ACIL Tasman Briefing Note

Date: 12 September 2012

Subject: Wholesale electricity cost investigation – impact on the competitiveness of the retail electricity market

The report *Wholesale electricity cost investigation – approaches to setting the wholesale electricity cost allowance* described three approaches to setting the wholesale electricity cost (WEC) allowance:

- the long run marginal cost (LRMC) approach, which is based on the cost of an incremental unit of generation capacity, spread across each unit of electricity produced over the life of the generator
- a market-based or energy purchase cost (EPC) approach, which involves estimating the wholesale energy purchase costs that a prudent and efficient electricity retailer would be expected to incur
- hybrid approach, which applies different weightings to each of the LRMC and the EPC.

This paper assesses the impact of using each of these approaches to determine the WEC allowance on the competitiveness of the retail electricity market.

LRMC approach

The LRMC is the average cost over the long term of supplying incremental energy requirements. In a competitive market, the price outcomes will align with the LRMC over the *long-term*.

The history of Australia's deregulated electricity markets since the mid 1990s indicates that the market moves through cycles in response to the market conditions. The wholesale electricity price may be higher or lower than the LRMC depending on these market conditions.

If the WEC is set using the LRMC approach and the actual wholesale electricity price is *lower* than the LRMC, electricity retailers would be able to compete based on the difference between the wholesale electricity price and the LRMC.

If the WEC is set using the LRMC approach and the actual wholesale electricity price is *higher* than the LRMC, electricity retailers would not be able to compete in the market – the cost of purchasing energy in the wholesale electricity market would be more than the WEC allowance.

The competitiveness of the retail electricity market will be dependent on market conditions. The market will be more competitive in those years when wholesale electricity prices are low and less competitive in those years when wholesale electricity prices are high.

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EPC approach

As discussed above, the EPC is the estimated wholesale energy purchase costs that a prudent and efficient electricity retailer would be expected to incur.

If the WEC is set using the EPC approach and the actual wholesale electricity price is *lower* than the estimated wholesale electricity price, electricity retailers would be able to compete based on the difference between the actual wholesale electricity price and the EPC.

If the WEC is set using the EPC approach and the actual wholesale electricity price is *higher* than the estimated wholesale electricity price, electricity retailers would not be able to compete in the market – the cost of purchasing energy in the wholesale electricity market would be more than the EPC.

The competitiveness of the retail electricity market will be dependent on the errors associated with forecasting the EPC and the margin in the retail electricity price. The market will be more competitive when forecasting errors are low and there is sufficient margin in the retail electricity price and less competitive in those years when forecasting errors are high and there is insufficient margin in the retail electricity price.

Hybrid approach

If the WEC is set based on the higher of the LRMC and the EPC and the WEC is set based on the LRMC then:

- if the actual wholesale electricity price is *lower* than the LRMC, electricity retailers would be able to compete based on the difference between the wholesale electricity price and the LRMC
- if actual wholesale electricity price is *higher* than the LRMC, electricity retailers would not be able to compete in the market – the cost of purchasing energy in the wholesale electricity market would be more than the WEC allowance.

If the WEC is set based on the higher of the LRMC and the EPC and the WEC is set based on the EPC then:

- if the actual wholesale electricity price is *lower* than the estimated wholesale electricity price, electricity retailers would be able to compete based on the difference between the actual wholesale electricity price and the EPC
- if the actual wholesale electricity price is *higher* than the estimated wholesale electricity price, electricity retailers would not be able to compete in the market – the cost of purchasing energy in the wholesale electricity market would be more than the EPC.

The competitiveness of the retail electricity market will be dependent on market conditions in those years when the wholesale electricity cost is estimated to be lower than the LRMC and will be dependent on the errors associated with forecasting the EPC and the margin in the retail electricity price in those years when the estimated wholesale electricity cost if higher than the LRMC.

Facilitating a competitive retail electricity market

To ensure that the retail electricity market is competitive, an allowance needs to be provided above the expected costs that would be incurred by a prudent and efficient retailer.

This allowance has generally been implicitly provided during periods when the WEC has been set based on the LRMC and the actual wholesale electricity costs have been *less* than the LRMC. However, under this approach the level of competition has declined when the actual wholesale electricity costs have been *greater* than the LRMC.

If using the EPC approach to determine the WEC allowance, a more transparent approach would be to include an explicit allowance in the determination of the retail electricity price. This allowance should take into consideration the level of discounting between the standing contract price and market offers, and the forecasting errors implicit in the estimation of the wholesale electricity cost.

By adopting such an approach, the competitiveness of the retail electricity market will be less dependent on market conditions.

As retail electricity prices are deregulated in Victoria, the level of discounting between the standing contract and market offers in Victoria is the most transparent and data-rich source of information as to the level of discounting in the market. The standing contract and market offers for a range of retailers in each of the five Victorian electricity distribution areas are published on the YourChoice website (www.yourchoice.vic.gov.au).

Quantifying the level of discounting

The table below sets out the quarterly bill for a customer in CitiPower's electricity distribution area that consumes 1,564 kWh per quarter based on each of the standing offers and the lowest market offers that are available. The market offers are compared to the standing offer for that retailer, to Origin's standing offer[1] and to Neighbourhood Energy's standing offer[2].

Electricity distribution area: CitiPower					
Usage: 1564 kWh	Billing: Quarterly				
	Quarterly bill		Discount		
	Standing offer	Market offer (with discounts)	Market relative to standing	Market relative to Origin standing	Market relative to Neighbourhood standing
Red Energy	444	352	21%	23%	12%
Dodo Power & Gas		325	N/A	29%	18%
Neighbourhood Energy	398	358	10%	21%	10%
Alinta Energy	398	359	10%	21%	10%
Momentum Energy	555	405	27%	11%	-2%
Powerdirect	481	414	14%	9%	-4%
Energy Australia		380	N/A	16%	5%
Origin Energy	455	424	7%	7%	-7%
Lumo Energy	447	399	11%	12%	0%
Simply Energy	474	391	18%	14%	2%
Click Energy	471	380	19%	16%	5%
TRUenergy	452	438	3%	4%	-10%
Australian Power & Gas	458	405	12%	11%	-2%
AGL	481	422	12%	7%	-6%

[1] Origin Energy is the former franchise retailer for CitiPower's electricity distribution area.
[2] Neighbourhood Energy has the lowest standing offer.

The table illustrates that the discounts between the standing offers and market contracts vary from retailer to retailer and vary depending on the reference point (to the same retailer's standing offer or to anther retailer's standing offer).

Origin Energy is the former franchise retailer in the CitiPower area. If Origin Energy's standing offer tariff is used as the reference point, then the lowest discount provided is 3% (TRUenergy) with AGL and Origin Energy offering market contracts with a 7% discount relative to Origin Energy's standing offer contract.

AGL, Origin Energy and TRUenergy have the largest market shares in Victoria, followed by Lumo Energy and Simply Energy. Lumo Energy and Simply Energy offer market contracts with a 12% and 14% discount, respectively, relative to Origin Energy's standing offer contract.

The discounts will also vary depending on the consumption level and by electricity distribution area.

If this type of analysis was adopted to quantify the level of discounting, the discounts for different consumption levels and in different electricity distribution areas would also need to be considered.

Based on this initial analysis, a margin of at least between 3% and 7% would need to be provided to facilitate a competitive market.