

How to be a dispatchable load purchaser

Version 1.4

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Version control

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Disclaimer

1. This document provides general information to help participants understand how to be a dispatchable load purchaser under the Electricity Industry Participation Code 2010 (Code). It reflects the Authority's view.
2. The information is not intended to be definitive and should not be used instead of legal advice.
3. If there is any inconsistency between this information and the Code, the Code takes precedence.

Reference documents

4. This document must be read in conjunction with
 - (a) the DCLS Approval Process guidelines available from the system operator's web site
 - (b) the Code
 - (c) the reconciliation manager functional specification
 - (d) WITS User Manual and functional specification

Glossary of abbreviations and terms

The majority of the terms and abbreviations noted below are more fully defined in clause 1.1(1) of the Code.

Act	Electricity Industry Act 2010
Authority	Electricity Authority
Board	Electricity Authority Board
Code	Electricity Industry Participation Code 2010
Customer	Electricity customer
DCLS	Dispatch capable load station
GXP	Grid exit point
ICP	Installation control point
MEP	Metering equipment provider
Non-dispatch-capable load	The quantity of electricity at a GXP that is not purchased for a DCLS
NSP	Network supply point
Purchaser	Electricity purchaser
NRS	Non-response schedule
Registry	Electricity registry
Retailer	Electricity retailer
WITS	Wholesale Information and Trading System

Contents

Disclaimer	A
Reference documents	B
Glossary of abbreviations and terms	C
Introduction	3
Who can apply to have a DCLS approved?	5
Purchasers have a range of Code obligations	5
What do you need to consider before applying to have a DCLS approved?	7
What is the process for getting a DCLS approved?	9
How do I maintain a DCLS's approval status?	10
What are the responsibilities of a dispatchable load purchaser?	11
Updating the participants register	11
Changes to certification of functions	11
Access to the Wholesale Information and Trading System (WITS)	13
Bids	14
Responding to dispatch instructions	17
Metering installations compliance	17
Provision of daily information to the pricing manager and the grid owner	18
Provision of dispatchable load information to the reconciliation manager	18
<i>Application of internal site network losses</i>	20
<i>Determination of internal site network losses</i>	21
Invoicing of dispatchable settlements by the clearing manager	21
Sources of information	22
Appendix A Becoming a purchaser who is also a certified reconciliation participant under the Code	24
Register as a purchaser participant with the Authority	24
Obtain a participant identifier from the Authority	24

Certification as a reconciliation participant	24
Obtain access to the electricity registry	26
Use of systems agreements	26
Electricity Levy payments	27
Spot market risk disclosure	27
Exchange of information with distributors	28
Notification to reconciliation manager of intention to purchase electricity	28
Provision of monthly information to the reconciliation manager	28
Make arrangement for payments with the clearing manager	29
Establish prudential security arrangements	29
Access to the Wholesale Information Trading System	29

Introduction

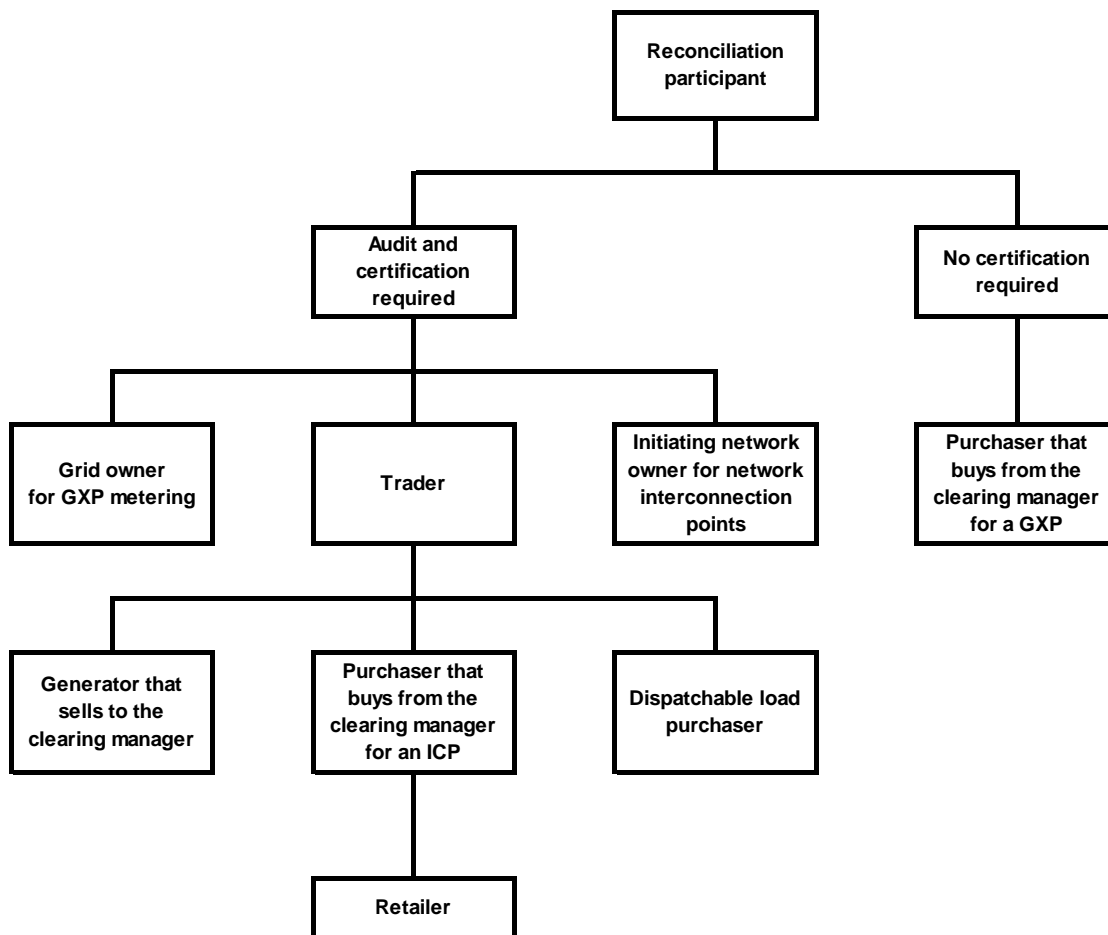
1. The ability of demand-side participants to respond actively to wholesale electricity market conditions is an important component of an efficient wholesale market. In the Code's dispatchable demand regime, demand-side participants are able to respond to wholesale market prices by reducing their electricity demand in accordance with the bids they have made into the market.
2. Dispatchable demand promotes:
 - (a) competition in the wholesale market, by enabling purchasers to compete with generators to set prices
 - (b) the efficient operation of the industry, by improving the ability of purchasers to react to pricing information, and ensuring the actions they take in response to this information are not penalised in final prices, and by making the pricing outcomes of demand response more certain.
3. The dispatchable demand regime ensures participating purchasers will never pay prices higher than they bid into the market.
4. Before being able to bid for its controllable load to be dispatched in the electricity market, a purchaser must have a device, or a group of devices, that are controllable approved by the system operator. The approved, controllable load is described as a dispatch-capable load station (DCLS) in the Code.
5. Only a purchaser who has had a DCLS approved can bid to have its load dispatched. A purchaser who purchases electricity for a DCLS is called a dispatchable load purchaser.
6. The requirements for approval and operating a DCLS are defined in the Code. The intent of this guideline is to explain:
 - (a) who can apply to have a DCLS approved
 - (b) what you need to consider before applying to have a DCLS approved
 - (c) the process for getting a DCLS approved
 - (d) how to maintain a DCLS's approval status
 - (e) the responsibilities of dispatchable load purchasers.

Who can apply to have a DCLS approved?

7. Any participant that meets the Code's definition of a purchaser can apply to have a DCLS approved. A purchaser is defined in clause 1.1(1) of the Code as "a person who buys **electricity** from the **clearing manager**...".
8. If you are not a purchaser but you want to apply to have a DCLS approved, you have the following two options:
 - (a) you can enter into a commercial agreement with your retailer, where the retailer assumes the role of dispatchable load purchaser, including having the DCLS approved
 - (b) you can become a purchaser, which would then allow you to apply to have a DCLS approved and become a dispatchable load purchaser. Appendix A provides information on how to become a purchaser, and what purchasers' obligations are.

Purchasers have a range of Code obligations

9. Purchasers, as defined in the Code, have Code obligations in the capacity of other participant types. For example, for the purposes of the Code, a purchaser is also a trader and a reconciliation participant, and may also be a dispatchable load purchaser, retailer, etc. As a reconciliation participant, a dispatchable load purchaser must be certified in accordance with clause 15.38 of the Code. The relevant Code requirements for reconciliation participants are discussed in more detail in paragraphs 28 to 34, below.
10. The below diagram sets out the relationships that exist in the Code between definitions in the context of dispatchable load purchasers. Note that this diagram does not capture the full relationship between all of the definitions used in the Code.



11. As an industry participant, a purchaser who has an approved DCLS must comply with all of the relevant legislation, including:
- (a) the Electricity Industry Act 2010 (Act)
 - (b) the Code
 - (c) the Electricity Industry (Enforcement) Regulations 2010
 - (d) the Electricity Industry (Levy of Industry Participants) Regulations 2010.

What do you need to consider before applying to have a DCLS approved?

12. As discussed above, once you have a DCLS approved, and you purchase electricity for a DCLS, you will become a dispatchable load purchaser for the purpose of the Code.
13. The Code requires the system operator to consider the following factors before it approves a DCLS:
 - (a) the effect an approval would have on the system operator's ability to comply with the principal performance obligations
 - (b) whether the applicant is able to provide real-time indications and measurements to the satisfaction of the system operator
 - (c) whether the applicant has in place communication systems that meet the system operator's requirements
 - (d) whether the applicant is able to receive dispatch instructions via the wholesale information and trading system (WITS) – the DCLS must be able to respond to dispatch instructions at any time.
 - (e) whether there is a substantial risk that a dispatch instruction that changes the level of load of the DCLS may be offset by changes in demand in the same trading period from other load controlled by the applicant
 - (f) whether the DCLS would be technically capable of complying with a dispatch instruction so that it does not adversely affect the system operator's ability to comply with the principal performance obligations
 - (g) any other matter the system operator reasonably considers relevant.
14. One other matter that the system operator may consider in granting approval is where the DCLS's metering installation is located. The following factors should be considered when a purchaser is determining the location of a DCLS's metering installation(s):
 - (a) Whether the DCLS is going to be located at the point of connection. If the metering installation is not at a point of connection, an additional metering installation may be required for the DCLS.
 - (b) Whether there is going to be more than one DCLS within the same point of connection.
 - (c) Metering for a DCLS must:

- (i) measure the electricity conveyed through the DCLS with sufficient resolution so that bids and dispatch can be compared
 - (ii) be installed, certified, and maintained in accordance with Part 10 of the Code by an Authority approved test house
 - (iii) be capable of being interrogated daily and monthly in order to deliver daily pricing manager information and monthly reconciliation manager information
 - (iv) have a MEP contracted to manage the compliance of the metering installation.¹
- (d) When a DCLS is dispatched at 0MW, no electricity can be consumed at the point of connection for the duration of the dispatch instruction (ie. there must be no non-dispatchable load behind the metering installation).
- (e) While a DCLS's load should preferably be measured at one point, in some cases multiple metering installations will be necessary. In the case of multiple metering installations, volume information will need to be aggregated in order to provide dispatchable load information to the reconciliation manager.
15. You are encouraged to discuss your application, including the proposed location of the metering installation(s) with the system operator before you submit it.

¹ The compliance process is detailed in Part 10 of the Code. For clarity, the MEP for the metering installation at the point of connection of the DCLS's premises does not necessarily need to be the MEP for the DCLS's metering installation.

What is the process for getting a DCLS approved?

16. This section outlines some of the key aspects of the process for approving a DCLS. For the full process, please refer to Schedule 13.8 of the Code and the guidelines published on the system operator's website.²
17. If you are a purchaser who wants to get a device or a group of devices approved as a DCLS, you must apply for approval to the system operator using the form on its website. The application must be in writing and should include the information specified in paragraph 13. You should discuss your application with the system operator before you submit it to prevent unnecessary re-work or cost.
18. The system operator may at any time request additional information from you about the application.
19. You may at any time make amendments to, or withdraw your application. The amendment or withdrawal will take effect from the date the system operator receives the amendment or withdrawal.
20. The system operator will assign the approved DCLS a unique identifier; this is the dispatch-capable load station identifier and will be of the form GXP1234XXX1.³
21. The system operator may also impose conditions when approving your application, with which you must comply.

² The guidelines and application form will be available from 15 May 2014 at <http://www.systemoperator.co.nz/market/setup-and-information/dispatch-capable-load-station-setup>.

³ This identifier must be used when submitting nominated bids.

How do I maintain a DCLS's approval status?

22. The system operator may at its sole discretion, or on the request of the Authority or a dispatchable load purchaser:
 - (a) amend a DCLS approval;
 - (b) revoke a DCLS approval; or
 - (c) suspend a DCLS approval.
23. A DCLS approval can be altered for various reasons, which include, but are not limited to:
 - (a) there are concerns by the system operator, or the Authority, or the dispatchable load purchaser itself about failure to comply with the requirements of the Code
 - (b) there are changes to the factors the system operator considered in granting the approval, including an intended change of the dispatchable load purchaser for the DCLS.
24. You must advise the system operator of changes to the factors the system operator considered in granting the DCLS approval no later than 10 business days before the change takes effect. The system operator will then consider if the proposed changes will alter the DCLS approval.

What are the responsibilities of a dispatchable load purchaser?

25. This part of the paper assumes that a participant is already a purchaser.

Updating the participants register

26. Every industry participant⁴ is required to register with the Authority by supplying the information specified in section 27(2) of the Act. Amongst other information, the participant is required to provide information about the nature of its business, for example whether it is involved in generation, distribution, etc. Information on registration as a participant is publicly available on the Authority's website at <https://www.ea.govt.nz/operations/industry-participants/how-to-register-as-a-participant/>.
27. A dispatchable load purchaser must update its current registration to include its participation in dispatchable demand. There is no cost to update a participant's registration.

Changes to certification of functions

28. Clause 15.38 of the Code requires reconciliation participants, including dispatchable load purchasers to be certified to undertake certain functions:

15.38 Functions requiring certification

- (1) A **reconciliation participant** (except an **embedded generator** selling **electricity** directly to another **reconciliation participant**) must obtain and maintain **certification** in accordance with Schedule 15.1 in order to be permitted to perform, or to have performed by way of an agent or agents, any of the following functions in compliance with this Code:
- (a) maintaining **registry** information and performing **customer** and **embedded generator** switching (except if the maintenance of **registry** information is carried out by a **distributor** in accordance with Part 11);
 - (b) gathering and storing **raw meter data**;
 - (c) creating and managing (including validating, estimating, storing, correcting and archiving)—
 - (i) **half hour volume information**; or
 - (ii) **non half hour volume information**; or
 - (iii) **half hour** and **non half hour volume information**; or
 - (iv) **dispatchable load information**;
 - (d) calculation of **ICP days**, monthly kWh information of **half hour** metered **ICPs**, and **electricity supplied**;
 - (e) provision of **submission information** for reconciliation;
 - (f) provision of **metering information** to the **pricing manager** in accordance with subpart 4 of Part 13.
- (1A) A **dispatchable load purchaser** must obtain and maintain **certification** in accordance with Schedule 15.1 in order to be permitted to perform, or to

⁴ Definitions of 'industry participant' is contained in section 7 of the Act

have performed by way of an agent or agents, any of the following functions in compliance with this Code:

- (a) gathering and storing **raw meter data**:*
 - (b) creating and managing (including validating, estimating, storing, correcting and archiving)—*
 - (i) **half hour volume information**; or*
 - (ii) **non half hour volume information**; or*
 - (iii) **half hour and non half hour volume information**; or*
 - (iv) **dispatchable load information**:*
 - (c) providing **dispatchable load information**:*
- (2) To avoid doubt, the performance of any of the functions in subclause (1) by a **reconciliation participant**, or its agent or agents, without the **reconciliation participant** having **certification**, is a breach of this Code by the **reconciliation participant**.*

29. If you are going to be a dispatchable load purchaser that will purchase electricity at an NSP connected to the grid, you require certification for the following:
- (a) gathering and storing raw meter data
 - (b) creating and managing (including validating, estimating, storing, correcting, and archiving) dispatchable load information
 - (c) provision of dispatchable load information to the reconciliation manager
 - (d) provision of metering information to the pricing manager in accordance with subpart 4 of Part 13.
30. If you are going to be a dispatchable load purchaser that will purchase electricity at any other point of connection which is not an NSP connected to the grid, you require certification for the following:
- (a) maintaining registry information and performing customer and embedded generator switching
 - (b) gathering and storing raw meter data
 - (c) creating and managing (including validating, estimating, storing, correcting and archiving):
 - (i) half hour volume information
 - (ii) dispatchable load information
 - (d) calculation of ICP days, monthly kWh information of half hour metered ICPs, and electricity supplied

- (e) provision of submission information for reconciliation
 - (f) provision of metering information to the pricing manager in accordance with clause 13.138A.
31. A reconciliation participant or a dispatchable load purchaser, or their agent, performing any of the functions specified above without the reconciliation participant having the required certification, will be in breach of the Code.
32. If you have not previously been required to obtain certification until you became a dispatchable load purchaser, you can follow the process set out in paragraphs A.7 to A.16 in Appendix A to obtain the initial certification for the appropriate areas of activity that you will be required to perform.
33. If you already have certification for certain functions and you would like to obtain additional certification to include the dispatchable demand functions, you must give the Authority five business days' notice before you commence the dispatchable demand related functions.⁵
34. An application for a change to a reconciliation participant's certification must be provided to the Authority. Details can be found at <https://www.ea.govt.nz/operations/retail/audits-approvals-and-certification/audit-regimes/certified-reconciliation-participant-audits/>.

Access to the Wholesale Information and Trading System (WITS)

35. Dispatchable load purchasers will also require access to WITS in order to:
- (a) submit or revise bids
 - (b) receive dispatch instructions
 - (c) review forecast pricing from the non-response schedule (NRS) information to determine if and when a DCLS is likely to be dispatched.
36. Dispatchable load purchasers must complete an application form for WITS Full Trader access. The application form is available on the Authority's website at <https://www.ea.govt.nz/operations/wholesale/spot-pricing/wits/>. Follow the directions on the website to submit the application form.
37. The WITS user manual is available from the WITS web site. The WITS administrator can also be contacted for assistance on 0800 426 648 or at cadmin@nzx.com.

⁵ Clause 8 of schedule 15.1

Bids

38. If you are a dispatchable load purchaser, you will fall in one of the following two situations in relation to your DCLS:
- (a) all of the electricity you purchase at the relevant GXP is for the DCLS;
 - (b) not all of the electricity you purchase at the relevant GXP is for the DCLS, in which case the rest of the electricity is for non-DCLS load (non-dispatch-capable load).
39. Before a dispatchable load purchaser submits a bid for a DCLS for the first time, it must give at least 5 business days' notice to the system operator and the clearing manager. You can find the "notice of initial bid" form at <http://www.systemoperator.co.nz/market/setup-and-information/offer-and-bid-setup>.

All electricity at GXP purchased for DCLS

40. If you are a dispatchable load purchaser of the kind that is described in paragraph 38(a) (all electricity purchased is for a DCLS), you must submit one of the following nominated bids for the DCLS:
- (a) a nominated dispatch bid, if you would like to make the DCLS available for dispatch; or
 - (b) a nominated non-dispatch bid, if you would not like to make the DCLS available for dispatch.

Not all electricity at a non-conforming GXP is for a DCLS

41. If you are a dispatchable load purchaser of the kind that is described in paragraph 38(b) (not all electricity purchased is for a DCLS) and you purchase electricity at non-conforming GXP, you must:
- (a) submit for your DCLS one of the following nominated bids for the DCLS:
 - (i) a nominated dispatch bid, if you would like to make the DCLS available for dispatch; or
 - (ii) a nominated non-dispatch bid, if you would not like to make the DCLS available for dispatch.
 - (b) submit for your non-DCLS load (non-dispatch-capable load), a nominated non-dispatch bid.

42. A non-conforming GXP is one at which load is not easily predicted. A list of non-conforming GXPs can be found at <https://www.ea.govt.nz/operations/wholesale/spot-pricing/conforming-and-non-conforming-gxps/>.

Not all electricity at a conforming GXP is for a DCLS

43. If you are a dispatchable load purchaser of the kind that is described in paragraph 38(b) (not all electricity purchased is for a DCLS), and you purchase electricity at a conforming GXP, you:
- (a) must submit for your DCLS one of the following nominated bids for the DCLS:
 - (i) a nominated dispatch bid, if you would like to make the DCLS available for dispatch; or
 - (ii) a nominated non-dispatch bid, if you would not like to make the DCLS available for dispatch
 - (b) may, if you wish to, submit a difference bid for your non-DCLS load (non-dispatch-capable load).
44. Submitting a difference bid for non-dispatch-capable load is optional under the Code. It indicates to the system operator a reasonable estimate of an increase or a decrease in the purchaser's usual non-dispatch capable load purchased at a conforming GXP.

Dispatch bids must be reasonable estimates

45. Nominated dispatch bids must represent a reasonable estimate of the total quantity a dispatchable load purchaser will purchase at a GXP for a DCLS or the total non-DCLS load (non-dispatch-capable load) the purchaser will purchase at a GXP (whichever is relevant).
46. When submitting a bid, it is important that a dispatchable load purchaser that has been dispatched off takes into account the time it would take for the DCLS to be dispatched back on.
47. As indicated in paragraph 44, a difference bid must also be a reasonable estimate.

Rolled over (deemed) bids

48. A dispatchable load purchaser may choose to have its nominated bids roll over under clause 13.8A of the Code. Bids that have rolled over are also known as deemed nominated bids. It is the dispatchable load purchaser's obligation to ensure rolled over

or deemed bids are still reasonable estimates of the quantities of electricity it will purchase.

Revisions and cancelations of bids

49. A dispatchable load purchaser may revise or cancel its bid at any time before the two hours prior to the relevant trading period. This includes the revision of the bid's type from nominated dispatch bid to nominated non-dispatch bid and vice versa.
50. A dispatchable load purchaser must not cancel or revise its bid within the two hours prior to the relevant trading period, unless one of the circumstances specified in clause 13.19A applies. These circumstances are discussed in the following couple of paragraphs.
51. A purchaser may revise its bid quantities or type (from nominated dispatch bid to nominated non-dispatch bid and vice versa), or cancel the bid if the purchaser has a bona fide physical reason necessitating the revision or cancelation.
52. A purchaser must immediately submit a revised nominated bid quantity if the purchaser expects, or ought reasonably to expect, that the quantity of electricity likely to be purchased by the purchaser at the prices indicated in the nominated bid will:
 - (a) for a nominated non-dispatch bid, differ from the quantity in the nominated non-dispatch bid by more than the lesser of 20MW and 20% of the nominated non-dispatch bid quantity; or
 - (b) for a nominated dispatch bid, differ from the quantity in the nominated dispatch bid by more than the lesser of 10MW and 10% of the nominated dispatch bid quantity.
53. An example of this will be when a dispatchable load purchaser's DCLS has been dispatched to 0MW. It, say, it takes the DCLS an hour to be switched back on again, the dispatchable load purchaser's bid for the two trading periods following this dispatch to 0MW must take this into account. If the change in quantity is more than the lesser of 10MW or 10% of the nominated dispatch bid quantity, the dispatchable load purchaser must submit a revision to the nominated dispatch bid.
54. However, a purchaser is not required to submit a revised nominated bid quantity, if the expected change in the quantity is less than 5MW.
55. If the system operator declares a grid emergency, a purchaser may revise a nominated bid in accordance clauses 13.99 and 13.100 of the Code.

Responding to dispatch instructions

56. A dispatch instruction will be issued in the form of the non-response schedule (NRS) via WITS. The instruction will be for the MW amount the DCLS should consume. The latest 'short' NRS schedule (NRSS) will contain the latest dispatch instruction for a particular trading period. Note that occasionally there may be more than one NRSS provided for a trading period. A dispatchable load purchaser should have a process in place to review NRS as they are published.
57. Once a dispatchable load purchaser has been issued with a dispatch instruction, the dispatchable load purchaser becomes a dispatched purchaser.
58. Dispatchable load purchasers should take into consideration that dispatch instructions may be issued via WITS at any time, day, or night. Dispatchable load purchasers must have the processes and capability to monitor WITS, manage bids, and comply with dispatch instructions at all times for which a nominated dispatch bid was made.
59. A failure to comply with a dispatch instruction is a breach of the Code.

Metering installations compliance

60. Part 10 of the Code sets out participants' obligations in relation to metering standards.
61. MEPs are required to maintain compliance of metering installations used for Code purposes, while dispatchable load purchasers are responsible for ensuring that a certified metering installation is provided for each DCLS. MEPs are participants under the Code. They may provide all, some, or no components in a metering installation but retain responsibility for compliance of active metering installations. Further information on MEPs is available at <http://www.ea.govt.nz/dmsdocument/13758>.
62. A dispatchable load purchaser must either:
 - (a) become the MEP for its DCLS; or
 - (b) contract another party to be the MEP for its DCLS.
63. Contracts that traders enter into with MEPs typically expressly require that the MEP maintain compliance with Part 10 of the Code.

Provision of daily information to the pricing manager and the grid owner

64. Dispatchable load purchasers must provide daily information to the pricing manager and the grid owner in accordance with the Code.⁶ Information to the pricing manager and the grid owner must be:
- (a) half-hour metering information for each of the dispatchable load purchaser's DCLSs
 - (b) in the case of premises that are directly connected to a GXP, the information must be adjusted for internal site losses, if any, relevant to the GXP at which the dispatchable load purchaser purchases electricity for the DCLS (refer to the sections dealing with losses below)
 - (c) in the case of premises that are directly connected to an ICP
 - (i) if the DCLS is not at the point of connection, but is within the premises that are directly connected to the ICP, the information must be adjusted for internal site losses
 - (ii) the information must be adjusted for the local or embedded network losses, relative to the GXP at which the dispatchable load purchaser purchases electricity for the DCLS.⁷
 - (d) in the format specified by the pricing manager⁸
 - (e) submitted by 0500 hours on a trading day for each trading period of the previous trading day.
65. The file you send to the system operator and the grid owner must use the identifier assigned by the system operator to the DCLS (as per paragraph 20, above).

Provision of dispatchable load information to the reconciliation manager

66. Dispatchable load purchasers, in their capacity of reconciliation participants, must provide reconciliation information in accordance with the Code and the reconciliation manager functional specification.
67. Dispatchable load purchasers are also required to provide dispatchable load information to the reconciliation manager.

⁶ Clause 13.138A of the Code.

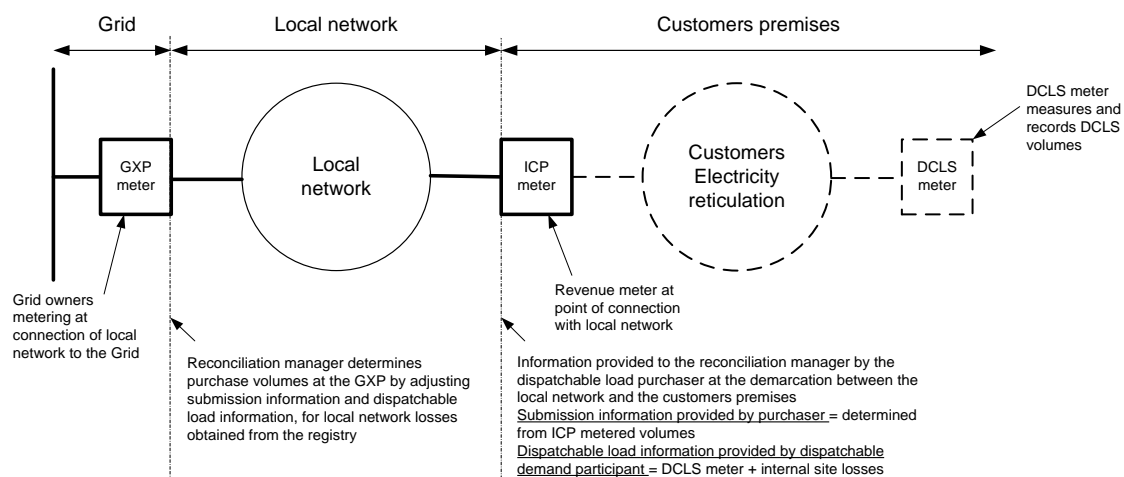
⁷ The losses applied should be obtained from the Loss Factor Table (one of the static data tables) contained within the registry and using the Loss Category Code assigned by the network owner to the ICP in the registry.

⁸ Clause 13.138A(2)(b) of the Code.

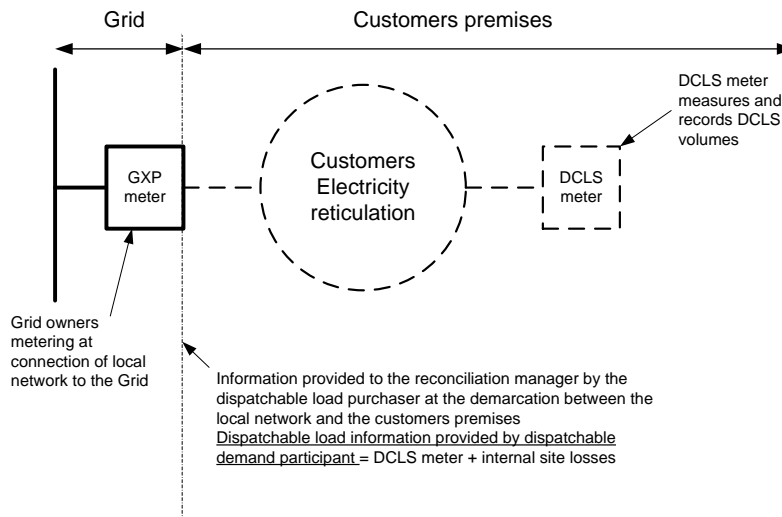
68. Dispatchable load information must be delivered to the reconciliation manager in the AV-170 format contained in the reconciliation manager functional specification, and using the delivery methods approved by the reconciliation manager.
69. If DCLS metering is at a point of connection, then the dispatchable load purchaser must use volume information prepared using the normal process set out in Schedule 15.2 to prepare the dispatchable load information.
70. However, if the DCLS metering is not at a point of connection but is rather located within premises that is directly connected to a point of connection (internal to a site), then a different process must be followed to prepare dispatchable load information. This process is discussed in paragraphs 78 to 82.
71. Dispatchable load information must be aggregated and rounded in accordance with the Code.
72. The Code specifies timeframes for the provision of dispatchable load information to the reconciliation manager. In the event that a dispatchable load purchaser becomes aware that dispatchable load information provided to the reconciliation manager is incorrect, the dispatchable load purchaser must provide revised dispatchable load information to the reconciliation manager.
73. The reconciliation manager functional specification can be found on the Authority's website at <https://www.ea.govt.nz/operations/retail/reconciliation/reconciliation-manager/>.
74. The reconciliation manager also has useful information on its website at <https://electricityreconciliation.co.nz/page/home>.
75. The reconciliation manager will process the dispatchable load information received from participants, by adjusting for local or embedded network losses (where applicable) and will provide a file to the clearing manager (GR-015 in the reconciliation manager functional specification).
76. The clearing manager will use this file in the market clearing calculation and invoicing process.
77. Revised dispatchable load information that has been provided to the reconciliation manager will be provided to the clearing manager, who will then produce wash-up invoices in accordance with the Code.

Application of internal site network losses

78. The application of losses is intended to compensate measured electricity flow for internal site losses between the DCLS meter and premise's point of connection to the grid, local, or embedded network.
79. Where the DCLS metering is internal to an ICP (within a premises directly connected to an ICP), the dispatchable load purchaser must apply internal site losses to the DCLS's volume information to reference it to the ICP.



80. Where the DCLS metering is internal to a GXP (within a premises directly connected to a GXP) the dispatchable load purchaser must apply internal site losses to the DCLS's volume information to reference it to the GXP.



Determination of internal site network losses

81. The determination of the loss factor must be accurate, and is subject to audit as part of the certified reconciliation participant audit. It is a Code breach to use an inaccurate loss factor. Assistance with determining loss factors is available in the draft Loss Factor Guidelines available on the Authority's web site at <https://www.ea.govt.nz/operations/distribution/losses/>.
82. Dispatchable load purchasers should have a documented process for determination of the loss factors they use.

Invoicing of dispatchable settlements by the clearing manager

83. The clearing manager will invoice constrained on and off dispatchable demand settlements as separate lines on each invoice to buyers from the clearing manager.
84. Further information on the allocation of costs and benefits relative to the calculation of dispatchable demand constrained on and off amounts can be found at (link to be added when available).

Sources of information

85. Summary of sources of information contained in this information paper:

- (a) Electricity Industry Act 2010:
<http://www.legislation.govt.nz/act/public/2010/0116/latest/whole.html>.
- (b) The Electricity Industry (Enforcement) Regulations 2010:
<https://www.ea.govt.nz/code-and-compliance/act-and-regulations/regulations/>.
- (c) Electricity Industry Participation Code 2010 <https://www.ea.govt.nz/code-and-compliance/the-code/>.
- (d) Electricity (Levy of Industry Participants) Regulations 2005:
<https://www.ea.govt.nz/dmsdocument/2968>.
- (e) Participant registration: <https://www.ea.govt.nz/operations/industry-participants/participant-register/>.
- (f) Wholesale Information and Trading System:
<https://www.ea.govt.nz/operations/wholesale/spot-pricing/wits/>.
- (g) System operator website (for wholesale electricity bids):
<http://www.systemoperator.co.nz/>.
- (h) Registry information: <https://www.ea.govt.nz/operations/retail/the-registry/about-the-registry/>.
- (i) Reconciliation information (including certification application form, profile information, and frequency meter reading):
<https://www.ea.govt.nz/operations/retail/reconciliation/>.
- (j) Reconciliation participant certification and audit requirements:
<https://www.ea.govt.nz/operations/retail/audits-approvals-and-certification/>.
- (k) Reconciliation manager website: <https://electricityreconciliation.co.nz/>.
- (l) Metering equipment provider guideline
<http://www.ea.govt.nz/dmsdocument/13758>
- (m) EIEPs: <https://www.ea.govt.nz/development/work-programme/retail/eieps/>.
- (n) NZX: <http://www.nzxgroup.com/who-we-are/business-overview/nzx-energy/>.
- (o) Retail information (general): <https://www.ea.govt.nz/operations/retail/>.
- (p) Wholesale information (general): <http://www.ea.govt.nz/operations/wholesale/>.

86. The Authority publishes a weekly 'Market Brief. This is designed to provide individuals, businesses, and groups with regular updates and information on a variety of topics in relation to the Authority and its work plan. More information can be found at <https://www.ea.govt.nz/about-us/media-and-publications/market-brief/>.

87. If you require further information, please contact the market operations team:

C/o Electricity Authority
PO Box 10041
Wellington

Telephone: 04 460 8860
Fax: 04 460 8879
Email: marketoperations@ea.govt.nz.

Appendix A Becoming a purchaser who is also a certified reconciliation participant under the Code

- A.1 If you intend to become a purchaser who is also a certified reconciliation participant as defined in the Code, you should make yourself familiar with the obligations associated with being a purchaser and a certified reconciliation participant.

Register as a purchaser participant with the Authority

- A.2 Any party that carries out the activities of an industry participant⁹ must register with the Authority. The participant is required to provide the information specified in section 27(2) of the Electricity Industry Act 2010 (Act), which includes the nature of the business the participant is involved in. There is no cost to register as a participant.
- A.3 Information on registration as a participant is publicly available on the Authority's website at <https://www.ea.govt.nz/operations/industry-participants/how-to-register-as-a-participant/>. To register as a participant, complete the participant registration form available from this link and follow the directions on the application form to submit it to the Authority.

Obtain a participant identifier from the Authority

- A.4 Participant identifiers are used to track all market transactions, and are only issued by the Authority to active industry participants.
- A.5 The participant identifier is a unique four letter code that identifies each participant, and is used in all electricity market transactions from bids through to clearing manager settlements.
- A.6 To obtain a participant identifier, complete the participant identifier application form available from <https://www.ea.govt.nz/operations/industry-participants/how-to-register-as-a-participant/> and follow the directions on the application form to submit it to the Authority.

Certification as a reconciliation participant

- A.7 A purchaser at an NSP connected to the grid does not require certification as a reconciliation participant, as the Grid Owner provides metering information to the reconciliation manager and no interface with the registry is required. However, for clarity, a purchaser that becomes a dispatchable load purchaser will require certification to be a dispatchable load purchaser.
- A.8 A purchaser at an ICP is a reconciliation participant and is required to be certified for the following Code obligations¹⁰:
- (a) maintaining registry information and performing customer and embedded generator switching

⁹ Definitions of 'industry participant' is contained in section 7 of the Act

¹⁰ 15.38 of part 15 of the Code.

- (b) gathering and storing raw meter data
 - (c) creating and managing (including validating, estimating, storing, correcting and archiving)—
 - (i) half hour volume information
 - (ii) dispatchable load information
 - (d) calculation of ICP days, monthly kWh information of half hour metered ICPs, and electricity supplied
 - (e) provision of submission information for reconciliation
 - (f) provision of metering information to the pricing manager in accordance with Subpart 4 of Part 13 of the Code.
- A.9 Reconciliation participants must obtain and maintain certification to perform these functions in the electricity market. Certification requires having ISO 9001:2000 or ISO 9001:2008, or an Authority-deemed equivalent, and a suitable audit from an Authority approved auditor to show to the Authority's approval that the reconciliation participant complies with the Code.
- A.10 The performance of any of the functions of a reconciliation participant, without having appropriate certification, is a breach of the Code.
- A.11 Purchasers wanting to become certified reconciliation participants are required to apply to the Authority for certification two months before certification is required. However, new entrants must obtain certification no later than three months after the date on which they become reconciliation participants.¹¹ Certification is granted for a period of no longer than 12 months.¹²
- A.12 Reconciliation participants can use agents to perform the functions in part 15 of the Code. However, responsibility under the Code still rests with the certified reconciliation participant, not the agent.¹³
- A.13 For further information, please access the information paper on audit and certification requirements for reconciliation participants and distributors that can be found at <https://www.ea.govt.nz/operations/retail/audits-approvals-and-certification/audit-regimes/certified-reconciliation-participant-audits/>.
- A.14 For existing certified reconciliation participants seeking recertification, the application form for certification as a reconciliation participant must be submitted to the Authority two months prior to when the reconciliation participant must be certified. The Authority uses the published certification dates on the certified reconciliation participant register as its due date for renewal applications for certification as a reconciliation participant.¹⁴
- A.15 Application for certification must be provided to the Authority. Details can be found at <https://www.ea.govt.nz/operations/retail/audits-approvals-and-certification/retail-audit-database-access/>.

¹¹ Clause 4 of schedule 15.1 of the Code.

¹² Clause 7 of Schedule 15.1 of the Code.

¹³ Clause 15.34 of the Code.

¹⁵ Clause 11.2 of the Code.

A.16 If required, the clearing manager may be contacted via cmanager@nzx.com.

Obtain access to the electricity registry

A.17 Obtaining access to the electricity registry is only necessary for a purchaser that purchases electricity from the clearing manager for an ICP.

A.18 The registry is a national database that contains information on every ICP on a network from which electricity is supplied.

A.19 The purchaser at an ICP is the purchaser recorded in the registry as the person responsible for the purchases at an ICP.

A.20 Only persons approved by the Authority can access the registry, and only on the terms and conditions noted in the Authority's registry Access Policy available at <http://www.ea.govt.nz/dmsdocument/16031>.

A.21 To obtain access to the registry, complete the registry access application form available from <http://www.ea.govt.nz/dmsdocument/6083> and follow the directions on the application form for submitting it to the Authority.

A.22 Industry participant obligations for managing registry information are defined in Part 11 of the Code. For the purpose of Part 11, a dispatchable load purchaser is a trader.

A.23 Purchasers have the obligation, under part 11, to ensure certain information is kept up to date on the registry and is complete and accurate at all times¹⁵. The purchaser retains responsibility for the updating of the information until the ICP is switched to another purchaser by the consumer, or the ICP has been decommissioned.¹⁶ Refer to the "How to be a retailer guidelines" for further explanation of the management of the registry information and the switching of an ICP from one purchaser to another.

A.24 Further information on the registry can be obtained from:

- (a) the registry functional specification which contains valuable information as well as the file formats required when interacting with the registry - <https://www.electricityregistry.co.nz/files/FunctionalSpecification.zip>
- (b) the registry user manual - https://www.electricityregistry.co.nz/files/User_Documentation.zip
- (c) an information paper - <https://www.ea.govt.nz/operations/retail/the-registry/about-the-registry/>.

Use of systems agreements

A.25 Where the premise is electrically connected to a local or embedded network, a purchaser is required to ensure it has arrangements in place for line function services prior to taking ownership of an installation control point (ICP) in the registry.¹⁷

¹⁵ Clause 11.2 of the Code.

¹⁶ Clause 9 of Schedule 11.1 of the Code.

¹⁷ Clause 11.16 of the Code.

- A.26 Electricity is conveyed from grid exit points (GXP) to consumers by distributors. Purchasers must have agreements in place with distributors for the use of their distribution systems and must pay the distributors for this service (interposed agreements). In some instances, purchasers may arrange for consumers to directly pay the distributor, or the distributor may require the consumer to pay the distributor (conveyance agreements). This will depend on the agreement between the retailer of the customer and the distributor.
- A.27 A purchaser must arrange for the conveyance of electricity with the distributor for every customer to which it intends to sell electricity. The following website may help purchasers: <http://www.electricity.org.nz/?page=networkMap>.
- A.28 The Authority has promoted the adoption of model use of (electricity distribution) system agreements. Further information is available at <https://www.ea.govt.nz/development/work-programme/retail/more-standardisation-of-use-of-system-agreements/>.

Electricity Levy payments

- A.29 Purchasers of electricity from the clearing manager pay a levy in accordance with Electricity Industry (Levy of Industry Participants) Regulations 2010 based on their wholesale electricity market purchases to and from the reconciliation manager and on the number of their ICPs in the registry. The levy is invoiced monthly by the Authority, with an annual wash-up after the completion of the financial year.
- A.30 For clarity, dispatchable load purchasers pay levy as a purchaser, but do not incur additional levy beyond what would be incurred as a purchaser, when providing a bid or having their DCLS dispatched.
- A.31 Details of the levy and other charges are available on the Authority's website at <https://www.ea.govt.nz/about-us/what-we-do/how-we-are-funded/levy-rates/>.

Spot market risk disclosure

- A.32 Spot risk disclosure is termed on the Authority's web site as "stress testing regime". This regime requires certain participants in the wholesale electricity market to apply a set of standard stress tests to their market position, and:
- (a) report the results to their board and to an independent registrar appointed by the Authority
 - (b) provide spot price risk disclosure statements each quarter, no later than five working days before the start of the quarter
 - (c) certify to the Authority each year that they have provided information about stress tests to their customers and that their Board has considered the contents of the disclosure statements.
- A.33 Participants required to carry out stress testing and provide spot price risk disclosure statements are termed "disclosing participant" and are participants who:
- (a) consume electricity that is conveyed to them directly from the national grid
 - (b) buy electricity from the clearing manager.

- A.34 For clarity, dispatchable load purchasers are participants who buy electricity from the clearing manager.
- A.35 The stress tests and associated base case scenarios are set out at <https://www.ea.govt.nz/operations/wholesale/spot-pricing/stress-tests/>.

Exchange of information with distributors

- A.36 Purchasers that buy electricity from the clearing manager at an ICP will be required under their use of systems agreement with the network owner, to provide and receive information to/from the network owner or distributor. The information required will be set out in the use of system agreement.
- A.37 The Authority supports and endorses the use of exchange protocols called the Electricity Information Exchange Protocols (EIEPs). The purpose of the EIEPs is to enable the exchange of low cost, standardised and reliable information between participants. The protocols are agreed between participants and are not mandatory.
- A.38 The EIEPs can be found on the Authority's website at <https://www.ea.govt.nz/development/work-programme/retail/eieps/>.

Notification to reconciliation manager of intention to purchase electricity

- A.39 The reconciliation manager receives volume information in the form of submission information, dispatchable load information, or supporting information from all purchasers and sellers, and determines the amount of electricity purchased by each purchaser at each NSP.
- A.40 A purchaser for a premises directly connected to the grid, is required to notify the reconciliation manager of its intention to purchase or cease purchasing electricity on any NSP. It is also required to provide any information that is required by the Code or that is reasonably required by the reconciliation manager. The reconciliation manager must be notified at least five business days prior to the day the purchaser intends to purchase (or to cease purchasing) electricity at any NSP.¹⁸
- A.41 Notification to the reconciliation manager can be given via email to rm@nzx.com.

Provision of monthly information to the reconciliation manager

- A.42 Purchasers (as reconciliation participants) must provide submission information to the reconciliation manager in accordance with the Code and the reconciliation manager functional specification¹⁹.
- A.43 The reconciliation manager's functional specification can be found on the Authority's website at <https://www.ea.govt.nz/operations/retail/reconciliation/reconciliation-manager/>.
- A.44 There are specific timeframes that must be met for the provision of this information.²⁰

¹⁸ Clause 15.3 of the Code.

¹⁹ Clause 15.35 of the Code.

²⁰ Clause 15.4 of the Code and Schedule 15.4 of the Code. the Code.

- A.45 Note that purchasers at an ICP must also deliver supporting information to the reconciliation manager as follows:
- (a) ICP days information for each consumption period;²¹
 - (b) electricity supplied (billing) information;²² and
 - (c) half hourly metered monthly ICP aggregates.²³
- A.46 The reconciliation manager also has useful information on its website at <https://electricityreconciliation.co.nz/page/home>. Please contact the reconciliation manager directly to arrange logon access by emailing rm@nzx.com.

Make arrangement for payments with the clearing manager

- A.47 The clearing manager invoices industry participants by combining reconciled quantity information, provided by the reconciliation manager, with pricing information, other ancillary costs, FTR settlements and dispatchable demand settlements, to determine the amounts owed to and by each industry participant.
- A.48 Payments to the clearing manager for electricity purchases are required to be made by 1400 hours on the 20th calendar day of each month (or the following business day, if the 20th calendar day is not a business day) following the billing period for which an invoice had been issued by the clearing manager. The payments must be made in same day cleared funds.²⁴

Establish prudential security arrangements

- A.49 Before a purchaser may purchase electricity from the wholesale market (and at all times while it purchases electricity), the purchaser must satisfy the prudential requirements as described in Part 14 of the Code.
- A.50 Financial settlements associated with the wholesale electricity market are substantial. Accordingly, electricity purchasers, including retailers, are required to establish financial security arrangements with the clearing manager.
- A.51 Purchasers also pay for frequency keeping and ancillary services through their wholesale electricity market invoices.
- A.52 Prudential security may be provided in a number of ways, and an intending purchaser should contact the clearing manager to determine the most suitable way of meeting this requirement.
- A.53 The clearing manager may be contacted via cmanager@nzx.com.

Access to the Wholesale Information Trading System

- A.54 Purchasers require access to WITS in order to manage their wholesale electricity market trading activities. This system provides services including the placing of bids to purchase electricity and the receiving of wholesale electricity market interim and final charging information.

²¹ Clause 15.6 of the Code.

²² Clause 15.8 of Part 15.

²³ Clause 15.7 of Part 15

²⁴ Clause 14.37 of the Code.

- A.55 Dispatchable load purchasers must complete an application form for WITS Full Trader access. The application form is available on the Authority's website at <https://www.ea.govt.nz/operations/wholesale/spot-pricing/wits/>. Follow the directions on the website for submission of the application form.
- A.56 New users will be asked to sign a Use of System Agreement with NZX. In considering the applications, certain criteria will need to be satisfied before the Authority will grant access.
- A.57 User manual and help is available from the WITS web site, and also the WITS administrator, ph 0800 426 648 or alternatively email cadmin@nzx.com