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The Electricity Authority

By email to: reviewconsultation2021@ea.govt.nz

Re: Market Monitoring Review of structure, conduct and performance in the wholesale Electricity Market

1. Introduction

This submission is based on the experiences we have enjoyed as a new entrant electricity Retailer. We entered the marketplace in April 2017.

2. Confusion

Our first observation is that we think the EA and the market are confused by the use of the terms “SPOT Market” and “Wholesale Market” when referring to or describing the “SPOT Market”. The EA will use these words interchangeably when referring to and describing the “SPOT Market”.

3. The SPOT Market

Our understanding is that the SPOT Market is a market utilised by Transpower to solicit bids from generators to meet forecasted consumer demand. Transpower does not own the generation assets, these are owned by independent companies with most of the generation supply in New Zealand owned by a small number of companies that also compete with Retailers, these companies are commonly referred to us “Gentailers”.

The current design of the SPOT market often results in the most polluting and most expensive generation being dispatched first as it is often “bid” into the SPOT market at some of the lowest prices. The reasons for this include the need for large thermal generators to be guaranteed that they will be selected to supply, as it is not practical to turn on and off such plants at short notice.

An example of this was the recent power outages this winter due to high demand. Genesis Energy says that it was not economical for Genesis to turn on its additional thermal generation capacity that day due to unfavourable prices available to it, despite the request from Transpower for additional generation to meet the expected peak demand later that evening. When the shortage of supply eventuated that evening and SPOT prices went

through the roof, it was too late for Genesis to bring on additional capacity to meet the demand and reduce the blow out in the SPOT market price.

The current SPOT market design prohibits Transpower from buying generation, instead it must select the supply from bids made by generators. The lowest priced supply must be selected first, then the next lowest and then the next until the required demand is secured.

All Generators are then paid at the highest priced supply that Transpower required to meet its demand forecast. This means that even if a generator has bid its supply in at zero dollars, that generator will still be paid at the highest priced supply Transpower selected. We understand this is referred to in the industry as “Marginal Pricing”.

4. The Clearing Manager

The Clearing Manager is then required to utilise the half hour SPOT market prices to calculate how much Retailers must pay and how much generators will receive. This exercise is completed monthly with settlement occurring on the 20th of the month for the prior month’s activity.

Retailers need to protect themselves from having to settle with the Clearing Manager at SPOT Market prices as SPOT market Prices are highly volatile and are typically above the retail rate, that is the rate at which retailer’s sell to end consumers. Retailers that do not have such protection quickly go broke as they will be paying more than they receive for the electricity their customers use. There are plenty of examples of retailers that have exited the market in recent years because of this.

5. Wholesale Market

As described above Retailers need to protect themselves from having to settle with the Clearing Manager at SPOT Market prices. They cannot do this by buying protection/cover from the Clearing Manager. The Clearing Manager provides settlement services only and does not provide or offer a market where Retailers can buy forward protection/cover at a “Wholesale Price”.

So, what is a “Wholesale price”. A search of Wikipedia reveals that the description of “Wholesale “is:

“the business of selling of goods in large quantities and at low prices, typically to be sold on by retailers at a profit.”

As a Retailer we expect to be able to purchase supply below the cost at which we must sell at to consumers in order to make a profit. If such a market existed in New Zealand, then those Retailers that have been forced from the market in recent years would most likely still be in business today. The SPOT Market does not meet this definition of “Wholesale” and Retailers cannot buy forward cover or product from the SPOT Market.

6. Where can Retailers buy protection/supply from at a wholesale price?

In our experience there are 2 options available to us to buy protection from SPOT Market prices, these are:

6.1. ASX Futures Options

Retailers like us can buy electricity Futures contracts via the ASX. Product/liquidity is made available by 4 (I believe it's currently 4) large New Zealand Gentailers referred to as Market Makers, as they set the prices.

However, the problem here is that the prices being charged by these Gentailers is like the SPOT Market, typically above the Retail rate at which these Gentailers sell to their own retail customers.

A quick check of these same Gentailers retail prices as displayed on the Powerswitch web site, shows that the ASX Futures prices for the next three years are above the price they are selling to their retail customers at.

This not only makes it impractical for a Retailer like us to buy an ASX Futures contract it also means the ASX Futures market is not a "Wholesale Market", based on the above-mentioned definition of "Wholesale".

The ASX futures market is in fact a financial transaction, a contract for differences, not a product supply contract, and as demonstrated below the ASX futures contracts are not a "Wholesale" market.

Below is a summary of the ASX Futures prices at the Otahuhu (Auckland) node for the next 3 years (from Q1 2022 to Q2 2024).

Node	Period	Price	Lossess	Time of Day	Total Cost	c/kWh
		MW	3.83%	4%	MW	
OTA	Q1 2022	\$115.00	\$4.40	\$4.60	\$124.00	\$0.1240
OTA	Q2 2022	\$159.00	\$6.09	\$6.36	\$171.45	\$0.1714
OTA	Q3 2022	\$162.00	\$6.20	\$6.48	\$174.68	\$0.1747
OTA	Q4 2022	\$130.00	\$4.98	\$5.20	\$140.18	\$0.1402
OTA	Q1 2023	\$139.00	\$5.32	\$5.56	\$149.88	\$0.1499
OTA	Q2 2023	\$148.30	\$5.68	\$5.93	\$159.91	\$0.1599
OTA	Q3 2023	\$151.00	\$5.78	\$6.04	\$162.82	\$0.1628
OTA	Q4 2023	\$112.75	\$4.32	\$4.51	\$121.58	\$0.1216
OTA	Q1 2024	\$117.00	\$4.48	\$4.68	\$126.16	\$0.1262
OTA	Q2 2024	\$133.35	\$5.11	\$5.33	\$143.79	\$0.1438
OTA	Q3 2024	\$133.35	\$5.11	\$5.33	\$143.79	\$0.1438
OTA	Q4 2024	\$108.00	\$4.14	\$4.32	\$116.46	\$0.1165

Note: These prices are from the Close of Business on the 20th of December 2021

Note. The average price over this 3-year period is \$0.1446 c/kwh, before network losses, time of day impacts and seasonality.

Retailers that buy from the ASX futures market to lock in their supply cost at these rates also have to add to these rates an allowance to cover their costs for network losses, time of day pricing variations (consumers use more electricity at higher price trading periods) and seasonality (consumers use more volume in winter than summer and as per the table above prices are higher in winter than in summer).

When these ASX forward prices are compared to the average price 4 large Gentailers are selling to retail consumers at, you can quickly tell that again the ASX futures market is not a “Wholesale” market, one cannot buy ASX Futures contracts below the retail rate.

Below is a summary of the gross profit calculations for a residential consumer of 4 large Gentailers based on their published rates and the cost of supply based on the average ASX Futures prices for the next 3 years.

Gentailer	Cost to consumer	Gentailers Gross Profit	Ave ASX Futures price per kWh average next 3 years c/kWh	Loss per kWh	For a Gross Profit of \$0 supply cost needs to be
Mercury	\$2,889.00	-\$542.96	\$0.1489	-\$0.0475	\$0.1014 c/kwh
Contact	\$3,036.00	-\$361.85	\$0.1489	-\$0.0316	\$0.1173 c/kwh
Meridian	\$3,068.00	-\$387.46	\$0.1489	-\$0.0339	\$0.1150 c/kwh
Genesis	\$3,358.00	-\$123.78	\$0.1489	-\$0.0108	\$0.1381 c/kwh

Note 1 The ASX Futures prices have been increased to allow for the additional supply costs retailers incur over and above just the base price. This includes network losses, time of day and seasonality, 3.8%, 4% and 3% respectively have been allowed for.

Note 2. This calculation is based on the OTA node ASX price and gentailer pricing to customers for this same node.

Note 3. This example is based on a standard residential user, on an uncontrolled pricing plan, using 11,439.95 kWhs per annum.

Note 4. ASX pricing is for the OTA node as at close of business 20/12/2021

Note 5. The EA levy costs has been estimated at 0.0010 c/kwh for all gentailers

Note 5. Metering costs have been assumed to be 25 cents per day for all examples

Note 6. An annual cost of gentailers operations of \$254. per customer has been included. This cost has been estimated based on information published in various gentailers annual reports.

Leaving out the highest and lowest supply prices required for Gentailers to break even, the average price required to be able to buy at to break even becomes \$0.01161 c/kWh.

The average buy cost of ASX futures for the next 3 years including an allowance for network losses, time of day and seasonality is \$0.1489 c/kWh, **a loss of \$0.0328 cents per kWh. And this is before allowing for any profit margin.**

Mercury has the lowest prices in the market at this time, a total cost to the consumer (for the example mentioned above) of \$2,889. inclusive of GST and after a PPD of 12%.

To demonstrate how the Gentailers gross profit calculation has been compiled the table below shows the calculation for Mercury.

Mercury consumer gross margin calculation				
Income	Rate	Units	Amount p.a.	Totals
Daily Fee	\$1.9974	365	\$729.07	
Supply (Uncontrolled)	\$0.1559	11439.95	\$1,783.20	
EA Levy	\$0.0000	11439.95	\$0.00	
Total Income				\$2,512.27
Costs	Rate	Units	Amount p.a.	Totals
Network Daily Fee	\$1.0900	365	-\$397.85	
Network Supply (Uncontrolled)	\$0.0530	11439.95	-\$606.32	
Generation ASX Futures 3 years average	\$0.1489	11439.95	-\$1,703.37	
EA Levy (estimated)	\$0.0010	11439.95	-\$11.44	
Metering (estimated)	\$0.2500	365	-\$91.25	
Operations (estimated)			-\$245.00	
				-\$3,055.22
Gross profit				-\$542.96

This implies Gentailers are selling to consumers below cost, sometimes described as predatory pricing.

No wonder the following statement is now being displayed to consumers when on the Powerswitch web site

Some retailers have told us they are not taking on new customers at the moment, so you won't see them here. If your retailer is not appearing, check the prices before you switch.

However, this may not be the case, a Gentailers retail division may in fact be protected from the SPOT Market and ASX Futures Market prices through an arrangement with their own generation division. This may explain why the Meridian Energy CEO recently criticised independent and new entrant retailers for complaining about the lack of a “Wholesale” market and our inability to access electricity supply at prices that their wholly owned subsidiary Powershop has access to.

The Meridian Energy CEO went on to say that the solution for independent retailers is that they should invest in Generation themselves. This is like saying broadband providers must lay their own cables, liquor stores must produce their own liquor, Noel Lemming must build its own computers, washing machines, fridges and TVs and airlines must build their own planes and airports.

Conclusion:

Buying ASX futures contracts and matching the Gentailers retail prices to consumers, will result in significant losses for a retailer.

The ASX futures market is not a “Wholesale” market for retailers.

6.2. Over the Counter or ISDA agreements with Gentailers

The other option available to retailers like us is to enter into a supply agreement with our direct competitors, one of the Gentailers that is willing to offer us a supply contract.

We have had first-hand experience of this. When we first entered the marketplace Gentailers were willing to offer retailers like us supply contracts at a price that was below the retail rate thus allowing us to acquire customers for a profit.

This option has since disappeared, and we can no longer access a “Wholesale” price below the retail rate. Our previous supplier has advised us that they now price supply to us based on the ASX futures prices plus a margin.

As demonstrated above the ASX futures prices are above the retail rate, the ASX Futures market is not a “Wholesale” market.

7. SPOT Market Prices

In our view, tinkering with rules and regulations that govern the SPOT Market will do nothing to address the fact that there is no “Wholesale” market for electricity supply in New Zealand.

Electricity retailers should be able to buy electricity at a “Wholesale” price and this price should be the same for all purchasers. Retailers would then compete for consumers starting out on a level playing field.

We find it odd that generators are not paid for the cost of their production, plus a profit margin of course. As different fuel types have different cost bases not all generation should be priced the same. For example, Hydro generation is much less expensive to produce than Coal fired generation, yet generators of Hydro and Coal are paid the same under the current SPOT Market regime.

We also find it odd that supply accepted by Transpower at the highest price, which may often only be required for a short period of time, would dictate the price paid to all generators including, base load generators.

It seems to us that the volatility in SPOT market prices does not reflect the cost of producing electricity in New Zealand, the pricing changes can be dramatic, often large swings in prices can occur in the same day. It seems to us that SPOT Market prices are totally disconnected from the cost of production. For example, on windy days with demand low SPOT Market prices will often be below the cost of wind production resulting in losses for wind generators. We think this is insane, especially in an era where we are looking to decarbonise our industry and contribute positively to New Zealand’s goal of 100% renewable electricity supply.

Obviously SPOT Market prices dictate the profitability of the Gentailers and the returns to their shareholders. The largest Gentailers are majority owned by the New Zealand Government and the flow of GST and dividends to the Government is important.

We think the Governments returns could be guaranteed and locked in through the setting of a weighted average cost of electricity that all Retailers should be able to buy at. A weighted average cost would need to include the mix of generation types required to meet demand and keep the lights on (some more expensive than others eg Coal vs Hydro), stand by capacity able to be brought on at short notice and contingency capability to cover for spikes above historical peaks and increasing demand, plus an acceptable return to shareholders.

Such a system would also enable future Governments to easily add on a consumer tax if required, similar to how government taxes on petrol work today, without distorting the generation or retail marketplaces.

If Transpower had been able to buy supply from Genesis, New Zealand could have avoided the outage that occurred this winter, the current SPOT Market regime which has served New Zealand well for some time now is, we believe, no longer fit for purpose.

Given New Zealand's current pathway to decarbonisation of various industries, the electrification of others and the rise and rise of electric vehicles it will be important for any future regime to have access to additional generation to meet peak period demands. This capacity should not be constrained from being brought online when needed by the actions of other Gentrailers pricing strategies and the cost of such contingent generation capability should be baked into the weighted average cost of supply.

We also think having known and predicable returns for the various supply types (Wind, Hydro, Solar, Geothermal, Hydro, Coal, Gas, Diesel) would give investors' confidence to invest in renewable energy expansion in support of New Zealand's commitment to lower carbon emissions.

8. Security of Supply and Meeting New Zealand's Carbon Reduction Responsibilities

Once a market exists for Generators to be paid a fair price for their generation, perhaps Transpower should then be given the responsibility of managing supply.

Rather than Generators bidding in supply Transpower would requisition supply from its contracted pool of providers. Transpower would therefore be able to take an overall New Zealand wide view of supply and demand and would be best positioned to dictate the product mix required to meet demand, ensure security of supply (for example protect the lake levels in summer) and New Zealand's carbon reduction responsibilities.

Thank you for the opportunity to submit our experiences and thoughts on the difficulties we face as a Retailer through the lack of a "Wholesale" market for electricity supply and for the opportunity to make suggestions for a way forward.

Kind regards
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