cost stack components:

- retail components (wholesale electricity costs, retail operating costs and retail margin);
- network access charges;
- the Tariff Equalisation Fund (payable to Horizon Power to subsidise the increased cost of supplying electricity to regional Western Australia);
- the CPRS (now a carbon tax); and
- the notional renewable energy target costs.

The Authority will conduct a similar exercise to that undertaken by the OOE in 2009 but with specific attention being paid to Synergy's efficient cost of procuring wholesale electricity and renewable energy certificates.

The Authority expects to use three commonly utilised methods to determine an efficient retail margin for Synergy.[90] These are:

- The expected returns approach. This provides estimates of the expected cashflows that Synergy will earn from its electricity retail activities and determines a retail margin that compensates an investor for the systematic risk of those cashflows.
- A benchmarking approach. This reviews the reported margins of electricity retailers as determined by other Australian regulators over recent years.
- The bottom-up approach. This relies upon an assumed investment base (including intangible assets) and cost estimates and provides estimates of earnings and revenue which allow Synergy to earn an expected return equal to its estimated cost of capital.

In calculating retail margin, the Authority will consider if different retail margins are required for different classes of customer. In retailing to contestable and non-contestable customers, Synergy faces differing risks. For example, Synergy faces no customer

[89] Office of Energy (2011), Tariff and Concession Framework Review – Issues Paper, p5

[90] These methodologies will be fully explained in the draft report for the inquiry, although further information is available in SFG (2009), Estimation of the regulated profit margins for electricity retailers in New South Wales – Methodology and assumptions.

acquisition and retention costs when retailing to non-contestable customers as these customers cannot choose their electricity retailer. However, Synergy will face increased risk as it competes with other retailers for market share in the contestable retail market.

There will be elements of the cost stack that will need to be estimated during the inquiry. The Terms of Reference require the Authority to determine cost-reflective tariffs for the four year period 2012/13 to 2015/16 which coincides with the third Access Arrangement determination for Western Power. Therefore, the Authority will have to determine cost-reflective tariffs for Synergy by the end of December 2011, in advance of network charges being finalised (by the end of June 2012) for the third Access Arrangement period. Consequently, the Authority will need to make an assumption around the expected level of network charges for modelling purposes over the review period. This assumption should not be taken as indicative of any outcome from the Western Power Access Arrangement determination.

Furthermore, on 24 February 2011 the Federal Government announced its decision to introduce a carbon price on 1 July 2012.[91] There will be a fixed price phase for a period of three to five years where the carbon price will increase annually at a pre-determined rate before transitioning to an emissions trading scheme.[92] The $23 per tonne/CO2 equivalent fixed price for carbon was officially announced on 10 July 2011.[93] Overall, the issue for the Authority will be how to incorporate the effect of the carbon tax in the modelling for the inquiry.

The Authority will also need to review the numbers of customers utilising each of the uniform tariffs and review similarities in the structure of tariffs to determine if certain tariffs can be amalgamated. There is also a specific reference to consider if regulated tariffs for contestable customers (typically businesses with electricity consumption between 50 and 160 MWh per annum) should be phased out. How near uniform tariffs are to cost-reflective levels could determine how quickly these tariffs can be phased out.

Issues for this inquiry

8) How often should cost-reflective tariffs be determined for Synergy (please explain the reasoning for any timeframe suggested)?

9) How should the new carbon price be included in the modelling of cost-reflective tariffs in this inquiry?

10) Given the regulatory methodology outlined in this issues paper, are there any other issues for the Authority to consider in conducting this inquiry?

[91] This is dependant upon the Government being able to negotiate agreement with a majority in both houses of Parliament and passing the relevant legislation in 2011.

[92] Federal Government (2011), Media release 24 February 2011, Climate change framework announced

[93] Federal Government (2011), Clean Energy Package

APPENDICES

Appendix A: Terms of Reference

INQUIRY INTO THE EFFICIENCY OF SYNERGY'S COSTS AND ELECTRICITY TARIFFS

TERMS OF REFERENCE

I, C. Christian Porter, Treasurer, pursuant to section 32(1) of the *Economic Regulation Authority Act 2003*, request that the Economic Regulation Authority (the Authority) undertake an inquiry into the operating efficiency of the Electricity Retail Corporation (Synergy) and the electricity tariffs regulated under the *Energy Operations (Electricity Retail Corporation) (Charges) By-laws 2006* (By-Laws).

The Authority is to:

1. consider and develop findings on the:
    a. efficiency of Synergy's operating and capital expenditure;
    b. efficiency of Synergy's procurement of wholesale electricity; and
    c. efficiency of Synergy's procurement of Renewable Energy Certificates:
2. determine the efficient cost-reflective level for each tariff under the By-Laws over the period 2012/13 to 2015/16, including:
    a. developing recommendations regarding the number of regulated electricity tariffs, and whether any tariffs should be amalgamated; and
    b. taking into account the competitive markets within which Synergy operates and the current operating subsidy arrangements when considering the cost-reflective level of each tariff;
3. develop a methodology to regularly re-determine the efficient cost-reflective level for each tariff and recommend a period for the review of the efficient cost-reflective level of tariffs;
4. consider whether regulated tariffs for contestable large business customers should be phased out, with reference to the competitive nature of this segment of the electricity market; and
5. if regulated, large contestable tariffs are to be phased out, provide recommendations on which tariffs should be phased out and over what timeframe.

GENERAL

The Authority is to:

1. prepare and release an Issues Paper as soon as possible after receiving the reference. The paper is to facilitate public consultation on the basis of invitations for written submission from industry, government and all other stakeholder groups, including the general community;
2. prepare and release a Draft Report for public consultation; and
3. complete a Final Report on the findings by no later than 31 December 2011.

C. CHRISTIAN PORTER MLA
TREASURER; ATTORNEY GENERAL

Appendix B: Uniform Tariff Schedule

No.	Tariff code	Description	Fixed charge (c/day)	Variable charge (c/unit per day)	Notes
1	L1	General supply – low/medium voltage supply	36.278 c/day	23.8428 for the first 1650 units per day 21.5145 for all units exceeding 1650 units per day	Less than 50 MWh supplied to customers premises per annum
2	L3	General supply – low/medium voltage supply	38.008 c/day	24.9744 for the first 1650 units per day 22.5421 for all units exceeding 1650 units per day	More than 50 MWh supplied to customers' premises per annum
3	M1	General supply – high voltage tariff	38.008 c/day	24.1289 for the first 1650 units per day 21.6706 for all units exceeding 1650 units per day	For customers supplied at 6.6 kV, 11 kV, 22 kV or 33 kV or as approved by Synergy
4	R1	Time of use tariff	148.73 c/day	26.1061 on peak charge 8.0517 off peak charge	Less than 50 MWh supplied to customers premises per annum Customer agrees to take the tariff for a minimum of 12 months and pays appropriate fee
5	R3	Time of use tariff	178.83 c/day	31.3091 on peak charge 9.6386 off peak charge	More than 50 MWh supplied to customers' premises per annum Customer agrees to take the tariff for a minimum of 12 months and pays appropriate fee
6	S1	Low/medium voltage time based tariff	$356.0955 per day and whichever is the greater of 90.45 c/day multiplied by i) on peak half hourly max. demand; or ii) 30% of the off peak half hourly max demand	12.94 on peak charge 8.1876 off peak charge	Customer agrees to take the tariff for a minimum of 12 months Power factor must be 0.8 or better during the on peak period Synergy reserves the right to levy an additional charge of 41.06 c/day to improve the power factor
7	T1	High voltage time based tariff	$499.3865 per day and whichever is the greater of 87.9815 c/day multiplied by i) on peak half	12.8633 on peak charge 8.5548 off peak charge	Customer agrees to take the tariff for a minimum of 12 months Power factor must be 0.8 or better during the on peak period Synergy reserves the right

No.	Tariff code	Description	Fixed charge (c/day)	Variable charge (c/unit per day)	Notes
			hourly max. demand; or ii) 30% of the off peak half hourly max demand		to levy an additional charge of 41.06 c/day to improve the power factor
8	A1	Residential tariff	38.2291 c/day for first dwelling and 29.6382 for each additional dwelling	20.8251	
9	B1	Residential water heating	19.8054 c/day	10.9414	Only over a 6 hour period between 11pm to 6am
10	C1	Special community service tariff	34.9121 c/day	19.03 for the first 20 units per day 23.8428 for the next 1630 units per day 21.5145 for all units exceeding 1650 units per day	For voluntary, non-profit making organisations
11	D1	Special tariff for certain premises	34.9121 c/day	19.03	For charitable or benevolent organisations providing residential accommodation
12	K1	General supply with residential tariff	38.2291 c/day	20.8251 for the first 20 units per day 26.1061 for the next 1630 units per day 23.5696 for all units exceeding 1650 units per day	Where the circuit wiring is not separate between general and residential area (e.g. a flat above a shop)
13	W1	Traffic light installations		401.92 c/kWh per day	

Source: Energy Operators (Electricity Retail Corporation) (Charges) By-Laws 2006 – Schedule 1

Appendix C: Comparable Eastern States electricity retailers

Retailer	Residential customers	Non-residential customers	Total customers
Synergy (WA)	850,790	91,366	942,156
Country Energy (NSW)	604,416	81,640	686,056
EnergyAustralia (NSW)	1,032,166	131,828	1,163,994
Integral Energy Australia (NSW)	630,383	63,590	693,973
AGL Sales (VIC)	576,932	71,488	648,420
Origin Energy (VIC)	552,249	87,518	639,667
TRUenergy (VIC)	496,153	66,148	562,301

Source: ERA – 2009/10 Annual Performance Report Electricity Retailers; ESC – Energy Retailers Comparative Performance Report Customer Service 2009-10 and IPART – Electricity retail businesses' performance against customer service indicators in NSW 1 July 2006 to 30 June 2010

Appendix D: LRET and SRES – further information

Large-scale Renewable Energy Target (LRET)

The LRET creates a financial incentive for the establishment and growth of renewable energy power stations by legislating demand for Large-scale Generation Certificates (**LGC**). The LGCs are created based on the amount of eligible renewable electricity produced by power stations. Renewable electricity must be generated from approved sources such as solar energy, wind, ocean waves and the tide, geothermal aquifers, wood waste, agricultural waste, bagasse (sugar cane waste), black liquor (a by-product of the paper-making process) or landfill gas.

LGCs can be sold or traded to liable entities (e.g. electricity retailers) in addition to the power station's sale of electricity to the grid. Liable entities have a legal obligation to buy LGCs and surrender them to Office of the Renewable Energy Regulator (**ORER**) on an annual basis.

The LRET specifies the amount of renewable energy to be generated by renewable energy power stations every year to 2030. These are shown in the table below.

Annual targets 2011-2030

Year	Target (GWh)
2011	10,400
2012	16,338
2013	18,238
2014	16,100
2015	18,000
2016	20,581
2017	25,181
2018	29,781
2019	34,381
2020-2030	41,000

Source: ORER (2011), Increasing Australia's renewable energy generation

The number of LGCs to be purchased by a liable entity each year is calculated from the Renewable Power Percentage (**RPP**) which is set annually. The liable entity multiplies the total MWh of electricity it acquires from the relevant electricity grid by the RPP to determine the number of LGCs it needs to purchase and surrender each year. LGCs are purchased directly from renewable energy power stations or agents with payment negotiated directly. Ownership of LGCs is transferred in the REC Registry. The market price of LGCs varies with the supply and demand within the market; the price has varied between $10 and $60 per certificate in the past.

A liable entity must surrender its required number of LGCs or pay a shortfall charge of $65 per certificate not surrendered.

Where a liable entity retails to emission-intensive trade-exposed industry[94], it has an allowance in the form of Partial Exemption Certificates (**PEC**s) against the number of RCGs it requires.

Small-scale Renewable Energy Scheme (SRES)

This scheme was devised to create additional financial incentives for owners to install small-scale installations such as solar water heaters, heat pumps, solar panel systems, small-scale wind systems or small-scale hydro systems. Small-scale Technology Certificates (**STC**) are created for these installations according to the amount of electricity they produce (or displace) over their intended lifetime. Legal entities have a legal requirement to buy STCs and surrender them on a quarterly basis.

The number of certificates a system can produce is based on the amount of electricity (MWh):

- generated by the system over its lifetime (up to 15 years); or
- displaced by the solar water heater or heat pump over its lifetime (up to 10 years).

The number of credits is also dependant upon geographic location, the size and capacity of the system and the availability of Solar Credits. These are a 'multiplier' available to some renewable systems that increases the number of STCs created for the renewable system. In 1 July 2011, the solar credit multiplier reduces to three and then reduces by one per year until phased out completely by 1 July 2013.

STCs must be created within one year of the renewable energy system being installed. Owners of such systems can register STCs on the REC Register themselves or alternatively assign them to agents. Typically agents are renewable system installers who pay the system owner directly for their system STCs or offer payment as a discount on the cost of installation of the renewable system.

The number of STCs purchased by liable entities is determined by the Small-scale Technology Percentage (**STP**). For the 2011 calendar year, this equates to 28 million MWh of renewable energy generated or displaced by small generation units or solar water heaters, or 28 million STCs (at 1 MWh each) or 14.8 per cent of total estimated electricity demanded.

STCs are created on the on-line REC Registry and listed for sale on the open STC market or via the STC clearing house. The price of STCs fluctuates depending upon demand but tends to stay within the range of $20 to $40 per STC. The Government guarantees a price of $40 per STC if purchased through the clearing house.

[94] Examples are companies engaged in petroleum and alumina refining, lime and copper production and iron and steel manufacturing.

Appendix E: Glossary

Act	*Economic Regulation Authority Act 2003*
Audit	Electricity retail licence performance audit
Authority	Economic Regulation Authority (ERA)
BM	Balancing Market
By-Laws	*Energy Operators (Electricity Retail Organisation) (Charges) By-Laws 2006 – Schedule 1*
Columbus	Synergy's new billing and customer service system
Code of Conduct	*Code of Conduct for the Supply of Electricity to Small Use Customers*
CPRS	Carbon Pollution Reduction Scheme
CSO	Community Service Obligation payment
DSM	Demand Side Management. This is the commitment to curtail electricity load upon request.
DWAT	Discounted Weighted Average Tariff
Feed-in Tariff (FIT)	A subsidy scheme introduced by the State Government and administered by Synergy and Horizon Power. This is available to residential customers who have renewable energy systems installed.
GreenPower	A retail product enabling customers to purchase electricity, at a premium, that contributes to the generation of renewable energy over and above the level required by mandatory targets.
GTEs	Government Trading Enterprises
HEP	Hardship Efficiency Programme
Horizon Power	The GTE regional power supplier, outside the SWIS
HUGS	Hardship Utility Grants Scheme
IMO	Independent Market Operator
IRCR	Individual Reserve Capacity Requirement
KW	Kilowatt (1000 watts)

KWh	Kilowatt hour
Late bills	Electricity bills, issued by Synergy, more than three months after the previous bill.
LGC	Large-scale Generation Certificates
LRET	Large-scale Renewable Energy Target
MRCP	Maximum Reserve Capacity Price
MW	Megawatt (1000 kilowatts)
MWh	Megawatt hour
NSW	New South Wales
OOE	Office of Energy
ORER	Office of the Renewable Energy Regulator
RCM	Reserve Capacity Mechanism
RCP	Reserve Capacity Price
REBS	Renewable Energy Buyback Scheme
REC	Renewable Energy Certificate
RVC	Replacement Vesting Contract issued in 2010 to replace the 2006 Vesting Contract
RET	Renewable Energy Target
RPP	Renewable Power Percentage
s.32 notice	Notice served under section 32 of the *Electricity Industry Act 2004*
SCI	Statement of Corporate Intent
SRES	Small-scale Renewable Energy Scheme
STC	Small-scale Technology Certificates
STEM	Short Term Energy Market

STP	Small-scale Technology Percentage
SWIN	South West Interconnected Network
SWIS	South West Interconnected System
Synergy	The GTE electricity retailer in the SWIS
TCF	Tariff and Concessions Framework review
TEC	Tariff Equalisation Contribution is payable to Horizon Power to subsidise the cost of supplying electricity to regional Western Australia.
TEF	Tariff Equalisation Fund, out of which the TEC is paid
Verve Energy	The GTE electricity generator in the SWIS
Vesting Contract	From 2006 to 2010, the contract covering the majority supply of wholesale electricity from Verve Energy to Synergy
WACC	Weighted Average Cost of Capital
WEM	Wholesale Electricity Market
Western Power	The GTE electricity network access provider in the SWIS
WPC	Western Power Corporation
VIC	Victoria