Switch Process Review

Issues with the ICP switching processes

Issues paper to develop a proposal for future code amendment

Submissions close: 5pm, 13 November 2018

4 September 2018

Executive summary

When consumers participate more in markets it puts pressure on suppliers to compete more vigorously and to innovate. Participation can be supported by improving consumers' access to markets, and by making it easier for consumers to make choices. Having efficient switching processes is important as it enables consumers to make choices without incurring unnecessary transaction costs.

The switching process requires coordination between multiple parties; so it is inevitable that not all switches are processed as quickly or simply as possible. This unwanted 'grit' in the system can also result from time to time as retailers which are losing customers have incentives to make switches by leaving customers harder.

The Electricity Authority (Authority) considers that this grit in the system has been steadily growing over the years and it is now timely to review the processes set out in the Electricity Industry Participation Code 2010 (Code) for switching installation control points (ICPs). Other relevant factors include:

a) the prevalence throughout the country of metering installations with advanced metering infrastructure (AMI)

b) the uptake of evolving technologies in the electricity industry

c) industry participants' back-office systems and processes becoming more technically advanced

d) a general increase in innovation on the part of industry participants and consumers

The purpose of this paper is to consult with interested parties on issues with the ICP switching processes set out in the Code. We seek interested parties' views on:

a) the issues raised in this paper

b) any issues related to ICP switching that are not in this paper, and which may be hindering competition or introducing operational inefficiencies.

We expect to use your feedback to develop and consult on a final set of issues and options to improve the switching process.

The switch process review

The purpose of the switch process review is to recommend ways to ensure ICP switching processes in the Code, which govern the transfer of responsibility for ICPs between participants, remain fit for purpose over the next five years.

The Code sets out three different ICP switching processes:

a) *Trader ICP switching*

This is the transfer of a trader's responsibilities in relation to an ICP from:

i) the trader that had a contractual relationship with the customer or embedded generator at an ICP (the "losing trader"), to

ii) the trader that now has a contractual relationship with the customer or embedded generator (the "gaining trader").

This switching process is much the same now, albeit with various "tweaks", as it was in October 2002, when it became an automated process involving the registry for ICPs.

b) *Distributor ICP switching*

This is the transfer of a distributor's responsibilities in relation to an ICP from:

i) the person who formerly owned the network on which the ICP was physically located (the "losing network owner"), to

ii) the person who now owns that network (the "gaining network owner")

This switching process was implemented on 14 July 2008, and is a manual registry process. No participants, other than the losing network owner and the gaining network owner, have visibility of this process.

c) *Metering equipment provider (MEP) ICP switching*

This is the transfer of an MEP's responsibilities in relation to an ICP from:

i) the MEP formerly contracted to provide metering services at the ICP (the "losing MEP"), to

ii) the MEP now contracted to provide metering services at the ICP (the "gaining MEP").

This switching process was implemented on 29 August 2013, and is an automated registry process.

We have convened a technical group to provide us with expert advice on issues with the switching processes listed above.

This group, known as the Switch Technical Group (STG), comprises individuals that have in-depth knowledge and understanding of one or more of the switching processes. We have incorporated the STG's advice on switching issues into this consultation paper.

Contents

Tables

1 What you need to know to make a submission

What this issues paper is about

1.1 The purpose of this paper is to consult with interested parties on issues with the ICP switching processes set out in the Code. We have identified these issues as part of our Switch Process Review project—a project aimed at ensuring the ICP switching processes in the Code are fit for purpose.

1.2 The switch process review aligns with the competition and efficiency limbs of our statutory objective.

1.3 This paper is an "issues" paper only. It contains no Code amendment proposal and associated regulatory statement.

1.4 We seek interested parties' views on:

(a) the issues discussed in this paper

(b) any issues related to ICP switching that are not in this paper, and which may be hindering competition or introducing operational inefficiencies.

1.5 We will use your feedback to ensure we have identified all of the key issues related to ICP switching.

1.6 We expect to use your feedback to develop and consult on a final set of issues and options to improve the switching process.

How to make a submission

1.7 Our preference is to receive submissions in electronic format (Microsoft Word) in the format shown in Appendix A. Submissions in electronic form should be emailed to submissions@ea.govt.nz with "Issues Paper—Switch Process Review" in the subject line.

1.8 If you cannot send your submission electronically, post one hard copy to either of the addresses below, or fax it to 04 460 8879.

Postal address	Physical address
Submissions Electricity Authority PO Box 10041 Wellington 6143	Submissions Electricity Authority Level 7, ASB Bank Tower 2 Hunter Street Wellington

1.9 Please note we want to publish all submissions we receive. If you consider that we should not publish any part of your submission, please

(a) indicate which part should not be published

(b) explain why you consider we should not publish that part

(c) provide a version of your submission that we can publish (if we agree not to publish your full submission).

1.10 If you indicate there is part of your submission that should not be published, we will discuss with you before deciding whether to not publish that part of your submission.

1.11 However, please note that all submissions we receive, including any parts that we do not publish, can be requested under the Official Information Act 1982. This means we would be required to release material that we did not publish unless good reason existed under the Official Information Act to withhold it. We would normally consult with you before releasing any material that you said should not be published.

When to make a submission

1.12 Please deliver your submissions by **5pm** on Tuesday **13 November 2018**.

1.13 We will acknowledge receipt of all submissions electronically. Please contact the Submissions Administrator if you do not receive electronic acknowledgement of your submission within two business days.

2 Introduction

It is timely to review the ICP switching processes

2.1 The Authority wants to ensure the processes set out in the Code for the switching of ICPs are fit for purpose. We consider it is timely to review these processes now, because of:

(a) the prevalence throughout the country of metering installations with AMI

(b) the uptake of evolving technologies in the electricity industry

(c) industry participants' back-office systems and processes becoming more technically advanced

(d) a general increase in innovation on the part of industry participants and consumers

(e) issues within the current switching processes that may be hindering the promotion of our statutory objective.

We believe the current ICP switching processes are causing operational inefficiencies and may be limiting competition

2.2 We consider the issues referred to in paragraph 2.1(e):

(a) are causing a number of operational inefficiencies in the ICP switching processes, which are imposing unnecessary transaction costs on industry participants and consumers

(b) may be limiting competition and innovation in the retail electricity market, to the detriment of consumers.

2.3 Industry practices are changing, driven in large part by innovation and evolving technologies. Evolving technologies, in particular, are affecting operational efficiency across all aspects of the ICP switching processes—for example:

(a) the use of AMI to record and gather information on electricity conveyed at an ICP

(b) increasingly advanced back-office systems and processes in participants' businesses

(c) the use of innovative technologies in customer service offerings

(d) the increased use of mass market half-hour information for electricity market settlement and customer invoicing purposes.

2.4 The majority of the issues raised in this paper relate to operational inefficiencies. Generally, these inefficiencies are being caused by a set of ICP switching processes that were developed some years ago, and which may no longer be fit for purpose.

This paper raises 22 issues

2.5 This paper raises 22 issues. The majority of these issues relate to the switching of ICPs between traders. Table 1 lists these 22 issues.

Table 1: ICP switching issues

	Issues associated with switching ICPs between traders
1.	The actual switch event date is delayed or is not as agreed
2.	Replacing/modifying metering installations on the trader ICP switch event date is difficult
3.	Gaining traders face difficulties ensuring accurate switch event meter readings
4.	A trader should not have to issue a switch completion notification for an ICP with only unmetered load
5.	A gaining trader may face a delay receiving the first AMI meter reading for the ICP it has gained
6.	AMI switch event meter readings are not necessarily midnight meter readings
7.	Interpreting trader ICP switching as customer or embedded generator switching may be misleading
8.	There is no mechanism to identify the sale and transfer of customer or embedded generator accounts between traders
9.	It is unclear whether an acknowledgment of a switch request notification is required
10.	Different timeframes for different types of ICP switches add complexity to the ICP switching process
11.	Switch withdrawals can be delayed because of delayed information from third parties
12.	Different timeframes for applying a meter reading to a non half-hour (NHH) ICP switch add complexity to the ICP switching process
13.	Sometimes switch event meter readings cannot be obtained despite best endeavours
14.	Preventing losing traders from updating an ICP identifier during a switch can mean the gaining trader is unaware the ICP is electrically disconnected

	Issues associated with switching ICPs between traders
15.	The Code is ambiguous as to whether a switch event meter reading is required for certain ICPs with a category 3—5 metering installation
16.	The replacement read process is inefficient
17.	Delays to a trader being assigned a new ICP may delay installing a metering installation at the ICP and electrically connecting the ICP
	Issues associated with switching ICPs between distributors
18.	The process for switching ICPs between distributors is inefficient
19.	The Code prohibits backdating price category codes
	Issues associated with switching ICPs between distributors
20.	The provision of initial metering data to a trader is not always timely
21.	Meter reading file formats are not standardised
22.	The gaining and losing MEPs cannot use the same MEP event date for an MEP switch

Source: Electricity Authority

This subject matter is quite technical

2.6 This consultation paper discusses operational aspects of the ICP switching processes in the Code, including registry processes that facilitate ICP switching.[1] These operational aspects are relatively technical and complex in nature. Therefore, this paper's content is relatively technical.

2.7 Submitters reviewing and providing feedback on this paper should:

(a) have a good operational understanding of how the ICP switching processes operate

(b) understand the implications of the issues raised in this paper and how these relate to other industry processes.

[1] For further information on these registry processes, please refer to the registry functional specification, which is available on our website at https://www.electricityregistry.co.nz/files/FunctionalSpecification.zip.

3 Overview of the operation of the ICP switching processes

There are three different switching processes

3.1 The Code sets out three different ICP switching processes:

(a) Trader ICP switching

This is the transfer of a trader's responsibilities in relation to an ICP from:

(i) the trader that had a contractual relationship with the customer or embedded generator at an ICP (the "losing trader"), to

(ii) the trader that now has a contractual relationship with the customer or embedded generator (the "gaining trader").

The trader ICP switching process in fact comprises three sub-processes. These are discussed below—refer to paragraph 3.10.

The trader ICP switching process is much the same now, albeit with various "tweaks", as it was in October 2002, when it became an automated registry process.

(b) Distributor ICP switching

This is the transfer of a distributor's responsibilities in relation to an ICP from:

(i) the person who formerly owned the network on which the ICP was physically located (the "losing network owner"), to

(ii) the person who now owns that network (the "gaining network owner").

This switching process was implemented on 14 July 2008, and is a manual registry process. No participants, other than the losing network owner and the gaining network owner, have visibility of the process.

(c) MEP ICP switching

This is the transfer of an MEP's responsibilities in relation to an ICP from:

(i) the MEP formerly contracted to provide metering services at the ICP (the "losing MEP"), to

(ii) the MEP now contracted to provide metering services at the ICP (the "gaining MEP").

This switching process was implemented on 29 August 2013, and is an automated registry process.

3.2 We consider these ICP switching processes have been working well. However, as discussed in section 2, we believe some problems are emerging.

3.3 The operation of the ICP switching processes are set out in more detail below. Issues with the ICP switching processes are set out in the sections 4 to 6.

Trader ICP switching

3.4 The Code defines a trader to be a retailer or a generator or a (direct) purchaser who:

(a) buys electricity from the clearing manager, or

(b) sells electricity to the clearing manager, or

(c) enters into an arrangement with another retailer or generator or purchaser to buy or sell contracts (or parts of contracts) for electricity for the purposes of the Code.[2]

3.5 Not all retailers are traders. A retailer is not a trader if it buys electricity from another participant instead of from the clearing manager. Under the Code, a trader must be responsible for any switching of ICPs supplied by this type of retailer.

3.6 The Code requires a trader to record its participant identifier in the registry, [3] against those ICP identifiers for which the trader has an arrangement:

(a) to sell electricity to the customer at the ICP, or

(b) to buy electricity from the embedded generator at the ICP.

3.7 The trader is then responsible for all trader obligations relating to that ICP, as prescribed in the Code, until the ICP is either decommissioned or is switched to another trader. These obligations include:

(a) responsibility for ensuring the electricity conveyed through the point of connection[4] at the ICP is accurately measured, and

(b) responsibility for paying for the electricity conveyed through the point of connection at the ICP.

3.8 If a customer or embedded generator at an ICP switches traders, the trader ICP switch process transfers the ICP identifier in the registry from the losing trader's participant identifier to the gaining trader's participant identifier. This is known as a "switch event".

3.9 The date stamps of switch events in the registry determine the period for which a trader, in relation to an ICP, has the responsibility for:

(a) the trader obligations under the Code

(b) selecting an MEP

(c) electricity market settlement

(d) network invoicing.

3.10 The Code prescribes three types of processes for switching ICPs between traders. The type of trader switch process to be used for an ICP depends on the ICP's attributes. An identifier is used to denote what type of switch is occurring:

(a) "TR" is used to denote a standard switch, where a customer or embedded generator has an arrangement with a trader at an ICP, and

(i) decides to change trader, and

(ii) the categories of metering at the ICP are one or more of 0, 1, 2, or 9.

(b) "MI" is used to denote a "switch move", where no trader has an agreement with a customer or embedded generator to trade electricity at an ICP, and

---

2 Refer to the definition of "trader" in Part 1 of the Code.

3 The participant identifier is a four character code that is unique to each industry participant. It is used to trace all electricity market transactions in the registry.

4 A point of connection is a point at which electricity may flow into or out of a network.

(i) a customer or embedded generator enters into an arrangement with a trader, and

(ii) the categories of metering at the ICP are one or more of 0, 1, 2, or 9.

(c) "HH" is used to denote a "gaining trader switch", where a customer or embedded generator has an arrangement with a trader at an ICP, and

(i) the customer or embedded generator decides to change trader, and

(ii) either:

(A) the categories of metering at the ICP are 3, 4 or 5, or

(B) at the time of the switch, a metering installation at the ICP:

(1) is being changed from a NHH metering installation to a half-hour (HHR) metering installation that is not AMI; or

(2) is being changed from a HHR metering installation that is not AMI to a NHH metering installation.

Distributor ICP switching

3.11 The Code adopts the definition of distributor set out in the Electricity Industry Act 2010 (Act). The Act defines a distributor to mean "a business engaged in distribution", where "distribution" means "the conveyance of electricity on lines other than lines that are part of the national grid".[5]

3.12 The Code requires a distributor to, amongst other things, create ICP identifiers in the registry for ICPs connected to the distributor's network. The distributor's participant identifier must be recorded in the registry against the newly established ICP identifier.

3.13 The distributor is then responsible for all distributor obligations relating to that ICP, as prescribed in the Code, until the ICP is either decommissioned or is switched to another distributor. These obligations include maintaining the "distributor attributes" for that ICP identifier (eg, ensuring the registry correctly records the network supply point (NSP) from which electricity is usually supplied to the ICP).

3.14 If an ICP is switched between networks, the distributor-to-distributor switch process transfers the ICP identifier in the registry from the losing distributor's participant identifier to the gaining distributor's participant identifier.

3.15 An ICP switches between distributors when:

(a) a network is sold and the network's participant identifier is changed

(b) an embedded network is created or decommissioned. As the ICP is not decommissioned and recreated as part of this process, the ICP identifier is:

(i) transferred from the parent network to the embedded network (when an embedded network is established), or

(ii) transferred to the parent network from the embedded network (when an embedded network is disestablished).

[5] Refer to section 5 of the Act.

3.16 When an ICP switches between distributors, the Code requires the gaining distributor to obtain the approval of the traders that are responsible for the ICPs being transferred, and to advise the Authority of the switch.

MEP ICP switching

3.17 The Code adopts the Act's definition of metering equipment provider. The Act defines an MEP to mean "a person who, in accordance with the Code,—

(a) assumes responsibility for any metering installation; or

(b) is appointed to be responsible for any metering installation."

3.18 The Code requires an MEP to, amongst other things, record its participant identifier in the registry against those ICP identifiers that pertain to ICPs at which the MEP has agreed to provide a metering installation.

3.19 The MEP is then responsible for all MEP obligations relating to the metering installation at the ICP, until the ICP is either decommissioned or is switched to another MEP.

3.20 If an ICP is switched between MEPs, the MEP-to-MEP switch process transfers the ICP identifier in the registry from the losing MEP's participant identifier to the gaining MEP's participant identifier.

3.21 An MEP switch occurs when:

(a) an ICP is created and the MEP is the first MEP at the ICP

(b) the trader responsible for an existing ICP decides to change the MEP at the ICP

(c) the MEP sells either its business or its interest in certain metering installations.

4 Issues with the trader ICP switching process

4.1 We consider that the following seventeen issues with the trader ICP switching process may be introducing operational inefficiencies and/or hindering competition.

Issue 1: The actual switch event date is delayed or is not as agreed

4.2 For trader ICP switches that use a switch type of "TR" or "MI", the Code requires the losing trader to complete the switch. The losing trader determines the switch event date in accordance with the requirements set out in Schedule 11.3 of the Code.[6]

4.3 The Code requires a losing trader to establish a switch event date no more than 10 business days after the date on which the losing trader receives a switch initiation notification (NT file)[7] from the registry. The Code requires that 50% of these switch event dates must be within 5 business days over the last 12 months.

4.4 Despite the switch initiation notification containing the gaining trader's proposed switch event date, the losing trader may determine a different switch event date, if the losing trader:

(a) disagrees with the commencement date of the arrangement between a gaining trader and the customer or embedded generator at the ICP

(b) disagrees with the gaining trader's arrangement with an MEP to replace or reconfigure a metering installation at the ICP.

4.5 Alternatively, the losing trader may delay completing a switch, for reasons such as:

(a) differences between the trader's metering records and the registry metering records

(b) where the losing trader has insufficient meter readings to create a switch event meter reading

(c) where the losing trader has elected to process, or receive, only weekly (or a greater period) AMI meter readings, and is unwilling to estimate a switch event meter reading

(d) where the losing trader has already invoiced the customer or embedded generator past the proposed switch event date

(e) where the losing trader may have agreed a contract termination date with the customer or embedded generator at the ICP that is a later date than the proposed switch event date

(f) where a human error, or processing error, has been made.

4.6 Increasingly, we are seeing traders looking to differentiate themselves from their competitors by installing new technology. The current ICP switching process makes it difficult for a gaining trader to align the switch event date with:

(a) the date its arrangement with the customer or embedded generator commences

(b) the metering reconfiguration date.

---

6 Refer to cClauses 4 and 10 of Schedule 11.3.

7 "Notification of transfer" file.

4.7 This is an operational inefficiency. It also means some traders may be reluctant to enter into an arrangement with a customer or embedded generator at an ICP. This would be the case if the metering installation at the ICP did not have the capability to provide the services that the traders' offers depended on.

Issue 2: Replacing/modifying metering installations on the trader ICP switch event date is difficult

4.8 Currently, the Code:

(a) prevents an MEP interfering with a metering installation:

(i) when it is not the MEP responsible for that metering installation, or

(ii) when it has not been asked to do so by the trader responsible for the ICP

(b) requires a gaining trader to have an arrangement with an MEP to be responsible for all metering installations at the ICP the gaining trader will be responsible for, before the gaining trader commences switching the ICP. However, this does not prevent, at the time of the ICP switch,:

(i) the gaining trader displacing the incumbent MEP at the ICP, or

(ii) the metering installation being reconfigured at the gaining trader's request.

4.9 When a customer or embedded generator accepts an offer from a trader, the customer or embedded generator may be agreeing to specific service requirements (eg, weekly invoicing, provision of real time data, etc). The trader may need to displace the MEP responsible for the metering installation(s) at the ICP if the MEP cannot, or will not, deliver the necessary metering services at the ICP.

4.10 The most efficient approach is for this MEP displacement to occur on the day of the trader ICP switch. This aligns the MEP's service provision with the services required by the trader at the ICP. It also:

(a) benefits the gaining trader and losing trader by reducing operational inefficiencies:

(i) the gaining trader does not need to provide an interim service, until the metering installation is reconfigured, which differs from the service the customer or embedded generator has contracted for

(ii) the losing trader does not need to reconfigure its invoicing to the customer or embedded generator at the ICP, should the metering installation be changed before the switch event date

(b) benefits the customer or embedded generator at the ICP because:

(i) they will receive the service they have contracted for, as at the switch event date

(ii) they do not receive confusing invoices from the losing or gaining trader.

4.11 The concept of replacing or modifying metering installations was not considered in the development of the switching processes. As a result, the Code does not provide for a number of situations pertaining to the replacement or modification of a metering installation on or before the trader ICP switch event date.

Situation 1

4.12 An MEP may refuse to deal with the gaining trader because the gaining trader is not yet recorded in the registry as the trader responsible for the ICP.

Situation 2

4.13 An MEP may be prohibited from modifying, replacing or reprogramming a metering installation until after a trader ICP switch is completed because:

(a) the Code prohibits the gaining MEP doing so

(b) the contract between the losing trader and the existing MEP prohibits the existing MEP from doing so.

Situation 3

4.14 The MEP at an ICP may be unaware of a trader ICP switch commencing, because the Code does not require that MEP to be notified when a trader ICP switch is initiated. The MEP is notified only when the switch completes.

Situation 4

4.15 In certain situations the gaining trader faces a manual, inefficient, and at times inaccurate, process to coordinate the switch event date with the losing trader and MEP. These situations arise when the losing trader determines the switch event date for the ICP—which occurs for switch types “TR” and “MI”.

Situation 5

4.16 A trader, in order to gain responsibility for an ICP, may have to commence trading at the ICP using:

(a) a meter type it does not want, and/or

(b) an MEP that it does not have an arrangement with, or does not want to have an arrangement with.

Situation 6

4.17 An MEP replaces or modifies a metering installation before a trader ICP switch is completed, meaning that:

(a) The losing trader must update its back office system, customer invoicing and electricity market settlement by finalising the old meter readings, and starting new meter readings for a very short period of time.

(b) The losing trader may be unaware of the metering change and final meter readings when the customer switches, because the registry metering records cannot be updated until after the switch is completed.

(c) If the switch is subsequently withdrawn, the losing trader may be unaware of the changed metering installation(s) at the ICP if the registry has not been updated with this information. The losing trader may be unable to meet its service obligations to the customer or embedded generator at the ICP it is receiving back, and may not have an arrangement with the new MEP.[8]

4.18 Situation 6 is exacerbated by:

[8] We note that, in this instance, the gaining MEP has breached the Code by installing the new metering installation. Refer to clause 10.12

(a) traders being reluctant to contract with the existing MEP at an ICP, because the contract may include notice periods or exclusivity arrangements

(b) MEPs being reluctant to modify a metering installation until after a gaining trader is recorded in the registry as being responsible for the ICP where the metering installation is located

(c) MEPs being unwilling to reprogram AMI meters to enable traders or distributors to provide new services based on accumulating meter register reads.

4.19 The inability of a gaining trader to be able to effectively coordinate meter modification, replacement or reprogramming to coincide with a trader ICP switch reduces the efficient operation of the electricity industry. It may also constrain competition, since traders may elect to not compete at ICPs that do not have the metering configuration to support their service offering.

Issue 3: Gaining traders face difficulties ensuring accurate switch event meter readings

4.20 The losing trader completes the switch for an ICP, if that ICP has a metering installation of category 1, 2 or 9. In these instances, the losing trader must also provide the switch event meter reading if a metering installation at the ICP contains a channel recorded in the registry with:

(a) an accumulator type of “C”, and

(b) a settlement indicator of “Y”.

4.21 Despite the availability of actual daily AMI meter readings for almost 79% of the AMI metering installations in New Zealand, some losing traders elect to provide an estimated reading as the switch event meter reading.

4.22 A losing trader may use an estimated reading because:

(a) it does not have an arrangement with the MEP to receive daily AMI meter readings, or

(b) its back office system cannot put daily AMI meter readings into switch completion notifications.

4.23 However, estimated readings are often inaccurate. An inaccurate switch event meter reading may penalise the gaining trader, or the customer or embedded generator at the ICP. Therefore, gaining traders often use the replacement read process for ICPs with an estimated switch event meter reading—particularly if the settlement method for the ICP is being moved from NHH to HHR on the switch event date.

4.24 Gaining traders face difficulties ensuring that switch event meter readings are accurate. A gaining trader may:

(a) be unable to obtain an actual AMI meter reading for 00:00 hours on the day of the ICP switch without incurring charges from the MEP

(b) be unable to obtain an actual AMI meter reading for 00:00 hours on the day of the ICP switch because the MEP will not provide it

(c) be able to obtain an actual AMI meter reading for 00:00 hours on the day of the ICP switch, but only after a delay . If the delay is greater than five business days,

the losing trader may refuse to agree to the replacement read. This may impose costs on the gaining trader and the customer or embedded generator at the ICP.

4.25 The difficulties that gaining traders face ensuring that switch event meter readings are accurate represent operational inefficiencies. They can also result in the customer or embedded generator at the ICP having a bad first experience of the gaining trader's service. For example:

(a) The gaining trader's service provision may be delayed, while the meter reading issues are resolved.

(b) The gaining trader may invoice the customer or embedded generator for a period of time during which the gaining trader did not have an arrangement with the customer or embedded generator.[9]

(c) Where the losing trader reconciles and invoices electricity using NHH meter readings, and the gaining trader reconciles electricity using HHR meter readings,

(i) the customer or embedded generator may have electricity over- or under-billed

(ii) the electricity market may be may be over reconciled, or under reconciled.

4.26 Competitive pressure in the retail electricity market may be dampened if customers have a bad first experience of a gaining trader's services.

Issue 4: A trader should not have to issue a switch completion notification for an ICP with only unmetered load

4.27 Currently, the Code requires a trader to issue a switch completion notification for all ICP switches. However, this is unnecessary where the only load at the ICP is unmetered load. The daily volume of electricity for an ICP with unmetered load is recorded in the registry and can be seen by the gaining trader as well as the losing trader. Therefore there is no need to provide a cumulative register meter reading in a switch completion notification.

4.28 Requiring participants to issue a switch completion notification for an ICP with only unmetered load represents an operational inefficiency, since the notification is unnecessary.

Issue 5: A gaining trader may face a delay receiving the first AMI meter reading for the ICP it has gained

4.29 We understand some traders experience a delay obtaining from an MEP the first AMI meter reading for an ICP the trader has become responsible for.

4.30 If a trader has an arrangement with an MEP to access raw meter data from a metering installation, the Code requires:

(a) the MEP to provide the trader with access to the MEP's services access interface to collect, obtain, and use raw meter data from the metering installation

(b) the MEP to do this within 10 business days of receiving a request from the trader.[10]

---

9 The gaining trader may have to absorb some or all of the cost of energy, lines and other charges relating to the ICP, for the period during which it did not have an arrangement with the customer or embedded generator.

10 Refer to clause 1 of Schedule 10.6.

4.31 The 10 business day period is a maximum period. It is not a target.

4.32 At times there are valid reasons for delays in the provision of AMI meter readings. However, such delays may cause problems for a gaining trader at an ICP—for example:

(a) The ICP switch may be delayed, thereby inconveniencing the customer or embedded generator at the ICP, which:

(i) may delay the gaining trader's service provision (eg, weekly invoicing, paying for demand response)

(ii) gives the customer or embedded generator a bad first experience with the gaining trader.

(b) If the delay is more than five business days after receipt of the switch completion file, the gaining trader will be unable to require the losing trader to accept a revised switch event meter reading.[11] This may cause issues for the gaining trader if the switch event meter reading is inaccurate. For example, the gaining trader may end up paying for electricity that should have been allocated to the losing trader.

4.33 These problems represent operational inefficiencies. In addition, competitive pressure in the retail electricity market may be dampened if customers have a bad first experience of a gaining trader's services.

Issue 6: AMI switch event meter readings are not necessarily midnight meter readings

4.34 When an ICP switches between traders, the switch occurs at 00.00 hours. Ideally then, any meter reading(s) for the switch will also be at 00.00 hours on the day the switch occurs.

4.35 AMI meters can provide meter readings at specific times (eg, 00.00 hours), provided this is programmed into the meter and/or back office system.

4.36 We understand some losing traders do not use AMI midnight meter readings for switch event meter readings, despite having these reads available to use within 1-3 days of the read occurring.

4.37 We also understand some traders continue to either estimate a switch event meter reading, or use a previous meter reading for the switch event meter reading, despite having AMI midnight meter readings available to them.

4.38 We understand some MEPs:

(a) do not provide a midnight switch event meter reading to a gaining trader, despite the gaining trader becoming responsible for the ICP at 00:00 hours on the day of the read (ie, at the time of the meter reading)

(b) in some instances, do not provide meter readings to a gaining trader for up to 10 days after a switch has been completed.

4.39 The Code requires that the switch event meter reading:

(a) must be used by both the gaining trader and the losing trader in determining reconciliation manager submission information

[11] Refer to clause 6(2) of Schedule 11.3. Note that this clause applies only when, at the time of the switch, the submission type is changed from NHH to HHR and the metering installation is AMI.

(b) must be on the day of the switch event

(c) may be for any time during the day of the switch event.

4.40 Where an ICP identifier is being switched from a losing trader to a gaining trader, the switch event meter reading provides the demarcation between the losing trader and the gaining trader for settlement and invoicing purposes. The effect of any inaccuracy in the switch event meter reading depends on:

(a) the size of the inaccuracy

(b) how the gaining trader intends to settle electricity in the wholesale market

(c) how the customer or embedded generator at the ICP is invoiced.

4.41 For example:

(a) If the gaining trader and the losing trader both use a submission type of NHH, the same switch event meter reading is used by both participants. All electricity conveyed through the ICP is settled, but possibly not with the correct trader, and depending on the switch event date, possibly not into the correct month. If the switch event meter reading is:

(i) lower than a midnight meter reading would have been, the gaining trader's settlement process will account for the increased electricity volume that the losing trader did not account for. If this volume is substantial, the services provided by the gaining trader are distorted, and the customer or embedded generator at the ICP may have a quite negative first experience with the gaining trader.

(ii) higher than a midnight meter reading would have been, the gaining trader's settlement process will account for the reduced electricity volume that the losing trader has already accounted for. If this volume is substantial, the services provided by the gaining trader are distorted, and the customer or embedded generator may have a quite positive first experience with the gaining trader.

(b) If the losing trader uses a submission type of NHH and the gaining trader uses a submission type of HHR, all electricity conveyed at the ICP may not be settled, leading to inaccuracies in the market settlement quantities for the ICP. In this case, the switch event meter reading is used by the losing trader, while the gaining trader will use a HHR meter reading. However, the gaining trader may have difficulty determining what time of day it must start HHR submissions for the ICP. If the switch event meter reading is:

(i) lower than a midnight meter reading would have been, the Code requires the gaining trader to account for the electricity volume that the losing trader did not account for.[12] The gaining trader cannot account for electricity volumes before becoming the trader, so it may estimate HHR meter readings until it is allocated the additional consumption from the losing trader. If these volumes are substantial:

[12] Refer to clauses 6, 12(2) and 12(3)(b) of Schedule 11.3.

(A) the gaining trader must purchase electricity for a period of time before having in place an arrangement with the customer or embedded generator at the ICP

(B) the services provided by the gaining trader are distorted

(C) the customer or embedded generator at the ICP may have a quite negative first experience with the gaining trader (eg, from a higher-than-expected first invoice).

(ii) higher than what a midnight meter reading would have been, the gaining trader still has the problem of determining what day and what time of day its HHR settlements should start

(c) If the losing and gaining traders both use a submission type of HHR, the switch event meter reading may not be used by either trader. Instead, the traders will use actual HHR meter readings. Consequently there will be no inaccuracies in the market settlement.

4.42 We also understand that MEPs will not release historic metering data to gaining traders. In the case of an incorrect switch event meter reading, as set out in paragraph 4.41(b), the gaining trader may have difficulty in determining exactly what the customer consumption was for each trading period. This will adversely affect the gaining trader's ability to provide accurate submission information to the reconciliation manager, which might adversely affect the accuracy of market settlement and invoicing, and customer invoicing.

4.43 A failure by a gaining trader to align a switch event meter reading with the actual meter reading at the date and time the gaining trader becomes responsible for an ICP causes at least the following outcomes:

(a) over- or under-invoicing of consumers

(b) either

(i) a good first experience of the gaining trader for the customer or embedded generator at the ICP, if the losing trader overstates the switch event meter reading, or

(ii) a bad first experience of the gaining trader for the customer if the switch event meter reading is understated, and the gaining trader tries to recoup from the customer the value of the electricity and the line charges

(c) over- or under-recovery of network charges

(d) over- or under-settlement of electricity volumes with the clearing manager. The surplus or deficit will become unaccounted for electricity (UFE) and will be paid for (or received) by all other traders on the network.

4.44 These outcomes represent operational inefficiencies. In addition, competitive pressure in the retail electricity market may be dampened if customers have a bad first experience of a gaining trader's services.

Issue 7: Interpreting trader ICP switching as customer or embedded generator switching may be misleading

4.45 The registry process for switching ICPs between traders involves transferring responsibility for an ICP from a losing trader to a gaining trader. However, this does not

necessarily equate to a trader entering into, or exiting from, an arrangement with a customer or embedded generator at an ICP.

4.46 Interpreting a trader ICP switch as a customer or embedded generator switching between traders may be misleading. For example, a customer or embedded generator may:

(a) move into premises and enter into an arrangement with the incumbent trader at the premises. In this situation, there is no switch of ICP between traders, and therefore no trader ICP switch is recorded in the registry, but a customer or embedded generator has switched.

(b) move into premises and decide not to enter into an arrangement with the incumbent trader at the premises, but remain with the trader it had at its previous premises. In this situation, there is a switch of ICP between traders, which will be recorded in the registry, but there has been no switching of a customer or embedded generator between traders.

4.47 Such inaccuracies distort the view of customer/embedded generator switching in New Zealand's electricity sector.

4.48 The Authority needs to accurately determine the number of customers and embedded generators switching between traders in order to:

(a) determine the state of retail competition in the New Zealand electricity industry

(b) develop, and report on, the effectiveness of policy

(c) benchmark the New Zealand electricity industry with other competitive jurisdictions

(d) report to the Government and to government agencies.

4.49 We also publish the number of trader ICP switches on our "EMI" website.[13] We are aware that this information is used for a variety of purposes. For example, we know it is used by:

(a) local and international research organisations, when comparing policy and market structures

(b) traders in New Zealand, to determine how their competitive position compares with other traders' positions.

4.50 The current approach to determining the number of customers and embedded generators switching between traders is causing operational inefficiencies for the Authority, and most likely others. We have to spend unnecessary time and effort validating the accuracy of the information on ICP switching.

Issue 8: There is no mechanism to identify the sale and transfer of customer or embedded generator accounts between traders

4.51 Acquisitions and rationalisation of back-office functions are part of a workably competitive retail market. However, currently we are at times unable to determine whether a trader ICP switch is due to this type of activity.

4.52 The registry does not always record:

[13] https://www.emi.ea.govt.nz/Retail/Reports.

(a) the transfer, between traders, of responsibility for an ICP that results from one trader acquiring the other trader's account with the customer or embedded generator at the ICP

(b) a trader's consolidation of the participant identifiers it uses in the electricity market.

4.53 The registry will record these types of activities as an ICP switching between traders, if the participant identifier recorded against the ICP identifier is updated.

4.54 The registry will not record these types of activities as an ICP switching between traders, if the participant identifier recorded against the ICP identifier is not updated.

4.55 The Authority needs to be able to distinguish between:

(a) trader ICP switches that are the result of the activities in paragraph 4.52, and

(b) trader ICP switches that are the result of a consumer or embedded generator entering into an arrangement with a different trader to their existing trader.

4.56 Currently, this is a manual process that relies on:

(a) knowing the activities in paragraph 4.52 are occurring, or

(b) observing a spike in trader ICP switching.

4.57 Identifying the activities in paragraph 4.52 and manually compensating for them in our switching statistics is inefficient and prone to error.

4.58 This represents an operational inefficiency.

Issue 9: It is unclear whether an acknowledgment of a switch request notification is required

4.59 A losing trader at an ICP sends the gaining trader an acknowledgment of a switch request notice (AN file),[14] upon receiving a switch initiation notification (NT file). The AN file:

(a) indicates to the gaining trader that the switch is being processed, and

(b) provides:

(i) confirmation of the intended switch event date

(ii) additional information to the gaining trader, via response codes such as "contracted customer" or "premises de-energised".[15]

4.60 A losing trader must provide an AN file for trader ICP switches that have:

(a) the "MI" switch type code

(b) the "HH" switch type code. A switch using this switch type cannot be completed without an AN file first being issued.

4.61 A losing trader may provide an AN file for trader ICP switches that have the "TR" switch type code.

---

14 "Acknowledgement of notice" file.

15 A complete list of response codes is contained in the registry functional specification, under SD-020, which is available on our website at https://www.electricityregistry.co.nz/files/FunctionalSpecification.zip.

4.62 Currently, the Code does not permit a trader ICP switch with an “HH” switch type code to be completed unless the losing trader has provided the gaining trader an AN file. The registry’s functionality ensures this Code requirement is complied with.

4.63 The AN file provides no benefit if the ICP switch has an “HH” switch type code, because these switches are for large customers. These customers switch traders after a change of a negotiated contract. The losing trader will be aware of the switch. The current Code requirement therefore can delay the completion of the switch, for no benefit to the parties involved.

4.64 In addition, the AN file must not contain more than one response code. This means the gaining trader may, at times, receive only a subset of relevant information via the AN file. For example, if the ICP was disconnected and the customer was under contract to the losing trader, the losing trader could inform the gaining trader of only one of these matters via the AN file.

4.65 These problems represent operational inefficiencies. In addition, competitive pressure in the retail electricity market may be dampened if ICP switches are delayed.

Issue 10: Different timeframes for different types of ICP switches add complexity to the ICP switching process

4.66 Currently, the time within which a gaining trader or losing trader must provide a notification as part of a trader ICP switch varies by switch type.

4.67 Table 2 shows the current times mandated in the Code.

4.68 Different times for similar ICP switching activities:

(a) adds complexity to traders’ back-office systems

(b) is confusing

(c) does not promote the efficient operation of the electricity industry.

Table 2: Times for different switch types

Switch notice	Standard switch process ("TR" switch type)		Move-in switch process ("MI" switch type)		Gaining trader switch process ("HH" switch type)	
	Status	*Time*	*Status*	*Time*	*Status*	*Time*
Gaining trader notifies registry manager of the switch (NT)	Mandatory	≤ 2 BD after arrangement becomes effective	Mandatory	≤ 2 BD after arrangement becomes effective	Mandatory	≤ 3 BD after arrangement becomes effective
Trader acknowledges switch (AN)	Optional	≤ 3 BD after receipt of NT	Mandatory	≤ 5 BD after receipt of NT	Mandatory	≤ 3 BD after receipt of NT
Losing trader completes switch (CS)	Mandatory	≤ 5 BD after the switch event date	Mandatory	≤ 5 BD after receipt of the NT if the losing trader accepts the gaining trader's proposed switch event date	Not applicable	Not applicable
				No time limit if the losing trader proposes alternate switch event date		
Gaining trader completes switch (CS)	Not applicable	Not applicable	Not applicable	Not applicable	Mandatory	≤ 3 BD after receipt of AN

Source: Electricity Authority

Issue 11: Switch withdrawals can be delayed because of delayed information from third parties

4.69 The Code permits the gaining trader or the losing trader to withdraw an ICP switch (using the appropriate registry process) for one of the following reasons:

(a) The customer or embedded generator at the ICP is cancelling the switch.

(b) The ICP is being decommissioned.

(c) The account holder did not authorise the switch request.

(d) There is a metering issue at the ICP.

(e) The wrong premises have been, or are being, switched (due to an error by the gaining trader).

(f) The requested ICP transfer date is more than 10 business days into the future.

(g) The losing trader is not the responsible trader at the ICP—the ICP has been switched to another trader, and the registry has not been updated to reflect that switch.

(h) The gaining trader is in a trader default situation.[16]

4.70 Approximately 17% of switches initiated or completed are subsequently withdrawn.

4.71 The Code requires that, if a switch is to be withdrawn, then it must be withdrawn no more than two months after the switch has been completed (if it has not been withdrawn before the switch being completed).[17]

4.72 A switch withdrawal can only occur if both the gaining trader and the losing trader agree to it. Switch withdrawals must be carried out via the registry. If both traders agree to the switch withdrawal, the registry unwinds the ICP switch and the losing trader remains responsible under the Code for the ICP.[18]

4.73 Although a switch withdrawal must be undertaken via the registry, often some information must be exchanged directly between the gaining trader and the losing trader, to support the withdrawal. This information may be exchanged in various forms, including JPGs, PDFs and emails.

4.74 A switch withdrawal can be delayed because of delays in receiving information from third parties, such as MEPs or field services agents. This causes operational inefficiencies for the gaining and losing trader because electricity market settlement, network settlement, and customer invoicing may, in relation to the ICP,:

(a) be delayed, or

(b) reversed by the gaining trader.

Issue 12: Different timeframes for applying a meter reading to a NHH ICP switch add complexity to the ICP switching process

4.75 Under the Code, NHH meter readings are deemed to apply from 00:00 hours on the day after the last meter reading up to and including 24:00 hours on the day of the meter reading. This is unless the NHH meter reading is a switch event meter reading for a NHH-metered ICP that is being switched. In this case, the NHH switch event meter reading is deemed to apply:

(a) for the gaining trader, from 00:00 hours on the day of the switch

(b) for the losing trader, at 24:00 hours at the end of the day before the switch.[19]

4.76 The Code's current approach to deeming when a NHH switch event meter reading applies is confusing and leads to complexity in traders' systems. For example, it is

---

16 The trader uses a reason code within the "withdraw request" file to identify which of the reasons listed applies in the circumstances.

17 Refer to clause 17 of Schedule 11.3.

18 Refer to clause 18 of Schedule 11.3. Registry reports do not show the switch as ever occurring, although the registry history tables do record it.

19 Refer to clause 6 of Schedule 15.2.

difficult to align the relevant events in the registry with the final meter reading for a meter that has been replaced as part of the ICP switch. The meter reading date recorded in the registry metering records will be one day earlier than the date the meter reading is applied in the gaining trader's reconciliation system.

4.77 This can cause inaccurate counts of ICP days, which result in the reconciliation manager scaling reconciled electricity quantities unnecessarily.

4.78 The current process is inefficient, and creates a small risk for traders when purchasing electricity.

Issue 13: Sometimes switch event meter readings cannot be obtained despite best endeavours

4.79 Currently, the Code requires the losing trader in a trader ICP switch to provide a switch event meter reading that is either:

(a) a validated meter reading[20] or, if that is not available

(b) a permanent estimate.[21]

4.80 In rare instances, a losing trader may be unable to obtain a validated meter reading, or have sufficient information to produce a permanent estimate for an ICP that is being switched to another trader. Examples of when these instances occur include when the metering installation:

(a) is destroyed by fire or other disaster

(b) is tampered with or goes missing

(c) fails catastrophically

(d) cannot be accessed.

4.81 In these instances, the losing trader is in breach of the Code. However, it is impossible for the losing trader to comply with the Code. This results in unnecessary compliance costs for the losing trader and the Authority. These compliance costs represent an operational inefficiency.

Issue 14: Preventing losing traders from updating an ICP identifier during a switch can mean the gaining trader is unaware the ICP is electrically disconnected

4.82 Currently, the registry locks the trader records for an ICP identifier as soon as the registry receives a switch initiation notification. This means the losing trader cannot then update any of the ICP's attributes in the registry, unless the switch is withdrawn.

4.83 Preventing a losing trader from updating an ICP's attributes during a switch is problematic, if the losing trader has electrically disconnected the ICP immediately before, or after, the registry receives the switch initiation notification. The gaining trader will be unaware the ICP is electrically disconnected, since the losing trader cannot update the registry.

---

[20] A validated meter reading is a meter reading that has passed the trader's validation process.

[21] A permanent estimate is an estimated meter reading that has passed a validation process, including a comparison with two validated meter readings.

4.84 This may result in a negative customer experience, and impose a relatively material cost on the gaining trader, particularly if a manual reconnection of the ICP is required outside normal working hours.

4.85 This represents an operational inefficiency. In addition, competitive pressure in the retail electricity market may be dampened if customers have a bad first experience of a gaining trader's services.

Issue 15: The Code is ambiguous as to whether a switch event meter reading is required for certain ICPs with a category 3—5 metering installation

4.86 Under the "Gaining trader switch process" set out in the Code,[22] the gaining trader has an arrangement with a customer or embedded generator to trade electricity through:

(a) a non-AMI category 3—5 HHR metering installation, at an ICP at which the losing trader also trades electricity through a non-AMI HHR metering installation; or

(b) a non-AMI HHR metering installation, at an ICP at which the losing trader trades electricity through a NHH metering installation; or

(c) a NHH metering installation, at an ICP at which the losing trader trades electricity through a non-AMI HHR metering installation.

4.87 In rare circumstances, an ICP with a category 3—5 metering installation may also have:

(a) a category 1 or 2 metering installation, or

(b) a NHH or AMI metering installation, or

(c) a metering installation with NHH or AMI metering components.

4.88 If the type of ICP described in paragraph 4.87 is switched between traders, the current functionality of the registry means the gaining trader will have to provide a switch event meter reading for the ICP, if the registry metering records for the ICP show the meter has a channel with:

(a) accumulator type of "C", and

(b) settlement indicator of "Y".

4.89 If the gaining trader does not do this, the ICP switch will not be completed.

4.90 However, the Code does not explicitly require the gaining trader to provide a switch event meter reading in this circumstance. The Code does not require accumulating channels for category 3—5 HHR-only metering installations, which are the metering installations to which the "gaining trader switch process" is intended to apply. This is because the Code requires category 3—5 metering installations to be settled in the electricity market using half-hour information.

4.91 This ambiguity in the Code can cause operational inefficiencies for new traders, who are initially unaware of the registry's validation on switches involving this type of ICP. In addition, competitive pressure in the retail electricity market may be dampened if ICP switches are delayed.

[22] Refer to clauses 13 to 16 of Schedule 11.3.

Issue 16: The replacement read process is inefficient

How the replacement read process works

4.92 The Code requires a participant to take all practicable steps to ensure that information the participant must provide under Part 11 is—

(a) complete and accurate

(b) not misleading or deceptive

(c) not likely to mislead or deceive.[23]

4.93 However, inaccurate switch event meter readings can, and do, occur. For example:

(a) vacant premises may have UFE consumption from remedial building work

(b) there may be a meter error

(c) an estimated reading may have been used for the switch event meter reading instead of an actual meter reading.

4.94 If the gaining trader in a trader ICP switch considers the switch event meter reading provided by the losing trader to be inaccurate, the Code provides for the gaining trader to dispute the meter reading and provide the following replacement reading, for switch types "TR" and "MI":

(a) a standard ICP switch (for switch type "TR")

(b) a move-in ICP switch (for switch type "MI").[24]

4.95 The current Code requirements for replacement readings are quite complex. They may be summarised as follows:

(a) Only the gaining trader may initiate the process for obtaining and using a replacement read.

(b) The gaining trader must initiate the replacement read process within four months of the switch event date.

(c) For a standard switch ("TR" switch type) or a move-in switch ("MI" switch type), the replacement read process can only be used if the switch event meter reading provided by the losing trader differs by more than 200 kWh from the switch event meter reading determined by the gaining trader. (Note the 200 kWh is per meter channel, which is a sizable quantity of electricity over several channels.)

(d) The gaining trader and the losing trader must agree on any replacement reading for an ICP switch. If the losing trader disagrees, the gaining trader must:

(i) use the original switch event meter reading, or

(ii) use the disputes procedure in clause 15.29 of the Code.[25]

(e) Despite (c) and (d) above, the losing trader must accept the gaining trader's replacement read for the ICP switch, if:

(i) the ICP's metering installation is AMI, and

---

23 Refer to clause 11.2 of the Code.

24 Refer to clauses 6, 6A and 12 of Schedule 11.3.

25 Refer to clauses 7 and 12 of Schedule 11.3.

(ii) the ICP's submission type is changing from NHH to HHR at the time of the ICP switch, and

(iii) the switch event meter reading provided by the losing trader was not an actual AMI meter reading, and

(iv) the gaining trader determines a revised switch event meter reading from AMI information, and

(v) the replacement read process occurs within five business days of the gaining trader receiving the switch completion file.

We have identified seven shortcomings with the replacement read process

4.96 We have identified seven shortcomings with the replacement read process, which are resulting in the replacement read process causing operational inefficiencies.

Shortcoming 1

4.97 An inaccurate switch event meter reading may penalise, or benefit the gaining trader, or the customer or embedded generator at the ICP. Therefore, the customer or embedded generator may have a relatively bad experience, or a relatively good experience, when they receive the gaining trader's first invoice. Experience indicates the former is more common that the latter.

Shortcoming 2

4.98 The four months for using a replacement read is proving too short in the case of some backdated ICP switches. For example, a move-in switch completed on 12 Dec 2017, but backdated to 13 Aug 2017, falls just inside the four month window, but only by a day. Consequently, the gaining trader has one day to determine whether the switch event meter reading is inaccurate, before it is too late to use the replacement read process.

4.99 The gaining trader must instead undertake an off-market settlement with the losing trader to correct for the error in the meter reading, with the possibility that the losing trader may not agree to the settlement. This manual process is inefficient compared with the process prescribed under the Code.

Shortcoming 3

4.100 Currently, there is no materiality threshold for the process described in paragraph 4.95(e). If a gaining trader adopts this process, the losing trader must accept any minor revision, (eg, less than 1 or 2 kWh). Such relatively small differences may be due to rounding.

4.101 Revising meter readings for inconsequential changes is inefficient, labour intensive, and time consuming.

Shortcoming 4

4.102 A losing trader cannot use the replacement read process in relation to an ICP, if the gaining trader at the ICP:

(a) adopts the process described in paragraph 4.95(e), and

(b) provides in the switch completion file (switch type "HH"—gaining trader completes switch):

(i) a switch event meter reading, or

(ii) a replacement read.

4.103 The losing trader must instead undertake an off-market settlement with the losing trader to correct for the error in the meter reading, with the possibility that the losing trader may not agree to the settlement. This manual process is inefficient compared with the process prescribed under the Code.

Shortcoming 5

4.104 In order to use the process described in paragraph 4.95(e), the gaining trader must rely on an MEP delivering the first AMI meter readings within five business days of the switch event date. However, an MEP may take longer than this because of:

(a) communication issues between the MEP back office systems and the gaining trader's back office systems

(b) a switch occurring where the trader has not made an arrangement with an MEP

(c) the MEP taking a relatively long time to start providing meter reading information to:

(i) a new retailer, or

(ii) an existing retailer for a new ICP.

4.105 If the MEP takes longer than five business days to deliver the ICP's AMI metering data for the first time, the gaining trader:

(a) cannot require the losing trader to accept an actual AMI meter reading, and

(b) must use the standard replacement read process, which is less efficient.[26]

Shortcoming 6

4.106 The gaining trader will require HHR information for a period before the switch event date in order to use the switch event meter reading:

(a) if the gaining trader intends to use HHR submission information, and

(b) if the losing trader has been using NHH submission information for the ICP, and

(c) if the losing trader underestimated the switch event meter reading.

4.107 For contractual or privacy reasons, the MEP may refuse to supply the gaining trader with meter readings before the switch event date. This means the gaining trader may not be able to use the switch event meter reading, unless the gaining trader estimates the missing HHR information it requires. Any missing HHR information will appear in the reconciliation and settlement processes as UFE on the network.

Shortcoming 7

4.108 The replacement read process set out in the Code does not prescribe clear timelines for resolving the erroneous meter reading, and the disputes process is unwieldy.

Issue 17: Delays to a trader being assigned a new ICP may delay installing a metering installation at the ICP and electrically connecting the ICP

4.109 When a distributor first records an ICP in the registry, the distributor assigns the ICP a status of "New". There is little information recorded in the registry against an ICP with

[26] Refer to clause 6 of Schedule 11.3.

this status. The registry changes an ICP's status from "New" to "Ready" once the distributor has completed populating the registry with distributor information for the ICP.

4.110 We understand ICPs sometimes retain the status of "New" for considerable periods of time, before transitioning to the "Ready" status.

4.111 Traders can become responsible for an ICP when it has the "Ready" status in the registry. The process by which traders do this is called the "initial assignment" process. A trader cannot notify an MEP to become responsible for providing the metering installation(s) at an ICP until the trader is responsible for the ICP.

4.112 If an ICP is moved from the "New" status to the "Ready" status on the date the ICP is ready for electrical connection, the responsible trader cannot organise for a metering installation to be in place at the ICP on the day the ICP is ready for electrical connection.

4.113 This can lead to delays electrically connecting the customer or embedded generator at the ICP. These represent operational inefficiencies.

5 Issues with the distributor ICP switching process

5.1 We consider that the following issues with the distributor ICP switching process may be introducing operational inefficiencies and/or hindering competition.

Issue 18: The process for switching ICPs between distributors is inefficient

How the process works for switching ICPs between distributors

5.2 As noted in paragraph 3.15, an ICP will be switched between distributors when:

(a) a network is sold, and the network's participant identifier is changed

(b) an embedded network is created or decommissioned—since the ICP is not decommissioned and recreated as part of this process, the ICP identifier is:

(i) transferred from the parent network to the embedded network (when an embedded network is established), or

(ii) transferred to the parent network from the embedded network (when an embedded network is disestablished).

5.3 The Code sets out the following process for this to occur: [27]

(a) The gaining distributor must obtain, from the trader at each ICP to be switched, that trader's consent to the switch. The Code requires this consent because:

(i) The gaining distributor may have a different distribution price plan to the losing distributor, which may require a change to the price plan agreed between the trader and the customer or embedded generator.

(ii) The trader may not have a use-of-system agreement with the gaining distributor.

(iii) The trader may not wish to trade on the gaining distributor's network (eg, the cost-to-serve may be too high).

(b) The gaining distributor must notify the Authority of the ICPs to be switched, in the required format,[28] if and when the distributor receives the consent to the ICPs being switched from all affected traders.

(c) The Authority uploads the distributor notification into the registry, and the registry processes the notification and:

(i) updates the distributor participant identifier for each of the ICP identifiers contained in the notification; and

(ii) notifies each trader and MEP recorded against the relevant ICPs.

We have identified four shortcomings with the process for switching ICPs between distributors

5.4 We have identified four shortcomings with the distributor ICP switching process, which are resulting in the distributor ICP switching process causing operational inefficiencies.

---

27 Refer to Schedule 11.2 of the Code.

28 Refer to registry functional specification DS-010.

5.5 We expect these operational inefficiencies will grow in significance over time. In New Zealand, there are currently 49 embedded networks, with 233 associated NSPs. However, as Table 3 shows, these numbers are increasing.

Table 3: Number of embedded network NSPs at year end

Year	Number of embedded network NSPs
2010	100
2011	105
2012	116
2013	134
2014	150
2015	168
2016	200
2017	226

Source: Electricity Authority

5.6 There is also the possibility of micro grids being operated as embedded networks in the future, placing further upward pressure on distributor switching requests, and compounding the current issues.

Shortcoming 1

5.7 The registry does not show there is a distributor switch pending at an ICP. Therefore, the gaining trader at an ICP may be unaware the ICP is subject to a distributor switch (if the gaining distributor has obtained the necessary consents but the ICP has not yet been switched between distributors).

Shortcoming 2

5.8 The gaining trader at an ICP that is subject to a distributor switch may refuse to consent to the ICP being switched between distributors (eg, because the gaining trader has no use-of-system agreement with the gaining distributor, or cannot reach agreement with the gaining distributor on such an agreement). Reversing the pending distributor switch is extremely inconvenient for all traders involved in the pending switch, and their customers. Reversing the pending switch involves a manual process, which is very inefficient.

Shortcoming 3

5.9 There is no easily accessible audit trail for a distributor switch. The Authority relies on documentation provided by gaining distributors.

Shortcoming 4

5.10 A gaining distributor may have difficulty communicating with traders to obtain their consent to the distributor switch. Traders have no obligation to respond to a distributor

requesting their consent—either in the affirmative or the negative. A distributor switch can be effectively stalled by one trader refusing to respond to a request for its consent to the switch.

Issue 19: The Code prohibits backdating price category codes

A distributor must populate the price category code for each ICP

5.11 The Code requires each distributor to populate the registry with the price category code for each ICP on their network.[29] They must do this no later than three business days after the distribution charge for the ICP takes effect.[30]

5.12 The price category code is a code that distributors use to indicate the price(s) that a trader should apply to a customer's or embedded generator's invoice for line charges. A distributor typically provides a trader with the price category code and individual distribution charges via a pricing schedule. Traders use the price category code and the registry metering records to determine from the pricing schedule what distribution charge applies at an ICP.

5.13 Currently, the Code does not permit a distributor to backdate changes to a price category code. The reason for this is that, if a price category code is backdated for an ICP, the trader responsible for that ICP faces the risk of being unable to pass on this backdated charge to the customer or embedded generator at the ICP. For example, the trader may have supplied more than one customer or embedded generator at the ICP over the period for which the distributor wishes to backdate the change in price category code, and may be unable to recover its costs.

5.14 However, price category codes may occasionally need to be backdated as part of ICP switching.

5.15 A new customer may move into premises at an ICP and be eligible for low fixed charge prices. The trader may be unaware of the customer's eligibility for low fixed charge prices until it has some reliable consumption history for the customer. This may take two or three months.

5.16 Once the trader finds the customer is eligible for low fixed charge prices, it may agree to backdate the change in prices to the date the customer moved into the premises.

5.17 A distributor that agrees to backdate a change to a price category code must use a manual process to refund the customer. This is inefficient and prone to error.

5.18 In addition, the distributor cannot update the registry without breaching the Code.

[29] Refer to clause 7(1)(g) and (h) of Schedule 11.1.

[30] Refer to clause 8(2)(b) of Schedule 11.1.

6 Issues with the MEP ICP switching process

6.1 We consider that the following issues with the MEP ICP switching process may be introducing operational inefficiencies and/or hindering competition.

Issue 20: The provision of initial metering data to a trader is not always timely

We have identified four shortcomings with the process for an MEP to provide initial metering data

6.2 We have identified four shortcomings with the process for an MEP to provide initial metering data to a trader. These shortcomings are resulting in operational inefficiencies. They may also be dampening competition in the retail electricity market.

Shortcoming 1

6.3 We have been advised by some traders that MEPs can take some time to provide the first meter reading when a gaining trader takes responsibility for an ICP. The Code requires an MEP to give a trader access to raw meter data within 10 business days.[31] This 10 business day period is a maximum, not a target.

6.4 An MEP has provided us with analysis showing the average time for that MEP to deliver the first meter reading to a gaining trader:

(a) is 5—8 days, based on the actual switch date ranges recorded in the registry

(b) is 2—4 days, based on the actual date of the registry switch completion notification.

6.5 Despite this, we understand this is still too slow for some traders, who offer services such as daily cost information or weekly invoicing.

Shortcoming 2

6.6 Under the current ICP switching processes, an MEP only receives a switch completion notification. The MEP does not receive a switch initiation notification. As a result, the MEP may have insufficient time to prepare its systems for a change in trader at the ICP.

Shortcoming 3

6.7 If an ICP switch is backdated by the gaining or losing trader, then by definition the MEP will always be perceived as late in providing the meter reading(s) for that switch.

Shortcoming 4

6.8 Where a gaining trader does not receive and process a meter reading for an AMI meter within five business days of the trader ICP switch, then:

(a) The gaining trader cannot use the revised read process to require an AMI meter reading to be used as the switch event meter reading (refer also to paragraph 4.92).

(b) The gaining trader may be unable to provide the level of service to the customer or embedded generator that it has agreed to provide, which:

(i) may give the customer or embedded generator a bad first impression of the gaining trader's service

[31] Refer to clause 1(1) of Schedule 10.6.

(ii) may place the trader in breach of its agreement with the customer or embedded generator (eg, where the trader and the customer / embedded generator have agreed services such as real time or daily consumption reporting, weekly invoicing, weekly payments).

Issue 21: Meter reading file formats are not standardised

6.9 Where only an MEP can read a meter (eg, an AMI meter), the MEP provides the meter reading files to the trader in accordance with the agreement between them.

6.10 Currently, the Code does not regulate the format of these files, although the Code allows for the Authority to do so.[32]

6.11 The non-standardisation of meter reading formats creates operational inefficiencies, since retailers must develop the capability to receive a different type of meter read file from each MEP that reads AMI meters.

6.12 The non-standardisation of meter reading formats may raise a barrier to new entrant retailers entering the retail electricity market. New entrant retailers need to develop an interface for each AMI MEP, depending on what file structure and content the MEP offers as part of its meter reading service. Creating a unique interface for each AMI MEP imposes costs on new entrant traders and increases the risk of error. This may reduce efficiency and competition in the retail market.

6.13 We note that regulating meter reading formats could also discourage innovation by both MEPs and traders. Participants that develop special services in addition to meter reading (eg, disconnection/reconnection, load control, voltage information, current information) would need to receive two files rather than one (ie, one file for meter readings and another file for special services). This would add complexity and cost to the systems and processes of the MEP and the participant.

6.14 On balance, we believe the non-standardisation of meter reading file formats is more of an issue than standardised meter reading file formats.

Issue 22: The gaining and losing MEPs cannot use the same MEP event date for an MEP switch

How an MEP populates an event date in the registry at the time of an MEP switch

6.15 The registry operates using an events structure, where related fields are aggregated into the same event. Updating any one field in the registry because of an event (eg, the switch of an MEP at an ICP) requires all of the fields in the event to be refreshed. When it receives an update for an event, the registry ends the old event and creates a new event. The date of creation of the new event is called the event date.

6.16 The registry is currently limited to holding only one event, for any registry event, per day. When two events are to be populated for the same event type, the registry requires one of the events to be on an earlier or later day compared with the other event.

6.17 If an MEP switch occurs at an ICP, the Code requires the gaining MEP to update the registry metering records within 15 business days of becoming the MEP at the ICP.[33]

---

[32] Refer to clause 10.16 of the Code.

[33] Refer to clause 2 of Schedule 11.4.

The losing MEP is not required to update the registry, but if it decides to do so, then it must update the registry within 10 business days.[34]

6.18 The reason why the losing MEP does not have to provide a removal event to the registry is because the registry will automatically end date the losing MEP's metering event when it receives the gaining MEP's new registry metering records. The end date the registry uses is the day before the gaining MEP's registry metering records event date.

6.19 The event date used in both the gaining MEP and losing MEP updates should be either:

(a) the date the metering installation at the ICP switched to the gaining MEP; or

(b) the date the gaining MEP installed metering equipment at the ICP.

6.20 Some retailers appear to rely on the removal event, and would prefer that this function be used in the registry to allow standardisation of the meter change process. However, the majority of retailers do not appear to use the data in the registry. Instead, these retailers rely on formal paperwork for the information associated with the removal of metering at the ICP (removed metering component reads).

6.21 Some MEPs also prefer to populate metering removal events in the registry:

(a) sometimes to communicate removal reads to the retailer

(b) sometimes because they no longer hold the assets on the site, and the gaining MEP has not updated the registry with the new metering event.

6.22 If a gaining MEP replaces the losing MEP's metering installation but does not update the registry metering records for the ICP, the losing MEP remains responsible under the Code for the metering installation. The handover of Code obligations does not occur until the gaining MEP populates the registry with its metering records for the ICP.

6.23 When a losing MEP populates a removal event in the registry for the day that its metering installation is removed, the gaining MEP cannot populate an installation meter event for that same day. The gaining MEP's metering event must be populated for the next day.

6.24 When the type of the metering installation changes from NHH to HHR, the delay of one day in populating the registry metering records may present a problem to the gaining trader. The gaining trader may rely on the registry dates when preparing submission information to submit to the reconciliation manager. Possible consequences are that:

(a) the gaining trader's back-office system incorrectly counts ICP days for the ICP, which may cause the reconciliation manager to scale submission information

(b) the gaining trader's back-office system may have difficulty preparing submission information because the information will differ from the registry metering records.

6.25 It should be noted the gaining trader can already update the registry with "HHR" as the profile type for the ICP, in situations where the metering installation is NHH, provided the switch initiation file triggers the update.

[34] Refer to clause 3 of Schedule 11.4.

General comments

Q1. Which, if any, of the 22 issues raised in this paper do you consider should <u>not be</u> investigated further? Please give reasons.

Q2. Are there any issues not raised in this paper that you consider should be investigated? Please identify these other issues and give reasons why they should be investigated.

For each issue 1 to 22

Q3. How material is this issue?

Q4. Is this issue getting worse?

Q5. Why do you think this issue is occurring?

Appendix A Format for submissions

Submitter	

Question	Comment
General comments Q1. Which, if any, of the 22 issues raised in this paper do you consider should not be investigated further? Please give reasons. Q2. Are there any issues not raised in this paper that you consider should be investigated? Please identify these other issues and give reasons why they should be investigated. Issue #1 Q3. How material is this issue? Q4. Is this issue getting worse? Q5. Why do you think this issue is occurring? Issue #2 Q3. How material is this issue? Q4. Is this issue getting worse? Q5. Why do you think this issue is occurring? …… Issue #22 Q3. How material is this issue? Q4. Is this issue getting worse? Q5. Why do you think this issue is occurring?	

Glossary of abbreviations and terms

Act	Electricity Industry Act 2010
AMI	Advanced metering infrastructure (smart meters, remote communications and supporting back office systems)
AN file	"Acknowledgement of notice" file
Authority	Electricity Authority
Code	Electricity Industry Participation Code 2010
CS file	"Complete switch" file
HHR metering	Half-hour metering – the process of measuring and recording information— a) related to electricity conveyed; and b) during— (i) an interval that is 30 minutes; or (ii) intervals that can be aggregated to 30 minutes
HH switch type	An ICP switch made using the "gaining trader" switch process
ICP	Installation control point
MEP	Metering equipment provider
MI switch type	An ICP switch made using the "move-in" switch process
NHH metering	Non half-hour metering – the process of measuring and recording information— a) relating to electricity conveyed; and b) at intervals that are greater than 30 minutes.
NSP	Network supply point
NT file	"Notification of transfer" file
STG	Switch Technical Group
TR switch type	An ICP switch made using the "standard" switch process
Trader	A retailer or a generator or a (direct) purchaser who a) buys electricity from the clearing manager, or b) sells electricity to the clearing manager, or c) enters into an arrangement with another retailer or generator or purchaser to buy or sell contracts (or parts of contracts) for electricity for the purposes of the Code
UFE	Unaccounted for electricity