



FTR MANAGER



FTR POLICY: FTR CALENDAR

JULY 2019

Disclaimer

1. EMS, as FTR Manager, will only accept a person as an FTR participant, and will only offer and issue FTRs to that person, if the person meets all of the following requirements:
 - (a) Meets the prudential requirements in relation to FTRs set out in Part 14 of the Electricity Industry Participation Code 2010 (**Code**), as determined by the Clearing Manager under the Code.
 - (b) Is a natural person resident in New Zealand, a body corporate that is incorporated in New Zealand, or a person with a branch office or other substantial physical presence in New Zealand through which it conducts its FTR participation.
 - (c) Has provided EMS as FTR Manager with either:
 - (i) a current and valid eligible investor certificate under clause 41 of Schedule 1 of the Financial Markets Conduct Act 2013 (FMCA) in respect of the issue or sale of FTRs; or
 - (ii) a current and valid wholesale investor certificate under clause 44 of Schedule 1 of the FMCA.
 - (d) Is registered by the Electricity Authority as an Industry Participant under section 9 of the Electricity Industry Act 2010 as a trader in electricity.
 - (e) Agrees to the standard FTR participation agreement, **(authorised persons)**.
2. Information about FTRs made available by EMS through any medium (**FTR information**) is not:
 - (a) advice on, or a recommendation of, FTRs or any other investment, financial product or risk management arrangement;
 - (b) an offer or solicitation by EMS to issue or deal in FTRs or any other investment, financial product or risk management arrangement; or
 - (c) directed to any person who is not an authorised person.
3. Clause 2(c) applies to all FTR information including FTR information that is or may be accessible to persons who are not authorised persons, for example on the Internet or by being distributed outside New Zealand by persons to whom EMS initially made the FTR information available. No recipient of FTR information is authorised to distribute it outside New Zealand.
4. Prior to any person acquiring, entering into or dealing in any investment, financial product or risk management arrangement they should obtain their own tax, legal and financial advice.
5. The FTR auction, reconfiguration auction and assignment facilities provided by EMS as FTR Manager are not licensed financial product markets under the FMCA or otherwise. However, those facilities and the FTR Manager are regulated under the Electricity Industry Act 2010, Electricity Industry (Enforcement) Regulations 2010 and Electricity Industry Participation Code 2010.

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Document History

Version	Date	Status	Edited By	Revision Description
0.1	30/11/2012	Released	EMS	Initial draft.
1.0	24/01/2013	Released	EMS	Draft removed. Minor changes.
1.1	25/03/2013	Released	EMS	Updated based on variation to the Allocation Plan to defer the FTR market start to June 2013. Minor change to Fig 2.
1.2	30/04/2013	Released	EMS	Minor spelling correction in Fig 1. Updated capacity release factor in Fig 8 on first November FTR auction in August 2013.
1.3	15/05/2013	Released	EMS	Updates to 2013 and 2014 Calendars. Update to Grid Owner Schedule – providing files on -12 BD. Updates to Fig 1, Fig 3, Fig 4, Fig 5 and Fig 6
1.4	18/11/2013	Released	EMS	Change to bid window (effective from 1 January 2014) – update to Fig 1, auction day timeline in Section 3. Other minor wording changes to remove comments related to market startup activities.
1.5	28/02/2014	Released	EMS	Updated Outage Mapping schedule.
1.6	30/04/2014	Draft	EMS	Inclusion of changes derived from the approved Allocation Plan 2014
1.7	28/10/2014	Released	EMS	Changed horizons for Auctions and Capacity Release Factors.
1.8	24/11/2014	Released	EMS	Updated Disclaimer to reflect FMCA changes
1.9	06/04/2016	Released	EMS	Apply fix to FTR Calendar for May 2016 (Figure 6)
1.10	16/08/2016	Released	EMS	Change made on page 6 to correctly define duration of bid window
1.11	18/10/2016	Released	EMS	Update to annual calendars, auction horizons, and capacity release up to April 2017.
1.12	6/12/2016	Released	EMS	Update for change to Auction Iterations as a result of AP16.
1.13	1/07/2019	Released	EMS	Update to annual calendar up to JAN 2022

1. Introduction

The FTR Allocation Plan provides in section 3.5 that the FTR Manager will publish and keep up to date as an FTR policy an FTR Calendar that will include the information in sections 3.1 to 3.4 of the Auction Rules. The FTR Calendar will be published as far ahead as practicable to give FTR Participants and other service providers ample notice of forthcoming events in the FTR market.

PROCESS FOR DEVELOPING THE POLICY

Section 1.6 of the FTR Allocation Plan provides further that the FTR Manager will develop these FTR Policies transparently with the industry through:

- Open publication of current and proposed policies and their rationale
- Considering feedback from interested parties
- Use of an FTR users' group
- Keeping the industry up to date
- Advising the Authority on developments as they arise

The FTR Manager will operate a public website that will provide access to consultations on the FTR Allocation Plan and FTR policies, including the change process for these, and submissions received.

THE CONTENTS OF THE CALENDAR

As specified in sections 3.1 – 3.4 of the FTR Allocation Plan the calendar will include;

- The schedule of FTR auctions and FTR periods (months) that will be auctioned at each auction over a period of 2 years.
- The Capacity Release Factor. This indicates how much of the available FTR capacity will be made available in the upcoming auctions.
- The pattern of information releases leading up to and following each auction. In particular the auction notices.

GLOSSARY

Please refer to the FTR Glossary for an explanation of terms used in this policy¹.

¹ Available at www.ftr.co.nz

2. Monthly calendar

This figure shows the cycle of information flows and FTR market related activities that will repeat each month. The pattern is based on the rule that the Primary Auction will be held on the first Wednesday of the month that falls at least seven business days into the month.

Figure 1 Monthly pattern of FTR market activity

Monthly pattern of notifications, FTR auctions and prudential checks.

Business days (BD)	FTR Auction information	Assignment & Prudentials
12 BD before PA	Auction notice number 1: auction details, and Grid owner provides network model & associated files.	Able to assign FTRs continuously except during the auction CM advises prudential limits for each participant and prudential liability per FTR daily at 11:00
10 BD before PA	FTR Grid information available on FIS. <i>Monthly report to the Authority.</i>	
	<i>FTR rentals amount for previous month to CM.</i>	
PA on Wednesday >6 BD into the calendar month	PRIMARY AUCTION (PA) Bid window 12:00 – 16:30. PA results 16:00 on day following auction.	
VA held the Wednesday following PA	VARIATION AUCTION (VA) Bid window 12:00 – 16:30. VA results 16:00 on day following auction.	
	<i>CM settles previous month on 20th of calendar month.</i>	
12 BD before PA	Auction notice number 1: auction details, and Grid owner provides network model & associated files.	
10 BD before PA	FTR Grid information available on FIS. Monthly report to the Authority.	

Normal FTR grid configuration information will be made available on the FIS ten business days prior to the Primary Auction each month.

The Grid Owner is to provide the Network Model, Asset Map and associated files including Outage File two business days before the FTR capacity is released.

For more detail on the sequence of events around the auction see the following section Intraday Timetable.

AUCTION NOTICE

There will be one auction notice published on the FIS each month:

The notice, issued twelve business days prior to the first of two auctions held each month, includes all the information on the upcoming Auction that is known in advance of receiving and analysing the grid information from the Grid Owners, including:

- Auction identifier
- the FTR Periods for which FTRs will be offered (availability horizon)
- the FTR Products offered (which will be Obligations and Options for each of the 8 Hubs)
- the Bid Window when bids will be accepted
- the time when the auction results are expected to be published

In addition, special auction notices will be provided should there be any change of information, including change of status (open/suspended/closed) and if the auction status is suspended, including the reason.

If a participant becomes aware of a significant change to the planned outages on the Grid after the auction notices and Grid information have been published then it should notify the FTR Manager. The FTR Manager will discuss the changes with the Grid Owner and determine if the Grid information should be revised. The FTR Manager will endeavour to minimise uncertainty by only providing a single update in such circumstances.

3. Intraday timetable

NORMAL DAYS (OTHER THAN BD 0 AND BD 1)

Continuous	Requests for Assignments will be accepted at any time
11:00 a.m.	Every FTR Participant's Prudential Trading Limit, the Maximum Initial Margin and the Daily Settlement Price are advised to the FTR Manager by the Clearing Manager

AUCTION DAYS (BD 0)

7:00 a.m.	Prudentials available for each participant are locked by the Clearing Manager No requests to register an Assignment will be accepted from 7:00 a.m.
11:00 a.m.	Every FTR Participant's Prudential Trading Limit, the Maximum Initial Margin and the Daily Settlement Price are advised to the FTR Manager by the Clearing Manager
12:00 p.m. to 4:30 p.m.	Bid Window
5:00 p.m.	The FTR Manager advises the Clearing Manager of each FTR Participant's Allocated Prudential Amount, being the prudentials that would be allocated to each market participant if all of their bids were accepted Processing of bids commences

DAY FOLLOWING AN AUCTION (BD 1)

11:00 a.m.	Every FTR Participant's Prudential Trading Limit, the Maximum Initial Margin and the Daily Settlement Price are advised to the FTR Manager by the Clearing Manager
By 4:00 p.m.	The auction results are published: the FTR Manager registers the awarded FTRs (from which point FTR Participants can see the change in the FTR Register) and notifies the Clearing Manager. The Clearing Manager can now determine the prudentials required to cover the successful bids Requests for Assignments will be accepted from 4:00 p.m.

TWO DAYS FOLLOWING AN AUCTION (BD 2)

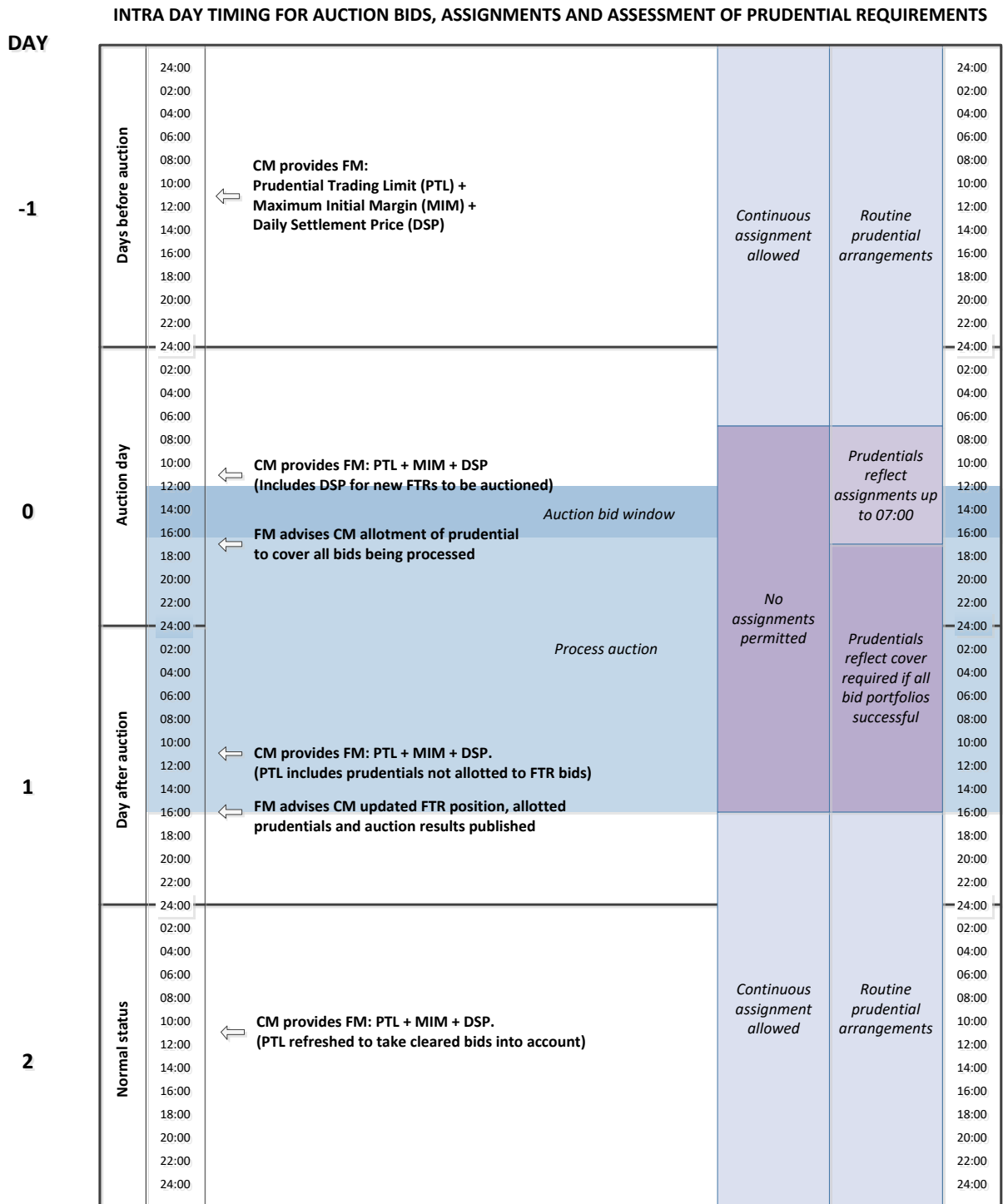
Continuous	Requests for Assignments will be accepted at any time
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11:00 a.m. Every FTR Participant's Prudential Trading Limit, the Maximum Initial Margin and the Daily Settlement Price are advised to the FTR Manager by the Clearing Manager

The Prudential Trading Limits now take into account newly registered FTRs

The sequence of events and restrictions is shown in the table below. This is replicated in the FTR Policy on Prudential Requirements. For further detail on the transfer of prudential information between the Clearing Manager and the FTR Manager see the FTR Policy on Prudential Requirements.

Figure 2 Pattern of bids, prudential information and assignment restrictions for each FTR auction



4. Annual calendar

The rules and pattern discussed in the previous sections are reflected in the calendars shown below.

Figure 3 – Key to FTR Annual Calendars

What	When	Symbol
Auction notice #1	12 Business Days (BD) before Primary Auction (PA)	A
Grid owner to provide network model and associated files		
FTR Grid information posted to the FTR Information System (includes indicative capacity)	10 Business Days (BD) before Primary Auction (PA)	B
Primary Auction (PA) bid window Results posted on following day	Primary Auction (PA) Primary Auction will be held on the first Wednesday of the month that falls at least 7 business days into the month	C
Variation Auction (VA) bid window Results posted on following day	Variation Auction (VA) One week after the PA	D
Public holiday		E

Figure 4 – FTR Annual Calendar 2019

2019

JANUARY						
M	T	W	T	F	S	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

FEBRUARY						
M	T	W	T	F	S	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28			

MARCH						
M	T	W	T	F	S	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

APRIL						
M	T	W	T	F	S	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

MAY						
M	T	W	T	F	S	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

JUNE						
M	T	W	T	F	S	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

Figure 5 – FTR Annual Calendar 2019-2021

2019

JULY						
M	T	W	T	F	S	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

AUGUST						
M	T	W	T	F	S	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

SEPTEMBER						
M	T	W	T	F	S	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

OCTOBER						
M	T	W	T	F	S	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

NOVEMBER						
M	T	W	T	F	S	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

DECEMBER						
M	T	W	T	F	S	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

2020

JANUARY						
M	T	W	T	F	S	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

FEBRUARY						
M	T	W	T	F	S	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	

MARCH						
M	T	W	T	F	S	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

APRIL						
M	T	W	T	F	S	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

MAY						
M	T	W	T	F	S	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

JUNE						
M	T	W	T	F	S	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

2020

JULY						
M	T	W	T	F	S	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

AUGUST						
M	T	W	T	F	S	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

SEPTEMBER						
M	T	W	T	F	S	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

OCTOBER						
M	T	W	T	F	S	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

NOVEMBER						
M	T	W	T	F	S	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

DECEMBER						
M	T	W	T	F	S	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

2021

JANUARY						
M	T	W	T	F	S	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

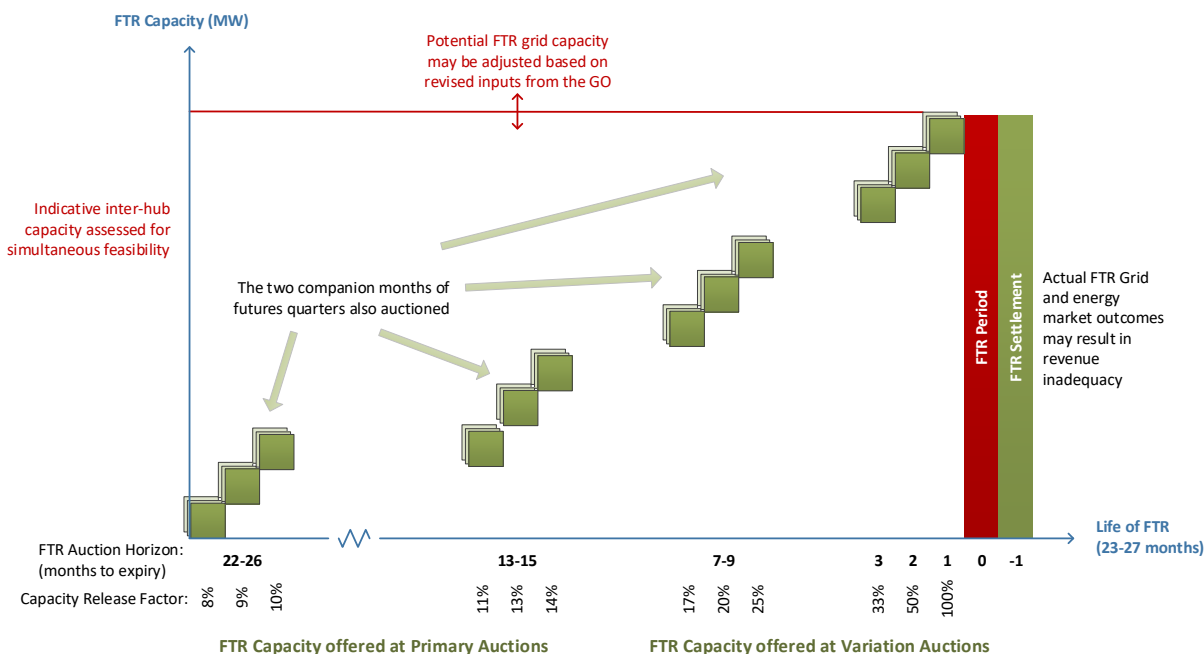
FEBRUARY						
M	T	W	T	F	S	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28

5. Progressive release of FTR capacity

The Code requires that FTRs are offered at least 24 months into the future. The figure below illustrates the pattern of release for each FTR period. The capacity release factor (discussed further below) indicates how much of the remaining FTR capacity will be offered at each auction.

The pattern of releases has taken into account industry feedback. Initially three FTR periods (months) will be auctioned (in any Primary auction) at a time so that traders can synchronise their FTR activity with trading in New Zealand Electricity Futures. The timing of variation auctions reflects the growing certainty around the likely amount of FTR capacity and influences on the likely settlement prices.

Figure 6 – FTR Auction build-up



The table below shows FTR periods that will be auctioned each month. It illustrates the pattern of FTR maturities that will be auctioned in the Primary auctions and the Variation auctions.

The FTR periods highlighted on the table in blue trace the timing of auctions for the March 2021 FTR period and its accompanying 2 quarterly months to match the New Zealand Electricity Futures maturities.

Figure 7 – Auction horizons

		Auction Month	Primary Auction Periods						Variation Auction Periods					
Steady State	68	Jan-19	Jan-21	Feb-21	Mar-21	Apr-20	Mar-20	Feb-20	Oct-19	Sep-19	Aug-19	Apr-19	Mar-19	Feb-19
	69	Feb-19	Jan-21	Feb-21	Mar-21	May-20	Apr-20	Mar-20	Nov-19	Oct-19	Sep-19	May-19	Apr-19	Mar-19
	70	Mar-19	Jan-21	Feb-21	Mar-21	Jun-20	May-20	Apr-20	Dec-19	Nov-19	Oct-19	Jun-19	May-19	Apr-19
	71	Apr-19	Apr-21	May-21	Jun-21	Jul-20	Jun-20	May-20	Jan-20	Dec-19	Nov-19	Jul-19	Jun-19	May-19
	72	May-19	Apr-21	May-21	Jun-21	Aug-20	Jul-20	Jun-20	Feb-20	Jan-20	Dec-19	Aug-19	Jul-19	Jun-19
	73	Jun-19	Apr-21	May-21	Jun-21	Sep-20	Aug-20	Jul-20	Mar-20	Feb-20	Jan-20	Sep-19	Aug-19	Jul-19
	74	Jul-19	Jul-21	Aug-21	Sep-21	Oct-20	Sep-20	Aug-20	Apr-20	Mar-20	Feb-20	Oct-19	Sep-19	Aug-19
	75	Aug-19	Jul-21	Aug-21	Sep-21	Nov-20	Oct-20	Sep-20	May-20	Apr-20	Mar-20	Nov-19	Oct-19	Sep-19
	76	Sep-19	Jul-21	Aug-21	Sep-21	Dec-20	Nov-20	Oct-20	Jun-20	May-20	Apr-20	Dec-19	Nov-19	Oct-19
	77	Oct-19	Oct-21	Nov-21	Dec-21	Jan-21	Dec-20	Nov-20	Jul-20	Jun-20	May-20	Jan-20	Dec-19	Nov-19
	78	Nov-19	Oct-21	Nov-21	Dec-21	Feb-21	Jan-21	Dec-20	Aug-20	Jul-20	Jun-20	Feb-20	Jan-20	Dec-19
	79	Dec-19	Oct-21	Nov-21	Dec-21	Mar-21	Feb-21	Jan-21	Sep-20	Aug-20	Jul-20	Mar-20	Feb-20	Jan-20
	80	Jan-20	Jan-22	Feb-22	Mar-22	Apr-21	Mar-21	Feb-21	Oct-20	Sep-20	Aug-20	Apr-20	Mar-20	Feb-20
	81	Feb-20	Jan-22	Feb-22	Mar-22	May-21	Apr-21	Mar-21	Nov-20	Oct-20	Sep-20	May-20	Apr-20	Mar-20
	82	Mar-20	Jan-22	Feb-22	Mar-22	Jun-21	May-21	Apr-21	Dec-20	Nov-20	Oct-20	Jun-20	May-20	Apr-20
	83	Apr-20	Apr-22	May-22	Jun-22	Jul-21	Jun-21	May-21	Jan-21	Dec-20	Nov-20	Jul-20	Jun-20	May-20
	84	May-20	Apr-22	May-22	Jun-22	Aug-21	Jul-21	Jun-21	Feb-21	Jan-21	Dec-20	Aug-20	Jul-20	Jun-20
	85	Jun-20	Apr-22	May-22	Jun-22	Sep-21	Aug-21	Jul-21	Mar-21	Feb-21	Jan-21	Sep-20	Aug-20	Jul-20
	86	Jul-20	Jul-22	Aug-22	Sep-22	Oct-21	Sep-21	Aug-21	Apr-21	Mar-21	Feb-21	Oct-20	Sep-20	Aug-20
	87	Aug-20	Jul-22	Aug-22	Sep-22	Nov-21	Oct-21	Sep-21	May-21	Apr-21	Mar-21	Nov-20	Oct-20	Sep-20
	88	Sep-20	Jul-22	Aug-22	Sep-22	Dec-21	Nov-21	Oct-21	Jun-21	May-21	Apr-21	Dec-20	Nov-20	Oct-20
	89	Oct-20	Oct-22	Nov-22	Dec-22	Jan-22	Dec-21	Nov-21	Jul-21	Jun-21	May-21	Jan-21	Dec-20	Nov-20
	90	Nov-20	Oct-22	Nov-22	Dec-22	Feb-22	Jan-22	Dec-21	Aug-21	Jul-21	Jun-21	Feb-21	Jan-21	Dec-20
	91	Dec-20	Oct-22	Nov-22	Dec-22	Mar-22	Feb-22	Jan-22	Sep-21	Aug-21	Jul-21	Mar-21	Feb-21	Jan-21
	92	Jan-21	Jan-23	Feb-23	Mar-23	Apr-22	Mar-22	Feb-22	Oct-21	Sep-21	Aug-21	Apr-21	Mar-21	Feb-21
	93	Feb-21	Jan-23	Feb-23	Mar-23	May-22	Apr-22	Mar-22	Nov-21	Oct-21	Sep-21	May-21	Apr-21	Mar-21
94	Mar-21	Jan-23	Feb-23	Mar-23	Jun-22	May-22	Apr-22	Dec-21	Nov-21	Oct-21	Jun-21	May-21	Apr-21	

6. Capacity release factors

The Capacity Release Factor is the proportion of available FTR Grid capacity that is released in an FTR Auction for an FTR Period. The available FTR Grid capacity is the portion of FTR grid capacity calculated by deducting any FTRs already awarded and held.

The capacity release factor is separate from the Capacity Scaling factor used to determine the amount of FTRs available for auction for each maturity. Unplanned outages can increase the likelihood of Revenue Inadequacy if the FTR Grid does not allow for them so the FTR Manager will apply a balancing factor in the FTR Grid to allow for the expected, average impact of:

- Unplanned outages
- Planned outages that are not “relevant” (e.g. of shorter duration)
- Electrical losses.

Refer to the FTR Policy on the FTR Grid

The build-up of Capacity Release Factors is as illustrated in *Figure 6 – FTR Auction build-up*.

The Capacity Release Factors for each FTR period offered in each auction are shown in *Figure 8 – Capacity Release Factors* below:

Figure 8 – Capacity Release Factors

		Auction Month		Primary Auction Periods					Variation Auction Periods					
Steady State	68	Jan-19	Jan-21	Feb-21	Mar-21	Apr-20	Mar-20	Feb-20	Oct-19	Sep-19	Aug-19	Apr-19	Mar-19	Feb-19
			8%	8%	8%	11%	13%	14%	17%	20%	25%	33%	50%	100%
	69	Feb-19	Jan-21	Feb-21	Mar-21	May-20	Apr-20	Mar-20	Nov-19	Oct-19	Sep-19	May-19	Apr-19	Mar-19
			9%	9%	9%	11%	13%	14%	17%	20%	25%	33%	50%	100%
	70	Mar-19	Jan-21	Feb-21	Mar-21	Jun-20	May-20	Apr-20	Dec-19	Nov-19	Oct-19	Jun-19	May-19	Apr-19
			10%	10%	10%	11%	13%	14%	17%	20%	25%	33%	50%	100%
	71	Apr-19	Apr-21	May-21	Jun-21	Jul-20	Jun-20	May-20	Jan-20	Dec-19	Nov-19	Jul-19	Jun-19	May-19
			8%	8%	8%	11%	13%	14%	17%	20%	25%	33%	50%	100%
	72	May-19	Apr-21	May-21	Jun-21	Aug-20	Jul-20	Jun-20	Feb-20	Jan-20	Dec-19	Aug-19	Jul-19	Jun-19
			9%	9%	9%	11%	13%	14%	17%	20%	25%	33%	50%	100%
	73	Jun-19	Apr-21	May-21	Jun-21	Sep-20	Aug-20	Jul-20	Mar-20	Feb-20	Jan-20	Sep-19	Aug-19	Jul-19
			10%	10%	10%	11%	13%	14%	17%	20%	25%	33%	50%	100%
	74	Jul-19	Jul-21	Aug-21	Sep-21	Oct-20	Sep-20	Aug-20	Apr-20	Mar-20	Feb-20	Oct-19	Sep-19	Aug-19
			8%	8%	8%	11%	13%	14%	17%	20%	25%	33%	50%	100%
	75	Aug-19	Jul-21	Aug-21	Sep-21	Nov-20	Oct-20	Sep-20	May-20	Apr-20	Mar-20	Nov-19	Oct-19	Sep-19
			9%	9%	9%	11%	13%	14%	17%	20%	25%	33%	50%	100%
	76	Sep-19	Jul-21	Aug-21	Sep-21	Dec-20	Nov-20	Oct-20	Jun-20	May-20	Apr-20	Dec-19	Nov-19	Oct-19
			10%	10%	10%	11%	13%	14%	17%	20%	25%	33%	50%	100%
	77	Oct-19	Oct-21	Nov-21	Dec-21	Jan-21	Dec-20	Nov-20	Jul-20	Jun-20	May-20	Jan-20	Dec-19	Nov-19
			8%	8%	8%	11%	13%	14%	17%	20%	25%	33%	50%	100%
	78	Nov-19	Oct-21	Nov-21	Dec-21	Feb-21	Jan-21	Dec-20	Aug-20	Jul-20	Jun-20	Feb-20	Jan-20	Dec-19
			9%	9%	9%	11%	13%	14%	17%	20%	25%	33%	50%	100%
	79	Dec-19	Oct-21	Nov-21	Dec-21	Mar-21	Feb-21	Jan-21	Sep-20	Aug-20	Jul-20	Mar-20	Feb-20	Jan-20
			10%	10%	10%	11%	13%	14%	17%	20%	25%	33%	50%	100%
80	Jan-20	Jan-22	Feb-22	Mar-22	Apr-21	Mar-21	Feb-21	Oct-20	Sep-20	Aug-20	Apr-20	Mar-20	Feb-20	
		8%	8%	8%	11%	13%	14%	17%	20%	25%	33%	50%	100%	
81	Feb-20	Jan-22	Feb-22	Mar-22	May-21	Apr-21	Mar-21	Nov-20	Oct-20	Sep-20	May-20	Apr-20	Mar-20	
		9%	9%	9%	11%	13%	14%	17%	20%	25%	33%	50%	100%	
82	Mar-20	Jan-22	Feb-22	Mar-22	Jun-21	May-21	Apr-21	Dec-20	Nov-20	Oct-20	Jun-20	May-20	Apr-20	
		10%	10%	10%	11%	13%	14%	17%	20%	25%	33%	50%	100%	
83	Apr-20	Apr-22	May-22	Jun-22	Jul-21	Jun-21	May-21	Jan-21	Dec-20	Nov-20	Jul-20	Jun-20	May-20	
		8%	8%	8%	11%	13%	14%	17%	20%	25%	33%	50%	100%	
84	May-20	Apr-22	May-22	Jun-22	Aug-21	Jul-21	Jun-21	Feb-21	Jan-21	Dec-20	Aug-20	Jul-20	Jun-20	
		9%	9%	9%	11%	13%	14%	17%	20%	25%	33%	50%	100%	
85	Jun-20	Apr-22	May-22	Jun-22	Sep-21	Aug-21	Jul-21	Mar-21	Feb-21	Jan-21	Sep-20	Aug-20	Jul-20	
		10%	10%	10%	11%	13%	14%	17%	20%	25%	33%	50%	100%	
86	Jul-20	Jul-22	Aug-22	Sep-22	Oct-21	Sep-21	Aug-21	Apr-21	Mar-21	Feb-21	Oct-20	Sep-20	Aug-20	
		8%	8%	8%	11%	13%	14%	17%	20%	25%	33%	50%	100%	
87	Aug-20	Jul-22	Aug-22	Sep-22	Nov-21	Oct-21	Sep-21	May-21	Apr-21	Mar-21	Nov-20	Oct-20	Sep-20	
		9%	9%	9%	11%	13%	14%	17%	20%	25%	33%	50%	100%	
88	Sep-20	Jul-22	Aug-22	Sep-22	Dec-21	Nov-21	Oct-21	Jun-21	May-21	Apr-21	Dec-20	Nov-20	Oct-20	
		10%	10%	10%	11%	13%	14%	17%	20%	25%	33%	50%	100%	
89	Oct-20	Oct-22	Nov-22	Dec-22	Jan-22	Dec-21	Nov-21	Jul-21	Jun-21	May-21	Jan-21	Dec-20	Nov-20	
		8%	8%	8%	11%	13%	14%	17%	20%	25%	33%	50%	100%	
90	Nov-20	Oct-22	Nov-22	Dec-22	Feb-22	Jan-22	Dec-21	Aug-21	Jul-21	Jun-21	Feb-21	Jan-21	Dec-20	
		9%	9%	9%	11%	13%	14%	17%	20%	25%	33%	50%	100%	
91	Dec-20	Oct-22	Nov-22	Dec-22	Mar-22	Feb-22	Jan-22	Sep-21	Aug-21	Jul-21	Mar-21	Feb-21	Jan-21	
		10%	10%	10%	11%	13%	14%	17%	20%	25%	33%	50%	100%	
92	Jan-21	Jan-23	Feb-23	Mar-23	Apr-22	Mar-22	Feb-22	Oct-21	Sep-21	Aug-21	Apr-21	Mar-21	Feb-21	
		8%	8%	8%	11%	13%	14%	17%	20%	25%	33%	50%	100%	
93	Feb-21	Jan-23	Feb-23	Mar-23	May-22	Apr-22	Mar-22	Nov-21	Oct-21	Sep-21	May-21	Apr-21	Mar-21	
		9%	9%	9%	11%	13%	14%	17%	20%	25%	33%	50%	100%	
94	Mar-21	Jan-23	Feb-23	Mar-23	Jun-22	May-22	Apr-22	Dec-21	Nov-21	Oct-21	Jun-21	May-21	Apr-21	
		10%	10%	10%	11%	13%	14%	17%	20%	25%	33%	50%	100%	