FTR Allocation Plan 2016

1 FRAMEWORK OF THE FTR ALLOCATION PLAN

1.1 The FTR Allocation Plan

The FTR Allocation Plan plays a key role in defining the FTR market under subpart 6 of Part 13 of the Electricity Industry Participation Code 2010 (the Code). The FTR Allocation Plan sets out the FTR Manager's plan for the operation of the FTR market, and sets out the terms of FTR products and the auction rules.

This FTR Allocation Plan, known as the FTR Allocation Plan 2016, has been issued by the FTR Manager under clause 13.238 of the Code, and approved by the Electricity Authority (the Authority) under clause 13.240 of the Code.

This FTR Allocation Plan 2016 takes effect on 1 October 2016. Until then, the FTR market will continue to use the FTR Allocation Plan 2014.

The approach taken to FTR Allocation Plan 2016 is based on the requirements of the Code, the functional requirements on the FTR Manager set out in the FTR Manager Service Provider Agreement, the capabilities and limits of the Nexant HEDGE FTR Market System, and the FTR Manager's consultation on this plan in early 2016.

This FTR Allocation Plan supplements the provisions of the Code relating to FTRs. The Code will prevail if there is any inconsistency with this FTR Allocation Plan.

1.2 Variations to the FTR Allocation Plan

The FTR Manager will maintain an annual schedule for consulting on, and seeking approval from the Authority for, variations to the FTR Allocation Plan in accordance with clause 13.241 of the Code.

Any requests for variations to the FTR Allocation Plan received by the FTR Manager will be judged on their merits. If not considered urgent, they will be considered as inputs to the consultation on the next scheduled update of the FTR Allocation Plan.

The next scheduled update of the FTR Allocation Plan is the FTR Allocation Plan 2017 for which consultation will commence after the changes to the FTR Market introduced with this Allocation Plan are implemented operationally.

1.3 Requirements for FTR participation

Any party may apply to the FTR Manager to be an FTR Participant.

The FTR Manager may only accept a party as an FTR Participant if the party meets all of the following requirements:

- Meets the prudential requirements in relation to FTRs set out in Part 14 of the Code, as determined by the Clearing Manager.
- Is within the category of persons to whom the FTR Manager is authorised to issue FTRs. That is:
    - 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; and
    - Is within one of the categories of "approved participant" in The Authorised Futures Dealers (Financial Transmission Rights) Notice 2012.

- Is registered by the Authority as an Industry Participant under section 9 of the Electricity Industry Act 2010 as a trader in electricity.
- Agrees to the standard FTR participation agreement.

The FTR Manager will keep a register of FTR Participants.

1.4 Suspension and cancellation of FTR participation

The FTR Manager may suspend an FTR Participant's right to participate in Auctions and/or Assignments, or cancel an FTR Participant's registration as an FTR Participant, with immediate effect if the FTR Manager, acting reasonably, determines that the FTR Participant has:

- Committed a material breach of its FTR participation agreement (which may include a material breach of the Auction Rules or Assignment Rules) and has not remedied that breach (if capable of remedy) within five Business Days of the FTR Manager notifying the FTR Participant of the breach and requiring it to be remedied;
- Failed materially to comply with the FTR Terms; or
- Ceased to meet any of the requirements to be an FTR Participant in section 1.3.

The FTR Manager will:

- Notify the FTR Participant as soon as reasonably practicable after the FTR Manager suspends the FTR Participant or cancels its registration as an FTR Participant under this section 1.4; and
- In the case of suspension, will lift the suspension as soon as reasonably practicable after the FTR Manager, acting reasonably, determines that the reason for the suspension has ceased to exist.

1.5 FTR participation agreement

FTR Participants will be required to agree to a standard FTR participation agreement that will:

- Prescribe the terms of use of the FTR Information System
- Bind FTR Participants to the Auction Rules and Assignment Rules
- Establish the FTR Terms as the basis for FTR settlement
- Require FTR Participants to warrant that they are within the category of persons to whom the FTR Manager is authorised to issue FTRs (see section 1.3).

If there is any conflict between the terms of the FTR participation agreement and the Electricity Industry Act 2010, Electricity Industry (Enforcement) Regulations 2010, Code or FTR Allocation Plan, then the Act, Regulations, Code or FTR Allocation Plan will prevail.

1.6 FTR policies

The FTR Manager will maintain, publish, apply and regularly review FTR policies detailing how it will implement the FTR Allocation Plan. These will include FTR policies on:

- Registration
- Use of the FTR Information System
- FTR Calendar
- FTR Grid
- Prudential Requirements.

The FTR Manager will evolve these FTR policies transparently with the industry through:

- Publication of current and proposed policies and their rationale
- Discussion with and considering feedback from an FTR users' group

- Considering, and incorporating where appropriate, feedback from interested parties
- Keeping the market up to date
- Advising the Authority on developments as they arise.

The same process will be used to evolve the FTR participation agreement.

The FTR policies will be designed so that the FTR Manager needs to exercise discretion in their application only in exceptional circumstances.

1.7 Third party information

Some FTR Manager obligations in this FTR Allocation Plan depend on information from the Clearing Manager, Grid Owner, System Operator and Pricing Manager. Those obligations are subject to that information being made available by the relevant third party. The FTR Manager is not responsible for the accuracy of that information or the timeliness of its provision.

2 TERMS OF THE FTR (FTR TERMS)

2.1 FTR Duration and Periods

Each FTR will have an FTR Duration of one calendar month, from the first Trading Period in that month to the last. The calendar month that applies to an FTR for settlement purposes is known as the FTR Period.

2.2 FTR Hubs

There are five FTR hubs. Each FTR Hub will have a Settlement Node and will be offered in all Auctions from a particular Auction Month (inclusive).

Hub	Settlement Node	Offered in Auctions from:
Benmore (BEN)	BEN2201	June 2013
Otahuhu (OTA)	OTA2201	June 2013
Haywards (HAY)	HAY2201	November 2014
Islington (ISL)	ISL2201	November 2014
Invercargill (INV)	INV2201	November 2014

All FTRs will be between pairs of these Hubs, with one of these Hubs as the Source, and another different Hub as the Sink.

2.3 FTR Types and Products

There are two FTRs Types: Option FTRs and Obligation FTRs.

Thus there will be multiple FTR Products for each FTR Period, being the two FTR Types multiplied by the possible combinations of FTR sources and sinks:

- From June 2013 to August 2014 Auction Months: 4
- From the November 2014 Auction Month: 40

2.4 FTR Volume

Every FTR will be for a defined FTR Volume, in multiples of 0.1MW, with a minimum value of 0.1MW. The defined FTR Volume will apply to both the Source and Sink Hubs and to all Trading Periods in the FTR Period.

2.5 FTR Acquisition Cost

FTRs are created as awards by an FTR Auction or through Assignment of part of an FTR's Volume.

The initial FTR Acquisition Cost ($/MW/h) is set at the time of awarding an FTR in an Auction, and the FTR Reconfiguration Amount ($/MW/h) is set at the time of selling all or part of an FTR's Volume in an Auction, both based on the Auction Clearing Price for that FTR Product for that FTR Period.

The initial FTR Acquisition Cost ($) and the FTR Reconfiguration Amount ($) are set as the $/MW/h values multiplied by the length of the FTR Period in hours multiplied by the FTR Volume (MW) awarded or sold respectively.

That FTR Acquisition Cost ($) remains constant through to FTR settlement unless it has been adjusted due to one or more FTR Assignments or through the sale of all or part of the FTR Volume at one of more Auctions, in which case it is adjusted by the FTR Reconfiguration Amount (s).

The FTR Acquisition Cost ($) is paid at the time of FTR settlement.

2.6 FTR Assignment

The FTR Manager will register Assignment of FTRs from an Assignor to an Assignee in accordance with the Code, including:

- Ensuring ownership by the Assignor
- Ensuring that the Assignee is an FTR Participant and has sufficient prudential security
- Updating the FTR Register
- Informing the Assignor, Assignee and Clearing Manager.

Adequacy of prudential security will be determined in accordance with the Clearing Manager's FTR Prudential Security Assessment Methodology.

Assignments may disclose the price at which the FTR is to be assigned. In cases of Assignment where there is a Disclosed Assignment Price ($/MW/h) not equal to the FTR Acquisition Cost ($/MW/h) pre-Assignment, then:

- If the FTR Disclosed Assignment Price is less than the FTR Acquisition Cost, an Assignment Difference Payment Assignor To Clearing Manager ($) is made of the difference multiplied by the FTR Volume (MW) multiplied by the number of hours in the FTR Period. This payment is made for the billing period in which the Assignment took place.
- If the FTR Disclosed Assignment Price is greater than the FTR Acquisition Cost, an Assignment Difference Payment Clearing Manager To Assignor ($) is made of the difference multiplied by the FTR Volume (MW) multiplied by the number of hours in the FTR Period. This payment is made at the time of FTR settlement.

Assignment Difference Payments are not subject to any FTR Payment Scaling.

Assignment can be for the whole or part of the Volume of an existing FTR. Part-Assignments will create a new FTR of the same FTR Product but different FTR Volume (MW), registered to the Assignee: the original FTR will be retained by the Assignor with a correspondingly decreased FTR Volume.

Assignments will be possible from the creation of an FTR at an Auction or a previous part-Assignment, excluding when an Auction is in progress. Assignments can be registered up to the end of the FTR Period. Assignments can be for the whole FTR Period only.

2.7 FTR Hedge Value (Provisional)

Each FTR will have a Provisional FTR Hedge Value calculated as:

Option FTRs: $$Provisional\ FTR\ Hedge\ Value = \frac{FV}{2} \times \sum_{t=1}^{T} \max(0, P_B(t) - P_A(t))$$

Obligation FTRs: $$Provisional\ FTR\ Hedge\ Value = \frac{FV}{2} \times \sum_{t=1}^{T} (P_B(t) - P_A(t))$$

where: *is…*

t	Each Trading Period in the FTR Period, from the first (1) to the last (T). T will make allowance for the number of days in the FTR Period and any daylight saving adjustment that occurred in it
$P_A(t)$, $P_B(t)$	The Final Prices in $/MWh (published in accordance with Part 14 of the Code) at the Settlement Node at the Source Hub A and the Sink Hub B, respectively for Trading Period *t*
FV	The FTR Volume in MW
2	A factor to convert from the per MWh Final Prices to the half-hours in the Trading Periods

2.8 FTR Rentals Amount

After each FTR Period, the FTR Manager will determine an FTR Rentals Amount according to Schedule 14.3 of the Code (which is based in part on inputs from the Grid Owner and the Pricing Manager) and inform the Clearing Manager by 1600 hours on the 7th Business Day after that FTR Period.

If the FTR Rentals Amount advised by the FTR Manager exceeds the amount of the loss and constraint excess for the FTR Period, the Clearing Manager will reduce the FTR Rentals Amount advised by the FTR Manager to that amount.

2.9 FTR Payment

The Clearing Manager will for each FTR Period determine the FTR Payment as:

$$FHVF_f = FHVP_f \times FPSF \qquad for\ all\ FTRs\ f$$

$$FTR\ Payment_f = FHVF_f - FAC_f \qquad for\ all\ FTRs\ f$$

where: *is the…*

FAC_f FTR Acquisition Cost, for FTR f (updated for any Assignments or reconfigurations)

FAM FTR Account Amount

$$FAM = FRA + \left(\sum_{f=1}^{F} FAC_f\right) + \left(\sum_{a=1}^{A} ADPACM_a - ADPCMA_a\right)$$

$FHVP_f$ FTR Hedge Value (Provisional), for FTR f

$FHVF_f$ FTR Hedge Value (Final), for FTR f

FPSF FTR Payment Scaling Factor

$$FPSF = Min\left(1,\ \frac{FAM}{\left(\sum_{f=1}^{F} FHVP_f\right)}\right)$$

FRA FTR Rentals Amount

$$FRA = Minimum\left\{\begin{matrix}\text{FTR Rentals Amount advised by the FTR Manager}\\ \text{Amount of loss and constraint excess for the FTR Period}\end{matrix}\right.$$

$ADPACM_a$ Assignment Difference Payment Assignor To Clearing Manager, for Assignment a

$ADPCMA_a$ Assignment Difference Payment Clearing Manager To Assignor, for Assignment a

Units Units of all the above are dollars ($), other than the FTR Payment Scaling Factor, which is a number.

The Clearing Manager will settle with FTR Holders the FTR Payments, and the Assignment Difference Payment Clearing Manager To Assignor, in the month following the FTR Period.

All financial calculations in this FTR Allocation Plan are GST exclusive.

The FTR Manager will obtain the results of settlement and revenue adequacy for each FTR Period from the Clearing Manager.

3 AUCTION RULES

3.1 Auction Months

Monthly FTR auctions will be undertaken according to a routine monthly schedule.

Each Auction Month there will be two Auctions:

- a Primary Auction, which may include both previously listed and previously unlisted FTR Periods
- a Variation Auction, for previously listed FTR Periods.

Auctions will use the latest FTR Grid for each FTR Period offered and make allowance for any FTRs already awarded and held.

3.2 Auction frequency and Horizons

The FTR Manager will auction 12 FTR Periods per calendar month.

The FTR Manager will publish the schedule of FTR Auctions with the FTR Periods offered and their FTR Horizons in the FTR Calendar.

3.3 Progressive release of FTR Grid capacity

FTR Grid capacity for an FTR Period will be released in stages across multiple Auctions.

The proportion of FTR Grid capacity that is released in an FTR Auction for an FTR Period, after allowance for any FTRs already awarded and held, will be governed by the use of a Capacity Release Factor.

The FTR Manager will publish the Capacity Release Factors for FTR Auctions and FTR Periods offered in the FTR Calendar.

3.4 Bid Window

For each FTR Auction there will be a Bid Window of at least four hours, covering all FTR Periods offered in that Auction.

3.5 FTR Calendar

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.

3.6 Auction structure

Each FTR Auction for each FTR Period will be a single round of closed bids.

3.7 Auction notices

The FTR Manager will issue Auction notices and publish information to enable FTR Participants to prepare for and participate in each FTR Auction. This information will include:

- The upcoming Primary and Variation Auctions and the FTR Periods that will be offered

- The FTR Products offered
- Confirming when the FTR Grid will be available for FTR Participants to access in the FTR Information System
- The Capacity Release Factor for each FTR Period
- Auction timings including the Bid Window.

Auction notices will be published on the FTR Manager's public website in accordance with the FTR Calendar.

3.8 [spare]

3.9 Submitting bids

Any FTR Participant can submit bids in Bid Portfolios for any FTR Period offered in any Auction.

The FTR Manager will enable FTR Participants to upload, download, revise and cancel Bid Portfolios during the Bid Window.

Bid Portfolios will be specific to an FTR Participant, FTR Auction, and FTR Period, and each Bid Portfolio may include one or more bids, each for:

- A specific FTR Product
- One or more price and quantity tranches with:
    - Bid quantity (MW) in 0.1 MW increments: bid quantities must be a positive value
    - Bid price ($/MW/h) in $0.01 (one cent) increments: bid prices may be positive, negative or zero.

Each bid must be submitted as a buy bid or a sell bid ('offer'). Participants may submit sell bids only for FTRs and FTR volumes that they hold for that FTR Period. A sell bid may be for the full volume of a held FTR, or for a part of that volume.

The FTR Manager will accept only those bids that conform to the Auction Rules and are submitted through the FTR Information System by an FTR Participant.

3.10 Prudential security check

The FTR Manager will reject a Bid Portfolio if the bidder does not have sufficient prudential security to cover the potential liabilities accruing from that Bid Portfolio, allowing for all previously accepted Bid Portfolios in that FTR Auction.

Adequacy of prudential security will be determined in accordance with the Clearing Manager's FTR Prudential Security Assessment Methodology, using information provided by the Clearing Manager, including each FTR Participant's Prudential Trading Limit. Such information provided by the Clearing Manager prior to the Bid Window will apply until the Auction process is complete and FTRs have been awarded and registered.

The FTR Manager will publish its calculation method in its FTR policy on Prudential Requirements, consistent with the Clearing Manager's FTR Prudential Security Assessment Methodology.

3.11 Auction awards

The Auction for each FTR Period offered will clear the FTR Products and Volumes that maximise the value-as-bid of cleared bids, subject to the combination of all Participants' cleared FTR Products and Volumes being simultaneously feasible on the FTR Grid.

Bids that clear at 0.1MW or above will be awarded FTRs for their cleared volume, truncated where not in multiples of 0.1MW to multiples of 0.1 MW.

There will be separate Auction Clearing Prices per MW of Volume per hour for each FTR Product for that FTR Period. These prices will observe the following conditions and relationships:

- The Auction Clearing Price for an Obligation FTR equals the Auction Clearing Price for an Option FTR in the same direction minus the Auction Clearing Price for an Option FTR in the opposite direction
- Option FTRs cannot have a negative Auction Clearing Price
- Obligation FTRs in opposite directions will have opposite Auction Clearing Prices: one positive, one negative
- The Auction will clear all buy bids whose bid prices exceed the relevant Auction Clearing Price, and all sell bids whose bid (offer) prices exceed the negative of the relevant Auction Clearing Price.

Bids whose bid prices equal the relevant Auction Clearing Price will be partially cleared: the pro-rating of tied bids will apply, prior to truncation and awards.

3.12 Pro-rating of tied bids

The FTR Manager will ensure that tied bids are treated equitably, so that equal bids are awarded proportionally.

3.13 Auction suspension

The FTR Manager will only suspend an FTR Auction if it receives from the Authority a suspension notice issued under clause 13.255 of the Code before the Auction results are entered into the FTR Register. Should this occur, the FTR Manager will advise FTR Participants as soon as practicable.

3.14 Publication of Auction results

The FTR Manager will, after each FTR Auction has cleared:

- Update the FTR Register with the results
- Publish the results to the Clearing Manager
- Publish the results to the (publically available) FTR Register.

4 FTR GRID

4.1 FTR Grid

The FTR Manager will develop and publish an FTR Grid for each FTR Period offered in each FTR Auction, for use in clearing the FTR Auction.

The FTR Grid will include:

- A network model
- Relevant planned outages
- Security constraints
- Allowance for unplanned outages
- Allowance for electrical losses
- Instantaneous reserves constraints
- Auction hub weightings.

4.2 Network model

A single network model will form the basis of the FTR Grid for each FTR Period offered in each FTR Auction. The FTR Manager will use as the network model the Grid Owner's forecast of the configuration and capacity of its grid for the FTR Period, allowing for:

- Any planned asset commissioning, asset decommissioning, asset re-rating or grid reconfiguration
- The expected impact of any variable and/or dynamic line ratings.

The FTR Manager will assume that the network model does not allow for any planned or unplanned outages.

4.3 Planned outages

The FTR Manager will use the relevant planned outages provided by the Grid Owner to develop the FTR Grid for each FTR Period offered in each FTR Auction. The source for these will be the public information posted on the POCP site *pocp.redspider.co.nz*.

The FTR Manager shall define in its policy on the FTR Grid what planned outages are relevant, as a function of their asset type, outage duration and distribution of multiple outages across parallel circuits.

The FTR Manager shall remove the relevant planned outages from the network model when clearing an Auction.

4.4 Security constraints

The FTR Manager will apply contingent security constraints to the network model, net of the relevant planned outages, when clearing an Auction. These constraints will be consistent with the System Operator's Policy Statement, which is included by reference in the Code (clause 8.10).

The FTR Manager may include additional security constraints in the FTR Grid to reflect constraints that the System Operator applies or might in future apply to manage, for example, voltage or transient stability.

4.5 Other outages and losses

Unplanned outages can increase the likelihood of Revenue Inadequacy if the FTR Grid does not allow for them.

The FTR Manager will apply a capacity scaling 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.

The capacity scaling factor used will be a function of:

- The horizon of the FTR Period and its relationship to the Grid Owners' outage planning cycle
- Which major assets are in the network model, net of the relevant planned outages

The capacity scaling factor will be a percentage applied to the capacity of all assets, or of HVDC or HVAC assets separately.

4.6 Instantaneous reserves

The FTR Manager will include in the FTR Grid constraints that limit flow across the inter-island HVDC link to represent the expected, average impact of instantaneous reserve constraints in the energy and reserves market.

These constraints will be a function of which HVDC assets are in the network model net the relevant planned outages.

4.7 Auction hub weightings

For each Hub, the FTR Manager shall use its Settlement Node for the FTR Auction unless that node restricts the FTR capacity to below the full capacity of the other inter-Hub circuits. In that case, the FTR Manager will include a weighting of neighbouring nodes in the relevant Hub to relieve that restriction.

4.8 Policy on the FTR Grid

The FTR Manager will maintain, publish, apply and regularly review an FTR policy on the FTR Grid, in accordance with section 1.6. So that FTR Participants are fully informed, and that the FTR Manager need exercise no discretion in its application, the FTR Manager will maintain that policy to be prescriptive including full:

- Definition of what planned outages are relevant
- Numerical values, capacity scaling factors and weightings
- Security and reserve constraints
- Formats of files.

In evolving the FTR policy on the FTR Grid, the FTR Manager will target a balance between ensuring that there is revenue available sufficient to settle the FTRs, and ensuring that sufficient volume of FTRs are available so that participants who wish to purchase FTRs are able to obtain them.

The FTR Manager will evolve the FTR policy on the FTR Grid such that, in its reasonable opinion at that time, it is expected that the primary objective will be achieved, with consideration given to also achieving the secondary objective:

- The primary objective is for Revenue Inadequacy to occur one month in twelve
- The secondary objective is for the annual average scaling factor to be 98%.

Collectively, these primary and secondary objectives are referred to as the Revenue Adequacy Objective.

4.9 Reviewing the policy

In addition to its regular reviews of FTR policies, the FTR Manager will review the FTR policy on the FTR Grid if:

- Revenue Inadequacy occurs in a third month of any rolling 12 month period or if Revenue Inadequacy is less than 80% in any single month
- The Grid Owner significantly changes its policy on outage planning
- There is a variation to the FTR Allocation Plan
- The FTR Manager considers that material new information is available that might support refining the numerical content of the policy to better meet the Revenue Adequacy Objective.

If an FTR Grid does not clear optimally in the Auction, or the FTR Manager in its reasonable opinion determines that there is important new information that could materially affect the likelihood of Revenue Adequacy (such as a sudden change to reserve market behaviour or to Transpower's asset commissioning plans), the FTR Manager may issue a temporary amendment to the policy on the FTR Grid. If the FTR Manager does this, it must review the policy on the FTR Grid to minimise the chance of re-occurrence.

4.10 Adding new FTR Hubs

The FTR Manager will at least once every two years conduct a process to offer FTR Participants the possibility to add up to five new FTR Hubs. Non-FTR participants can request new FTR Hubs at any time, and these requests will be considered as part of this process. In conducting the process, the FTR Manager will:

- Confer with the Authority regarding the number of FTR hubs to make available, taking into consideration the Authority's work-plan and appropriations
- Determine which nodes have sufficient levels of interconnection and capacity to act as effective FTR hubs
- Seek FTR Participants' nominations for which hub or hubs each FTR Participant would prefer were added (if any), with a limit on the number of proposed hubs per participant
- Consolidate a list of nominated hubs, including up to five 'non-hubs'
- Invite FTR Participants to vote on their preferences for nominated hubs using a single transferable vote method
- Use both the votes and any hubs requested by non-FTR participants and the Autority to select a subset of all nominated hubs (the nominated subset)
- Invite FTR Participants and non-FTR participants to advise their costs and views on market benefits should new hubs be selected to be added
- If one or more new FTR Hubs are selected to be added, and a positive cost-benefit can be demonstrated, propose to the Authority a corresponding variation to sections 2.2 and 2.3 of the FTR Allocation Plan.

The Authority's decision on whether to approve the variation will include consideration of the cost-benefit analysis and the funds available through the Authority's appropriations. The timing of any additions will also be influenced by the time and effort required to complete the necessary changes to the FTR Manager and clearing manager systems.

5 FURTHER INFORMATION

5.1 Public FTR website

The FTR Manager will operate a public website that will provide access to:

- The FTR Allocation Plan
- The standard FTR participation agreement
- FTR policies
- Auction notices
- Information on how to register to become an FTR Participant, nominate participant users, and obtain training
- Information on how to register to become a public user
- The FTR Register including information on FTR Auction results, with the ability to download files in a standard format
- Consultations, e.g. on the FTR Allocation Plan and FTR policies, including the change process for these, and submissions received.

5.2 FTR register

FTRs are created in an Auction through awards to successful FTR Participant bidders, and can then be Assigned between FTR Participants and offered into subsequent Auctions of the same FTR Period. Assignment can create new FTRs, through Assignment of part of the Volume of an existing FTR. FTRs offered into an Auction can be sold in whole or part.

The FTR Manager will record every FTR created or Assigned in an FTR Register, and will operate, maintain and provide appropriate access to that information. The following information will be able to be accessed:

- A unique registered number or code
- FTR Product, being:
  - FTR Period
  - FTR Type (Option or Obligation)
  - Source Hub and Sink Hub
- FTR Holders
  - Current: the FTR Participant who owns this FTR
  - Previous: previous holder (Assignor) if FTR has been Assigned
  - First: the FTR Participant awarded the FTR in an Auction, or Assigned a new FTR that is part of a pre-existing FTR
- FTR Volume
- FTR Auction Clearing Price
- FTR Acquisition Cost
- Original Acquisition Cost
- Auction at which awarded
- Date acquired
- The FTR Allocation Plan under which the FTR was first awarded
- Status: awarded, assigned or settled.

5.3 Use of FTR Information System

The FTR Information System will enable access, including to publically available information, from the FTR Register.

The FTR Manager will provide different levels of secure access to the FTR Information System to particular user classes:

- FTR Participants
  - Individual user accounts with read-only access (non-bidders)
  - Individual accounts with rights to submit FTR Bids and requests for Assignments (bidders)
- FTR Manager
  - Administrators
  - Operators
- Public (Public User)
- Electricity Authority
- Clearing Manager.

FTR Participants will nominate individual users as Participant Users, and their access rights (bidder or non-bidder), as part of the registration process.

The FTR Grid will be available for FTR Participants to access in the FTR Information System.

The FTR Information System will also be used by the FTR Manager's administrators and operators.

5.4 Regulatory reporting

The FTR Manager will provide monthly reports to the Authority on FTR market activity, including the summarised results of any FTR Auctions or Assignments that month and a summary of FTR Register information.

The FTR Manager will respond also to any other requests by the Authority for information under section 46 of the Electricity Industry Act 2010.

5.5 Training

The FTR Manager will offer training to relevant personnel of FTR Participants or potential FTR Participants, with refresher training and training of relevant personnel of new FTR Participants.

6 GLOSSARY

Term	Meaning
$/MW/h	Dollars per Megawatt per hour
Assignment Assignor Assignee	The Assignment of an FTR in accordance with clause 13.248 of the Code. Assignor and Assignee refer to the two parties to an Assignment.
Assignment Difference Payment Assignor To Clearing Manager	In cases of an FTR Assignment with an FTR Disclosed Assignment Price, then if the FTR Disclosed Assignment Price is less than the FTR Acquisition Cost, a payment of the assignment difference is made by the Assignor to the Clearing Manager.
Assignment Difference Payment Clearing Manager To Assignor	In cases of an FTR Assignment with an FTR Disclosed Assignment Price, then if the FTR Disclosed Assignment Price is greater than the FTR Acquisition Cost, a payment of the assignment difference is made by the Clearing Manager to the Assignor.
Assignment Rules	Section 2.6 of this FTR Allocation Plan.
Auction	A method for awarding FTRs for one or more FTR Periods based on FTR Participants' bids. One of (usually) two Auctions in an Auction Month, being either a Primary Auction or a Variation Auction.
Auction Clearing Price	Price for each FTR Type, Source Hub and Sink Hub at which an FTR Auction for a particular FTR Period clears.
Auction Horizon	An Auction Horizon is the period of time between the Auction Month and the FTR Period auctioned. Thus if an FTR Period of June 2018 is auctioned in June 2017, it has an Auction Horizon of 12 months. See also FTR Horizon.
Auction Month	The month in which an FTR Auction occurs.
Auction Rules	Section 3 of this FTR Allocation Plan.
Authority	The Electricity Authority.
Bid Portfolio	A set of bids for a particular FTR Auction and FTR Period.
Bid Window	The period when a particular FTR Auction is open to receive Bid Portfolios.
Business Day	A day defined in paragraph (b) of the definition of "business day" in Part 1 of the Code.
Capacity Release Factor	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 FTR Grid capacity remaining after allowance for any FTRs already awarded and held.
Clearing Manager	The party contracted by the Authority to provide clearing and settlement services to the wholesale electricity market.
Code	Electricity Industry Participation Code 2010.
Disclosed Assignment Price	Price ($/MW/h) disclosed in an Assignment, if any.

Term	Meaning
Dollars ($)	Unless otherwise specified, all dollar values are expressed in NZ$ exclusive of any GST to 2 decimal places.
Final Price	Wholesale electricity prices ($/MW/h) as defined in the Code and published by the Pricing Manager for every Trading Period in a month for every node.
FTR	Financial Transmission Right.
FTR Account	The account established by the Clearing Manager in accordance with clause 14.43A of the Code.
FTR Account Amount	The amount in the FTR Account for a particular FTR Period at the time of determining Revenue Adequacy for that FTR Period.
FTR Acquisition Cost	The net cost ($/MW/h or $) of an FTR awarded or sold at an FTR Auction, or acquired through Assignment, adjusted for any subsequent Assignments or reconfigurations. An FTR Acquisition Cost may be positive or negative.
FTR Allocation Plan 2012	The FTR Allocation Plan as approved by the Authority in 2012 including any subsequent approved variations.
FTR Allocation Plan 2014	The FTR Allocation Plan as approved by the Authority in 2014 including any subsequent approved variations.
FTR Calendar	A calendar detailing the planned schedule of activities in the FTR market.
FTR Disclosed Assignment Price	The price ($/MW/h) that can be disclosed by the Assignor and Assignee in an Assignment. The price at which an FTR has been assigned, if a price is disclosed.
FTR Duration	The length of the time period for which an FTR applies at settlement.
FTR Grid	The grid used by the FTR Manager to auction FTRs for an FTR Period.
FTR Hedge Value	The value calculated in accordance with sections 2.7 and 2.9 of this allocation plan. There is a Provisional and a Final FTR Hedge Value, corresponding to the FTR Hedge Value before and after any FTR Payment Scaling, being the values calculated in accordance with sections 2.7 and 2.9 of this allocation plan respectively.
FTR Holder	An FTR Participant that holds an FTR.
FTR Horizon	An FTR Horizon is the period of time between a specified time (e.g. now, or an Auction) and the FTR Period. See also Auction Horizon.
FTR Information System	The electronic systems provided or used by the FTR Manager for Auctions, Assignments, the FTR Register and registration of FTR Participants, and for any secondary market for FTRs.
FTR Manager	The market operation service provider who is, for the time being, appointed as the FTR manager for the purposes of the Code.
FTR Manager Service Provider Agreement	The FTR Manager Service Provider Agreement between the Electricity Authority and Transpower New Zealand Limited, dated 2 April 2012.

Term	Meaning
FTR Participant	A party who has been approved and registered by the FTR Manager to participate in an FTR Auction and to be Assigned FTRs.
FTR Payment	The value calculated in accordance with section 2.9 of this allocation plan.
FTR Payment Scaling	The process of scaling down FTR Hedge Values in cases of Revenue Inadequacy.
FTR Payment Scaling Factor	The degree of scaling down of FTR Hedge Values in cases of Revenue Inadequacy.
FTR Period	The time period for which an FTR applies at settlement, the length of which is the FTR Duration.
FTR Product	An FTR of specific FTR Type, Source Hub and Sink Hub.
FTR Prudential Security Assessment Methodology	The Clearing Manager's prudential security assessment methodology with respect to the FTR market, as approved from time to time by the Authority under clause 14.19B of the Code.
FTR Reconfiguration Amount	The price ($/MW/h or $) for an FTR sold at an FTR Auction. An FTR Reconfiguration Amount may be positive, zero or negative.
FTR Rentals Amount	The amount ($) calculated for a specific FTR Period in accordance with Schedule 14.3 of the Code, or the amount of loss and constraint excess for the FTR Period if less.
FTR Terms	Section 2 of this FTR Allocation Plan.
FTR Type	An FTR can be either an Obligation FTR or an Option FTR.
FTR Volume	The amount of an FTR in MW (to 1 decimal place).
HEDGE FTR Market System®	The name of Nexant Inc.'s FTR product used by the FTR Manager to run the FTR market.
HVAC	High voltage alternating current, being the North Island and South Island parts of the grid, less the HVDC.
HVDC	High voltage direct current, being the inter-island link from Benmore in the South Island to Haywards in the North Island.
Hub	A node or group of nodes (and in the case of a group of nodes, nodes in the group may be given different weightings) identified as either the Source Hub or the Sink Hub of an FTR.
MW	Megawatts.
POCP	Planned Outage Coordination Process.
Primary Auction	The first of two Auctions in a month.
Prudential Trading Limit	Calculated by the Clearing Manager in accordance with Part 14 of the Code, as the excess prudential security held by the Clearing Manager on behalf of the participant.
Revenue Adequacy	A situation where the FTR Account Amount is sufficient to settle all FTR Hedge Values in full for a particular FTR Period.

Term	Meaning
Revenue Adequacy Objective	An objective for the FTR Manager to use in evolving the FTR policy on the FTR Grid.
Revenue Inadequacy	A situation where the FTR Account Amount is insufficient to settle all FTR Hedge Values in full for a particular FTR Period.
Settlement Node	The node for each Hub at which Final Prices are used for the calculation of the FTR Hedge Value (Provisional)
Sink	The offtake Hub of an FTR.
Source	The injection Hub of an FTR.
Trading Period	A period of 30 minutes ending on each hour or 30 minutes past each hour on any trading day.
Variation Auction	The second of two FTR Auctions in an Auction Month.