

Competition in embedded and customer networks

Project scope, approach and issues

9 April 2014

1 Recommendation

- 1.1 It is recommended the Retail Advisory Group (RAG):
- a) provide feedback on the proposed scope, approach and issues for the project considering *competition in embedded and customer networks*, as outlined in this paper
 - b) agree to revise the project title to *competition and efficiency effects of secondary networks* to reflect the proposed scope of the project
 - c) agree that a secondary network expert attend the next RAG meeting to present on secondary networks.

2 Background to project

- 2.1 The RAG agreed in August 2012 to examine the potential to improve retail competition in embedded and customer networks as part of its 2013/14 work plan. The project was identified after the RAG noted possible issues with the ability of retailers, particularly small retailers, to compete to supply customers on embedded and customer networks.
- 2.2 The objective of the project was to examine the potential to improve retail competition in embedded and customer networks.
- 2.3 The scope, approach and milestones for the project were to be confirmed by the RAG during the project scoping process.

Project scoping process

- 2.4 This paper outlines the proposed scope and approach for the project taking into account the matters identified through the project scoping process:
- a) section 3 provides background on secondary networks. Embedded and customer networks, along with network extensions, are all forms of secondary networks
 - b) section 4 outlines potential issues with arrangements for secondary networks. The issues relate to potential competition effects and potential efficiency effects of arrangements for secondary networks
 - c) section 5 outlines the proposed next steps.

A new project title and objective is proposed

- 2.5 The key outcome of the project scoping process is a recommendation to revise the project title and project objective.
- 2.6 The proposed project title is *competition and efficiency effects of secondary networks*. This change is to enable consideration of:
- a) arrangements for the three forms of secondary networks, rather than just limiting the focus to embedded and customer networks
 - b) competition and efficiency issues with secondary networks.

3 Background to secondary networks

Introduction to local and secondary networks

- 3.1 Local networks are distribution networks connected to Transpower's transmission grid. These local networks enable electricity to be transported to consumers who are connected to that distribution network.
- 3.2 In addition to local networks, there are networks that are connected to other networks. These networks are termed secondary networks. They will be one of the following:
 - a) embedded networks
 - b) network extension
 - c) customer networks.
- 3.3 Examples of secondary networks include:
 - a) office blocks and shopping centre complexes that services tenants
 - b) airports that service airline terminals and retail outlets within the airport
 - c) retirement villages, and apartments that service tenants
 - d) industrial parks that service factories or offices or both
 - e) subdivisions where the developer chose to install and retain ownership of the works instead of the local network in the area owning the works.
- 3.4 Legislation was passed in 1994 to remove retail monopolies and allow competition for supply to all consumers. The removal of network franchises facilitated competition within the network areas and an initial increase in the number of secondary networks.
- 3.5 The following regulatory and non-regulatory instruments currently apply to secondary networks:
 - a) the *Electricity Industry Act 2010* provides a framework for the regulation of the electricity industry,¹ and the Electricity Industry Participation Code 2010 (Code) governs electricity trading in New Zealand²
 - b) the *Guidelines for Metering Reconciliation and Registry Arrangements for Secondary Networks* (Guidelines) set out the Code requirements to ensure that energy purchases and line charges are allocated equitably to participants within secondary networks³

¹ See part 3 of the Electricity Industry Act 2010 is available at:
<http://www.legislation.govt.nz/act/public/2010/0116/latest/DLM2634233.html>

² The Electricity Industry Participation Code 2010 is available at:
http://www.ea.govt.nz/search/?q=electricity+code&s=&order=&cf=&ct=&dp=&action_search=Search

³ Guidelines are under review so only hard-copies are available. These guidelines were published by the Electricity Commission in 2006 and updated for the transition to the Electricity Authority on 1 November 2010.

- c) the *Consumer Guarantees Act 1993* guarantees consumers of electricity (among others) of certain rights of redress against suppliers and manufacturers if goods or services fail to comply with a guarantee⁴
- d) the *Fair Trading Act 1986* is a further avenue that provides protection to consumers including those within secondary networks. This Act exists to encourage competition. The Commerce Commission is responsible for enforcing the Act.

3.6 For the purposes of this agenda paper, secondary networks are further delineated into customer networks, network extensions and embedded networks, as set out below.

Description of customer networks

- 3.7 A customer network is an electricity distribution network that is owned by someone other than the parent network owner, where consumers connected to it are not switchable and therefore have no choice of trader.⁵
- 3.8 The principal characteristic of a customer network is that there is one ICP connected to the parent network, and the consumer associated with that ICP is responsible for billing all other consumers connected to the customer network, for their electricity consumption.
- 3.9 A typical example of a customer network is where a shopping mall owner elects to purchase all the electricity consumed throughout the mall complex from one trader at the point of connection of the mall to the parent network. The mall owner then recovers this cost from its tenants individually in accordance with the arrangements that have been agreed between the mall owner and each tenant.
- 3.10 Currently, there is no information on how many consumers are on customer networks.

Description of network extensions

- 3.11 A network extension is an electricity distribution network that is owned by someone other than the parent network owner, where consumers have ICPs allocated and managed by the parent network owner, and the electricity traded is reconciled at the NSP for the parent network at the grid exit point (GXP).
- 3.12 A typical example of a network extension includes a shopping mall where the parent network owner has allocated ICPs to each tenant. Each tenant then pays the electricity trader of choice for electricity consumed plus the line charges.⁶

⁴ The Consumer Guarantees Act 1993 is available at:
http://www.legislation.govt.nz/act/public/1993/0091/latest/whole.html?search=sw_096be8ed80ce0ea3_electricity_25_se&p=1

⁵ Guidelines, paragraph 14.

⁶ Guidelines, paragraph 20-26.

Description of embedded networks

- 3.13 An embedded network⁷ is where the consumers located within that network have individual Installation Connection Points (ICPs). The ICPs are allocated and managed by the embedded network owner acting as the distributor for that network.
- 3.14 A typical example of an embedded network is a shopping mall where the embedded network owner, or its contractor, has allocated ICPs to each tenant. Each tenant pays their trader of choice for the electricity consumed, plus line charges as imposed by the embedded network owner to cover both parent network and embedded network line charges.⁸
- 3.15 In August 2012, there were 118 embedded networks in New Zealand with 21,278 ICPs.

4 Issues with secondary networks

- 4.1 There are two main sets of issues with arrangements for secondary networks:
- a) the ability of retailers, particularly small retailers, to compete to supply consumers on secondary networks (retail competition)
 - b) the process for converting from one form of secondary network to another (efficiency).

Table 1: Characteristics of Secondary Networks

Feature	Customer Network	Embedded Network	Network Extension
Customer choice of retailer	No	Yes	Yes
Conversion process outlined in guidelines	No	Yes ⁹	No

Customer networks: competition impact and process

- 4.2 The ability of a consumer located within a customer network to choose a retailer depends on whether the network owner allows it and whether ICPs are installed for individual consumers. While these consumers do not have a choice of retailer, they have voluntarily agreed, by contract, to buy electricity retailer services along with a package of services they receive from the network owner, such as office rental and cleaning.
- 4.3 A key benefit of a customer network is that the customer network is considered a single retail account and as such the owner can purchase electricity in bulk. The bulk purchase

⁷ Part 1 of the Code defines an embedded network to mean a system of lines, substations and other works used primarily for the conveyance of electricity between two points (point A and point B) where:

- a) Point A is a connection with either a local network or another embedded network
- b) Point B is a point of connection with a consumer, an embedded generating station, or both
- c) the electricity flow at point A is quantified by a metering installation in accordance with Part 10.

⁸ Guidelines, see paragraph 39.

⁹ As discussed above, the Guidelines set out the process for conversion in some detail at paragraphs 48 and 49.

of electricity may result in more favourable commercial rates for electricity compared to rates for smaller individual accounts. That is, the consumers/tenants within the customer network may benefit from an electricity rate that is lower than that being offered by an electricity retailer for smaller accounts.

- 4.4 In this situation there may be no problem with a supplier bundling services, such as office rental, electricity and office cleaning. Bundling is a normal feature of many markets. In addition, consumer concerns about bundling of services and the electricity supply could be met with provisions under the Fair Trading Act that provides consumers with protections. However, the RAG would like to better understand further impacts of customer networks on retail competition.
- 4.5 In its current form, the guidelines do not explain the responsibilities of owners of a customer network or a network extension in any detail. The guidelines also do not, in detail, set out the required process to convert to a customer network or network extension.

Customer network: advantages and disadvantages

- 4.6 The potential advantages of a customer network are:
- a) a single power account for the entire site may result in more favourable “bulk buying” rates for line and energy rates when compared to a lot of smaller power supplies individually connected to an electricity network throughout the site
 - b) the tenant may benefit by receiving an electricity rate that is potentially lower than that being offered by an electricity retailer, the body corporate can also benefit from the common areas being on this reduced rate
 - c) the building owner receives a rate of return on investment in the building wiring and the cost of installing check metering plus the building owners recover the administration and maintenance costs involved
 - d) companies offer a full customer network management service which includes meter reading, tenant billing, energy reconciliation, payment receipting and monthly financial analysis for customer networks
 - e) the building or site owner does not have any compliance costs.
- 4.7 The potential disadvantages of a customer network are:
- a) consumers are unable to choose and switch their retailers
 - b) consumers could be overcharged on electricity use
 - c) it may inhibit competition in the retail market
 - d) owners may receive payment (“double dipping”) on a leased asset return.

Network extensions: competition impacts and process

- 4.8 Network extensions allow consumers to switch and have a choice of traders.¹⁰ Arguably, competition is not inhibited on network extensions in the same way that it could be regarded for customer networks.
- 4.9 The guidelines on network extensions do not cover the responsibilities of parties in any detail in the process of converting to a different secondary network. Arguably, the guidelines on network extensions could, if warranted, include further detail around the responsibilities of owner, trader and distributor responsibilities and the required process of converting from other networks.¹¹

Network Extension: advantages and disadvantages

- 4.10 The potential advantages of a network extension are:
- a) each tenant can choose an individual retailer and plan
 - b) the building or site owner does not have any compliance costs, this is managed by the local network
 - c) the building owner receives a rate of return on investment in the building wiring in the property lease costs or corporate body fees.
- 4.11 The potential disadvantages of a network extension are:
- a) all electricity consumed must be measured. If this is not possible, a network extension cannot be used
 - b) the local network owner may not agree to providing ICPs on the network extension
 - c) the network owner is receiving a rate of investment on an asset and the building owner is getting a rate of investment on the asset they own as part of the lease, so effectively the consumer could be paying twice for the rate of investment on assets.

Embedded networks: competition impacts and process

- 4.12 Consumers in embedded networks do have a choice of retailer (subject to the necessary conveyance agreement in place between the trader and the embedded network owner) and could be considered to be in a similar position to those consumers connected to distribution networks.
- 4.13 The Guidelines clearly set out the responsibilities of embedded network owners, including converting to a customer network,¹² as well as the responsibilities of residual volume traders, parent network distributors and service providers.¹³
- 4.14 For instance, it is the responsibility of the embedded network owner/distributor to, at least one month before a customer network is to be converted to an embedded network,

¹⁰ Guidelines, paragraph 20.

¹¹ Guidelines, paragraph 61.

¹² Guidelines, paragraph 48 and 49, particularly 48(d).

¹³ Guidelines, see paragraph 48-60.

inform the trader responsible for the ICP at the point of connection between the parent network and embedded network for the change in status.¹⁴ It is also the embedded network owner/distributor's responsibility to advise the parent network owner of the date the embedded network is to be made active and separately reconciled, so that the parent network owner can decommission the old ICP and create a new distributor-only ICP.¹⁵

Embedded network: advantages and disadvantages

- 4.15 The potential advantages of an embedded network are:
- a) each tenant can determine their retailer and their plan
 - b) all electricity consumed does not need to be measured as different settlement will allocate any unders/overs or unallocated volumes to the network owner
 - c) the allocation methodology or metering must be accurate as the Code applies
 - d) a use-of-system agreement is not required under the Code. However, in future it may be required.
- 4.16 The potential disadvantages of an embedded network are:
- a) a customer that does not have an ICP number cannot choose a retailer, which means the embedded network owner could prevent a customer from having a choice of retailer
 - b) there are compliance costs for reconciliation participant certification, management of the registry, provision of a gateway meter and monthly submissions to the reconciliation manager
 - c) the building owner could recover a rate of investment on the building wiring in their property and electricity costs.

5 Approach to further work

- 5.1 The assessment of the arrangements for secondary networks and potential issues indicates that more information is needed to answer the following questions:
- a) what are the impacts on retail competition of converting secondary networks
 - b) how significant are these impacts
 - c) what is the current process being undertaken by electricity retailers/companies who are converting the networks
 - d) what are the negative impacts (if any) to the retail market from the current practice and process converting secondary networks
 - e) what is the potential to improve the current arrangements to reflect the necessary process or competition requirements

¹⁴ Guidelines, see paragraph 48 and 61 for further information.

¹⁵ Guidelines, see paragraph 48(h).

- f) any other significant related issues.

6 Next Steps

6.1 The next steps are:

- a) the secretariat will draft a discussion paper that incorporates the RAG's feedback on the issues outlined in this paper
- b) the secretariat can also organise for an expert on secondary networks to talk at the next RAG meeting
- c) stakeholder submissions are likely to be due mid-2014 and considered by the RAG in the third quarter of 2014
- d) depending on submissions received, the RAG will then provide a discussion paper or options paper to the Board, and if the Board approves the paper, it will be published for consultation by December 2014
- e) unless further consultation is required, it is likely the RAG will provide its final recommendation to the Authority Board by early 2015.