Independent Competition and Regulatory Commission's Technical Paper: Energy Purchase Costs, and Frontier Economics' Energy Purchase Cost Review.

Response by Environment, Planning and Sustainable Development Directorate (EPSDD)
ACT Government

The Environment, Planning and Sustainable Development Directorate (EPSDD) welcomes the Electricity Model and Methodology Review 2018-19 Technical Paper on Energy Purchase Costs, and Frontier Economics' Energy Purchase Cost Review, and would like to thank the Independent Competition and Regulatory Commission (the Commission) for the opportunity to comment of the papers. EPSDD would also like to thank the Commission for the opportunity to participate in the technical forum on 13 February 2019. EPSDD comes at this exercise from a perspective that considers the effect of methodology on prices, and therefore the effect on ACT electricity consumers.

The electricity market is a dynamic market with changing drivers, making it naturally volatile. The market is also currently in a state of transformation, with thermal generators approaching retirement (due to ageing infrastructure or economic pressures), new renewable generation changing the generation mix, and the development of distributed generation and demand response technologies, all of which will likely add to market volatility in the coming years.

EPSDD is therefore of the opinion, as discussed in more detail in the responses below, that the model for calculating energy purchase costs needs to give consideration to the current value of assets, rather than their historic values, which may be based on considerably different market conditions. The model should also be accurate, use contemporary and comparable methodologies, and be transparent.

A model with outputs that are more reflective of current energy purchase costs would provide stronger price signals and help market participants manage their risk profiles. For example, in the absence of effective competition in the ACT's electricity retail market, a standing offer that more accurately reflects the actual cost of electricity would provide potential new entrants with a more accurate indication of costs and risks.

EPSDD is also supportive of methodologies that are more comparable to other National Electricity Market (NEM) regions, in particular the neighbouring NSW region, as these differences in approach often lead to contrasting price trends that are difficult for consumers to understand.

Hedging strategy

The Commission's current methodology for the calculation of wholesale energy purchase costs only considers base swaps traded on ASXEnergy. As detailed in Frontier Economics' paper, retailers generally use a mix of base swaps, peak swaps and cap contracts to better hedge their load and manage exposure to volatility; using only base swaps would tend to be riskier and lead to retailers being over-contracted. This means that the current methodology is likely to overstate a retailer's hedging costs.

The volume of swaps traded on ASXEnergy will change over time and with market conditions. The Australian Energy Market Operator (AEMO) analysed available ASXEnergy futures data in its 2018 report *AEMO observations: Operational and market challenges to reliability and security in the NEM*, and found that the liquidity in the contract markets, especially swap products, has been declining since 2014. This trend was particularly notable in NSW (figure 1, below), with swap and cap liquidity down 50% and 21% respectively. The market in NSW has direct implications for the ACT, as the ACT forms part of the NSW NEM region and therefore shares its wholesale prices.

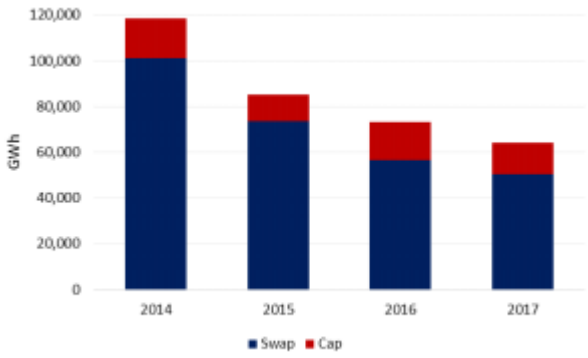


Figure 1. Traded futures volumes by product in NSW since 2014. From *AEMO observations: Operational and market challenges to reliability and security in the NEM, pg. 51*

Should this trend continue, low liquidity of swap derivatives may impact how reflective these products are of current market conditions, and therefore EPSDD urges consideration of a wider range of contract types in the energy purchase cost model.

Persisting with a calculation that also uses data from a market with reduced liquidity will lead to even less reflective pricing, and will likely have a negative impact on electricity consumers.

Given the above observations, EPSDD supports Frontier Economics' recommendation that the ICRC consider a methodology that includes a mix of base swaps, peak swaps and cap contracts. This approach would use a larger pool of data to produce a price that better reflects current retailer risk management practices, and therefore better represents the actual purchase cost of electricity that retailers face. EPSDD appreciates the added complexity of this approach, but considers that the benefits would outweigh the added cost and effort.

Contract position

If it was to implement Frontier Economics' recommended method for determining the hedging approach of an efficient retailer, the Commission would need to determine an appropriate contract position (volume of quarterly base swaps, peak swaps and cap contracts) to be included in the model.

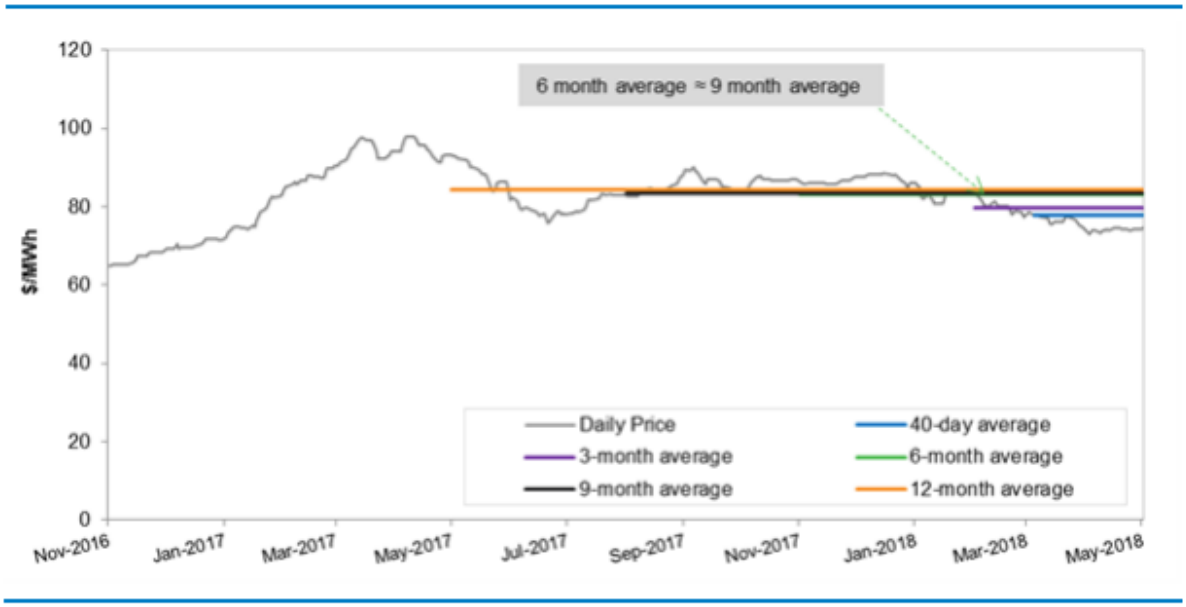
EPSDD does not have a firm position on either Frontier Economics' STRIKE model or the ACIL Allen benchmarking approach. Noting that Frontier Economics' analysis found each method produced comparable results, and the ACIL Allen approach is considered simple, transparent and does not require forecasts of future prices, it would seem that supports the recommendation by Frontier Economics to adopt this approach.

Failure to adopt the more reflective approach recommended by Frontier Economics risks an inaccurate energy purchase cost, which could lead to a higher standing offer and higher prices for ACT electricity consumers.

Forward price averaging period

The Commission currently uses a methodology for calculating the forward price component of the energy purchase cost calculation using a 23-month time-weighted average price of base swap prices traded on ASXEnergy. This approach leads to changes in wholesale electricity market prices taking an extended period of time to impact ACT retail electricity prices, and equally extends the time it takes for historic price movements to cease impacting these prices. This can lead to ACT electricity consumers paying a price for electricity that is not reflective of current market conditions.

The NSW Independent Pricing and Regulatory Tribunal (IPART) considered the impact of different forward price averaging periods in its *Solar feed-in tariffs - The value of electricity from small-scale solar panels in 2018-19* report. It found that the averaging period can have a significant effect on a forward price calculation (Figure 2, below). For the time period considered in the report, a 12-month average produced a forward price around $4 per MWh higher than a 40-day average. Using the same data, if a 24-month average was calculated, the price spike seen in Figure 2 for March 2017 (this corresponds to the closure of Hazelwood Power Station) would likely further increase the forward price.



Note: Averages are calculated as of 15 May 2018, and include a 5% contracting premium.
Data source: Data from Thomson Reuters Eikon.

Figure 2. Forecast average wholesale electricity prices for 2018-19 using different averaging periods. From IPART's *Solar feed-in tariffs - The value of electricity from small-scale solar panels in 2018-19, pg. 47*

EPSDD acknowledges that a 23-month averaging period provides more stable regulated prices. EPSDD further understands that the Commission has an obligation under the *Independent Competition and Regulatory Commission Act 1997* that requires it to consider social impacts in making its decisions. Smoothing volatility in wholesale prices is consistent with this legislated obligation.

EPSDD does not agree with the assessment that price stability alone produces better social impacts. The 23-month averaging period, despite delaying consumers being exposed to price spikes, also slows wholesale price reductions being passed through to customers, negating much of the positive social impact.

Additionally, the delaying effect that the 23-month averaging period has on the pass-through of price spikes is difficult for consumers to understand, especially given the different approaches to calculating energy purchase costs used by neighbouring NEM regions, especially NSW. It also leads to the modelling of energy purchase costs that are not necessarily representative of current market conditions.

For example, the closure of Hazelwood Power Station in Victoria in March 2017 increased the demand for exports from the NSW NEM region to Victoria, which in turn increased NSW wholesale electricity prices. Due to the current 23-month average price methodology, the increased wholesale prices took an extended period of time to fully impact electricity consumers in the ACT, but likewise, once more generation had come online in Victoria and electricity prices decreased, ACT consumers were still paying prices inflated by the Hazelwood closure. This effect is very difficult to explain to consumers.

EPSDD recognises that a significantly shorter forward price average, such as a 40-day average, is likely to produce prices that are too volatile, leading to price uncertainty and negative impacts on customers. However, EPSDD recommends considering a shorter timeframe for the forward price averaging period, such as 12 months, which would be closer to a mark-to-market approach, and better enable retailers and the ACT Government to explain to consumers the stimuli that are affecting annual changes to electricity prices.

Load profiles

EPSDD agrees with Frontier Economics' assessment that basing load data on historical outcomes back to 2003-04 is less likely to account for important changes in the market, and is unlikely to account for how load peaking and consumer habits change over time. Therefore, EPSDD agrees with Frontier Economics' proposed approach of analysing past load and price trends to identify historical years that are representative of future load profiles for the ACT, and using one or more of these years to determine an appropriate load profile for inclusion in the model.