

2 June 2015

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RAG - SECONDARY NETWORKS REVIEW

- 1 Orion New Zealand Limited (**Orion**) welcomes the opportunity to comment on the “RAG – Secondary Networks Review” issues and options paper (the **paper**) released by the Electricity Authority (Authority) in April 2015.
- 2 We are pleased that the issues around secondary networks are being considered.
- 3 Our submission is in two parts:
 - General comments on the paper
 - Our response to the specific questions in the paper (as an appendix).

General comments

- 4 The paper considers the three types of secondary networks in relation to their specific characteristics and the status of the secondary network owners as participants, it identifies several issues about competition, reliability and efficiency of secondary networks.
- 5 The RAG considers that the issues indicate the following competition, reliability and efficiency problems:
 - Retail competition is reduced because retailers are discouraged from operating on embedded networks.
 - Efficient operation is reduced because interactions between retailers, distributors and secondary networks are less efficient.
 - Reliability of supply for individual consumers is reduced due to poor coordination between retailers, distributors and secondary networks.

- 6 The RAG does not consider that retail competition is reduced as a result of consumers not having choice of retailer on customer networks.
- 7 The RAG has considered several options for addressing the problems identified and their preferred options are:
- Retail competition can be promoted by introducing a default UoSA for embedded networks.
 - Efficient operation can be promoted by amending the Electricity Industry Participation Code 2010 (Code) to:
 - (a) prevent the decommissioning the NSP while ICP's have an active or inactive status in the registry; and
 - (b) provide a 40 business day notification period for converting from an embedded network or from a network extension.
 - Reliability of supply for individual consumers can be promoted by amending the Guidelines for Secondary Networks to outline how parties describe and allocate responsibility for business to business interactions, for example, for identifying and resolving a fault occurring on a secondary network.
- 8 The RAG also considers that increased awareness by secondary networks of obligations under the Electricity Industry Act 2010 and the Code will promote efficient operation.
- 9 Overall we consider that the paper provides a useful explanation of a number of the issues around secondary networks, and we are pleased to see that:

“The RAG does not consider that retail competition is reduced as a result of consumers not having choice of retailer on customer networks.”¹

Customer networks are a practical commercial solution and look to a local network and retailers as a single customer (ICP) any issues that may arise between end-users and the site owner or operator should be resolved through the relationship between these two parties rather than regulation of the electricity sector.

Issues not considered

- 10 We believe that the paper could be enhanced by consideration of:
- Whether there should be a minimum size of the secondary network before registration as a participant is required.
 - The impracticality of all these networks owners/retailers being participants.

¹ Executive summary RAG Review of secondary networks issues and options paper 21 April 2015

- The efficiency benefits of network extensions in relation to avoiding the need for the local network owner to obtain multiple easements to supply individual ICPs.
- The impractical Code requirements on local networks in respect to network extensions.
- The inefficiencies introduced to local network design by some types of embedded networks (residential subdivisions and commercial subdivisions).
- Issues of responsibility for approval of DG on secondary networks.
- Advice of the existence of DG on a secondary network to the local network.

We will address these issues in our response to the specific questions

Options to address the problems identified with secondary networks

Option 1 Deminimus size

- 11 We believe that the Authority should consult with interested parties on the value of a diminimus size (such as number of customers, throughput of electricity) for each type of secondary network below which *registration as a participant and compliance with some parts of the Code* can be excluded.
- 12 Approach MBIE for a class exemption from registration as a participant under section 110 of the Act and compliance with parts of the Code under section 110 for secondary networks below a diminimus size. We note that the definition of electricity lines services in s54C of the Commerce Act provides the following exemptions from the definition of what constitutes electricity lines services:
 - (f) conveying electricity if the total circuit length of all of the prescribed voltage electric lines provided by the supplier (or over which electricity is conveyed by the supplier, as the case may be) is less than 25 kilometres:*
 - (g) conveying electricity if the total amount of electricity conveyed to consumers by the supplier is less than 20 gigawatt hours per annum:*
 - (h) conveying electricity if the total number of consumers to whom the supplier conveys electricity is less than 500.*In addition the definition of distributor in the Code also has a diminimus value of greater than 5GWh in respect to certain aspects of the Code.
- 13 While we do not suggest that these are appropriate deminimus sizes for exclusion of secondary networks from registration as a participant or Code compliance under the Act, they do provide a useful example that the practicalities and costs of compliance need to be considered.
- 14 While we consider that the status quo requirement that all secondary network owners are participants is untenable, we believe that very careful consideration needs to be given in this area to prevent unforeseen difficulties. See our comments in regard to DG on an embedded network at Q1 below.

Option 2 Code requirement on local distributors relating to network extensions should be on a reasonable endeavours basis

- 15 Local networks are required under the Code to comply with Rule's in relation to the supply of ICP identifiers and requirements relating to the ICPs on network extensions. While as we have noted in our response to Q1 network extensions can provide an efficient solution to supplying the end use customer, reduce costs of easements, while providing full retail competition, there is a problem that the local network can be held responsible for breaches of the Code on a secondary network over which it has no direct control. We consider that the service that the local network provides under the Code to the network extension should only be on a reasonable endeavours basis.

Option 3 Code changes

- 16 We believe the RAG's option to introduce Code changes to provide more certainty in relation to two aspects of the process for converting from an embedded network or from a network extension has merit.
- 17 However we are not convinced that the RAGs proposed solutions
- (a) prevent the decommissioning the NSP while ICP's have an active or inactive status in the registry; and
 - (b) provide a 40 business day notification period for converting from an embedded network or from a network extension

are appropriate or in the first case simple.

- 18 In the first case the ICP's should retain their current status as these ICPs will not be decommissioned, at least not without significant change to the Code. In the second case the Code already appears to require one calendar months notice in rule Schedule 11.1 26(5). While we would acknowledge that the Code could be changed to significantly clarify the Rules in this area we would suggest that a calendar month should be sufficient to manage the transfer rather than the suggested 40 days notice.

Option 4 Subject to the diminimus provisions of Option 1 further enhancement of the Guidelines

- 19 We agree with the RAG's suggestion that increased awareness by secondary networks of obligations under the Electricity Industry Act 2010 and the Code will promote efficient operation. This would need to be subject to a sensible diminimus value for establishing what constitutes secondary networks, such that the owners could reasonably be expected to be able to comply with any Code requirements. We therefore consider that the Authority should comply with its obligations under s 16.1 of Part 2 of the Act and encourage compliance with the Act and Code through education and the provision of enhanced Guidelines.

- 20 We also strongly recommend that the Authority consider the extent to which it can limit the spread of residential and commercial subdivision embedded networks.

Concluding remarks

- 21 Thank you for the opportunity to make this submission. Orion does not consider that any part of this submission is confidential. If you have any questions please contact Dennis Jones (Industry Developments Manager), DDI 03 363 9526, email dennis.jones@oriongroup.co.nz.

Yours sincerely

A handwritten signature in black ink that reads "D. L. Jones". The signature is written in a cursive, slightly slanted style.

Dennis Jones
Industry Developments Manager

Appendix – Response to specific questions

Question	Submission
<p>Q1. Please provide any comments and views on the description of the characteristics for customer networks, embedded networks and network extensions. Please provide evidence on your comments and views, where possible.</p>	<p>Specific characteristics of a customer network</p> <p>Orion agrees in general with the Authority’s outline of the specific characteristics of a customer network (section 2.4 of the paper).</p> <p>However, we consider that the size of the customer network can vary significantly from the example given in the paper of a Mall. For example, it could capture a very simple form of customer network such as a single domestic dwelling with two people flatting together one of which owns the house and pays the electricity bill while the flatmate pays for their use of electricity on some agreed basis.</p> <p>While this example of a customer network is clearly not something that we would expect the Authority to consider, the owner as a participant, it appears to fit the papers description of the characteristics of a customer network. Size in this case is important!</p> <p>For these small customer networks we are not convinced, as suggested in paragraph 2.4.4.that :</p> <p style="text-align: center;"><i>“The Customer network owner provides distribution services to all of the consumers on the customer network by taking responsibility for maintaining lines (often the building’s internal wiring) conveying electricity to customers.”</i></p> <p>The Authority has itself identified that the legal framework for whether a customer network owner is a distributor is not entirely clear. We are also not convinced that the owner can be said to be acting as a retailer.</p> <p>From a local distributors perspective, a customer network is the simplest form of secondary network, it is seen as an end use customer just like any other customer. In general terms there is no need for a local network owner/distributor to have any awareness that this customer is any different from any other. A customer network does not impose any additional costs on the local distributor to meet regulatory obligations.</p>

		<p>Specific characteristics of an embedded network</p> <p>Again we agree in general with the Authority's outline of the specific characteristics of an embedded network (section 2.5 of the paper)</p> <p>There are little additional regulatory requirements on the local network (other than the need to have a distributor only ICP for the embedded network). From the local network owner perspective there is only one customer.</p> <p>However, as with customer networks, the size of the embedded network is a significant factor in determining the impact of the embedded network. A small embedded network such as a Mall may have little impact while a larger embedded network, such as a large residential or commercial subdivision, may impose significant inefficiencies relating to network design. Contrary to the Authorities logic relating to the ability to buy in bulk it could well mean that the embedded network would have to pay more as it will pay for the full capacity it requested from day one.</p> <p>A practical example of the inefficiencies that can result from embedded networks is that of a large commercial subdivision being developed over time. As part of our network we would utilise capacity from the surrounding network and add new feeders as required to meet the developing growth. The subdivision would end up with multiple feeds into it and we would have the ability to use capacity to supply other customer in other areas thus maximising the utilisation of the network and providing for easier restoration in the event of a fault.</p> <p>As an embedded network this is not possible, we lose the ability to feed though the embedded network to supply other parts of our network. Any feeds into the network have to be metered (at high voltage in this case) which is expensive. Assuming that there are just two feeds into the network each of these cables would have to be able to carry the full embedded network load to provide for N-1 security (with switching). We would have to supply this dedicated capacity (twice the required load of the final network load) from the commissioning date and we would expect to charge the customer for this dedicated capacity from that date. Thus the embedded network must pay the full cost of the supply from the commissioning date regardless of the take up from customers, assets have been installed in</p>
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		<p>the ground which may never be fully utilised and our network has lost some of the flexibility to switch load around that it would have had if we had developed the network.</p> <p>We strongly recommend that the Authority consider the extent to which it can limit the spread of inefficient residential and commercial subdivision embedded networks.</p> <p>Other drawbacks with embedded networks are:</p> <ul style="list-style-type: none">• that the equipment used may be incompatible with the local network safety requirements. We note we have recently purchased a distributor owned embedded network and will be changing the 11kV switchgear as a result.• that the equipment used may not be compatible with the standard requirements of the local network – leading to increased costs of emergency spares, contractor training etc.• the Code appears exclude from the definition of distributor for the purpose of Part 6 of the Code a participant that owns an embedded network that conveys less than 5GWh per annum of electricity. It is therefore unclear in the Code who is responsible for allowing the connection of DG on an embedded network. We consider that the DG owner should apply to the distributor of the embedded network under Part 6, however this is unclear in the Code (there is also an issue if there is no distributor i.e the embedded network is less than 5GWh per annum or whether Part 6 applies to an embedded network - see definition of distributor in section 1.1 of the Code). We believe that the embedded network owner/distributor should advise the local network owner that it has generation attached to it's network (safety issue) although it is not clear whether there is any Code that would require this. We would also expect that the metering at the NSP would have to be import/export metering. Again this is not clear from the Code. We would expect that the distributor for the local network only LE ICP would have to update the registry attribute to "B" to indicate that the embedded network has both load and generation. The Code in this area is somewhat unclear and while we have raised this issue with the Authority we await a response from their legal team.
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		<p>Specific characteristics of network extensions</p> <p>Again we agree in general with the Authority's outline of the specific characteristics of network extensions (section 2.6 of the paper).</p> <p>Network extensions tend to be smaller than embedded networks and as we have previously advised we have many thousands of examples of small network extensions such as ownership flats, small block of shops, small commercial units (only 2 or 3 ICP's). These provide an efficient solution to supplying the end use customer, as there is one clear demarcation point, at the central supply point, between the local network and the secondary network.</p> <p>This approach removes the need for multiple easements that would be required if the local network were to supply directly to each end use customer. It is likely to be the most economical solution to supply the end use customers. The reticulation of the secondary network would require skill sets more common to commercial electricians rather than cable layers on a local network.</p> <p>The customer has access to the competitive retail sector of the industry. The metering is subject to the normal regulated requirements.</p> <p>Conceptually one could consider that the ICPs were deemed to be at the point of connection to the network.</p> <p>In the majority of cases we consider that the network extension will be far too small to consider the owner of the network extension as a network owner or distributor for regulatory purposes. The secondary network in this case should be treated, from a regulatory perspective, as though it does not exist.</p> <p>There are, of course, a number of issues relating to network extensions. As the paper notes it is the local network distributor that is required to create ICP's identifiers for the ICPs on network extensions (Rule 3 section E) and maintain the regulated information associated with these ICPs, which are not directly connected to their network. The distributor may unknowingly breach some of the Code requirements due to lack of information and control over aspects of the secondary network. For example, the local distributor is unlikely to have any control over the connection and energisation of these ICPs or be aware of any changes associated with them. Another issue with the creation of these</p>
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		<p>ICPs is that they distort the number of ICPs associated with a local network. However, we consider that these are in the main second order issues and do not of themselves indicate the need for a network extension distributor.</p>
<p>Q2.</p>	<p>Please provide any comments and views on the description of the legal framework for customer networks, embedded networks and network extensions. Please provide evidence on your comments, where possible.</p>	<p>Customer Networks</p> <p>While we agree with the RAG’s interpretation of the letter of the Electricity Act 2010 we consider that this interpretation is unworkable and impractical. We would suggest that the majority of customer networks and network extension owners have no idea of the obligations under the Act. We would expect that the result of an acceptance of this interpretation would be that the Authority will have to apply to MBIE for a class exemption for customer network owners so that they could be exempted from registration under s 110 of the Act. This would be similar to the Authority’s suggested approach following the response to a DG consultation paper that noted that all DG owners are required to be participants under the Act. We believe that there is clearly a requirement for some form of threshold, at least for customer networks and network extensions, below which participation would not be required.</p> <p>We also note that the paper states the definition of retailer at para 2.7.1(b) is: a retailer – which means a business engaged in retailing (the sale of electricity to a customer other than for the purpose of resale). The paper uses this definition to determine that a customer network owner is an industry participant because they are a retailer. However this raises the question of who does the customer network owner purchase electricity for resupply from? The Authority, at 2.4.3, suggests that “A customer network owner usually has a supply contract with a retailer(s) for delivered electricity to the site”. Clearly this is not appropriate as the retailer would be selling electricity to another retailer for the purpose of resale which is precluded by definition.</p> <p>Embedded networks</p> <p>In this case the question is limited to whether the embedded network owner is a distributor. In this case the application of the Act is somewhat clearer than for the customer network case and we can</p>

		<p>see more meaning in the requirement of the Act and the Code. Clearly having applied to be an embedded network the owner (or their consultant) is aware to some extent of the Act and the Code requirements and as such the network owners should expect to be registered as a participant and comply with the Code. Also as we note in response to Q1 small embedded networks such as Malls have little impact on the local network, however larger scale embedded networks can be inefficient compared to a local network.</p> <p>We also note that there is a discrepancy in the definition of distributor in the Code compared to the Act in relation to embedded networks which we believe raises issues in relation to the approval for DG on an embedded network see our comments at Q1 above.</p>
<p>Q3.</p>	<p>Please comment on the issues identified with customer networks, embedded networks and network extensions. Please provide evidence where possible.</p>	<p>Customer networks</p> <p>The paper overstates the issue that individual customers on a customer network do not have a choice of retailer. The paper makes the point that customers may not focus on the electricity supply arrangements when renting or buying an apartment or office and signing the contracts. This may or may not be correct, however we do not consider that this is sufficient reason for the Authority to intervene in these competitive commercial arrangements. The paper has indicated that retailers have suggested that there is a cost to them in responding to inquires about faults. Our customer service staff also receive queries in relation to faults on all types of secondary networks and they consider that these are easily dealt with and represent little additional cost.</p>
<p>Q4.</p>	<p>Please comment on the description of the problems relating to reduced competition, efficiency and reliability of supply.</p>	<p>Overall we consider that the paper provides a useful explanation of a number of the issues around secondary networks, and we are pleased to see that:</p> <p>“The RAG does not consider that retail competition is reduced as a result of consumers not having choice of retailer on customer networks.”</p>

		However as outlined in the body of our submission we consider that there are other options to deal with these issues.
Q5.	Do you agree that a default embedded network UoSA will promote retail competition by making it easier and less costly for retailers to supply consumers on embedded networks? Please give reasons for your view.	We do not agree that a default embedded network UoSA will promote retail competition. In fact doing so may inhibit innovative retailers from entering this market. We note the comments, from a recent Downstream conference reported in Energy News, from Flick Energy chief executive Steve O'Connor who says his company didn't find the number of lines companies a particular challenge. Standardising the data it receives and building systems from new made that relatively easy, though he noted it could be harder if firms were trying to adapt legacy systems.
Q6.	Do you agree with amending the Code to prevent an embedded network owner from decommissioning an NSP before the status in the registry of the associated ICPs is also changed? Please give reasons for your view.	We consider that this is an option that needs more work and consultation it would seem to us that the decommissioning of the NSP would have to occur simultaneously with the amendments to the ICP's. We do not consider that the status of the ICPs is an issues in this case rather it is a question of updating which NSP the ICP points too. The ICPs are not decommissioned but remain as ICPs on the local network if an embedded network becomes a local network.
Q7	Do you agree with mandating a minimum notice period for converting an embedded network or network extension through amending the Code? Please give reasons for your view.	We believe the RAG's option to introduce Code changes to provide more certainty about the process for converting from an embedded network or from a network extension has merit. However, we are not convinced that a period as long as the suggested 40 days notice is required. The Code already appears to require one calendar months notice in rule Schedule 11.1 26(5) while we acknowledge that the Code could be changed to significantly clarify the Rules in this area we would suggest that a calendar month should be sufficient to manage the transfer rather than the suggested 40 days notice.
Q8	Do you consider there are other viable options, in addition to those considered	Yes. We suggest the following options

	<p>by the RAG, for improving operational efficiency in respect of secondary networks? Please give reasons for your view.</p>	<p>As per our cover letter we consider that there are a number of options to improve operational efficiency:</p> <p>Option 1 Deminimus size</p> <p>We believe that the Authority should consult with interested parties on the value of a diminimus size (such as number of customers, throughput of electricity) for each type of secondary network below which registration as a participant and compliance with some parts of the Code can be excluded.</p> <p>Approach MBIE for a class exemption from registration as a participant under section 110 of the Act and compliance with parts of the Code under section 110 for secondary networks below a diminimus size. We note that the definition of electricity lines services in s54C of the Commerce Act provides the following exemptions from the definition of what constitutes electricity lines services:</p> <p><i>(f) conveying electricity if the total circuit length of all of the prescribed voltage electric lines provided by the supplier (or over which electricity is conveyed by the supplier, as the case may be) is less than 25 kilometres:</i></p> <p><i>(g) conveying electricity if the total amount of electricity conveyed to consumers by the supplier is less than 20 gigawatt hours per annum:</i></p> <p><i>(h) conveying electricity if the total number of consumers to whom the supplier conveys electricity is less than 500.</i></p> <p>In addition the definition of distributor in the Code also has a diminimus value of greater than 5GWh in respect to certain aspects of the Code.</p> <p>While we do not suggest that these are appropriate deminimus sizes for exclusion of secondary networks from registration as a participant or Code compliance under the Act, they do provide a useful example that the practicalities and costs of compliance need to be considered.</p> <p>While we consider that the status quo requirement that all secondary network owners are participants is untenable, we believe that very careful consideration needs to be given in this area to prevent unforeseen difficulties. See our comments in regard to DG on an embedded network at Q1 above.</p>
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		<p>Option 2 Code requirement on local distributors relating to network extensions should be on a reasonable endeavours basis</p> <p>Local networks are required under the Code to comply with Rule's in relation to the supply of ICP identifiers and requirements relating to the ICPs on network extensions. While as we have noted in our response to Q1 network extensions can provide an efficient solution to supplying the end use customer, reduce costs of easements, while providing full retail competition, there is a problem that the local network can be held responsible for breaches of the Code on a secondary network over which it has no direct control. We consider that the service that the local network provides under the Code to the network extension should only be on a reasonable endeavours basis.</p> <p>Option 3 Code changes</p> <p>We believe the RAG's option to introduce Code changes to provide more certainty in relation to two aspects of the process for converting from an embedded network or from a network extension has merit.</p> <p>However we are not convinced that the RAGs proposed solutions</p> <ul style="list-style-type: none"> (a) prevent the decommissioning the NSP while ICP's have an active or inactive status in the registry; and (b) provide a 40 business day notification period for converting from an embedded network or from a network extension <p>are appropriate or in the first case simple.</p> <p>In the first case the ICP's should retain their current status as these ICPs will not be decommissioned, at least not without significant change to the Code. In the second case the Code already appears to require one calendar months notice in rule Schedule 11.1 26(5). While we would acknowledge that the Code could be changed to significantly clarify the Rules in this area we would suggest that a calendar month should be sufficient to manage the transfer rather than the suggested 40 days notice.</p>
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		<p>Option 4 Subject to the diminimus provisions of Option 1 further enhancement of the Guidelines</p> <p>We agree with the RAG’s suggestion that increased awareness by secondary networks of obligations under the Electricity Industry Act 2010 and the Code will promote efficient operation. This would need to be subject to a sensible diminimus value for establishing what constitutes secondary networks, such that the owners could reasonably be expected to be able to comply with any Code requirements. We therefore consider that the Authority should comply with its obligations under s 16.1 of Part 2 of the Act and encourage compliance with the Act and Code through education and the provision of enhanced Guidelines.</p> <p>We also strongly recommend that the Authority consider the extent to which it can limit the spread of residential and commercial subdivision embedded networks.</p>
<p>Q9</p>	<p>Do you agree the secondary network guidelines should specify expectations on secondary networks (particularly network extensions) to identify and allocate responsibility for business to business interactions, for example responsibility for fault management? Please give reasons for your view.</p>	<p>We believe the RAGs suggestion that increased awareness by secondary networks of obligations under the Electricity Industry Act 2010 and the Code will promote efficient operation. This would need to be subject to a sensible diminimus value for establishing what constitutes a secondary networks such that the owners could reasonably be expected to be able to comply with any Code requirements. We therefore consider that the Authority should comply with its obligations under s 16.1of Part 2 of the Act and encourage compliance with the Act and Code through education and the provision of enhanced Guidelines.</p> <p>We note that anything that the Authority includes as a guideline would not be mandatory.</p>
<p>Q10</p>	<p>Do you consider there are viable options, in addition to those considered by the RAG, for improving reliability of supply on secondary networks? Please give reasons for your view.</p>	<p>We do not consider that this is a significant issue, however as indicated above, education and guidelines may assist.</p>

Q11	Based on your experience, what is the average time and cost for a retailer and an embedded network owner to negotiate and thereafter administer an embedded network UoSA when the retailer is entering the embedded network for the first time?	No Comment
Q12	What estimated cost saving would your organisation receive from the use of a default embedded network UoSA?	None
Q13	What would be the cost saving or additional cost to your organisation if embedded network owners were required to use EIEP 1, 2, 3 and 12?	We do not think that there would be any cost savings or additional costs to our organisation.
Q14	What would be the cost saving to your organisation from adopting the notice period in the RAG's preferred option?	We do not think that there would be any cost savings to our organisation.
Q15	What would be the cost saving or additional cost to your organisation from clarifying with consumers on embedded networks that the embedded network	Small

	owner has responsibility for the management of faults, not retailers or local network owners?	
Q16	Do you agree that the adoption of a default embedded network UoSA will enhance retail competition on embedded networks? Please give reasons supporting your answer.	See our response to Q5
Q17	What is the cost estimate for your organisation to review and comment on a draft default embedded network UoSA, prepared using the Authority's model local network UoSA and the Authority's guidelines for drafting embedded network UoSAs?	No Comment