



Prudential Information

24 November 2022



1. Introduction

Each business day the clearing manager will provide an estimate of the minimum prudential security required for each participant. This estimate will consist of general and FTR prudential requirements adjusted for pre-payments.

General prudential requirements include electricity, ancillary services, lodged hedge settlement agreements, wash-ups and FTR holdings. The methodology for estimating the value of FTR holdings remains unchanged.

As is currently the case the general prudential requirement will offset electricity sales from electricity purchases. It will have a historic component, referred to as the outstanding financial exposure, and a forward component, referred to as the exit period prudential margin.

The clearing manager must also provide a forward estimate of the minimum prudential security required on the next three business days. A separate methodology is used for this purpose.

Once the day's estimate is available, the clearing manager will check for each participant that the amount of prudential security held is at least equal to the lowest of the previous three estimates made for that day and the estimate on that day. Failure to have the required amount of prudential by 1600 hours on that day will be a default by the participant.



2. Outstanding general financial exposure

Outstanding financial exposure covers unsettled amounts owed by a participant. The corresponding period of time is from the start of the last month not settled, until the day before calculation.

The estimate will use (unsettled) invoiced amounts where these have been published. Where invoiced amounts are not available, then exposure amounts will be estimated as follows.

2.1 Quantities

Purchase and generation quantities will be based on reconciled volumes where these are available¹.

Where reconciled volumes are not available, purchase quantities are estimated using grid volumes² multiplied by an estimate of participant market share. Market share is estimated from the most recent reconciliation information.

Generation quantities are based on cleared offers where reconciled data is not available. Where a participant's portfolio includes unoffered generation, they may submit unoffered generation quantities to the clearing manager.

2.2 Prices

Final prices are used where available. Interim prices are used if no final price is available. If neither a final nor an interim price is available, exit period prices will be used.

2.3 Ancillary services

Where an invoice is not available, amounts for outstanding ancillary services will be based on the last settled ancillary services amount pro-rated for the required number of days.

2.4 Hedge settlement agreements

Lodged hedge settlement agreement amounts are based on quantities from the hedge settlement agreement and prices as estimated above.

2.5 Washups

Where a washup notification has been published but not yet included in an invoice, the washup amount will be added to or subtracted from the general outstanding amount as is necessary.

¹ Reconciliation volumes are typically published by the reconciliation manager on the 7th business day of the month for volumes purchased or sold in the previous month.

² Grid volumes are actually demand half hourly metering information published by the pricing manager. Adjustments to this data are required where there is un-offered embedded generation, intermittent generation or dispatch capable load stations.

3. Exit period prudential margin

Exit period prudential margin provides cover for amounts incurred over the participant's prudential exit period. The prudential exit period is 19 days for retailers and 8 days for direct connect participants. Participants may apply to the Electricity Authority if they wish to have a shorter exit period.

3.1 Quantities

Participant electricity purchase and generation quantities are estimated using an historic 21-day rolling average over the prudential exit period. The rolling average is calculated for every GXP at which the participant trades and for business and non-business days. Historic participant quantities will be estimated using the same methodology as for the outstanding general financial exposure.

3.2 Prices

Exit period prices are calculated from quarterly ASX futures prices adjusted by four factors to account for the month in the quarter, location of the node, business/non-business days (day type) and the time of day. The exit period price for each trading period, node, day type and month is published at least two months before the start of the quarter in which it applies. A fixed amount known as the adder is then added to this price in order to reduce the probability of loss given default. The adder is \$25.49/MWh for 2021.

The adder and the location factor remain the same for a calendar year, while the remaining factors are adjusted quarterly.

Participants are able to view exit period price information on the clearing manager's website <https://electricityclearing.co.nz>. This shows each of the factors as well as factor adjusted ASX futures price, with and without the adder for every combination of location, day type, month and trading period.

3.3 Ancillary services

Ancillary service amounts are estimated using last settled invoice amount, pro-rated to the number of days in the exit period.

3.4 Hedge settlement agreements

Lodged hedge settlement agreement amounts are based on quantities from the hedge settlement agreement and prices as estimated above.

3.5 The adder

For further information on how the adder is calculated refer to the clearing manager's published settlement and prudential security methodology.

4. Forward estimates

Each business day, the clearing manager will publish an estimate of the amount of prudential security required from a participant on that day and each of the next three business days. Participants are required to meet the lowest of the four estimates by 1600 hours on that day.

For example, in the table below, on 23 March 2021 Participant XXXX needs to have at least \$44 of prudential posted with the clearing manager, being the least of the 4 estimates provided for 23 March on 18, 19, 22, and 23 March.

Example of Forward Exposure (in dollars) for Participant XXXX								
Prudential notice issued on	Day of new regime	18 Mar	19 Mar	22 Mar	23 Mar	24 Mar	25 Mar	26 Mar
18 Mar		30 ^d	35 ^{d+1}	40 ^{d+2}	45 ^{d+3}			
19 Mar			35 ^d	40 ^{d+1}	45 ^{d+2}	50 ^{d+3}		
22 Mar				39 ^d	44 ^{d+1}	48 ^{d+2}	57 ^{d+3}	
23 Mar	1				48 ^d	62 ^{d+1}	66 ^{d+2}	70 ^{d+3}
24 Mar	2					50 ^d	62 ^{d+1}	66 ^{d+2}
25 Mar	3						55 ^d	65 ^{d+1}
26 Mar	4							58 ^d
Minimum Forward Exposure					44	48	55	58

The forward estimate is calculated from the average change in the estimate of prudential security over the last seven days. This is segregated into a business day and a non-business day average.

If you require any further information regarding prudential calculations please email cm@nzx.com.