Economic Regulation Authority

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Senate Select Committee on Electricity Prices
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Dear Committee Secretary

Supplementary submission to the Senate Inquiry on Electricity Prices – additional information

This supplementary submission provides the additional information requested by Senate Committee members at the public hearing in Perth on 2 October 2012. It also provides clarification or confirmation of the responses made at the public hearing, where necessary.

The 'bond yield' approach

Mr Watkinson: .... to propose an alternative arrangement where we simply observe a selection of bonds in the market. As long as they meet certain criteria as to the length of time on issuance and credit rating, for example, we then simply observe those bonds and take an average of the data to provide an indication to us of what would be the appropriate cost of debt underlying the rate of return. That has been challenged by service providers as a result of previous decisions and has been upheld at the Australian Competition Tribunal.

Clarification

The Economic Regulation Authority notes that its 'bond yield approach' is based on a selection of bonds that meet certain criteria, including the *remaining time to maturity* and credit rating.

AEMC's Power of Choice document

CHAIR: Have you had a look at the AEMC's *Power of choice* document? .... Perhaps you could take that on notice.
Mr Watkinson: To the extent it is a policy matter, it would not be appropriate for us to give too much of an opinion.

Clarification and response

The ERA notes that the AEMC's draft report *Power of choice* makes a number of recommendations in the context of the National Electricity Market to facilitate efficient demand side participation. A key recommendation, among others, relates to the gradual phasing in of time varying network tariffs.

With regard to the structure of network tariffs for the South West Interconnected Network in Western Australia, the ERA is empowered to consider and approve the network tariffs that

are proposed by the network service provider, Western Power. Provided that the proposed network tariffs meet the objectives of the Access Code, then the ERA must approve the proposed structure. The objectives in the Access Code with regard to pricing methods are as follows:[1]

Objectives of pricing methods – Primary objectives

7.3 Subject to sections 7.5, 7.7 and 7.12183, the *pricing methods* in an *access arrangement* must have the objectives that:

(a) *reference tariffs* recover the forward-looking efficient costs of providing *reference services*; and

(b) the *reference tariff* applying to a *user*:

(i) at the lower bound, is equal to, or exceeds, the *incremental cost of service provision*; and

(ii) at the upper bound, is equal to, or is less than, the *stand-alone cost of service provision*.

{Notes:

1. The objective in section 7.3(a) refers to charges paid by an individual *user*. However in practice *reference tariffs* will be set, and *access arrangements* will be assessed, by aggregating together groups of similar *users*.

2. One implication of section 7.3(b)(i) is that the *charges* paid by *users* should increase as the *network* becomes constrained, reflecting the increased *incremental cost of service provision*.

3. The *charge* paid by a *user* in respect of a *reference service* will normally reflect the *average cost of service provision*}

Objectives of pricing methods – Other objectives

7.4 Subject to sections 7.5, 7.7 and 7.12184, the *pricing methods* in an *access arrangement* must have the objectives that:

(a) the *charges* paid by different *users* of a *reference service* differ only to the extent necessary to reflect differences in the *average cost of service provision* to the *users*; and

{Examples of factors which may result in the charges paid by different users of a *reference service* differing from each other, include:

☐ the quantities of *reference service* supplied or to be supplied; or

☐ a *user's* time pattern of *network* usage; or

☐ the technical characteristics or requirements of the *facilities and equipment* at the relevant *connection point*; or

☐ the nature of the plant or equipment required to provide the *reference service*; or

☐ the periods for which the *reference service* is to be supplied; or

[1] Western Australian Government 2004, *Electricity Networks Access Code 2004*, www.sla.wa.gov.au, p. 93.

subject to section 7.7, a *user's* location.}

(b) the structure of *reference tariffs* so far as is consistent with the *Code objective* accommodates the reasonable requirements of *users* collectively; and

{Example: *Users* may prefer more of the *average cost of service provision* to be recovered using *tariff* components that vary with usage or demand than might otherwise be the case under section 7.6.}

(c) the structure of *reference tariffs* enables a user to predict the likely annual changes in *reference tariffs* during the *access arrangement period*; and

(d) the structure of *reference tariffs* avoids price shocks (that is, sudden material *tariff* adjustments between succeeding years).

{Note: Price adjustments between succeeding years could include *tariff* rebalancing to achieve greater cost reflectivity of individual *tariffs*. The mechanisms to avoid price shocks could include a phased approach or other measures to assist in the management of adjustment costs.}

There is a considerable range between the specified lower and upper bounds. As a result, Western Power has considerable discretion as to where it sets network tariffs for groups of customers.

The ERA Secretariat notes that the Access Code objectives for pricing methods would not appear to preclude Western Power from proposing time varying prices and having these accepted. However, the Access Code does not mandate such a structure. Were such a mandate desired, then it would need to be written into the Access Code. The Access Code is due to be reviewed over the next year or so. The review is a policy matter for the State Government, and is expected to be coordinated by the Public Utilities Office.

Synergy's market shares

Senator LUDLAM: It is helpful to tease that out. To what degree is there competition—we will leave Horizon aside for the moment—in the south-west system?
Mr Watkinson: Synergy's market share is in the order of 70 to 80 per cent. Obviously they have 100 per cent share of the franchise, the regulated residential and small business market. I think of the more contestable market their market share may be down to around 50 per cent, but we will have to check that number.

Clarification and response

Synergy's load share on the South West Interconnected System (**SWIS**) was estimated at around 12,000 GWh for 2012/13, out of an estimated total SWIS 2012/13 load of approximately 19,500 GWh, giving a current overall market share of around 60 per cent.[2]

Synergy's share of the contestable market is stated in its 2010/11 Annual Report at 48 per cent for 2010/11:[3]

> Information on market share for electricity retailers in Western Australia is difficult to obtain due to its commercially sensitive nature. However, the limited public data available suggests that the electricity market has been becoming more competitive over

[2] Economic Regulation Authority 2012, *Synergy's Costs and Electricity Tariffs*, www.erawa.com.au, p. 43.

[3] Economic Regulation Authority 2012, *Synergy's Costs and Electricity Tariffs*, www.erawa.com.au, p. 121.

the past six years, with Synergy's share of electricity sales falling. The Office of Energy's review of Verve Energy in 2009 indicated that Synergy's share of electricity sold in the contestable market (more than 50 MWh per annum) decreased from 90 per cent in 2006 to 66 per cent in 2009. Synergy's 2010/11 annual report indicated that in 2010/11, Synergy's share of the contestable electricity market was 48 per cent.

Number of electricity retailers

Senator LUDLAM: I am just interested to get a sense of construction at the retail level. How many independent retailers actually exist?
Mr Watkinson: I would have to come back to you on that.
Senator LUDLAM: Is it the number of fingers on one hand?
Mr Watkinson: Yes.
Mr Pullella: A matter of hands, because in the wholesale electricity market there are retailers and defined retailers.

Response

Under the *Electricity Industry Act 2004*, a party is required to be licensed if it wishes to sell electricity in Western Australia to customers, unless it is exempted.[4]

There are 17 licences to retail electricity on issue in Western Australia. Of the 17 licensees, six are licensed to retail to small to medium size contestable customers consuming between 50 and 160 MWh per annum. Only Synergy is licensed to retail to non-contestable customers consuming less than 50 MWh per annum in the SWIS.

Number of generators

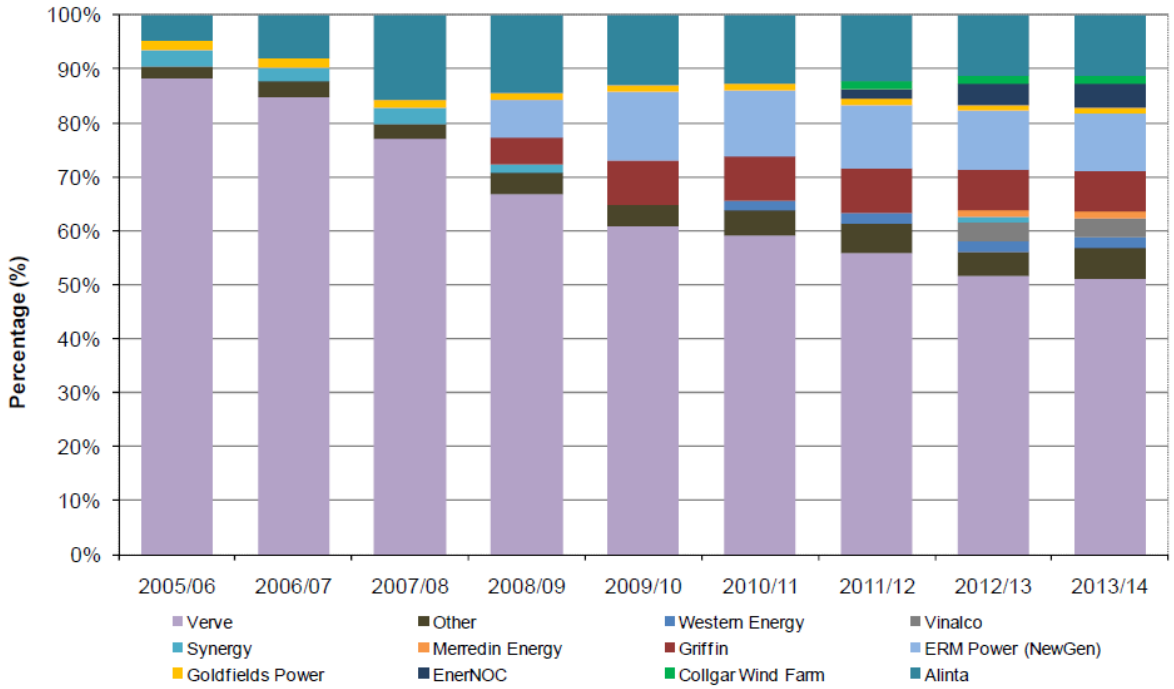
Senator LUDLAM: That is what I figured. And what about at the generation end? We have got the 500-pound gorilla, still, that was meant to be addressed by segregating Western Power in the first place. Who else is out there?
Mr Watkinson: I think Verve Energy has in the order of 50 per cent market share, as at 2013-14.

Response

The Independent Market Operator indicates that Verve Energy holds just over 50 per cent of the certified capacity for 2012/13 (Figure 1). Other participants on the South West Interconnected System, with a market share greater than 1 per cent, include Western Energy, Vinalco, Synergy, Merredin Energy, Griffin Power, ERM Power (NewGen), Goldfields Power, Collgar Wind Farm and Alinta.

[4] Exemptions may be applied for under a number of criteria, including, among others, on-supply to commercial or residential premises and supply to Aboriginal communities

Figure 1 Capacity credits by market participant (minimum 1% market share)



Note: Does not include the refurbished Muja AB (220 MW), which is registered under Vinalco.

Source: Independent Market Operator 2012, *2012 Statement of Opportunities Report,* www.imowa.com.au, p 28.

Contribution of wind to the market

Mr Watkinson: Well, we say have seen wind come into the market quite considerably. And I should have said before that we have a lot of data on this, which is included in part B of our report to the Minister for Energy, which we are quite happy to provide to you.

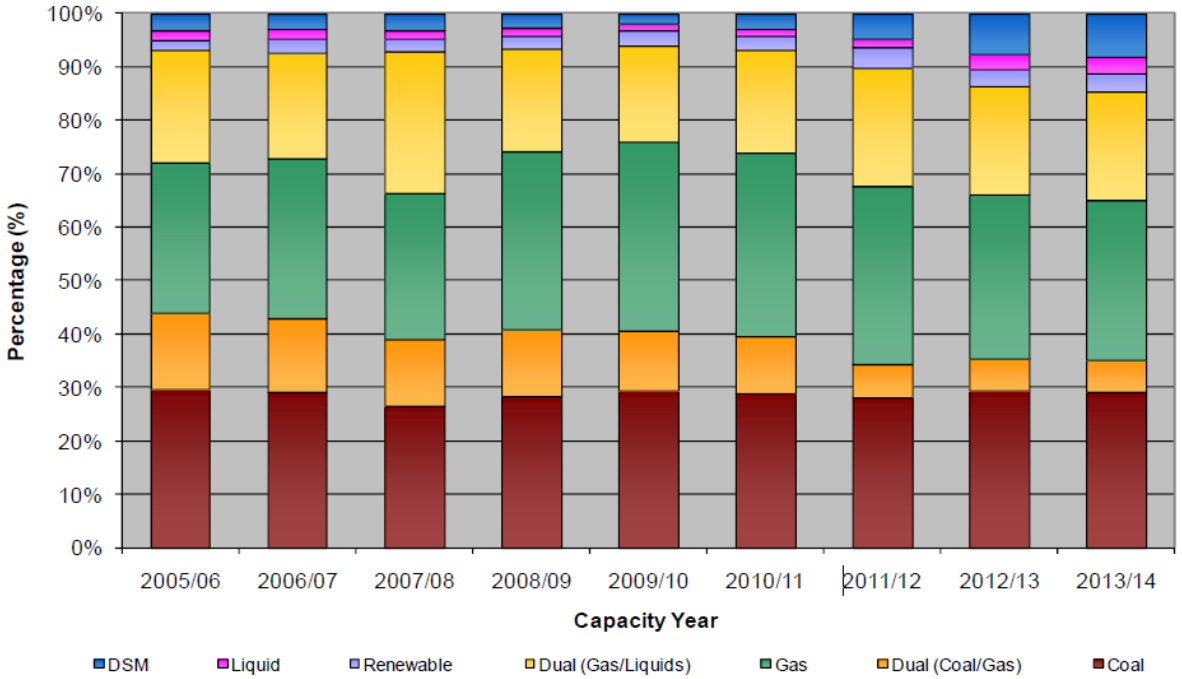
Response

The ERA's views in regard to the impact of intermittent generation (e.g. wind and solar) on the market are included in the Economic Regulation Authority's 2010 and 2011 Annual Wholesale Electricity Market Report for the Minister for Energy.[5] Extracts of the relevant pages are provided at Attachment A.

The following Figure 2 from the Independent Market Operator shows the proportions of the South West Interconnected System that are supplied by fuel type (including 'demand side management' or **DSM**).

5 Economic Regulation Authority 2011, *2010 Annual Wholesale Electricity Market Report for the Minister for Energy*, www.erawa.com.au, pps. 13 – 15; Economic Regulation Authority 2012, *2011 Annual Wholesale Electricity Market Report for the Minister for Energy*, www.erawa.com.au, p. 28.

Figure 2 Percentage of capacity credits by fuel type



Note: Does not include the refurbished Muja AB (220 MW), which is registered under Vinalco.

Source: Independent Market Operator 2012, *2012 Statement of Opportunities Report,* www.imowa.com.au, p 28.

Contributing costs to a dollar of retail electricity on the South West Interconnected System

Senator LUDLAM: ...firstly, whether you could provide us with a breakup of where my electricity dollar goes—

Mr Watkinson: I will deal with each of those in turn. I will go through the costing, first of all—and you can find this on page 2, I think it is, of the executive summary of the inquiry into Synergy. We estimate that the cost of generating electricity accounts for around 46 per cent of total costs. I just need to be clear here that these numbers that I will give you are our estimate of total costs, not what households or businesses pay at the moment; it is a percentage of total costs. So, the cost of generating electricity accounts for around 46 per cent of total costs. The costs of transmitting electricity across the transmission and distribution network make up to 33 per cent of total costs. The costs to retailers of meeting their renewable energy obligations and the costs associated with the newly introduced carbon pricing regime make up around 11 per cent of total costs. The billing call centre and other costs associated with running a retail electricity business make up seven per cent of total costs. And the return that the electricity retailer must earn to have an incentive to provide a service makes up around three per cent of total costs.

Confirmation of figures provided

The Economic Regulation Authority's report on Synergy noted the following components contributing to the cost of electricity for 2012/13:[6]

[6] Economic Regulation Authority 2012, *Synergy's Costs and Electricity Tariffs*, www.erawa.com.au, p. 9.

- the cost of generating electricity (which accounts for around 46 per cent of total costs);
- the cost of transmitting electricity across the transmission and distribution network (up to 33 per cent of total costs);
- the cost to retailers of meeting their renewable energy obligations and the cost associated with the newly introduced carbon pricing regime (around 11 per cent of total costs);
- the billing, call centre and other costs associated with running a retail electricity business (7 per cent of total costs); and
- the return that the electricity retailer must earn to have an incentive to provide a service (around 3 per cent of total costs).

Comparison to the National Electricity Market

Senator LUDLAM: and how different that profile is likely to be to the figures cited for the NEM .....

Response

The breakdown of the costs of retail electricity for Synergy in 2012/13 set out above may be compared with a typical retail cost on the NEM. For example, IPART has estimated that an average NSW retail customer bill has a higher share for network charges at 49 per cent (as compared to the estimated 33 per cent for Synergy), a slightly higher share for retail operating costs, and a lower share for energy and carbon charges at 41 per cent combined (as compared 57 per cent for Synergy) (Figure 3).[7]

IPART has estimated the average charge for 2012/13 for a 'medium usage' retail customer utilising 5,600 kWh per annum in New South Wales at 31.9 cents per kWh.[8] This contrasts with the current average charge for a residential customer in Western Australia consuming 5,600 kWh per annum of electricity of 27.6 cents per kWh (includes carbon charge).[9] Based on these figures and the shares set out above:

- energy and carbon charges contribute an estimated 13.1 cents per kWh in New South Wales, compared to an estimated 15.7 cents for Synergy in Western Australia;

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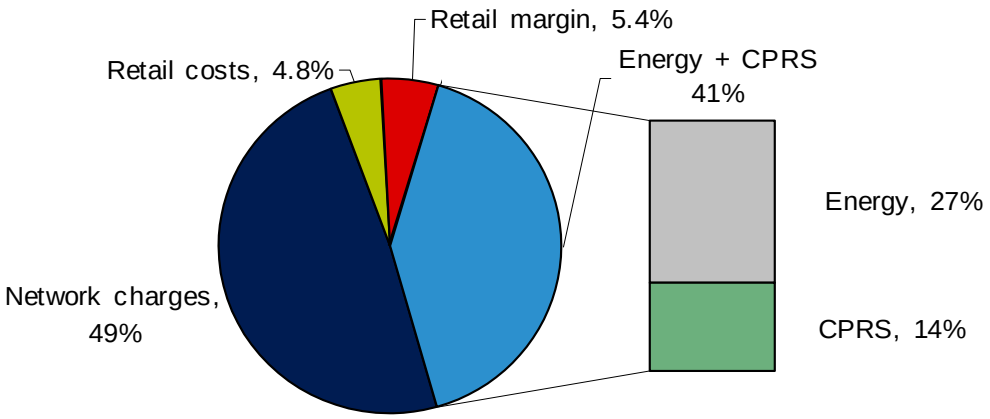
7 Note that this data is based on the Carbon Pollution Reduction Scheme (**CPRS**) estimated carbon charge for 2012/13 under CPRS-5, which was for around $30 for 2012/13 in nominal terms. To the extent that the actual Clean Energy Future carbon prices for 2012/13 are lower – at $23 per tonne CO_2e in nominal terms – implies that the impact on electricity prices of carbon charges will be lower than estimated by IPART. However, the lowering effect of adjusting the carbon price component would be reasonably modest – leading to an estimated reduction in overall electricity costs of around 3 per cent (pro-rating, the 14 per cent share for carbon would fall to 11 per cent) – and would not change the broad relativities identified from the data.

8 The estimated 2012/13 annual bill for an Energy Australia medium usage customer is $1,788 (included carbon charges associated with the CPRS. This will be an overestimate of around 3 per cent (see the previous footnote). Dividing the annual bill of $1,788 by 5,600 kWh gives the average charge of 31.9 cents per kWh.

9 This calculation is the average tariff based on Synergy's 2012/13 A1 tariff supply charge of 41.5455 cents per day and electricity charge of 24.8866 cents per unit, applied to an annual usage of 5,600 kWh per annum.

- network charges contribute an estimated 15.6 cents per kWh in New South Wales, compared to an estimated 9.1 cents per kWh in Western Australia;
- retail operating costs and retail margin contribute an estimated 3.2 cents per kWh in New South Wales, compared to an estimated 2.8 cents per kWh in Western Australia.

Figure 3 Composition of a typical NSW electricity retail bill under final determination, 2012/13



Source: IPART 2010, *Review of regulated retail tariffs and charges for electricity 2010-2013: Electricity – Final Report,* www.ipart.nsw.gov.au, p. 7.

Where the $371 million subsidy goes

Senator LUDLAM: .... and, secondly, of the $371 million loss that we are running the overall system at, how much of that accrues to networks, as opposed to generators? I presume the retailers will not be running at a loss.

Response

The State Government estimates that the subsidy paid to Synergy and to Horizon Power for the electricity prices 'tariff adjustment payment' will be $371 million in 2012/13 (Table 1).[10] These payments offset the shortfall in electricity prices paid by customers relative to the cost of providing electricity.

[10] The Government of Western Australia 2012, *2012-13 Budget: Economic and Fiscal Outlook: Budget Paper No. 3*, www.ourstatebudget.wa.gov.au, p. 307.

Table 1 Tariff adjustment payments – 2012/13

	Budget estimate
Horizon Power	36.6
Synergy	334.0
Total electricity	**370.6**

Source: The Government of Western Australia 2012, *2012-13 Budget: Economic and Fiscal Outlook: Budget Paper No. 3*, www.ourstatebudget.wa.gov.au, p. 320.

The subsidy to Horizon Power will apply to the whole business, which encompasses the networks, generation and retailing components.

The subsidy to Synergy will accrue to its cost of generation, which is provided through a mix of private and public sector contracts, and to its retail operating costs and retail margin. The subsidy will not accrue to networks, as Synergy pays Western Power's tariffs, which are set independently by the Economic Regulation Authority on a cost reflective basis.

Contribution of carbon charges to Synergy's cost reflective average tariff in 2012/13

Mr Watkinson: In our inquiry into Synergy, we spent some time talking about this issue. When we estimated the carbon cost, we used the method called long-run marginal cost, which attempted to identify pre carbon what the efficient portfolio of generators was and post carbon what the efficient portfolio of generation was, and we calculated the carbon impost as being the difference between those two—the 8.3 per cent.

Confirmation

The quoted figure of 8.3 per cent is the contribution of the carbon charges to 2012/13 cost reflective tariffs averaged across all customers.[11]

Yours sincerely

ROBERT PULLELLA
CHIEF EXECUTIVE OFFICER A/G

10 / 10 / 2012

ENCLOSURES (as separate documents)

Attachment A Extracts from the Economic Regulation Authority's 2010 and 2011 Annual Wholesale Electricity Market Reports for the Minister for Energy

Attachment B Draft Hansard 2 October 2012 marked up for corrections.

[11] Economic Regulation Authority 2012, *Synergy's Costs and Electricity Tariffs*, www.erawa.com.au, p. 11.