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17th June 2019

Dear Sir/ Madam

Re: Nyrstar submission on RRO Contract Firmness Guidelines

As an overarching comment the proposed approach by the Australian Energy Regulator (AER) for determining qualifying contracts and their degree of firmness appears reasonable. However, Nyrstar has the below specific comments and feedback on the interim guidelines;

- The 5% of MPC threshold for caps appears arbitrary and not based on market evidence. A cap exercise price of $725/ MWhr appears unusual. Whilst the guidelines should not restrict flexibility in setting different cap exercise prices the reality is that non-standard exercise prices (i.e that do not equal $300/ MWhr) are not common. The AER should consider $300 caps (whether sold or bought) are standard RRO qualifying contracts with firmness factor of 1. Any non-standard exercise price that is not $300 is considered a non-standard qualifying contract and its firmness factor must be determined and supported through independent evaluation.

- For sold caps is the degree of cap coverage assessed? i.e how is a short cap contract covered and what is the impact on the degree of firmness?

- While using option deltas to assess the approximate likelihood of whether the option will be in-the-money (ITM) at expiry is a reasonable 'rule of thumb' however it is not perfect. Option deltas are normally valid for small changes in the underlying asset price. Due to the dynamic nature of options, possible large market moves in the underlying and time value of long dated options there is the probability that the option could finish at-the-money (ATM) or out-of-the-money (OTM). How does the AER framework deal with this volatility aspect? Furthermore, some options that are ATM may be exercised closer to expiry so that applying a delta of 0.5 as the firmness factor may not be valid and thus penalise a liable entity if a gap period if triggered.

- In estimating option deltas implied volatility is required as an input. Implied volatility is at best an estimate only and perhaps taking an average consensus view through exchanges and market participant's view may be useful in setting volatility. Alternatively, more complicated volatility models can be used to estimated volatility for options.

- The AER propose to determine option deltas using option pricing models for example Black Scholes. However, Black Scholes is only relevant for European options and not American options. In the electricity market swaptions can normally be exercised at any time before option expiry so how will the AER deal with American options?

- The Black Scholes model is valid only if certain assumptions can be met for example: underlying asset prices are lognormally distributed, constant risk free rate, no transaction costs, underlying asset prices follow Brownian motion with no jumps, constant implied volatility and that volatility is

known. These are unlikely to all be satisfied for pricing electricity option derivatives (and their deltas). If vanilla options (i.e liquid options) or exotic options (i.e illiquid options) firmness requires assessment it would be preferable that these fall into the bespoke firmness methodology as it is not entirely valid to adopt the Black Scholes model. For instance, volatility surfaces and stochastic volatility models or using Monte Carlo simulation are likely to be better but which will make valuing call and put options more complex and thus less standard. Thus, options should be considered qualifying standard contracts but they should be assessed using bespoke methodologies due to the complexity of option valuation.

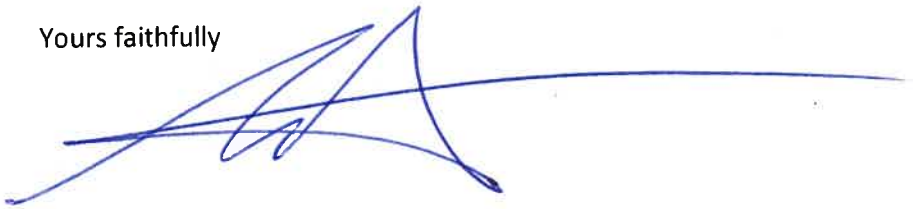
- On page 6 of the AER consultation paper there are two questions the AER is seeking feedback. For the first part it can be argued that these instruments i.e PAAs, inter-regional hedges, demand response products and internal hedges are commonly used in the market and thus could be considered as standard qualifying contracts. However, their degree of liquidity is low and the firmness is likely to be difficult to assess and not straightforward and hence it would be appropriate that bespoke firmness methodologies are adopted for these. It is appropriate that certain exotic derivatives are classed as non-standard qualifying on the basis that they are highly illiquid and complex derivatives for example collars, spreadtions, compound options and path dependent options to name a few. A better test for non-standard qualifying is whether they are commonly used in the NEM or not AND their degree of liquidity and whether they are OTC instruments. If so, then they are non-standard qualifying contracts. Perhaps the AER could provide a matrix of what is standard vs. non-standard using as a basis whether they are commonly used instruments, their degree of market liquidity and whether they are structured products.

- For the second question posed by the AER on page 6 how do qualifying contracts deal with Force Majeure (FM) risk such as a regulatory disruption event or other FM event and the degree of firmness? The outlined eligible adjustments on page 44 and 45 for NCP on position day does not allow for such adjustments.

- Given that secondary trading of SRAs will commence later this year. Secondary traded SRAs should be considered as qualifying contracts but will likely require bespoke methodologies to assess the degree of firmness.

Should the AER wish to contact me regarding our submission please contact myself on 03 62784935 or email greg.zooeff@nyrstar.com

Yours faithfully



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