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Essential Services Commission
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By email: RetailEnergyReview@esc.vic.gov.au

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Re: Developing a reference price methodology for Victoria's energy market: Consultation Paper

AGL notes the Victorian Government has issued a Terms of Reference (ToR) on *Efficient Pricing in the energy market* which requires the Essential Services Commission (ESC) to:

"...develop a pricing methodology that could enable the publication of a 'reference BSO price' for electricity and gas offers may be published from 1 July 2018."

The ToR specifically instructs the ESC to exclude the costs of customer acquisition and retention from these gas and electricity reference prices. As an energy retailer in Victoria with almost 1.2 million customer accounts, AGL does not believe the calculation of retail prices using this methodology will provide a useful reference for a competitive market given it excludes the costs of competition.

AGL is concerned that the resultant reference prices, despite the ESC's best endeavours, will be misleading for both customers and policy makers because of the excluded costs and will create unrealistic expectations.

This is especially concerning for a retail gas reference price because the lack of transparency in the domestic gas market exacerbated by current supply constraints will make it extremely difficult for to estimate the wholesale cost of gas, the costs of daily swing gas and even pipeline costs.

In saying this, AGL recognises the ESC is instructed to follow the current ToR and therefore would take this opportunity to submit on the *Developing a reference price methodology for Victoria's energy market: Consultation paper* (Consultation Paper) that the ESC released on 20 March 2018.

AGL is not clear on how these reference prices are to be used in practice which can have a significant bearing on the appropriate methodology used for estimation, however, the Consultation Paper proposals for estimating the cost components for electricity and gas are broadly sensible.

AGL generally supports the ESC using:

- a futures market method for estimating wholesale electricity costs;
- a market based approach for deriving wholesale gas costs;
- the pass through of network charges as approved by the Australian Energy Regulator;
- market based approaches for environmental scheme costs; and



- benchmarking approaches for both retail operating costs and retail margin.

AGL would like to express its concerns with the short consultation period being provided on the pricing methodology. In response to the ToR, ESC has quickly issued a Consultation Paper and since provided additional information on the planned methodology through its consultants Frontier Economics.

This is commendable but is an incredibly quick timeframe for a consultation on a pricing methodology and not in line with the ESC's consultation processes. Especially when you consider that the ESC is required to consult on the methodology with consumers, consumer advocates, energy businesses, relevant experts and other regulators.

In AGL's experience, even when a jurisdictional regulator has an acceptable pricing methodology in place that has been used for many years, the regulator usually conducts annual consultations on the relevant data inputs, forecast loads, forecast spot prices, other market forecasts, assumptions and modelling. This consultation can take many months alone to ensure a robust result.

AGL understands the ESC does not have any latitude with its timeframe because of the ToR but would emphasise that AGL is only participating in this accelerated process because the price methodology is being developed to estimate reference prices. If the ESC were constructing a regulated price that directly impacts on the energy market, then this would be unacceptable.

As it stands, the ToR has asked the ESC to prepare a pricing methodology and reference price for the purposes of monitoring and assessing the efficiency and competitiveness of the energy market from 1 July 2018. The ESC's competitiveness review is not due until the end of 2019 and there is no requirement in the ToR to produce a reference price for 2019 at this time.

AGL therefore proposes that the ESC focus on establishing the price methodology and preparing a reference price for the 2018 calendar year to meet its 1 July 2018 timeframe. The ESC would then be able to refine its methodology before preparing a reference price for the 2019 calendar year. This is eminently sensible given the need for improved data for 2019 including network charges, additional forward contract trades, and improved customer load data. Many of these issues the ESC has already acknowledged.

Regarding the methodology outlined by ESC and Frontier Economics in its workshop of the 5 April 2018, AGL has included in Appendix 1 its detailed comments and queries regarding both the data and modelling that they are intending to use.

If you wish any further information, please contact me on [REDACTED] or Patrick Whish-Wilson on [REDACTED].

Yours sincerely



Elizabeth Molyneux
GM of Energy Markets Regulation



Appendix 1: AGL Comments on ESC and Frontier Proposed Methodology

Pricing in the energy market

As highlighted by the ESC in its Consultation Paper, retail tariff structures usually reflect the basis of the underlying network tariff structures but can be structured in many ways by retailers. The major retail tariffs are currently flat rate or time of use tariffs and AGL supports the reference prices focussing on flat tariffs in each distribution zone.

However, there are five network zones for electricity and 13 network zones for gas. Despite the number of reference prices and potential confusion this will cause, AGL believes the ESC will need to establish different prices for residential and small business customers in all different zones.

Establishing the reference price

The cost components identified by the ESC are commonly identified as:

- wholesale costs of procuring electricity or gas;
- network charges and transportation;
- environmental scheme costs;
- retail operating costs;
- a retail margin; and
- any other costs.

AGL's has addressed the proposed method for estimating these cost components in the following sections.

Wholesale electricity costs

AGL agrees with the use of a futures market method for estimating wholesale electricity costs as it is a more accurate reflection of a retailer's costs compared to other approaches.

Retailers generally manage the volatility of the National Electricity Market (NEM) by hedging directly with generators or through the futures market. The four main financial products used by retailers being:

- base load swaps;
- peak swaps;
- off-peak swap; and
- price caps.

The futures market approach should replicate a hedging portfolio where the retailer minimises its wholesale electricity costs for supplying a customer load profile based on its risk profile.

To model wholesale electricity cost, Frontier has highlighted that it requires the following inputs:

- the demand profile or half-hourly load of the retailer's customers;
- a price trace or forecast of half-hourly spot prices that retailers will likely face;
- the cost of the financial hedging instruments; and
- an appropriate hedging strategy for a prudent retailer.



Load profile

The retailer's load profile for the relevant pricing period needs to appropriately reflect:

- the half hourly load shape; and
- the level of total energy or demand expected for the forecast year.

AGL understands that to produce the required load profile, Frontier will utilise:

- load shapes based on Victorian manually read interval meters (MRIM) that are published on the AEMO website; and
- Victorian system load in 2017 scaled for AEMO demand forecasts.

This has several advantages. Firstly, using the recent Victorian load trace allows Frontier to use the coincident price trace from the same year as the basis for its spot price forecast.

Secondly, AGL accepts that determining an appropriate recent load shape in Victoria is difficult due to the removal of the Net System Load Profile (NSLP). Although the Victorian MRIM data is almost two years old, AGL has compared it against its own load profile data and believes it is currently credible in shape, load factor and maximum demand.

AGL therefore agrees with this approach for calculating a reference price for the 2018 year. However, the ESC should attempt to access more up-to-date load data when it chooses to calculate a reference price for 2019. The MRIM profile will then be 3 years old and would be likely to diverge from the average profile of a Victorian customer. AGL is happy to discuss with the ESC the provision of better data for that process.

AGL does have some concerns with respect to the load profile and how volume risk arising from unknown customer churn and extreme weather events is incorporated in its modelling given the load trace is fixed and there is no apparent consideration given to extreme deviations that can and do occur at irregular intervals. AGL would appreciate further information on whether it is assumed this is covered by the volatility allowance or by the retailer's hedging position?

Pool price forecast

The calculation of expected wholesale costs requires a forecast of pool prices, even under a futures market method, because of the differences between forward contracted demand and actual customer demand. At these times, the difference between contract prices and the spot pool price needs to be accounted for and incorporated in wholesale costs.

AGL understands that Frontier is suggesting using the most recently available spot prices or price trace in its modelling, because it coincides with the load profile it is planning to use. These are to be scaled based on expectations of the contract market.

While AGL generally accept Frontier's approach for this purpose, it does have several concerns regarding:

- the assumption that contract prices minus 5 per cent premium can be used to infer the level of spot prices;
- how the future base contract price level is determined; and
- the sensitivity of the modelling to these spot price forecasts.

AGL has never agreed with the view that that contract prices reflect spot prices plus a 5 per cent premium.



The contract market is a forward-looking view on the likely spot outcomes in the future, with an 'insurance premium' added to that forward view. However, the premium cannot be estimated simply as by adding 5 per cent to the spot price results which occur months or years after the contract is traded. The forward view is always changing as is the relationship and premium compared to spot price which is why retailers are required to layer in hedges over time to comply with risk management policies.

Frontier have also suggested using its preferred point-in-time methodology for assessing the price of forward contracts which we discuss in more detail in the following section. The question in this instance is whether the base contract price that Frontier will use to scale spot prices is being calculated using a similar point in time average of trading prices. AGL does not believe a point in time future contract price bears any relationship to the future year's spot prices.

These issues, while very real, may be less important for the purposes of constructing a wholesale electricity cost for 2018 depending on the hedging position and modelling sensitivity to spot price. AGL expect Frontier to explore and highlight the sensitivity of its modelling to pool price scenarios to ascertain whether it required to change its scaling method for the 2018 reference price.

Either way, AGL believes this method needs to be further examined and refined for a 2019 reference price.

Contract price forecast

Past futures contract prices are readily available from trades on the ASX for the 2018 contract year. Trade liquidity for the 2019 contract year is increasing. The more liquidity in the market, the more that contract prices can be relied upon for estimating so AGL believes this reinforces the view that the ESC should be focussing on a reference price for 2018 and estimating the 2019 reference prices when further data is available at the end of the year.

Retailers purchase forward contracts for a period of one to two years in advance of the forecast year, as indicated by the liquidity of forward contracts. Most assessments of wholesale electricity cost calculate a volume weighted average of contract prices for trades over this period to estimate the average contract prices.

AGL understand that Frontier are proposing to use a 40-day average of published contract prices at the end of 2017 to estimate contract prices for 2018. This represents a continuation of the 'point-in-time' approach that Frontier has used previously. They have previously supported this approach because it represented the current value of the assets in question, and that prior hedging decisions in a competitive market are irrelevant because they are sunk costs.

In this instance, the ESC's stated objective is attempting to establish a reference price that reflects retailers' cost. The Frontier method will not work.

A snapshot of contract prices in a volatile market is not an appropriate methodology to reflect a retailer's hedging approach. Frontier should use the volume weighted average of trades over a 24-month period to estimate the cost for a retailer to acquire sufficient cover to supply its customer load.

Hedging position

The final input into the wholesale electricity cost modelling is the retailer's assumed hedging position based on its risk profile. Retailers hedge their exposure to the spot price by buying forward contracts in advance to cover their customer load. In AGL's view, retailers are particularly concerned with managing the risk of low-probability but high impact pool price events and therefore will hedge conservatively to reduce the risk of these.



Frontier is utilising its propriety model 'STRIKE' to determine an 'efficient frontier' that balances the costs and risks of remaining exposed to the spot price against the costs and risks associated with being over-contracted.

Frontier has suggested that the contract position is conservative and that:

- swaps will cover average demand;
- caps will cover peak demand; and
- there will be few instances of pool price exposure, only at peak demand times.

AGL supports the Frontier conservative hedging approach but with the understanding that the high level of hedging is priced realistically, and that volatility is an input into the model.

AGL's concern is that the Frontier modelling assumes a perfect correlation between the system load, the hedged load and spot price which narrows the variation between the cost of the portfolio and probable outcomes.

This is especially the case for the 2018 reference price as Frontier will need to model with data and assumptions that were relevant as of December 2017.

Volatility allowance

AGL would like to understand in further detail the calculation of the volatility allowance and any risks captured under this cost component.

Large-scale renewable energy target scheme

Retailers are required to purchase and surrender a certain number of large-scale generation certificates (LGC) to meet their obligations and these should be priced according to market prices.

The large-scale renewable energy target is published and known for 2018.

The relevant price for LGCs in 2018 should be non-controversial irrespective of whether Frontier use average LGC contract or spot prices or if it produces a forecast as of December 2017.

However, the methodology it uses will be material when calculating the cost of LGCs in 2019 given the uncertainty on future prices.

Small-scale renewable energy scheme

Under the small-scale renewable energy scheme (SRES), the small-scale technology percentage (STP) has been published for 2018 and retailers are required to purchase small-scale renewable energy technology certificates (STCs).

AGL expects Frontier to forecast STC prices based on historic prices.



Wholesale gas costs

The ESC has indicated that a market based approach should be used to forecast the wholesale cost of gas and it should be based on:

- Annual contract quantity costs based on a forecast of a short run Wallumbilla LNG netback price which is transported to Victoria;
- Gas swing costs on pricing benchmarks obtained from peaking gas providers (such as storage providers Iona and Dandenong LNG supply); and
- an efficient contracting strategy.

The construction of a reference price for gas is highly problematic due to the difficulty in estimating a wholesale cost of gas. AGL recognises the ESC is required to produce a gas reference price under the current ToR and AGL's specific comments on the proposed solution are included below.

LNG Netback Price

Frontier has indicated that it will calculate a LNG netback price based on the following inputs:

- an export price for LNG;
- less shipping, liquefaction and auxiliaries;
- less transport from Wallumbilla to Gladstone;
- plus transport from Wallumbilla to Victoria.

AGL has serious concerns with elements of this calculation and with the sources of some of the input data:

1. It appears that Frontier are considering using a spot price forecast for the price of LNG.

AGL does not support a net-back calculation based on the forecast of an international LNG spot price. AGL believe the appropriate net-back calculation should be based on a contract Asian LNG price. Spot LNG is a smaller component of the Asian LNG market than contract LNG and contract LNG is also sold FOB Gladstone.

Although Frontier has highlighted one relevant spot price forecast in the 5 April workshop, there are many different forecasts for spot LNG that could be used, both historically and as of today. Generally, spot prices are highly volatile and will vary throughout the year due to seasonal effects. For example, in the last 6 months, the spot LNG market fundamentals have changed substantially with China increasing its LNG imports which is likely to increase the forecast spot LNG in Frontier's forecasts.

2. Shipping costs appear inflated

Frontier appear to have calculated the cost for shipping LNG to Japan based on a per kilometre calculation. Recent reports from the ACCC have highlighted lower shipping costs, based on actual transactions, than the estimate calculated by Frontier.

3. What does the auxiliaries cost category refer to?

AGL agree that a SRMC of liquefaction is around AU\$1/GJ as indicated by Frontier, however AGL considers this price also includes the SRMC of transportation from Wallumbilla to Gladstone.



Liquefaction includes all process and pipeline costs at the Gladstone LNG plant so AGL would like further explanation regarding what cost Frontier is including in definition of auxiliaries? This concept of “auxiliaries” is not a standard industry approach to include in a short-run Wallumbilla LNG net-back calculation.

4. Frontier should not include Transport from Wallumbilla to Gladstone

This estimated cost for the Queensland Gas Pipeline (QGP) is irrelevant and should not be used in the net-back calculation proposed by Frontier.

The LNG producers transport the gas from Wallumbilla to Gladstone in their own pipelines and do not utilise the QGP. As such, the transport cost from Wallumbilla to Gladstone is the short-run marginal cost of their own pipeline which is small. Any actual cost of transport is already included in the SRMC of liquefaction.

Cost of daily swing

Although retailers contract for most gas directly from suppliers under GSAs, the degree of flexibility or ability to vary maximum daily quantities under a GSA is usually limited to approximately 10 per cent more than the contracted average. This means that retailers must either contract quantities under the GSA to cover maximum daily loads or access swing gas in these periods of high daily use.

Frontier’s methodology appears to have factored in the additional cost of providing transport for swing gas at peak times and has proposed using load factors applicable to the Victorian residential gas load to adjust the transport cost.

However, this concept has not included the additional upstream cost for swing gas itself. The commodity cost of gas, in this instance estimated using the LNG net-back, is for the LNG supply at a low load factor of close to 100%. AGL internal data suggest residential load factors of around 30% in recent years. Frontier need to accommodate the gas swing as well as the transport using such load factors.

AGL understood from the Consultation Paper that this was to be priced according to pricing benchmarks obtained from peaking gas providers such as storage providers Iona and Dandenong. Please confirm.

Network costs: electricity and gas

AGL agree that the simple pass-through of the network tariff components is a straightforward approach. The cost of metering, which remains a network charge in Victoria but has been separately itemised for electricity, needs to be included.

Other environmental scheme costs

The costs of both the Victorian Energy Upgrades Program and Feed in tariff schemes need to be incorporated into the retail reference prices.

The VEET scheme places an obligation on Victorian energy retailers (both electricity and gas) to surrender a specified number of Victorian energy efficiency certificates (VEECs) every year. The cost of the VEET scheme is considerable and needs to include costs of retailer’s compliance as well as price of the VEECs.

The costs of the feed-in tariff should be straight-forward for the ESC include given its responsibility in setting the minimum rate on a financial year basis.



Retail operating costs

There are benchmarks available that have been used by regulators for retail operating costs, with and without customer acquisition costs. They are a useful guide although retail operating costs can vary significantly from retailer to retailer, with economies of scale being a significant factor.

However, given the short time frame available to the ESC, AGL agrees with the ESC using regulatory benchmarks for the 2018 reference prices given it is relatively simple to implement and quite transparent.

AGL does not support using a benchmarking approach that uses publicly available data sourced from annual reports at this time. Sourcing and interpreting such data can be challenging as costs relating to retail operations which are provided in financial reports by publicly listed companies will often require adjustment. For example, AGL publishes cost to serve figures in its Annual Reports in relation to its Consumer Markets but these costs are not fully allocated costs as they do not include many centrally managed charges.

AGL centrally manages many expense items, including information technology to maximise operational efficiencies, minimise costs and optimise service levels across business divisions. Therefore, to adjust AGL's reported cost to serve figures would require costs included within its centrally managed expenses to be added, including:

- Labour and associated on-costs;
- Hardware maintenance and software licensing fees supporting the IT operating platform;
- Annual group insurance premiums;
- Consultancy and contractor's fees resulting from professional technical advice sought externally; and
- Depreciation charges on IT and CRM Projects.

AGL does support the ESC considering other methods for estimating retail operating costs for the 2019 reference price. Regulatory benchmarks do need to be updated and need to incorporate the additional operating costs being imposed on retailers through the introduction of retail market reforms. The ACCC Final Report may also include useful analysis of retail operating costs.

Retail operating margin

Like the above approach for estimating retail operating costs, AGL supports the ESC using a benchmark based on the decisions of other Australian regulators to estimate retail margin for the 2018 reference prices. Further examination of the retail margin component is warranted in the future.

Other costs

The ESC has identified the following costs that AGL agrees must be included in the reference prices:

- AEMO fees, including ancillary service fees;
- Distribution and Transmission Line Losses;
- Unaccounted for gas (UAFG) for gas networks; and
- ESC license fees.

AGL would also highlight that the ESC needs to include the cost of the Reliability and Emergency Reserve Trader (RERT) into the electricity retail reference price, perhaps included with the ancillary service charges. This was a new impost for electricity retailers in 2018 and is expected to increase in cost for 2019.