



17 October 2019

Ms Kate Symons  
Commissioner and Chairperson  
Essential Services Commission  
Level 37, 2 Lonsdale Street  
Melbourne VIC 3000

email: [www.engage.vic.gov.au](http://www.engage.vic.gov.au)

Dear Ms Symons,

**RE: VICTORIAN DEFAULT OFFER 2020 PRICE DETERMINATION – DRAFT DECISION**

Origin Energy appreciates the opportunity to provide a submission in response to the Essential Services Commission's (ESC) Victorian Default Offer Draft Decision to apply from 1 January 2020. As we have stated in previous submissions, we endorse a regulatory framework that supports a competitive market. This includes making it easy for customers to compare offers; allows retailer to recover their efficient costs; and sets a regulated price that fosters sustainable competition.

It is vitally important that the ESC ensures that its method and price do not produce outcomes that harm the competitiveness of the retail market and limit the ability of active customers to obtain the rewards they otherwise would. Initial observations of the operation of the VDO has been that churn is decreasing and retailer discounts are showing signs of converging around the VDO.

The ESC has proposed a method for its calculation of the VDO to apply in 2020 that is broadly consistent with its current method. While we support this approach, we consider that the ESC ought to further review the calculation of load profiles and the distribution of spot price outcomes to ensure that the energy purchase cost allowance better reflects a broader range of outcomes and more realistically accounts for the wholesale risk faced by an efficient retailer. For example, the selection of three years of historical data fails to capture extreme weather events and history has shown that these events can have a significant impact on both demand and the price of energy. The historical data must also factor in the projected increase in solar PV installations in 2020.

In addition, as part of its 2020 determination, the ESC is required to establish the maximum annual electricity bill for a prescribed customer on a tariff that is not a flat tariff (ie time-of-use). We do not believe it is reasonable to set a benchmark maximum annual bill for time-of-use (TOU) tariffs based on the annual cost for fixed tariffs (ie flat tariff) because it assumes a specific consumption point when in fact the impact on consumers with different levels of consumption will be uncertain.

Specifically, time-of-use network charges are applied using actual usage whereas under the VDO, retailers will be limited to recovering TOU tariffs based on the maximum annual bill. As a result, if the customer has a higher energy consumption during peak periods, the retailer will be liable for the difference between what it can recover under a maximum bill or flat tariff VDO and actual network charges. This approach goes against the intent of the VDO and Origin requests that a separate TOU maximum annual electricity bill be calculated.

Origin's response to specific elements of the framework are set out below.

***Approach to estimating Wholesale Costs***

Frontier (the ESC's consultant) has based its calculation of energy purchase costs on an efficient benchmark retailer. We agree, in principle, that an efficient retailer will make use of exchange traded

financial derivatives to hedge its exposure to spot prices to minimise its financial risk. However, we do not think that the modelled outcomes reflect the risks and costs faced by an efficient retailer given the:

1. load profiles are not representative of the diversity of load outcomes facing a retailer;
2. load profiles do not account for the increasing penetration of Solar PV;
3. selection of the median case from Monte Carlo modelling understates energy costs; and
4. modelled hedge position delivers positive cap pay offs i.e the 'insurance' purchased by the retailer reduces costs. The combination of the lack of variability in the load profile, the volume of cap contracts assumed, and spot price outcomes deliver unreasonable energy cost estimates.

Each of these concerns are discussed further below.

### Load Profiles

#### *Inclusion of data relevant to weather events*

Frontier has used three years (July 2016 to June 2019) of Manually Read Interval Meter (MRIM) data from each distribution zone to establish the likely half-hourly load of the retailer's customers. It also takes the corresponding half-hourly spot prices for the three-year MRIM data.

We submit that basing wholesale costs on a three-year data set will not adequately recognise the variability in an efficient retailer's purchasing costs. In particular, the small data set does not capture the probabilistic nature of weather events and the impact on spot prices and retailers' wholesale purchase costs. A small set of load data with limited variation will result in a modelled hedge position that is an unrealistically good fit for demand and carries an artificially low premium for volatility. The most recent weather record in Victoria was during January–March 2014 which means the selected three years of data do not allow for the impact of recent weather events.

Even if only three years of load data is available to the ESC, Frontier can simulate a more realistic range of load outcomes by sampling from a longer data set of readily available temperature data and creating 'synthetic' years' of load profiles using the temperature/load correlation drawn from the original three year data set. A similar approach has been applied by the Queensland Competition Authority (QCA).

Further, it is noted that Frontier states "average profiles are almost identical between years"<sup>1</sup>. Origin considers this is driven by the fact that profiles are being averaged across the entire year. If average profiles by month were compared over years, the profiles would be materially different due to weather patterns.

#### *PV Output Allowance*

Frontier's load profile analysis does not take into account the increasing level of behind the meter technology, such as rooftop solar PVs. Frontier has carried forward its assumptions on solar panel output assuming that it will occur at the same rate as previous years. Origin does not believe that this is the case.

In particular, the Victorian Government's solar homes scheme for 2019/2020 states that this phase of the program will:

- support the installation of 40,000 rooftop solar systems on private homes and community-owned housing;
- deliver 2,000 solar panel systems to rental properties; and
- deliver solar battery rebates to 1,000 households that already have rooftop solar and are in designated 'growth' suburbs<sup>2</sup>.

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<sup>1</sup> Frontier Economics, Wholesale Electricity Costs for 2020, 16 September 2019, p8.

<sup>2</sup> Solar Victoria, <https://www.solar.vic.gov.au/>

This significant increase in solar PV systems requires the collective trend to be included in future projections. Without the inclusion of this data, daytime load in projections will be significantly overstated. Importantly, the cost of hedging is likely to increase as the load factor deteriorates with retailers bearing more under/over hedging as flat swap products are used to hedge a more sculpted load shape. The lower consumption volume associated with greater PV penetration will also affect retail cost recovery - a higher unit price being required to recover the same operating costs and margin allowance over a reduced volume.

#### *Median vs mean expected outcome*

To develop a relationship between load profile and spot prices, Frontier has combined consumption load data with historical spot price data available from AEMO for the Victorian regional reference price node. Frontier then conducts a Monte Carlo simulation which generate 500 simulation years using three years of data (July 2016- June 2019). The ESC notes that the simulated year that results in the “median” price outcome is representative of a reasonable benchmark load profile.

The use of the “median” price outcome is not an appropriate metric to determine a reasonable outcome given electricity usage tends to be lognormally distributed. A “median” approach assumes that the underlying distribution of outcomes are normally distributed. Given that the outcomes are not normally distributed, the median outcome, or 50 per cent allowance, in the Draft Determination will mean that a retailer will under recover its costs. The “mean” would be a more reasonable representation of an ‘average retailers costs’. However, this also infers that a retailer will not have sufficient allowance for energy costs half of the time, this is an unreasonable pricing assumption. We note that the Queensland Competition Authority (QCA) seeks to address this issue by setting the energy cost allowance to cover 95% of modelled energy cost outcomes. It is important the ESC reconsiders its approach to the scenario selected within the distribution and the recognition of risk. The use of a median scenario will under recover in the long term and assumes retailers can bear an unreasonable level of year on year cost variance. We expect that the decision to adopt the median may have been informed by the lack of variance across the 500 modelled scenarios; we have sought to explain why this variance is understated by proposing changes to how load profiles are generated (section above) and spot prices distributed (see section below).

#### *Spot price simulation scaling*

To better align its prices with the market’s view on what will be the average spot price for 2020, Frontier assume that its average prices will be consistent with ASXEnergy futures prices. To do this, Frontier scale its half-hourly prices so that the time weighted average price in each quarter is equal to the relevant quarterly swap prices for 2020 from ASXEnergy.

The concern with this approach is that the afternoon peak is a lot higher relative to average in a less than 40MWh customer and as a result, the load weighted cost for these customers is higher. We do not believe Frontier’s analysis has accurately captured this.

We note that the scaling process has increased some spot prices to a level above the market price cap. Reducing these prices to the Market Price Cap (MPC) has the unexpected result of increasing the energy cost allowance, given the cap position assumed.

We are also concerned that scaling the pool price profiles to match the time averaged forward price curve removes volatility across the simulations, reducing the spread of Wholesale Energy Costs (WEC) (and presumably reducing the Volatility Allowance – see comments below).

#### *Volatility Allowance*

The ESC has included a volatility allowance which is intended to compensate retailers for the residual risk to which they are exposed, even when it contracts at the conservative point. The allowance is calculated based on the cost of holding working capital to fund cashflow shortfalls that could arise in years when the actual wholesale energy costs are higher than the Frontier estimate for the median simulated year.

The working capital requirement is based on the difference between the wholesale energy cost estimated for the median simulated year and the wholesale energy costs for the costliest simulated year for each distribution area.

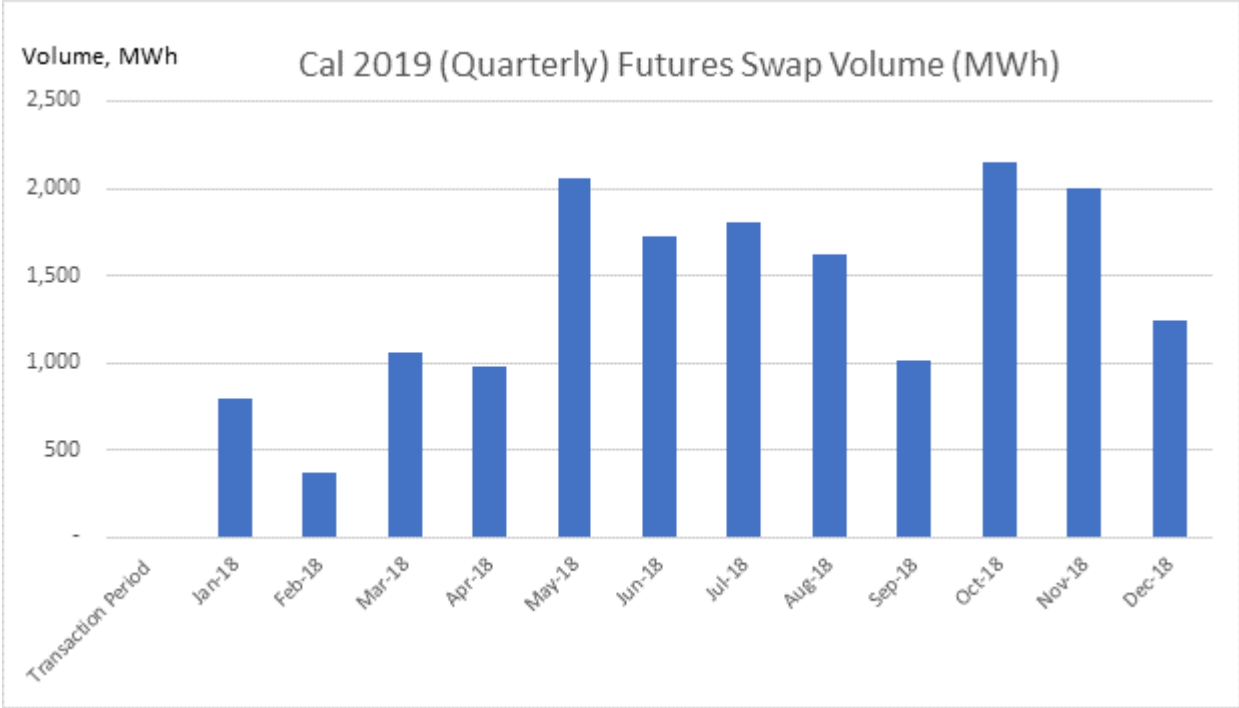
The volatility allowance takes no account of the likely corresponding variance in price. A retailer is likely to hold a pronounced short position when demand exceeds expectation, the very time when pool prices will be at their highest.

We consider that the volatility allowance understates the level of risk (and hence cost) associated with Frontier’s expected exposure. Specifically, Frontier suggests that a \$0.35/MWh - \$0.41/MWh premium accounts for all remaining wholesale volatility risk. It is not possible that a retailer could secure from the market a risk product (e.g. load following hedge) that managed all volatility risk for a 0.4 per cent premium. This allowance is clearly unreasonable when we consider that the price of swaps can vary by more than this within a single day.

For these reasons, we consider that the ESC ought to reassess the cost of managing residual risk under its preferred approach to developing wholesale costs. Before doing so, the ESC will need to address the issues we have raised with respect to the underlying lack of dispersion in load and pool prices.

*Timing for the inclusion of data*

As the chart below shows, there is typically an increase in the traded volume of swaps for a given calendar year in the months immediately prior to that year (ie a substantial volume of swaps for Cal2020 swaps will be traded in October and November 2019). Origin supports the ESC’s approach to apply a trade weighted average over 12 months and the ESC’s intent to update the forecast for the latest available information. We see no practical reason why swap and cap price data cannot be updated towards the end of the ESC’s review period to capture the most recent data.



**Contract Portfolio**

The combination of the lack of variability in the load profiles, the volume of cap contracts assumed, and spot price outcomes deliver unreasonable energy cost estimates and a lack of dispersion (as Frontier note only \$4-5/MWh) in the WEC simulations. The contract portfolio appears to deliver a positive net payout for caps under the selected median profile. If there was little pool price volatility (as was the case in FY17) then the WEC would counter intuitively be about \$4-5/MWh higher. It is not reasonable to model 'insurance' products like caps as having a positive net payout. While this will of course be a market outcome at times, it should not be the assumed likely scenario.

We also note that, because the pool prices have been scaled, in a couple of periods the pool price in the median price scenario appears to exceed the market price cap<sup>3</sup>. Limiting pool prices to the market price cap increases the WEC by \$0.11/MWh to \$0.13/MWh in the three network areas we examined.

**Approach to estimating Environmental Costs**

The ESC proposes a market-based approach for forecasting environmental costs such as LRET. For LRET costs, the ESC proposes to determine these as the loss adjusted electricity multiplied by futures market prices and by the Clean Energy Regulator’s renewable power percentage with an upper bound of the penalty rate.

Origin considers the proposed approach is reasonable for 2020. However, the ESC will need to revise its approach over coming years if the value of LGCs diverges significantly from the price an efficient retailer is likely to pay to meet its LRET obligations.

Specifically, the forward price curve for LGCs is in decline reflecting the anticipated delivery of sufficient large-scale renewable generation to meet the peak Renewable Energy Target in 2020 and no planned extension of the scheme. The ESC should carefully consider whether its approach of using the market price will adequately compensate retailers for their prudent LGC costs over the remaining years of the scheme. Retailers have progressively invested in renewables or entered into PPAs over the duration of the scheme with prices for earlier renewable projects generally made at a significantly higher price point, which may now be in excess of the current LGC/energy market price. There appears to be a risk of a perverse regulatory outcome over the remaining years of the scheme if the current LGC market price is applied without adjustment. Retailers will effectively be penalised for acting commercially and acting in good faith by supporting sufficient renewable investment to meet scheme obligations.

With respect to SRES, it is noted that the liability percentage (ie small-scale technology percentage (STP)) under the SRES scheme are published at differing times. The Clean Energy Regulator (CER) has published the non-binding STP for 2020 however the binding STP will not be published until March 2020.

The ESC notes the publishing time difference and proposes to use the non-binding STP in 2020 and put into place a cost pass-through mechanism to allow for any differences between the binding STP and the non-binding STP to be included in the next regulatory period.

While this approach seems reasonable, the growth of small-scale solar installations has outstripped the CER’s estimates of the volume of small-scale certificates (STC) in recent years and has created large variances between binding and non-binding liability estimates. We suggest the ESC consult with the CER on how to derive a more up to date estimate for inclusion in the ESC’s final determination to reduce the compounding impacts of variances in following years.

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<sup>3</sup> Periods where pool price exceeds market cap:

Datetime	Quarter	Period	Load	Spot price
26/03/2017 16:30	1	PK	0.29	\$16,912.47
26/03/2017 17:00	1	PK	0.31	\$15,642.66

### ***Approach to estimating Network Costs***

The ESC has proposed using the simplest underlying network tariff for each distribution zone as the structure for the respective VDO in each network. For Citipower, Jemena and Powercor these are single rate usage tariffs. For, United Energy this is a seasonal tariff while Ausnet uses a two-block tariff structure. There are additional controlled load tariffs which will also be included in the 2020 calculations.

We note that the AER will approve the 2020 tariff proposals for Victoria's electricity networks (to commence 1 January 2020) in mid-November 2019 and that the increases in the network tariffs are significantly greater than the CPI assumptions utilised in the VDO modelling. Origin supports the ESC's view that the final approved network charges should be a direct pass through and be reflected in the ESC's final decision.

It is noted that, as part of the network tariff reform process, it is proposed that the approval of network prices will move from calendar year approvals to financial year approvals. This will take effect from 2021. The ESC will need to consider the retail pricing framework and the integration of these changes into the timing requirements for retail prices. Origin considers the timing of regulated retail prices and regulated networks tariffs should be aligned.

### ***Approach to estimating Retail Costs***

#### *Retail Operating Costs*

The ESC has indicated that it will continue using the benchmark approach to estimate retail operating costs but has gathered additional cost data that is consistent across all retailers. The ESC requested the information to all licensed retailers on 3 September 2019 to obtain information pertaining to the costs of supplying retail electricity.

Origin questions the use of the data that has been collected by the ESC given the optional nature of many of the cost categories. Collecting data on an optional basis may create inconsistency in how costs data has been classified across retailers. Further, we note that the ESC's information request did not request costs for depreciation and amortisation, estimates of working capital or the cost of capital at risk in managing its energy trading position. These are material retail costs and should be considered in any assessment of costs and margins.

In addition, we also seek greater clarification regarding the data collection method and how the results will be interpreted and applied. Specifically, it has been widely recognised that the difference between the cost to serve of retailers is very significant. Therefore, it is important that costs are defined correctly and that benchmarks are applied that strike a balance between achieving immediate efficient outcomes and creating incentives for ongoing efficiency gains.

Most importantly, the retail operating costs will need to take into consideration the significant amount of energy reforms that are occurring in Victoria and the fact that all benchmark costs are based on historical data. Retailers operating costs are impacted as we manage the regulatory changes that are occurring this year. This includes best offer advice, GST inclusive pricing on bills, hardship and domestic violence requirements, clear advice and penalties for wrongful disconnection. These require investment in systems and process, increased customer interface and the management of debt collection processes.

#### *Retail Operating Margin*

The ESC has stated that the objective of the retail operating margin is to compensate the investor for the capital invested in the business and for the non-diversifiable risks associated with the investment. Compensation for discrete risks that can be quantified should be included in relevant components of the cost stack.

We have previously raised issues with respect to the calculation of an operating margin for a retail business. We retain the view that given increased market and regulatory risk, that the ESC should adopt a margin at the higher end of observed ranges.

### **Approach to the VDO compliant maximum annual bill**

We believe the ESC should revisit the need for a time-of-use (TOU) tariff annual maximum bill. Network investment is largely driven by demand for electricity at peak times. A key objective of reforming tariffs is to moderate household consumption at peak times to avoid the need for unnecessary investment in network infrastructure and therefore achieve lower network prices over the long-term. The allocation of costs between peak and off-peak tariffs is also underpinned by an efficient allocation of network costs.

The ESC needs to be cognisant of aligning network and retail tariffs to avoid exposing retailers to further financial losses or the move away from TOU tariffs to flat rate tariffs.

Origin has modelled the impacts of applying a TOU tariff versus flat rate for a benchmark 4,000 kWh per year customer in the table below. If a retailer was to apply a flat VDO tariff by the 4,000 kWh volume allocation to determine the VDO TOU tariff, retailers would be negatively impacted in CitiPower, Powercor, Ausnet and Untied Energy distribution areas. As a result, a TOU network tariff with metering costs is more expensive than the flat tariff for that same network. The network tariff difference is up to \$32 per customer in the Powercor region. Origin's data suggests that the number of TOU customers in Victoria are the greatest in these network areas and thus the impacts will be significant when multiplied by the number of customers. This approach is unreasonable and creates the potential outcome where a retailer's ability to fully recover their network cost liability is restricted by the legislated annual bill.

Distribution Area	Tariff Type	Annual Network only (Cal20 NUOS + Metering)	Change vs Flat Tariff (per customer)
Citipower	Flat	\$446.30	+\$30.69
Citipower	TOU	\$476.99	
Powercor	Flat	\$526.50	+\$32.61
Powercor	TOU	\$559.11	
Ausnet	Flat	\$642.79	+\$18.66
Ausnet	TOU	\$661.45	
United Energy	Flat	\$481.02	+\$1.08
United Energy	TOU	\$482.10	

\*Origin's analysis based on 4,000kWh customer

As mentioned in a previous submission, if the ESC is not open to developing a TOU annual maximum, an alternative could be for the ESC to consider establishing a bill benchmark split between off-peak and peak components of the annual bill. While still not optimal, it would at least allow the retailer to preserve some element of the network price signal.

While the ESC may consider that there does not appear to be a strong basis for designing a more complex approach for TOU tariffs, creating perverse price signals will simply create an incentive for customers on cost-reflective market prices to access a regulated TOU tariff to avoid paying charges that reflect the costs of their usage.

We encourage the ESC to develop a benchmark bill for TOU tariffs that maintains the intent of TOU tariff structures i.e. incentivises customers to shift consumption from peak to off-peak periods.

### **Other Issues – Embedded Networks**

We note that the ESC does not propose to formulate a maximum price for embedded networks through this VDO price determination process and will be determined through a separate consultation. We welcome the opportunity to form part of this consultation.

It is our view that there ought to be consistency in the maximum standing offer price that applies to standing offer customers and those customers in an embedded network. For this reason, we believe that the maximum standing offer price for a customer in an embedded network ought to be the VDO, irrespective of whether a provider is a licenced retailer of an exempt seller.

## Closing

We look forward to working closely and cooperatively to support the ESC to complete its determination of a method to calculate a VDO that will achieve an optimal balance between reforms that protect customers while preserving the integrity of the competitive market.

If you would like to discuss any aspect of this submission, please do not hesitate to contact me in the first instance.

Yours sincerely

A handwritten signature in blue ink, appearing to read "K. Robertson". The signature is written in a cursive style with a horizontal line at the end.

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