Retail Advisory Group

Review of secondary networks

Report

13 January 2017

Note: This paper has been prepared by the Retail Advisory Group. Content should not be interpreted as representing the views or policy of the Electricity Authority.

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Retail Advisory Group

Membership of the Retail Advisory Group (RAG) changes from time to time, as members resign, members' terms expire and new members are appointed.

This paper is approved by the members of the RAG as at 13 January 2017. The members of RAG are:

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1 Executive summary

1.1 Secondary networks are electricity networks that are indirectly connected to New Zealand's national electricity transmission grid. They are either embedded or connected to a local distribution network.

1.2 Secondary networks represent different models of responsibility for supplying electricity retail and distribution services to consumers, and for undertaking electricity market functions (eg, metering, reconciliation and consumer switching). In general, there are three types of secondary network:

- customer networks provide both retail and network services (examples include some office buildings, residential apartment complexes, camp grounds, marinas, hotels and motels)
- embedded networks provide network services (examples include some shopping malls, retirement villages, residential apartment complexes and office buildings)
- Network extensions provide (own) the network infrastructure (examples include some office buildings and residential apartment complexes).

1.3 Secondary networks are not new. They first emerged when:

1) networks with consumers were connected to local networks, rather than directly to the grid. This type of connection emerged early in the national electrification process, usually for cost or reliability reasons. Examples include Nelson City and Palmerston North. These networks are now known as embedded networks.

2) landlords of commercial buildings with multiple tenants invoiced consumers directly for the consumer's electricity consumption. These networks are now known as either network extensions or customer networks, depending on who invoices the consumer.

Secondary networks provide business models for different allocation of benefits and risks between parties

1.4 Secondary networks exist because each type provide a feasible business model for different allocation of benefits and risks between the secondary network, its customers, and other participants along the electricity supply chain:

1) From a local distributor perspective, embedded networks and customer networks may be a desirable model for allocating risks to customers/developers who are in a better position to manage the initial investment in network infrastructure and ongoing operating costs of a new sub-division, particularly industrial parks.

2) From a consumer perspective, customer networks may be a desirable model for procuring a bundle of services associated with residential or commercial accommodation. The electricity component of this bundle would be relatively minor.

Regulations should not limit the number and types of secondary networks

1.5 The RAG views secondary networks as being very much like micro-grids – small electricity grids that can operate independently or in conjunction with the area's main electricity network. New Zealand will likely see creation of more micro-grids, or secondary networks, as evolving technologies, such as distributed generation and batteries, make some form of self-supply increasingly feasible for households or communities.

1.6 Secondary networks plausibly could be a key feature of electricity supply in the future. Consequently, the RAG does not consider the Authority should explicitly regulate to limit the number or type of secondary networks as this would not be consistent with promoting competition and innovation in the electricity sector. However, the RAG does see a role for regulation where this is necessary to avoid inefficient creation of secondary networks, or a type of secondary network.

The appropriate scope of the Authority's regulatory activities in relation to secondary networks

1.7 The RAG's review of secondary networks highlighted an ambiguity about the participant status of secondary networks. In particular, secondary networks were found not to be 'distributors' as defined in the Electricity Industry Act 2010 (Act). This means that obligations on distributors imposed through the Electricity Industry Participation Code 2010 (Code) do not apply to secondary networks. Further, the RAG found that the definition of retailer in the Act is very broad, meaning that customer networks, in particular, and possibly all types of secondary network are 'retailers'.

1.8 The Ministry of Business, Innovation and Employment (MBIE) has been apprised of the consequences and implications of the current definitions of distributor and retailer in the Act. MBIE is looking at introducing a broader definition of distributor which would capture all secondary networks. There is no intention to amend the definition of retailer.

1.9 In view of the above, the RAG has assessed the appropriate scope of the Authority's regulatory activities in relation to secondary networks on the assumption that:

- all secondary network owners providing services similar to those provided by a local network distributor are captured by an updated, broader definition of distributor in the Act
- there is no change to the definition of retailer in the Act.

1.10 The RAG considers that the Authority should undertake its regulatory activities in relation to secondary networks where doing so is consistent with its functions and achieves long-term benefits for consumers.

We need to identify and keep track of the number of secondary networks

1.11 The RAG considers that specifically determining the scope of the Authority's regulatory activities requires obtaining accurate data for the number of secondary networks and the number of consumers connected to secondary networks.

1.12 There is no visibility of the number of secondary networks now operating, or the number of consumers supplied via a secondary network. The RAG's best estimate is that there are probably more than 100,000 consumers supplied via many thousands of secondary networks.

1.13 While data is available for embedded networks because they interface with the electricity market, such data is not currently available for customer networks or network extensions because they have not been required to interface with market systems.

1.14 The RAG considers this situation presents a catch-22. Assessing the costs and benefits of obligations made and enforced by the Authority requires a reasonable understanding of the number and type of secondary networks, and the number of consumers on those networks, which would be subject to an obligation.

1.15 The RAG has identified several options to improve the data on customer networks and network extensions. These include a survey of distributors, metering equipment providers, retailers, and property ownership/management firms. However, a survey would provide a one-off snap shot and not address the ongoing need to maintain visibility of secondary networks.

1.16 Ongoing visibility of customer networks and network extensions requires an effective means of recording their details in the participant register. The RAG notes that secondary networks, as retailers or distributors, are required to record their details in the participant register. The RAG doubts that many customer networks and network extensions are aware of this obligation.

1.17 Options for encouraging greater registration include:

- undertaking an education campaign to communicate to customer networks and network extensions the obligation to record their details in the participant register
- actively contacting owners of properties which have the characteristics of a customer network or network extension to have them clarify the electricity supply model at the location, and remind them of their obligation to record their details in the participant register if they are a customer network or network extension. This approach was adopted by Utilities Disputes Limited (UDL) (formerly the Office of the Electricity and Gas Complaints Commissioner).
- requesting or requiring local distributors, traders and metering equipment providers to advise the Authority of connection points that supply to customer networks and network extensions.

1.18 The RAG considers the identification problem will be challenging to address. Customer networks and network extensions have no clear or natural incentive to record their details in the participant register. Unlike other participants in the electricity market, customer networks and network extensions do not rely on interfacing with market systems or other participants. They have no reason to make themselves known to the Authority or to the market systems.

1.19 Moreover, it is not certain that customer networks or network extensions possess any specific characteristic that would make them routinely and easily identifiable by retailers or distributors. Retailers or distributors would be incurring cost to identify and keep track of such secondary networks, for little or no apparent benefit at this stage. As such, it is not clear if obliging distributors or retailers to keep track and update the register would lead to comprehensive identification.

1.20 Consequently, the RAG is uncertain whether these options will lead to comprehensive registration.

Proposals to promote competition and consumer choice and lower the cost to serve secondary networks

1.21 The RAG has identified proposals to promote competition and consumer choice and lower the cost to serve secondary networks.

1.22 The RAG sought feedback in April 2015 on issues with secondary networks relating to competition, reliability and efficiency. The RAG received 21 submissions.

1.23 The RAG believes there are a number of measures that could be undertaken to promote competition on, reliable supply by, and the efficient operation of, secondary networks. A net economic benefit vis-à-vis the status quo is expected if these measures are implemented.

1.24 These measures are based on the scope of the Authority's regulatory activities in relation to secondary networks being as recommended by the RAG.

1.25 The key proposals the RAG recommends to further competition, reliability and efficiency in relation to secondary networks are summarised in the table below.

Type of Secondary Networks	Issues		Recommendation
Customer Networks	Competition	Consumers cannot choose their electricity retailer.	RAG did consider enabling consumers on customer networks to individually choose their electricity retailer, on a user-pays basis. However, there are reasons not to interfere with existing market arrangements. The RAG believes that consumers would benefit if they are more aware about what they should expect and look out for in terms of their electricity supply under a customer network arrangement. This includes avenues where consumers could seek redress (e.g. Consumer Guarantees Act). The RAG also recommends encouraging owners of customer networks to provide more transparent pricing (i.e. breakdown of rates for each utility or service, and for electricity, further breakdown into network and energy charges). This will allow consumers to make informed decisions and facilitate competition between customer networks. Owners of customer networks would also gain credibility with existing and prospective customers.
	Reliability	Lack of clarity on party responsible for managing faults. Part 6 of the Code (connection of distributed generation) only applies to embedded networks which convey more than 5GWh of electricity per annum and does not explicitly	Clarify parties' roles in managing faults on customer networks by amending the Guidelines for Secondary Networks. A review should be conducted on Part 6 of the Code to ensure that consumers are not prevented from establishing DERs, and that DERs can be deployed in a safe and reliable manner.

Type of Secondary Networks	Issues		Recommendation
		apply to DER connections on customer networks.	
	Efficiency	No material issues currently.	N/A
Embedded Networks	Competition	Retailers have less incentive to serve on embedded networks due to the higher cost of negotiation and the lack of economies of scale. Bespoke network tariff structures also increase the cost to serve and deter retailers from serving in embedded networks.	Putting in place a default use-of-system agreement (UoSA) will reduce the cost to serve. Instead of bespoke network tariffs, embedded network tariff structures should as much as possible be aligned with distribution pricing principles. A service based and cost reflective pricing structure would correctly signal the economically efficient cost of providing network services to consumers and allow retailers to more easily serve on embedded networks. The RAG considered if network tariff pricing on embedded networks should be no more than parent networks so that consumers in embedded networks are no worse off compared to parent networks. However, such a proposal would not take into account the commercial realities faced by developers of embedded networks who bear the investment risks and upfront development costs.
	Reliability	Lack of clarity on party responsible for managing faults. Part 6 of the Code (connection of distributed generation) only applies to embedded networks which convey more than 5GWh per annum. With the proliferation of embedded networks, it is worthwhile	A default UoSA should define parties' roles in managing faults on embedded networks. The Authority should conduct a review to assess if Part 6 should also apply to all embedded networks so as to facilitate safe and reliable uptake of distributed energy resources.

Type of Secondary Networks	Issues		Recommendation
		reviewing if Part 6 should be extended to all embedded networks.	
	Efficiency	Non-standard reporting and data exchange requirements and processes used by embedded network owners impose unnecessary costs on retailers.	More standardisation of processes associated with embedded networks and of formats for the exchange of data with embedded networks will also reduce the cost to serve.
Network Extensions	Competition	No material issues currently.	N/A
	Reliability	Lack of clarity on party responsible for managing faults.	Clarify parties' roles in managing faults on network extensions by amending the Guidelines for Secondary Networks.
	Efficiency	No material issues currently	N/A

2 Introduction

2.1 The RAG provides independent advice to the Authority on the development of the Code and market facilitation measures. The RAG's focus is on the relationships between retailers, distributors and consumers.

2.2 This paper is in response to the Authority Board's request that the RAG provide advice on:

- Options to promote competition and efficiency on secondary networks for the long-term benefit of consumers. The RAG started considering ways to promote competition on, reliable supply by, and efficient operation of, secondary networks in 2014.
- The appropriate scope of the Authority's regulatory activities in relation to secondary networks. The RAG was asked in May 2016 to provide advice on the appropriate scope of the Authority's regulatory activities relating to secondary networks. This request followed the RAG's work highlighting an ambiguity about the participant status of secondary networks.

The purpose of this paper

2.3 This paper outlines the RAG's views in relation to the scope of the Authority's regulatory activities in relation to secondary networks and makes recommendations to the Authority Board on key initiatives which would further the Authority's statutory objectives on secondary networks.

3 What are secondary networks?

3.1 Secondary networks are electricity networks that are connected indirectly to the national grid. Secondary networks represent different models of responsibility for supplying electricity retail and distribution services to consumers, and for undertaking electricity market functions (eg, metering, reconciliation and consumer switching). There are generally considered to be three types of secondary network:

- customer networks provide both retail and network services (examples include some office buildings, residential apartment complexes, camp grounds, marinas, hotels and motels)
- embedded networks provide network services (examples include some shopping malls, retirement villages, residential apartment complexes and office buildings)
- Network extensions provide (own) the network infrastructure (examples include some office buildings and residential apartment complexes).

3.2 Secondary networks are not new. They first emerged when networks were connected to other networks rather than connecting directly to the grid. This type of connection emerged early in the national electrification process usually for cost or reliability reasons. These networks are now known as embedded networks.

3.3 Customer networks and network extensions also developed over time as landlords of commercial buildings with multiple tenants invoice consumers directly for the consumer's electricity consumption.

3.4 The types of secondary network represent different models of responsibility for supplying electricity retail and distribution services to consumers, and for undertaking electricity market functions (eg, metering, reconciliation and consumer switching). Table 1 summarises this.

Table 1 The supply of electricity services to end-consumers under secondary network types

	Customer network	Embedded network	Network extension
Retail service provided by:	Customer network	Traders with UoSA with embedded network	Traders with UoSA with local distributor
Distribution service provided by:	Customer network	Embedded network	Local distributor
Market functions undertaken by:	Not applicable	Embedded network & traders	Local distributor & traders

Note: The customer network owner and embedded network owner can contract with another party to provide retail and network services or perform market functions.

Source: Electricity Authority

3.5 Secondary networks exist because each type provides for a different allocation of benefits and risks between the secondary network, its customers, and other participants along the electricity supply chain (eg local distributors, retailers).

1) Embedded networks allow

   (i) consumers in the embedded network to choose their own retailer, removing consumer electricity credit risk from the embedded network owner

   (ii) the embedded network owner to obtain a return on its electrical assets that would otherwise have been collected by the local network if the embedded network was operated as a network extension

   (iii) the embedded network owner to take on the investment risk in developing the network.

2) Network extensions allow

   (i) consumers in the network extension to choose their own retailer, removing consumer electricity credit risk from the network extension owner

   (ii) the network extension owner to obtain a return on its electrical assets within its lease or body corporate arrangements and allocate operating risk to the local distributor

   (iii) the local distributor to run the network extension and bear the operating risk.

3) Customer networks allow

   (i) landlords of commercial buildings or premises with multiple tenants to invoice consumers directly for the consumer's electricity consumption, potentially passing on bulk purchase discounts, or alternatively, collecting a premium

   (ii) the customer network owner to obtain a return on its electrical assets within its invoice, lease or body corporate arrangements and accept the risk (eg, credit risk) of running its own network.

3.6 From a local distributor perspective, embedded networks and customer networks may be a desirable model for allocating risks to customers/developers who are in a better position to manage the initial investment in network infrastructure and ongoing operating costs of a new sub-division, particularly industrial parks.

3.7 From a consumer perspective, customer networks may be a desirable model for procuring a bundle of services associated with residential or commercial accommodation. The electricity component of this bundle would be relatively minor.

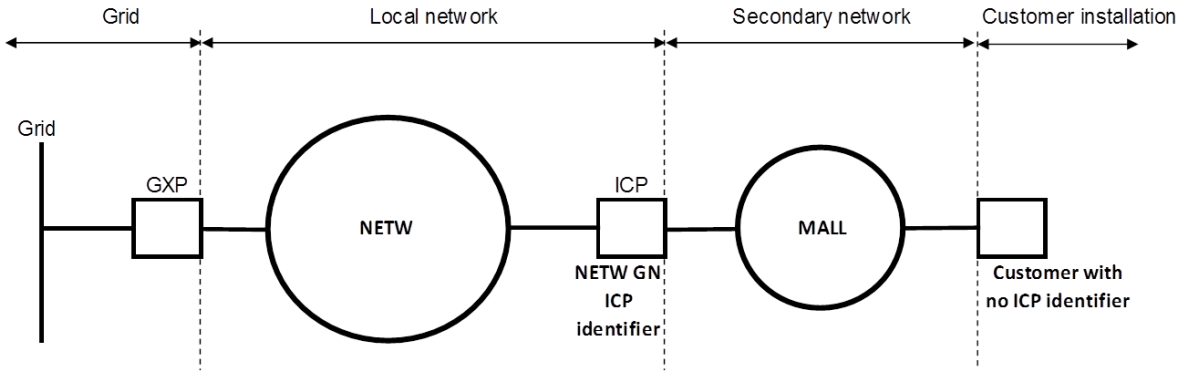
Secondary networks have three typical configurations

3.8 The configuration of typical examples of each of the secondary network types are shown below.

3.9 Figure 1 shows a typical configuration of a customer network. Examples of customer networks include some office buildings, camp grounds, apartment buildings (where the body corporate is the single customer), marinas, hotels and motels.

3.10 Consumers do not have individual choice of electricity retailer. The customer network owner buys electricity from a trader for on-selling to all consumers on the customer network.[1] The cost of the customer network electricity infrastructure is often bundled with the rent or body corporate fees.

Figure 1 Customer network configuration



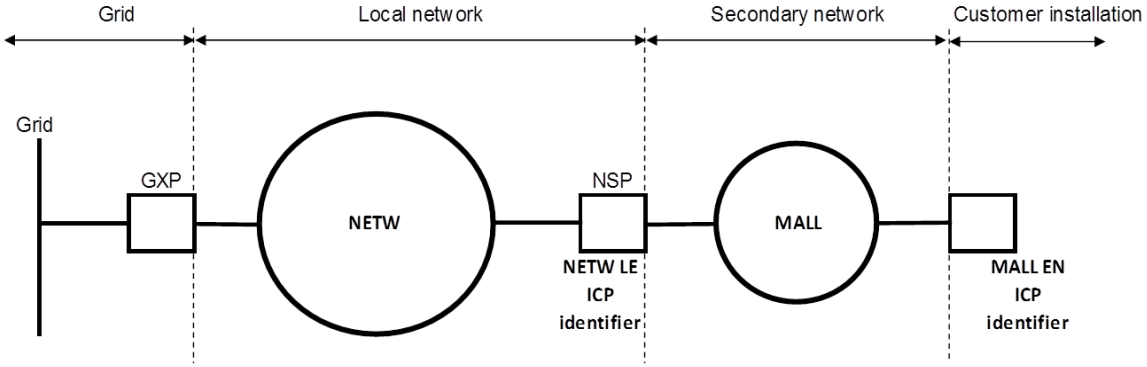
Source: Electricity Authority

Notes:
1. Each consumer on a customer network does not have their own ICP.
2. NETW means Network.

3.11 Figure 2 shows a typical configuration of an embedded network. Examples of embedded networks include shopping malls, retirement villages, residential apartment complexes and office buildings. Consumers on an embedded network who have installation control point (ICP) identifiers can have individual choice of electricity retailer, provided more than one retailer has a use of system agreement with the embedded network. Consumers may face different network charges to what they would face on the local network through which electricity is delivered to the embedded network. The cost of the embedded network infrastructure is included as part of the consumer's power bill, rather than being bundled with, for example, their rent or body corporate fees.

[1] The customer network owner may contract a third party to bill consumers on the customer network. In these circumstances, some consumers may think the billing agent is their electricity retailer.

Figure 2 Embedded network configuration



Source: Electricity Authority

Notes:
1. Each consumer on an embedded network has their own ICP.
2. NETW means Network.

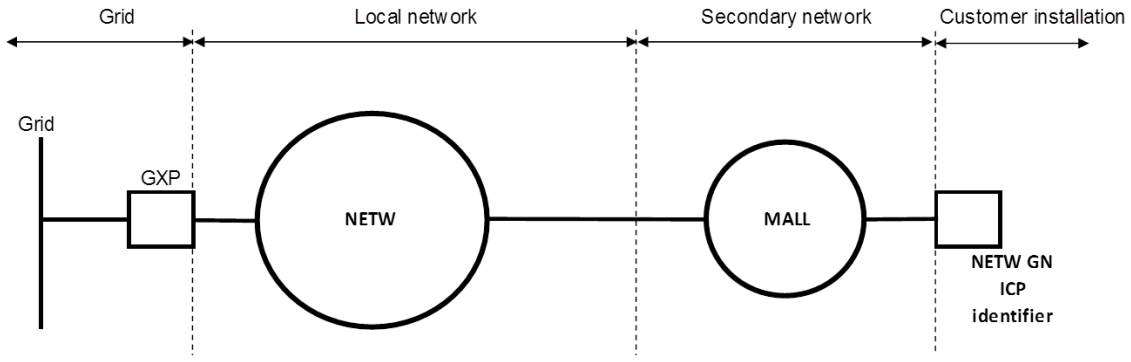
3.12 Figure 3 shows a typical configuration of a network extension. Examples of network extensions include some office buildings and residential apartment complexes.

3.13 Consumers have individual choice of electricity retailer. Theoretically, network extensions are analogous to being connected to the local distribution network. Consumers face the same network charges as they would if they were connected directly to the local network.

3.14 The cost of network extension infrastructure is typically bundled with the consumer's rent for the premises they lease on the network extension.

3.15 The cost for retailers to serve consumers on network extensions should, theoretically, be similar to the cost to serve consumers on local networks. Retailers do not need to enter into use-of-system agreements, or accommodate a particular operating practice of the network extension owner. There are also no distribution prices for the network extension that are additional to the distribution prices for the local network. Retailers can therefore use the same pricing plans for consumers on the network extension as they do for consumers on the local network.

Figure 3 Network extension configuration



Source: Electricity Authority

Notes:
1. Each consumer on a network extension has their own ICP.
2. NETW means Network.

The number of consumers on secondary networks is unknown

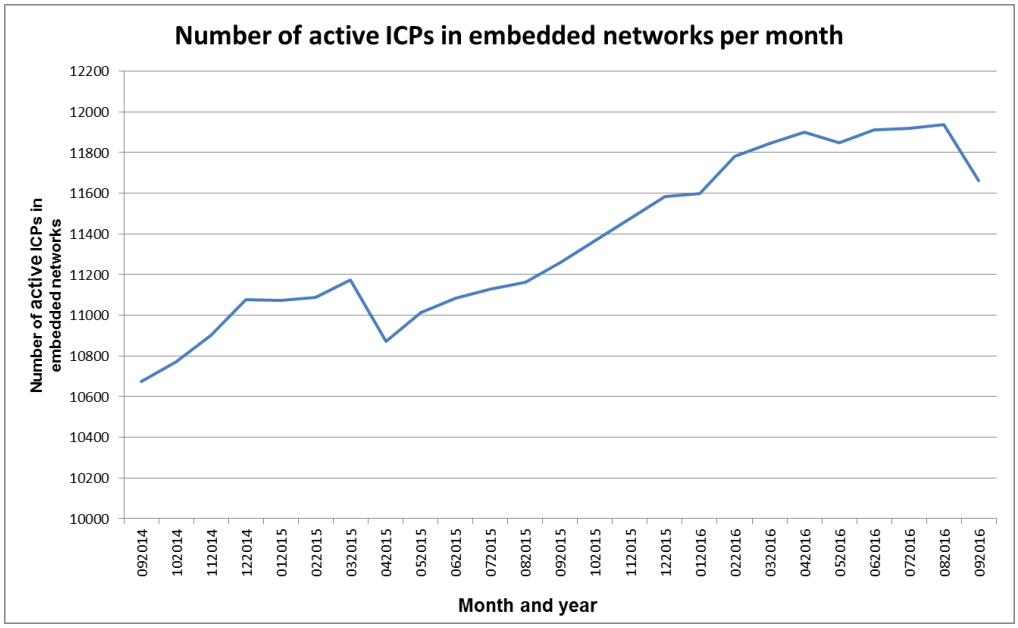
3.16 The number of secondary networks in New Zealand is unknown, which means the number of consumers on secondary networks is unknown. The RAG estimates there are probably more than 100,000 consumers on secondary networks in New Zealand.

3.17 The number of consumers on embedded networks in New Zealand can be estimated from data held in the registry. There are about 12,000 installation control points (ICPs) on embedded networks, implying at least 12,000 consumers on this type of secondary network.

3.18 Over the years, the number of active embedded networks and number of ICPs residing within them has increased. RAG is aware that aside from the organic growth of embedded networks, there were also customer networks being converted into embedded networks.

3.19 RAG notes that embedded networks can be converted into local networks. One such example is Nelson Electricity Ltd.

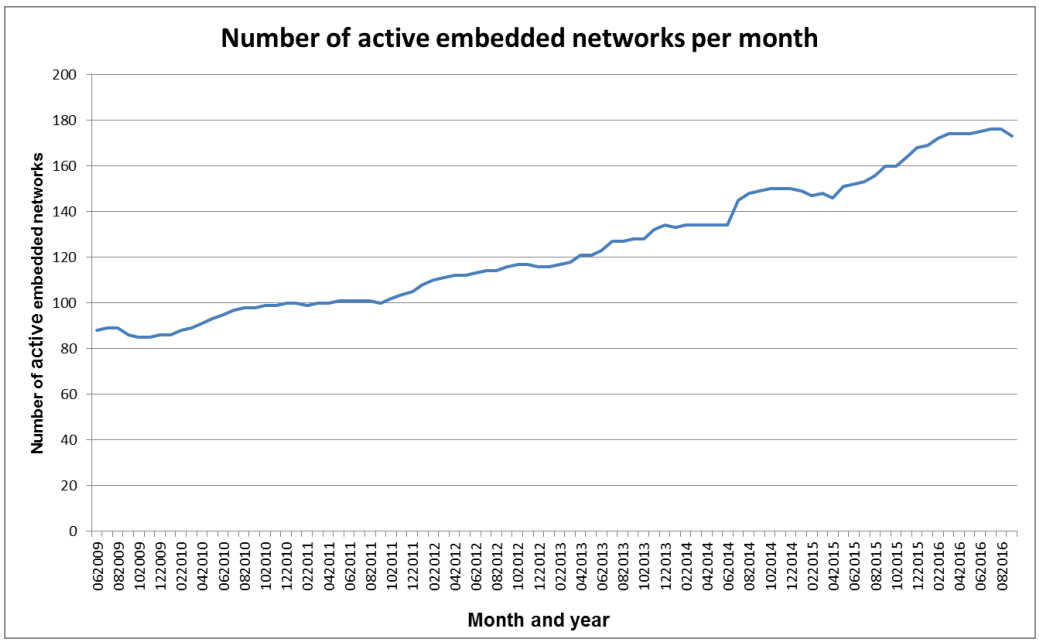
Figure 4 Number of active ICPs in embedded networks September 2014 to September 2016



Source: Electricity Authority

Notes: Data series starts September 2014 after Nelson Electricity converted from an embedded network to a local network

Figure 5 Number of active embedded networks June 2009 to August 2016



Source: Electricity Authority

3.20 The registry holds no similar data that enables the number of consumers on customer networks and network extensions to be estimated. Based on an initial desktop analysis by its secretariat, the RAG believes there are tens of thousands of consumers on many thousands of customer networks and network extensions in New Zealand.

The RAG's work has raised questions about the participant status of secondary networks

3.21 Submissions on the RAG's 21 April 2015 discussion paper about secondary networks raised questions about the legal status of secondary networks – in particular, whether secondary networks are participants.

Secondary networks are not "distributors"

3.22 The RAG has found that secondary networks (configured as shown in figures 1, 2 and 3) are not "distributors" as defined in the Act.

3.23 Due to (ultimately) the definition of "point of supply" in the Electricity Act 1992, the lines and equipment that make up the secondary network are beyond the point of supply for the secondary network. This means that the lines and equipment that make up the secondary network are excluded from the definition of "lines" in the Act.

3.24 The effect of this exclusion from the definition of "lines" in the Act is significant. In order to be a distributor, the owner of a secondary network must be engaged in the conveyance of electricity on lines (other than lines that are part of the national grid), within the meaning of the term "lines" in the Act.

3.25 For similar reasons, the owners of the secondary networks are not "persons who own lines" under the Act.

Customer networks are “retailers” but not embedded networks and network extensions

3.26 The RAG has found that the definition of retailer in the Act is broad. The chief implication is that a customer network is a retailer in terms of the Act. This is because the customer network is engaged in the sale of electricity to a consumer other than for the purpose of resale (under the definition of "retailing" in the Act). This means activities and businesses that are not obviously part of the electricity industry supply chain are potentially captured by the definition of retailer. For example, retirement villages, serviced apartments and hotels could be considered electricity retailers under the Act.

3.27 The RAG notes that it is possible that the owners of embedded networks and network extensions are also retailers. For example, a shopping mall owner recovering the cost of it providing electricity to shop lessees in relation to common areas and facilities powered by electricity. However, it is unclear whether this is definitely the case, because the Act provides no guidance on what is meant by the "sale of electricity". To a certain extent, it will also depend on the circumstances of each case. The RAG is taking the view that embedded networks and network extensions are not retailers.

Implications of secondary networks not being distributors

3.28 Embedded networks and network extensions that are not distributors are not an “industry participant”. The implications of this include:

- embedded networks are not obliged to comply with obligations on them under the Code, which are necessary for the operation of the New Zealand electricity market
- embedded networks and network extensions that are not retailers are not obliged to register as industry participants
- embedded networks and network extensions that are not retailers are not obliged to comply with Part 3 of the Act (separation of distribution from certain generation and retailing)
- embedded networks and network extensions that are not retailers are not obliged to comply with Part 4 of the Act. This means they are not obliged to join the UDL dispute resolution scheme as distributors. The UDL therefore cannot consider any complaints received from consumers that relate to distribution services provided by secondary network owners
- embedded networks and network extensions that are not retailers do not have to pay the industry levy.[2]

3.29 MBIE has been apprised of the consequences and implications of the current definitions of distributor and retailer in the Act. MBIE is currently proposing an amendment to the Act, to introduce a relatively broad definition of distributor, which *would* capture secondary networks. This would correct what MBIE considers to be a drafting error with the definition of distributor. MBIE has indicated that it does not intend to do anything about the breadth of the definition of retailer at this time.

[2] Under the Electricity Industry (Levy of Industry Participants) Regulations 2010 (Levy regulations).

4 Scope of the Authority's regulatory activities in relation to secondary networks

4.1 The Authority Board has requested that the RAG provide advice on the scope of the Authority's regulatory activities in relation to secondary networks.

4.2 This section outlines the views of RAG pertaining to the scope of the Authority's regulatory activities in relation to secondary networks. The views are based on the assumed definitions of "distributors" and "retailers" as set out below:

- For the purposes of this paper, it is assumed that the Act is amended so that all secondary network owners providing services similar to those provided by a local network distributor are captured by the definition of distributor
- Based on the legal advice obtained by the Authority, customer network owners appear to be covered by the current definition of retailer in the Act.

Regulatory activities should further the Authority's statutory objective

4.3 The Authority's statutory objective is to promote competition in, reliable supply by, and the efficient operation of, the electricity industry for the long-term benefit of consumers.

4.4 The Authority's regulatory activities in relation to secondary networks must be undertaken in a manner that furthers the Authority's objective.

Regulation should not limit the number or type of secondary networks

4.5 The RAG views secondary networks as being very much like micro-grids – small electricity grids that can operate independently or in conjunction with the area's main electricity network. New Zealand will likely see creation of more micro-grids, or secondary networks, as evolving technologies, such as distributed generation and batteries, make some form of self-supply increasingly feasible for households or communities.

4.6 The RAG notes that the Authority re-oriented its work programme for 2016/17. The revised work programme includes initiatives to reduce inefficient barriers to developing and using evolving technologies and business models across the electricity supply chain. This includes reducing inefficient barriers to:

- Any consumers purchasing directly from the wholesale electricity market or directly from local generators
- Mass-market demand response and aggregators of mass-market demand response
- Mass-market distributed energy resources and aggregators of mass-market distributed energy resources. Distributed energy resources include traditional distributed generation, batteries, micro-grids and 'prosumer' situations.[3]

4.7 Secondary networks plausibly could be a key feature of electricity supply in the future as electricity supply becomes more localised and distributed. Consequently, the RAG does not consider the Authority should explicitly regulate to limit the number or type of secondary networks as this would

[3] Refer to the Authority's 2016/17 work programme, available at www.ea.govt.nz/dmsdocument/20821.

not be consistent with promoting competition and innovation in the electricity sector. However, the RAG does see a role for regulation where this is necessary to avoid inefficient creation of secondary networks, or a type of secondary network.

4.8 Some submissions on the RAG's 2015 discussion paper proposed that the Authority regulate to limit the number and/or type of secondary networks. The RAG notes this would be inconsistent with the Authority's strategy of reducing inefficient barriers to mass-market distributed energy resources.

4.9 Evidence is not available to establish that limiting the number or type of secondary networks will achieve long-term benefits for consumers. In fact, as technology and business models continue to evolve, limiting the number or type of secondary networks may be detrimental to the long-term benefit of consumers.

Undertake regulatory activities to achieve long term benefits for all consumers on secondary networks

4.10 The RAG considers that the Authority should undertake regulatory activities in relation to secondary networks where doing so is consistent with its functions and achieves long-term benefits for all consumers.

4.11 This requires the Authority to quantify the benefits and costs of any Code amendments and market facilitation measures against the status quo.

4.12 However, it is currently difficult to perform a robust cost-benefit analysis given that RAG and the Authority has limited information on the number of secondary networks and the number of consumers in each type of secondary network.

4.13 The RAG estimates there are more than 100,000 consumers supplied via secondary networks. However, it is possible that the number is higher.

5 Identifying and monitoring secondary networks

There is a need to identify and keep track of secondary networks

5.1 Visibility of secondary networks and the number of customers on a secondary network are necessary for the following functions:

a) facilitate the Authority's industry and market monitoring function

b) facilitate market development and market operation

c) inform the Authority of which parties should be complying with the Act, with regulations made under the Act, and with the Code.

Suggestions on how to identify secondary networks

5.2 The Authority has reasonably good visibility of the number of embedded networks and the number of consumers within them. On the other hand, information on customer networks and network extensions are limited.

5.3 The RAG notes that secondary networks, as either retailers or distributors, are required to record their details in the participant register. The RAG doubts that most owners of customer networks and network extensions are aware of this obligation. Even if they are, there is no incentive to fulfil this obligation given that they will be subject to the regulatory obligations set out in the Act and the

Code. Unlike electricity retailers and distributors, many secondary network owners do not consider retailing or distribution of electricity as their core business (eg, hotels, malls).

5.4 The RAG has considered several options for identifying customer networks and network extensions:

a) A survey of distributors, metering equipment providers (MEPs), retailers, and property ownership/management firms. Traders or retailers would probably have oversight on customer networks which are likely to be large sites and loads with dedicated account managers looking after the customer. Distributors would likely monitor the number of network extensions on their lines so as to ensure efficient operation.[4]

b) The Authority could probably identify network extensions by doing a scan in the Registry as ICPs within a network extension would likely have similar addresses (eg, office buildings and residential apartment complexes). There will, however, be false positives as there may be residential apartment blocks which are all directly connected to the local distribution network.

c) The Authority could probably isolate potential customer networks by comparing historical ICP consumption data against the average consumption of a typical household ICP. ICP consumption data for customer networks would likely be multiple times higher than an average household as all tenant consumption data is captured in a single ICP.

d) Comparing the number of dwellings in an area from census data and compare with residential ICPs in the registry to identify possible customer networks.

5.5 It may also be helpful to develop some criteria as to whether certain businesses are clearly customer networks under the current definition of retailer. For example, tenants are billed directly by the landlord instead of electricity retailers for their electricity consumption. Tenants may also have their electricity consumption bundled up with rent or other utility payments.

Suggestions to maintain ongoing records of secondary networks

5.6 Moving forward, there is a need to ensure ongoing visibility on the number of secondary networks. To do so would require owners of secondary networks to include their details in the register. Some suggestions include:

a) undertaking an education campaign to reach out to owners of customer networks and network extensions, and to highlight the obligation for owners to record their details in the participant register

b) actively contacting owners of properties which have the characteristics of a customer network or network extension to have them clarify the electricity supply model at the location and remind them of their obligation to record their details in the participant register if they are classified as secondary networks

c) requesting or requiring local distributors or traders to advise the Authority of connection points that supply to network extensions.

5.7 Alternatively, the Authority may also consider having the local network distributor updating the registry when there are new network extensions and customer networks. Such requirements could be explicitly set out in the voluntary Guidelines for Secondary Networks.

[4] A distributor has suggested that it could identify perhaps 75% of customer networks connected to its network.

5.8 The RAG is cognisant that customer networks and network extensions may not possess specific characteristics that would make them routinely and easily identifiable by retailers or distributors. Therefore, it is not clear if distributors and retailers can identify and maintain ongoing records of these secondary networks. The cost of identifying secondary networks may also outweigh any benefits for distributors and retailers.

5.9 The RAG considered whether retailers or MEPs can update the secondary network information in the registry, but concluded that the retailers and MEPs would be less likely to know who owns the service line for a secondary network than the local network distributor or the secondary network owner. New customer networks can be also set up without retailers knowing.

5.10 Local network distributors could possibly identify and keep track of the network extensions and customer networks. However, there will be costs involved in doing so. It is not clear if the benefits derived will justify the costs for distributors.

5.11 It is possible to add a "Secondary Network Type" field to every ICP in the registry and for the local network distributor or the secondary network owner to populate this field when a new ICP is created or when there is a change in secondary network types (eg, from a network extension to a customer network).

6 Review of market facilitation measures that are meaningful to consumers

6.1 This section provides a review of key market facilitation measures which are meaningful to consumers and RAG's assessment on whether it should be applied to secondary network owners. The RAG notes that this may not an exhaustive list.

6.2 The Authority is responsible for undertaking market facilitation measures (such as providing education, guidelines, information, and model arrangements), and for monitoring the operation and effectiveness of these market facilitation measures.

6.3 Retailers (as defined in the Code) are encouraged to comply with the following key market facilitation measures:

- recommended terms and conditions for domestic electricity contracts
- the Medically Dependent Consumer (MDC) guideline and the Vulnerable Consumer (VC) guideline
- communication of price changes to consumers.

6.4 Distributors (as defined in the Code) are encouraged to comply with the following key market facilitation measures:

- the MDC guideline and the VC guideline (only for those distributors that direct bill consumers on their networks)
- the distribution pricing principles
- communication of price changes to consumers.

6.5 In addition, local network distributors and retailers are encouraged to use a model use-of-system agreement (UoSA) when negotiating retailers' use of a local network. Embedded network owners

and retailers are encouraged to use a set of drafting guidelines for a UoSA when negotiating retailers' use of an embedded network.

6.6 Market facilitation measures have been developed on the basis that embedded network owners are the only type of secondary network owner with obligations under the Code, and with these obligations applying to the embedded network owner as a distributor.

Recommended terms and conditions for domestic electricity contracts

6.7 The recommended terms for domestic electricity contracts cover matters including:

- making information readily available to consumers and potential consumers to help them make informed choices about electricity supplier, products and services, and pricing plans
- connections and disconnections, and contract termination
- the actual supply of electricity and related services, such as metering
- that the contractual terms and conditions of supply of electricity to the consumer are lawful, fair and reasonable
- that the delivered price for electricity supply is fair and reasonable, and is reflective of the cost of supply
- consumer access to timely and accurate billing and payment information for electricity and associated services
- retailer or third party access to a consumer's property
- consumers having access to suitable arrangements for dealing with any complaints in a timely manner, and for obtaining appropriate remedies.

Reasons for encouraging customer network owners to comply

6.8 The RAG has taken the view that only customer networks are classified as retailers. As such, the recommended terms and conditions for domestic electricity supply are only applicable to customer network owners.

6.9 Key reasons for the Authority to encourage customer network owners to comply with the recommended terms are:

- to promote competition in the retail electricity market
- to promote the efficient operation of the electricity industry.

6.10 The publication of the terms, coupled with annual monitoring of compliance with them, may be used by consumers to inform their decisions about whether to be supplied by a customer network owner. Closely linked with this is the opportunity for customer network owners to seek to leverage competitive advantage off this market facilitation measure by highlighting to consumers the quality of their residential electricity offerings.

6.11 Possible examples of the way in which this market facilitation measure may promote the efficient operation of the electricity industry include:

- providing an opportunity to reduce transaction costs for consumers seeking to compare the quality of electricity-related contractual arrangements proposed by customer network owners

- helping to reduce the likelihood of customer network owners offering contracts that impose unreasonable costs on consumers and/or industry participants (eg, imposing high complaint resolution costs).

Reasons for not encouraging customer network owners to comply

6.12 The recommended terms are intended for those parties whose core business is retailing electricity. Applying this market facilitation measure to customer network owners would add a layer of complexity to contractual arrangements that include domestic electricity supply as an incidental service (eg, residential tenancy agreements). The present value of the cost of incorporating a material number of additional terms into possibly thousands of contracts of this nature is expected to be significant. The cost could possibly be measured in many hundreds of thousands, if not millions, of dollars.[5]

6.13 The present value of the cost of the Authority encouraging and monitoring compliance by hundreds, if not thousands, of customer network owners is also expected to be measured in many hundreds of thousands, possibly millions, of dollars.[6]

Conclusion

6.14 Based on the discussion above, under the working assumptions the costs of encouraging and monitoring customer network owners' compliance with the recommended terms and conditions for domestic electricity contracts are expected to exceed the benefits.

6.15 The competition benefits listed above, and the first of the efficiency benefits described above, are expected to be small. This is because most consumers being supplied by customer network owners choose to be supplied because of other benefits (eg, they like the apartment they are living in).

6.16 The main benefit of encouraging and monitoring customer network owners' compliance with the recommended terms and conditions would appear to be the second efficiency benefit listed above. However, a lower cost way of achieving this benefit may be via promoting the UDL scheme. This alternative approach would certainly be lower cost for customer network owners and consumers who are satisfied with their existing contractual arrangements.

Recommendation: The Authority should not proactively encourage and monitor customer network owners to comply with the recommended terms for domestic electricity contracts.

Medically dependent and vulnerable consumers guidelines

Introduction

6.17 The MDC guideline and the VC guideline suggest actions designed to assist retailers and VCs/MDCs to avoid or at least minimise:

- non-payment of electricity bills by VCs/MDCs
- the accumulation of debt by VCs/MDCs
- the accumulation of credit risk by retailers

[5] Assuming a 10 year discount period at 8% with no inflation.

[6] Assuming a 10 year discount period at 8% with no inflation.

- the disconnection of VCs for non-payment of electricity bills, which is costly for both the retailer and the VC.

6.18 In addition, the MDC guideline is intended to assist retailers in ensuring that no MDCs are disconnected for reasons of non-payment of an electricity bill. This gives effect to a government policy objective.

Reasons for encouraging customer network owners to comply

6.19 The RAG has taken the view that only customer networks are classified as retailers. As such, MDC/VC guidelines are only applicable to owners of customer networks.

6.20 As a matter of principle, the MDC/VC guidelines should also apply to parties who bill consumers directly for electricity supply and can exercise the powers to disconnect a consumer's electricity supply.

6.21 Key reasons for the Authority to encourage customer network owners to comply with the MDC guideline and the VC guideline are:

- to promote reliable supply by the electricity industry
- to promote the efficient operation of the electricity industry.

6.22 Supply interruptions may impose very large costs on MDCs as well as substantial costs on vulnerable consumers, and impose significant costs on suppliers. The MDC guideline in particular, and the VC guideline to a lesser extent, act to reduce the risk of relatively large but uncertain costs, in return for lower but more certain costs.[7] Consideration of this trade-off is a matter for the Authority under the second limb of its objective.

6.23 The process of disconnecting electricity consumers for reason of non-payment may impose inefficient costs on consumers and suppliers. Encouraging and monitoring compliance with the MDC guideline and the VC guideline promotes the efficiency limb of the Authority's objective, to the extent that it promotes the removal of inefficiencies in the disconnection process.

Reasons for not encouraging customer network owners to comply

6.24 The MDC guideline and the VC guideline apply to domestic electricity consumers only. They therefore do not apply to customer network owners who supply electricity to non-residential consumers only.

6.25 For customer network owners that supply electricity to residential consumers, this market facilitation measure would add a layer of complexity over existing contractual arrangements that include domestic electricity supply as an incidental service.

6.26 Both guidelines were originally intended for those parties whose core business was supplying electricity, and who might consider discontinuing this service if a residential customer did not pay. The MDC guideline and the VC guideline were not intended for parties whose supply of electricity was incidental to their core business, and who were unlikely to stop supplying electricity to a residential customer if that customer did not pay for the main good/service. For example, a

[7] The MDC Guideline may be thought of as an example of tailoring security and reliability to the preferences of individual electricity consumers.

customer network owner might be expected to consider evicting a tenant over unpaid rent, rather than disconnecting the electricity.

6.27 The present value of the cost of the Authority encouraging and monitoring compliance by hundreds, if not thousands, of customer network owners who are retailers, or who, as distributors, directly bill their customers, is expected to be measured in many hundreds of thousands of dollars, possibly more.[8]

Conclusion in relation to the VC guideline

6.28 Based on the discussion above, under the working assumptions the cost of encouraging and monitoring compliance with the VC guideline might be expected to be higher than the benefit.

6.29 Retailing electricity is often not the core business of customer network owners who supply electricity to domestic consumers. Property management fees and rents (as applicable) are often a more significant source of revenue and earnings. By implication, customer network owners face a greater risk of non-payment by residential consumers in relation to these costs, than in relation to electricity. Customer network owners are therefore more likely to take other actions to recover these other costs before they need to take action to recover unpaid electricity bills.

6.30 Therefore, the Authority might not wish to proactively encourage and monitor customer network owners' compliance with the VC guideline.

Recommendation: The Authority should not proactively encourage and monitor customer network owners with the VC guideline

Conclusion in relation to the MDC guideline

6.31 It is more difficult to determine the net benefit associated with the Authority actively encouraging and monitoring customer network owners' compliance with the MDC guideline under the working assumptions.

6.32 As with vulnerable consumers, customer network owners who retail electricity are more likely to take actions to recover larger costs, such as rent, from MDCs, rather than relatively smaller costs such as electricity. This reduces the likelihood of MDCs on customer networks being disconnected by a customer network owner for reason of non-payment of electricity. The benefit of the Authority proactively encouraging and monitoring customer network owners' compliance with the MDC guideline would therefore be expected to be lower than the Authority doing so for parties whose core business is retailing electricity.

6.33 On the other hand, the cost associated with disconnecting an MDC on a customer network could potentially be extremely high.

6.34 On balance, there may be a net benefit in undertaking some proactive communications with customer network owners over the importance of identifying MDCs to whom they retail electricity. One possible avenue is to leverage on the Electricity Retailers Association of New Zealand's work programme on MDCs to reach out to customer networks. This would be in lieu of the Authority proactively encouraging and monitoring customer network owners' compliance with the MDC guideline.

[8] Assuming a 10 year discount period at 8% with no inflation.

6.35 In fact, the Authority might seek to communicate with customer network owners more generally. The purpose of doing so would be to highlight to customer network owners who act as distributors the importance of knowing whether any MDCs are connected to their respective networks.

6.36 The expected cost of undertaking such communications might be expected to be cheaper than the cost of encouraging and monitoring compliance by customer network owners with the MDC guideline.

Recommendation: The Authority should facilitate proactive communication with customer network owners over the importance of identifying MDCs to whom they retail electricity, instead of proactively encouraging and monitoring customer network owners' compliance with the MDC guideline

Communication of price changes to consumers

Introduction

6.37 The Authority's guidelines for communications about price changes provide guidance to retailers and distributors on their communications to consumers and the media concerning price changes.

6.38 The guidelines aim to ensure:

- consumers receive accurate and timely information about the reason for price changes
- consumers have access to meaningful information about price changes, such as the effect of price changes on monthly and annual bills
- statements made to media and consumers about price changes are consistent across industry spokespersons.

Reasons for encouraging secondary network owners to comply

6.39 Under the working assumption, all secondary network owners would be classified as distributors while customer network owners would be classified as retailers. As such, the Authority's guidelines for communications about price changes apply to all secondary network owners.

6.40 However, owners of network extensions may not be determining price changes and directly communicating with consumers on pricing. In such circumstances, the guidelines are not applicable to owners of network extensions.

6.41 Key reasons for the Authority to encourage secondary network owners to comply with the guidelines are:

- to promote competition in the retail electricity market
- to promote the efficient operation of the electricity industry.

6.42 The guidelines facilitate the communication of accurate, timely, meaningful and consistent information to consumers about the reasons for price changes. If retailers and distributors followed these guidelines, the potential for consumers to be confused about the reasons for price changes should be reduced, and consumers' confidence and level of engagement in the electricity market should be increased. Increased consumer confidence and engagement is expected to promote retail competition and enhance the durability of the electricity market.

6.43 If retailers and distributors followed these guidelines, there is a lower chance of retailers, distributors and the Authority spending time and effort addressing inconsistent information

provided by distributors and retailers. This improves the operational efficiency of the electricity industry.

Reasons for not encouraging secondary network owners to comply

6.44 The Authority's compliance focus in relation to these guidelines is on public comments made by retailers and local network distributors about each other's pricing announcements. Experience is that retailers and secondary network owners do not make public comments about each other's pricing announcements.

6.45 It would therefore be an inefficient use of the Authority's resources to encourage and monitor secondary network owners' compliance with the guidelines.

Conclusion

6.46 Based on the discussion above, under the working assumptions the cost of encouraging and monitoring secondary network owners' compliance with the guidelines for communications about price changes would be expected to be higher than the benefit. Therefore, the Authority should not proactively encourage and monitor secondary network owners' compliance with these guidelines.

Recommendation: The Authority should not proactively encourage and monitor secondary network owners' compliance with the guidelines for communications about price changes

Distribution pricing principles

Introduction

6.47 The Authority publishes distribution pricing principles to guide distributors when they are determining the structure of their distribution prices. The pricing principles set out an expectation that distribution pricing structures are to promote the long-term benefit of consumers, by being efficient. More specifically, the pricing principles encourage distributors to minimise the cost of providing lines services and to signal the economically efficient cost of supplying different consumers on their networks.

6.48 Under the working assumption, the Act will be amended so that all secondary network owners (not just embedded networks) providing services similar to those provided by a local network distributor are captured by the definition of distributor. With this understanding, all secondary network owners should be encouraged to adopt distribution pricing principles.

Reasons for encouraging secondary network owners to comply

6.49 Key reasons for the Authority to encourage secondary network owners to comply with the distribution pricing principles are:

- to promote reliable supply by the electricity industry
- to promote the efficient operation of the electricity industry.

6.50 The distribution pricing principles facilitate efficient investment in the electricity industry by providing incentives for the right investments to occur at the right time and in the right place. These investments can be in distribution networks, the national grid, generation (including distributed generation), or in demand-side management (ie, by electricity consumers).

6.51 The distribution pricing principles also facilitate the efficient operation of distribution networks, the national grid, generation (including distributed generation) and demand-side management. This

means providing incentives for the day-to-day operation of distribution, transmission, generation and demand-side infrastructure to involve an efficient trade-off between reliability and cost.

Reasons for not encouraging secondary network owners to comply

6.52 The key reason for not encouraging secondary network owners to comply with distribution pricing principles and monitoring their compliance would be the cost for the Authority to identify all the secondary networks.

Conclusion

6.53 Based on the discussion above, under the working assumptions the cost of encouraging and monitoring compliance might be expected to be higher than the benefit. Therefore, the Authority might wish to encourage and monitor secondary network owners' compliance with the distribution pricing principles only where the Authority considers the potential economic efficiency and reliability benefits exceed the cost of the Authority's compliance activities.

Recommendation: The Authority should encourage and monitor secondary network owners' compliance with the distribution pricing principles only where the Authority considers the potential economic efficiency and reliability benefits exceed the cost of the Authority's compliance activities.

Customer Compensation Scheme

Introduction

6.54 The Customer Compensation Scheme (CCS) was introduced to manage the risk that a dry year could lead to energy shortage conditions. Under the CCS, retailers must pay compensation to their qualifying customers during an official conservation campaign (OCC) to support efficient security of supply. The requirement for retailers to compensate customers removes the incentives for retailers to lobby for OCCs as a 'free option' to reduce their exposure to high spot market prices during periods of tight supply.

6.55 Under the current regulations, retailers are subject to CCS requirements as set out in the Code. Retailers can also offer their own additional compensation schemes that their customers may choose to adopt. The working assumption is that customer network owners are covered by the current definition of retailer in the Act.

6.56 It is noted that retailers (as opposed to owners of embedded networks and network extensions) are already selling electricity on embedded networks and network extensions and responsible for directly compensating consumers on the ICPs which they operate.

6.57 For customer networks, owners of customer networks are the right party to compensate their consumers as they are effectively serving as the electricity retailer for consumers and can directly compensate tenants during OCCs.

Reasons for encouraging customer network owners to comply

6.58 The key reason for the Authority to encourage customer network owners to comply with the CCS is to mitigate the risk that a lack of compensation for customers on customer networks could undermine the effectiveness of OCCs during periods of heightened supply shortage.

Reasons for not encouraging customer network owners to comply

6.59 The key reason for not encouraging and monitoring compliance with CCS by customer network owners would be the cost for the Authority to identify them and ensure compliance.

6.60 There may be CCS-specific exemptions on certain secondary network owners due to the nature of their business. For example, it is not possible for hotels to compensate their guests for participating in the OCCs. Similarly, occupants of retirement villages may not exceed the 3000 kWh a year threshold for receiving a payment.

Conclusion

6.61 Together with the stress test regime and scarcity pricing, the CCS plays a critical role in ensuring the security of supply during periods of tight supply. In particular, the system operator will only trigger OCCs once controlled storage in hydro lakes falls to levels that indicate an OCC is needed to avoid energy shortage.

6.62 In this regard, customer network owners should be encouraged to comply with the CCS to the extent the Authority considers the potential economic efficiency and reliability benefits exceed the cost of the Authority's compliance activities.

Recommendation: Owners of customer networks should be encouraged to comply with the CCS requirements and such compliance should be monitored only where the Authority considers the potential economic efficiency and reliability benefits exceed the cost of the Authority's compliance activities.

7 Key initiatives to further the Authority's statutory objectives

RAG considered if consumers on customer networks should be able to choose their electricity retailer

7.1 Consumers on a customer network do not have individual choice of electricity retailer. Consumers on a customer network agree to the customer network owner, or its agent, delivering retail electricity services when entering into an occupancy or tenancy agreement.

7.2 The electricity supply arrangements may not be something a consumer focuses on when renting or buying an apartment or office space. The RAG understands that consumers may be unaware of their inability to have individual choice of retailer when they enter into a sale or lease agreement.

7.3 If a consumer on a customer network were to seek individual choice of retailer:

1) The consumer may face contractual restraints on their ability to have individual choice

2) The consumer may have to pay for the installation of a compliant metering installation and necessary infrastructure and/or to have their electricity consumption reconciled separately from other consumers on the customer network.

7.4 The benefits to a consumer from being on a customer network may offset the cost to the consumer of not being able to choose their own retailer. Relative to having individual choice, the benefits might include, for example:

1) The customer network owner possibly being able to negotiate a volume discount with retailers and the local network distributor, resulting in the consumer on the customer

network paying less than if they were individually contestable. In this way a customer network arrangement is similar to a group buying scheme arrangement.

2) The consumer having the convenience of dealing directly with the customer network owner, who is often (but not always) the same person that owns the building and bills the consumer.

3) If a body corporate is responsible for selecting the retailer to supply the customer network, the consumer feeling a sense of community by being part of the body corporate's decision-making process.

4) Avoidance of the capital and operating costs of:

   (i) having a certified metering installation for the consumer on the customer network, although the accuracy of the consumer's electricity bill may be lessened, and

   (ii) maintaining registry and reconciliation functions and Authority audit requirements for the consumer on the customer network.

5) Despite these potential benefits, a consumer on a customer network may decide there is a greater benefit to them from being supplied electricity by someone other than the customer network owner (or its agent). For example, consumers who are part of a national chain will be operating on different customer networks. Such consumers may be able to access bulk discounts from a retailer for its all outlets across different customer networks if they could opt out of customer network supply.

7.5 The Code does not explicitly provide for consumers on customer networks to have the right to this choice.

7.6 Submissions on the RAG's 2015 discussion paper were mixed in their comments on the problem with customer networks. Some submitters believed there is no need to intervene in customer network arrangements. Pioneer Generation and TENCO EBS submitted that the customer network owner's ability to obtain a bulk discount would benefit a consumer on a customer network more than would individual choice. Orion submitted that the Authority should not intervene just because consumers on customer networks may not focus on the electricity supply arrangements when entering into an occupancy or rent agreement. Smart Power stated that it is not the electricity industry's mandate to dictate how lease agreements for properties are constructed or communicated to their customers.

7.7 Other submitters raised issues highlighting that consumers on customer networks are missing out on potential benefits. The UDL asked if the RAG had considered collecting empirical evidence supporting the view that savings are passed on to consumers on customer networks. Genesis Energy's view was that customer network owners would make choices based on their best interests, not the end consumer's. Mighty River Power noted that medically dependent consumers are often not readily identifiable on customer networks.

7.8 The RAG has considered feedback on its 2015 discussion paper.

7.9 The RAG considers that if a consumer on a customer network should be granted the right to choose their electricity retailer, they should be prepared to pay all reasonable costs associated with doing so (ie, a user-pay arrangement). Consumers would pay the incremental cost of being able to choose

their electricity retailer, including the costs associated with having in place the metering, registry and reconciliation arrangements required for them to have individual choice of electricity retailer.[9]

7.10 Providing consumers with the ability to individually choose their electricity retailer would promote competition between electricity retailers and customer network owners in the retail supply of electricity. This would be expected to lessen the incentive on customer network owners to price electricity above the cost of supply (or at least the incentive to price electricity above the marginal cost incurred by a consumer exercising individual choice of retailer).

But there are reasons not to interfere with existing market arrangements

7.11 While such a pro-competition initiative would further the first limb of the Authority's statutory objective, it could also result in an overall economic loss for the economy. This would occur if the cost of enabling consumer choice on customer networks were to be greater than the benefit that consumers, retailers and society more generally would receive.

7.12 One of the key benefits for consumers within customer networks is the bulk discount associated with a greater bargaining power. Consequently, consumers opting out of this arrangement will reduce the bargaining power for the remaining consumers and potentially dilute the discounts.

7.13 In addition, any re-wiring work needed to allow a particular consumer to be individually metered may result in higher network tariffs for all other consumers, even though the incremental cost is to be borne by the user.

7.14 RAG also recognised that owners of customer networks usually charge for bundle services of which electricity is just an incidental component. Even if the Authority put into effect measures to promote consumer choice for electricity supply, consumers are still effectively captive customers since they still need to contract with the customer network for non-electricity components (eg, water, refuse disposal, rent) in the bundle. It is possible for owners of customer networks to increase prices for the non-electricity components after electricity is carved out. The Authority has no legislative powers to regulate prices for non-electricity components of such bundled services.

7.15 The RAG also envisage strong opposition from customer network owners, who made initial investment in network infrastructure and ongoing operating costs of a new sub-division in the network when other parties (eg, local distributors) are unwilling to do so. Allowing for consumers to be supplied by alternative physical arrangements will directly undermine the investments made by owners of customer networks, even if a user-pay arrangement is adopted.

7.16 Instead of focussing on competition within customer networks, it is worthwhile considering if competition exists amongst customer networks in the market. The RAG is of the view that different

[9] There are three scenarios. Each has different costs. Choice of retailer for customers on a customer network is unlikely to be practicable in many situations. The three scenarios are:

1. The customer network becomes an embedded network for that one customer. All remaining customers are supplied by the customer network. The customer will incur set-up and ongoing costs.
2. The customer network becomes a network extension for that one customer. All remaining customers are supplied by the customer network. The customer will incur set-up and ongoing costs, including paying to extend the service line from their premises to the local network (ie, rewiring the building).
3. The customer network becomes a network extension for all customers. This occurs if the customer cannot rewire the building to create a separate service line.

customer networks do compete to provide differentiated services to consumers and consumers can already exercise choice by selecting the customer network that best suit their needs.

7.17 A consumer is also expected to exercise due diligence when they choose to locate themselves within a particular customer network. This includes being aware of how their electricity consumption is charged, and agreeing to be locked in by the customer network for supply of electricity, before signing any residential tenancy agreement.

7.18 In view of the above, the RAG believes that it is not warranted at this stage to impose a Code amendment to grant consumers choice on customer networks. This could be overly intrusive and lead to adverse consequences. It is also not entirely clear if such a proposal will reap net benefits for all consumers on customer networks.

7.19 The RAG is of the view that consumers would benefit more if consumers are educated on what they should look out for when deciding to reside, or are residing within, a customer network and the avenues for consumers to seek redress in the event of disputes with the owners of customer networks, when unfair conditions are imposed upon them or if any guaranteed quality of service is not met.

7.20 In particular, RAG is aware that consumers on customer networks would have access to the approved dispute resolution scheme under the Act which requires distributors and retailers to belong to an approved scheme. The only scheme that is currently approved is operated by UDL.

7.21 Other consumer protection laws could also apply. In particular,

a. The Consumer Guarantees Act 1993 implies a guarantee of quality into the services provided by retailers and prohibits unfair contract terms.

b. The Fair Trading Act (FTA) 1986 regulates trading conduct and prohibits:

(i) misleading and deceptive conduct generally

(ii) unsubstantiated claims

(iii) false representations

(iv) unfair practices

(v) unfair contract terms.

7.22 The FTA is regulated by the Commerce Commission, which may decide to prosecute. Individuals can bring a claim in the Disputes Tribunal or District Court.

7.23 The RAG believes that with proper education and enough information, consumers who wish to have a choice of electricity retailer and place a high priority on electricity supply (vis-à-vis other components of bundle services) would choose not to reside within customer networks. Over time, customer networks that wish to attract such consumers would change their business model and possibly convert to other forms of secondary networks where consumers would have a choice over their electricity retailer.

Recommendation: Consumers should be educated on what they should look out for when residing within a customer network and the avenues for which they could seek redress in the event of disputes, when unfair conditions are imposed upon them or the guaranteed quality of service is not met.

7.24 It is also important that the pricing of bundle services be more transparent so that customers can make informed decisions when consumers are shopping around for customer networks. This entails breaking down the charges for each service component within a bundle. For electricity supply services, it is also recommended that customer networks provide a breakdown of network charges and energy charges.

7.25 Increased transparency would facilitate greater competition between customer networks and impose pricing discipline – essentially making sure that each component is competitively priced and that the owners are passing the true costs to operate to consumers. The owners of customer networks with transparent pricing will also nurture greater credibility with existing and prospective consumers.

Recommendation: The Authority should encourage owners of customer networks to provide greater transparency on their pricing of services to consumers.

There should be a default UoSA for embedded networks

7.26 The RAG has identified that the higher cost for electricity retailers to serve consumers on embedded networks may result in some retailers either not competing on embedded networks, or competing less vigorously on embedded networks than on local networks.

7.27 All else being equal, the cost for a retailer to serve a consumer on an embedded network is expected to be higher than the retailer's cost to serve a consumer on a local network. This is because of reduced economies of scale. A retailer typically undertakes the same activities on an embedded network as it does on a local network. For example, a retailer must, for both local networks and embedded networks:

1) Negotiate a UoSA to trade on the network
2) Establish and maintain tariffs for the network
3) Accommodate the network's operating practices, which may differ from the operating practices of other networks.

7.28 A retailer is typically able to spread the cost of these activities over a larger quantity of electricity supplied to a larger number of consumers on a local network than it can on an embedded network.

7.29 The higher per-customer cost to serve consumers on embedded networks might be expected to result in consumers on embedded networks paying higher electricity tariffs than consumers on a local network. This is unless the retailer spreads the cost of supplying its (relatively few) customers on an embedded network with its (relatively many) customers on a local network.

7.30 In a competitive market, retailers' ability to spread costs between consumers on embedded networks and consumers on local networks is limited. Retailers may choose not to compete to supply consumers on embedded networks if the cost of doing so is sufficiently higher than supplying consumers on local networks. This would, for instance, avoid potential reputational risk to the retailer from charging embedded network consumers a higher price than local network consumers.[10]

[10] A residential consumer in a central city apartment complex may not see a reason why they should pay more for their electricity than a residential consumer living in a house in the suburbs.

7.31 Some retailers consider the cost of establishing and maintaining a presence on embedded networks to be unnecessarily high relative to the number of consumers they might end up supplying.

7.32 When it comes to establishing a presence on embedded networks, retailers point to the cost of negotiating a UoSA for each embedded network owner as being unnecessarily high. The main problem with the current UoSA arrangements for embedded networks, as described by retailers, can be summarised as follows:

1) Embedded network owners have historically offered UoSAs with unique terms and conditions. The extent of atypical terms and conditions has been unnecessary. While not as prevalent now, such terms and conditions still exist in some new UoSAs proposed by embedded network owners.

2) The proposed terms of some embedded network UoSAs offered to retailers attempt to depart significantly from the Authority's guidelines for drafting a UoSA suitable for an embedded network. This can make it difficult for the parties to reach agreement in a timely manner.

3) The two issues described above mean that the industry-wide cost of negotiating UoSAs for embedded networks has been, and continues to be, higher than necessary (eg, requiring additional management time and legal review).

7.33 Retailers also point to the bespoke set-up of tariffs and loss factors for each embedded network as another unnecessarily high cost associated with establishing a presence on embedded networks.

7.34 When it comes to maintaining a presence on embedded networks, retailers point to the following issues:

1) The varied UoSAs impose different operating requirements on retailers, which increases retailers' ongoing operating costs unnecessarily.

2) Non-standard reporting and data exchange requirements and processes used by embedded network owners impose unnecessary costs on retailers.

3) Each embedded network requires the bespoke maintenance of tariffs and loss factors for a relatively low number of customers.

4) Retailers incur unnecessary costs managing customer queries misdirected to the retailer because of customers' uncertainty about who is responsible for which services on the embedded network (eg, fault management).

7.35 The effect of the issues summarised above is that some retailers are not competing to supply consumers on embedded networks, or they are competing less vigorously than they would if these issues were to be addressed.

7.36 Submissions on the RAG's 2015 discussion paper were divided on the effect that embedded networks have on retail competition.

7.37 On the one hand, several submitters considered that embedded networks adversely affect competition (Mighty River Power, Nova Energy, Smart Power). A significant minority of submissions believed that consideration should be given to whether embedded networks are permitted and/or should be reclassified as network extensions and/or whether a *de minimis* should be met before an embedded network can exist. Four of these submitters were retailers (Contact Energy, Mighty River Power, Nova Energy and Trustpower), while the fifth was a local network (Orion).

7.38 On the other hand some submitters considered that embedded networks do not adversely affect competition (Auckland Airport, TENCO EBS). TENCO EBS, a provider of services to embedded networks, presented analysis indicating that:

1) Competition is higher on embedded networks than on local networks
2) The cost of serving customers on embedded networks should be lower than for local networks, because embedded networks are more likely to use standard data formats and standard means of transferring files.

7.39 RAG has ascertained that on an average basis, retail competition is lower on embedded networks than on local networks. In October 2016, the Herfindahl-Hirschman Index (HHI) on embedded networks was 3474, compared to that of 2759 on local networks. A higher HHI implies less competition.

7.40 The RAG has considered feedback on its 2015 discussion paper. Its recommendations are set out below.

Recommendation: There should be a default UoSA for embedded networks

7.41 The RAG considers there are likely to be material net benefits from developing a default secondary network UoSA. This default agreement will act as a 'fall back', to apply at the end of a certain negotiating period if parties cannot agree to terms. The length of the negotiating period (eg, 2 months) should be included in the default UoSA.

7.42 Compared with the status quo, a default UoSA for embedded networks should reduce the negotiating costs retailers and embedded network owners currently face when entering into UoSAs. It should also reduce ongoing operating costs for retailers and, quite possibly, embedded network owners. A default UoSA for embedded networks would therefore further the competition limb of the Authority's statutory objective, as well as the efficiency limb.

7.43 The Authority is currently considering whether there should be a default distributor agreement for local networks. The bases for the RAG's recommendation are similar to those put forward in support of a default distributor agreement. The RAG notes there are, however, some subtle differences in the arguments for a default UoSA for embedded networks compared with the arguments for a default distributor agreement. These differences include:

1) There are significantly more embedded networks in New Zealand than there are local networks
2) The number of consumers on embedded networks is substantially fewer than on local networks
3) The commercial incentives are less for embedded network owners and retailers supplying consumers on embedded networks, than they are for local network distributors and retailers supplying consumers on local networks
4) The bargaining strength of local network distributors differs from that of embedded network owners, as does that of retailers vis-à-vis local network distributors and embedded network owners.

Embedded networks should be encouraged to adopt distribution pricing principles

7.44 Bespoke network tariffs imposed by embedded networks impose a higher cost to serve as electricity retailers have to spend more to construct products, flexibility on product offerings is limited and it is more difficult for electricity retailers to establish presence on embedded networks.

7.45 The RAG deliberated on whether a cap should be placed on network charges on embedded networks to limit charges to those of the parent network. This would guarantee that in terms of pricing, customers serviced by embedded networks would not be worse off than those on local networks.

7.46 However, the RAG felt that it would not be beneficial to restrict network charges in a manner which does not take into account the commercial realities faced by developers/owners of embedded networks, who undertake the investment risk when no other parties were willing to do so. The RAG also noted that one of the contributing factors to the higher cost to serve on embedded networks, relative to parent networks, is because developers/owners have to bear higher initial capital contribution, which is subsequently recovered from consumers some time later.

7.47 Requiring owners of embedded networks to charge no more than their parent network could undermine the investment made by existing owners of embedded networks and deter future investment in embedded networks. As noted earlier, the RAG believes that secondary networks, including embedded networks, could well be a permanent feature of future electricity supply in New Zealand. Limiting the network charges would not be consistent with promoting competition in the electricity sector.

7.48 For the long term benefit of consumers, network charges on embedded networks should instead be service based and cost reflective. The distribution pricing principles set out an expectation that distribution pricing structures are to promote the long-term benefit of consumers by being efficient. More specifically, the pricing principles encourage distributors to minimise the cost of providing lines services and to signal the economically efficient cost of supplying different consumers on their networks.

7.49 Adopting distribution pricing principles would not only result in economically efficient pricing, but the reduced complexity would allow electricity retailers to more easily create products and lower the cost to serve on embedded networks. This will lead to increased competition and ultimately benefit consumers.

Recommendation: Embedded networks should be encouraged to adopt distribution pricing principles in their network pricing structures.

7.50 Separately, RAG would like to recommend the following initiatives to improve coordination between parties in an embedded network:

1) An embedded network owner should not be able to decommission the network supply point (NSP) for an embedded network before:

   - (for an embedded network conversion to a customer network) the embedded network owner changes, to 'Decommissioned', the status in the registry of all ICP identifiers associated with the NSP identifier

- (for an embedded network conversion to a network extension) all ICP identifiers associated with the NSP identifier, and with an 'Active' or 'Inactive' status, have been assigned to another NSP identifier in the registry

2) All participants affected by an intended change of an embedded network to another type of secondary network, other than market operation service providers, should be provided a minimum of 40 business days' notice of the intended change. This also applies to changes from a network extension to another type of secondary network.

7.51 Contact Energy raised the following efficiency-related issues with customer networks in its submission on the RAG's discussion paper:

1) The process to establish a new ICP and obtain metering and consumer information for the customer network takes a significant amount of time for the retailer to complete and set up. There is no standardised automated process for a new customer network, unlike standard new connections, which are largely process driven.

2) In some cases the physical wiring of connection points contains a significant number of meters across multiple floors of a building (eg, one ICP, 40 meters, across 10 floors).

7.52 The RAG has considered Contact Energy's feedback.

7.53 The RAG considers an industry-led approach would best identify ways to improve the process(es) by which retailers start supplying consumers on customer networks. To this end, the RAG considers an industry body such as the Electricity Retailers Association of New Zealand (ERANZ) Retailer Forum is well placed to work with representatives of customer networks and MEPs to consider ways in which the process(es) can be made more efficient.

Recommendation: Retailers can work with representatives of customer networks and MEPs to consider ways of improving the efficiency of the process for retailers to start supplying consumers on customer networks.

Standardised processes and data transfer formats for embedded networks

7.54 The RAG considers there are likely to be net benefits from greater standardisation of processes associated with embedded networks and of formats for the exchange of data with embedded networks. Greater standardisation will reduce the number of bespoke processes used by retailers and embedded network owners. This is expected to reduce the current level of transaction costs that retailers and embedded network owners incur when dealing with each other.

7.55 This is expected to not only deliver efficiency benefits, but also competition benefits. Retailers will be more likely to compete to supply consumers on embedded networks if the cost of supplying customers falls. Both the efficiency and competition limbs of the Authority's objective are therefore expected to be furthered by more standardisation.

7.56 In its 2015 discussion paper, the RAG indicated its expectation that the benefits from greater standardisation would accrue to retailers and consumers. Feedback on the RAG's 2015 discussion paper indicated the benefits would accrue to some embedded network owners as well.[11]

[11] See TENCO EBS's submission.

7.57 The RAG notes that a default embedded network UoSA arrangement would mandate the use of Electricity Information Exchange Protocols (EIEPs) 1, 2, 3 and 12.[12] This would then standardise the process and format for the exchange of line charge billing and related information between embedded network owners and traders (retailers).[13] The RAG notes that the use of EIEPs 1, 2, 3 and 12 is mandatory for local network distributors.[14]

Defining parties' roles in managing faults on secondary networks

7.58 The RAG has identified that the time required to resolve a fault on all types of secondary network can be longer than necessary. Consumers may be confused about who to contact to resolve the fault on customer networks and embedded networks. For network extensions, the retailer for a consumer reporting a fault may not know the consumer is located on a network extension. This results in the associated local network distributor incorrectly being asked to identify and resolve a fault when the responsibility for doing so lies with the network extension owner.

7.59 Retailers have informed the RAG that when consumers on a secondary network experience a fault, they often telephone a retailer's call centre, even though it is the secondary network owner who is responsible for managing the fault.

7.60 A coordination problem therefore appears to exist between retailers, secondary network owners, local network distributors and consumers. Longer than necessary faults could be frustrating and/or costly for the consumers.

7.61 Submissions on the RAG's 2015 discussion paper stated that fault management and reliability of supply on secondary networks do not appear to be significant issues.

7.62 The RAG has considered feedback on its 2015 discussion paper. Its recommendation is set out below.

Recommendation: Parties' role in managing faults on customer networks and network extensions could be better defined by amending the Guidelines for Secondary Networks. For embedded networks, the default UoSA should define parties' roles in managing faults.

7.63 The RAG recommends the Guidelines for Secondary Networks describe an operational process for managing faults on customer networks and network extensions.

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12 Retailers and distributors are required to use EIEPs 1, 2, 3 and 12 if they have entered into a UoSA.

13 EIEP 1 sets out a format for traders (retailers) to use when providing billing and volume information to distributors at an ICP level. This is to support the invoicing of fixed and variable line charges where time periods used in the tariffs are greater than 30 minutes, and/or to meet operational information requirements of the distributor. It also allows distributors to provide information to traders to support line charge invoices and traders to reconcile the distributor's line charges.

EIEP 2 sets out a format for traders to use when providing aggregated EIEP 1 billing and volume information to distributors. It can also be used by distributors to provide information to traders which supports the distributor's invoice and assist with reconciliation of the distributor's charges.

EIEP 3 sets out a format for traders to use when providing billing and volume information to distributors at an ICP level, to support the invoicing of fixed and variable line charges where half hour metering information is required. For embedded networks this EIEP allows embedded network owners to provide billing and volume information to the parent network owner.

EIEP 12 sets out a format for distributors to use when notifying retailers of changes to tariffs, including the introduction or removal of tariffs.

14 Refer to clauses 12A.13 and 12A.14 of the Code.

7.64 The RAG considers that better communication and coordination between secondary network owners and retailers would assist in reducing the number of consumers contacting the wrong party to report a fault.

7.65 The RAG believes that flexibility in the area of fault management on secondary networks is more important for parties than certainty. This is because specifying the full range of scenarios for managing faults on secondary networks is difficult. Faults could be caused by the local network or be within the secondary network. This would make developing a Code amendment difficult.

7.66 The Guidelines for Secondary Networks were developed to assist participants to manage their Code obligations in relation to secondary networks and to assist participants to manage the appropriate allocation of line charges. Expanding their scope to include the management of faults on customer networks would be in keeping with the basis for first developing the guidelines.

7.67 The RAG notes that amending the Guidelines for Secondary Networks is also a course of action consistent with submitters' feedback that fault management and reliability of supply on secondary networks do not appear to be significant issues.

7.68 There may be learnings that can be drawn from the work of ERANZ's Retailer Working Group. It currently has a sub-group looking at how to improve the reliability and effectiveness of current approaches to communicating information on unplanned and planned power outages.

7.69 For embedded networks, the RAG considers that the coordination problem is most appropriately addressed through its inclusion in the UoSA between the embedded network owner and the retailer(s) supplying consumers on the embedded network. This would be consistent with the approach adopted for local networks.

Ensuring efficient uptake of distributed energy resources on secondary networks

7.70 Owners and consumers on secondary networks should undergo processes similar to their parent networks in terms of installing and operating distributed energy resources (DERs) on their premises.

7.71 The Authority needs to ensure that DERs are deployed safely on secondary networks and that the uptake of DERs does not adversely affect the reliability of electricity supply to consumers.

7.72 At present, Part 6 of the Code (i.e. the framework for connection of distributed generation) applies only to distributed generators intending to connect or has distributed generation connected to an embedded network that conveys more than 5 GWh of electricity per annum. As embedded networks proliferate, it is timely to review if Part 6 should be applied to distributed generators on all embedded networks, not just larger embedded networks.

7.73 It is also not explicit that Part 6 of the Code applies to customer networks. Given that the Authority has no oversight over the process between owners and consumers with regard to establishing DER connections on customer networks, it is worthwhile that a review is conducted on Part 6 regulations to ensure that the connection framework for DER also applies to customer networks, that consumers are not prevented from establishing such connections on customer networks (eg, exorbitant charges to install and connect DER, network not configured to support DER), and that DERs can be deployed in customer networks in a safe and reliable manner.

7.74 As network extensions are essentially operated by distributors, the existing connection framework already applies to any distributed generation located within network extensions.

Recommendation: A review should be conducted to assess if the framework for connection of distributed generation should apply to DERs on all embedded networks and customer networks.

Appendix A Current scope of the Authority's regulatory activities

A.1 This appendix describes what the Authority's regulatory activities *would* be under the existing broad definition of "retailer" in the Act, and under a relatively broad definition of "distributor" in the Act.

Working assumption: a broad definition of "distributor"

A.2 The owners of each of the three types of secondary network are not covered by the current definition of distributor in the Act. For the purposes of the analysis in this paper, it is assumed that the Act is amended so that all secondary network owners providing services similar to those provided by a local network distributor are captured by the definition of distributor.

Working assumption: no change to the definition of "retailer"

A.3 A related working assumption is that there is no change to the definition of retailer.

A.4 Based on the legal advice obtained by the Authority, under this working assumption customer network owners appear to be covered by the current definition of retailer in the Act. Embedded network owners and network extension owners may be captured by the definition of retailer, depending on the circumstances.

Secondary network owners' obligations under a broad definition of distributor

A.5 Under the working assumptions, ***all*** secondary network owners providing services similar to those provided by a local network distributor would need to:

- be registered as distributors with the Authority
- ensure they complied with Part 3 of the Act (separation of distribution from certain generation and retailing)
- be distributor members of the UDL scheme
- offer tariffs that assist electricity retailers to make available low fixed charge tariff options in accordance with the Electricity (Low Fixed Charge Tariff Option for Domestic Consumers) Regulations 2004 (LFC regulations)
- pay the distributor levy to the Authority
- comply with Code obligations on distributors, insofar as these applied to the secondary network owner (eg, the current version of the Code only places obligations on embedded network owners).

Secondary network owners' obligations under the definition of retailer

A.6 Under the working assumptions, ***all*** customer network owners providing services similar to those provided by a local network distributor and ***some*** embedded network owners and network extension owners would need to:

- be registered as retailers with the Authority
- be retailer members of the UDL scheme

- make at least one low fixed charge tariff option available for each of the delivered electricity packages that the secondary network owner, as a retailer, supplied to an electricity consumer's principal place of residence
- comply with Code obligations on retailers, insofar as these applied to the secondary network owner (eg, the Code currently does not require secondary network owners captured by the Act's definition of "retailer" to compensate consumers who are asked to conserve electricity during an OCC).

Secondary network owners' obligations under market facilitation measures

A.7 To provide for consistency of treatment across all retailers and distributors, under the working assumptions:

- all secondary network owners providing services similar to those provided by a local network distributor should be encouraged to comply with the market facilitation measures applying to distributors
- secondary network owners that fall within the definition of retailer in the Act should be encouraged to comply with the market facilitation measures applying to retailers.

Compliance with the Act

A.8 Under the working assumptions, the Authority's regulatory activities would, in accordance with the Act, extend to monitoring and enforcing the obligation on all secondary network owners providing services similar to those provided by a local network distributor:[15]

- to register as industry participants
- to comply with Part 3 of the Act
- to be a member of the UDL scheme
- to comply with the LFC regulations
- to comply with the Code.

A.9 This would be unless the Authority granted exemptions to secondary network owners under Parts 2 and 3 of the Act, or the responsible Minister granted exemptions under Part 4 of the Act or under the LFC regulations.

A.10 The Authority could, subject to the relevant exemption criteria in the Act being met, exempt *individual*[16] participants from:

- registering as an industry participant,[17] and/or

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15 To clarify, all secondary network owners providing services similar to those provided by a local network distributor would need to meet the obligations listed, in their capacity as distributors, while some secondary network owners would *also* need to meet some of the obligations in their capacity as retailers.

16 Class exemptions can only be granted by regulation.

17 The Authority may grant an individual exemption to an industry participant only if the Authority is satisfied that—

(a) it is not necessary, for the purpose of achieving the Authority's objective under section 15 of the Act, for the participant to be registered; and

- complying with Part 3 of the Act, and/or
- complying with the Code.[18]

A.11 The responsible Minister (currently the Minister of Commerce and Consumer Affairs) could grant to secondary network owners either an individual exemption or a class exemption from membership of the UDL scheme, if the exemption criteria in the Act were met.[19]

A.12 The responsible Minister (currently the Minister of Energy and Resources) could grant to secondary network owners an individual exemption from one or more provisions of the LFC regulations, if the exemption criteria in the LFC regulations were met.[20]

Payment of the industry levy

A.13 The Levy regulations require the Authority to invoice an annual levy on industry participants. The levy is payable to the Authority in monthly instalments in arrears.

A.14 Under regulation 6(5) of the Levy regulations, the Authority may waive the payment of one or more monthly instalments if the Authority considers the cost of invoicing the industry participant would exceed the amount to be recovered.

A.15 The Authority has previously waived the levy for some industry participants, under regulation 6(5). Under the working assumptions, the Authority would waive the payment of the distributor levy by secondary network owners in instances where the Authority considered the cost of invoicing the party would exceed the amount to be recovered.

The Code and market facilitation measures

A.16 The Authority is responsible for making Code and for monitoring and enforcing compliance with it.

A.17 The Authority is also responsible for undertaking market facilitation measures (such as providing education, guidelines, information, and model arrangements), and for monitoring the operation and effectiveness of these market facilitation measures.

A.18 Retailers (as defined in the Code) are encouraged to comply with the following key market facilitation measures:

- recommended terms and conditions for domestic electricity contracts
- recommended approach to managing medically dependent consumers[21] (MDC guideline) and vulnerable consumers[22] (VC guideline)

(b) exempting the participant will reduce overall administration and compliance costs.

18 The Authority may grant an individual exemption to an industry participant only if the Authority is satisfied that—

(a) it is not necessary, for the purpose of achieving the Authority's objective under section 15 of the Act, for that participant to comply with the Code or the specific provisions of the Code; and

(b) exempting the participant will reduce overall administration and compliance costs.

19 Refer to section 96 of the Act.

20 Refer to regulations 26 to 34.

21 A domestic consumer is medically dependent if a domestic consumer is dependent on mains electricity for critical medical support, such that loss of electricity may result in loss of life or serious harm. For the avoidance of doubt, medical

- communication of price changes to consumers.

A.19 Distributors (as defined in the Code) are encouraged to comply with the following key market facilitation measures:

- the MDC guideline and the VC guideline (only for those distributors that direct bill consumers on their networks)
- the distribution pricing principles
- communication of price changes to consumers.

A.20 Local network distributors and retailers operating on local networks are encouraged to use a model UoSA when negotiating retailers' use of a local network. Embedded network owners and retailers operating on embedded networks are encouraged to use a set of drafting guidelines for a UoSA when negotiating retailers' use of an embedded network.

A.21 The Code and the market facilitation measures have been developed on the basis that:

- no secondary network owners are captured by the definition of retailer in the Code
- embedded network owners are the only type of secondary network owner captured by the definition of distributor in the Code.

A.22 The definition of distributor in the Code is aligned with the definition in the Act. Under the working assumptions, the Authority would need to amend the definition of distributor in the Code to ensure that embedded network owners are the only type of secondary network owner with Code obligations, if the Authority were to retain the current Code obligations on secondary network owners.

A.23 The definition of retailer in the Code uses different language from that used in the Act. The definition in the Code refers to the "supply" of electricity whereas the Act defines retailing as the "sale" of electricity.

A.24 Under the working assumptions, the Authority would need to amend the definition of retailer in the Code to ensure that the definition did not apply to any type of secondary network owner, if the Authority were to retain the current Code obligations on secondary network owners.

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dependence on electricity could be for use of medical or other electrical equipment needed to support the treatment regime (eg, a microwave to heat fluids for renal dialysis).

[22] A domestic consumer is vulnerable if:

(a) for reasons of age, health or disability, the disconnection of electricity to that domestic consumer presents a clear threat to the health or wellbeing of that domestic consumer; and/or

(b) it is genuinely difficult for the domestic consumer to pay his or her electricity bills because of severe financial insecurity (which includes low income), whether temporary or permanent.