

Submission
to the Ministry of Economic Development
on the draft Electricity Governance
(Connection of Distributed Generation)
Regulations 2006

10 October 2006



INTRODUCTION

- 1 This submission is made by Orion New Zealand Limited (*Orion*) in response to the draft Electricity Governance (Connection of Distributed Generation) Regulations 2006 (*draft Regulations*) and accompanying Ministry of Economic Development (*MED*) discussion paper “Facilitating Distributed Generation”.
- 2 As the MED is aware, Orion strongly supports facilitating distributed generation. Orion has long recognised the role of distributed generation in limiting the need for network expansion.
- 3 Orion was amongst the first to:
 - 3.1 develop information packages targeted at distributed generators to assist them to connect their distributed generation; and
 - 3.2 introduce pricing policies that provided for the payment of benefits of distributed generation¹.
- 4 The body of this submission responds to the substance of the draft Regulations as requested by the MED. However we raise first some key policy issues that the MED needs to address before finalising the regulations.

KEY POLICY ISSUES

Is regulation still required?

- 5 In the three years since MED released its first distributed generation discussion document in September 2003 the industry has voluntarily moved a long way to facilitating distributed generation. Many distributors now provide information packs and information on their web sites advising distributed generators of the processes and requirements to enable them to connect their distributed generation.

¹ We have since expanded our pricing policy to include payments to large generators (30 to 1000 kVA) for volume generated when we require it for extreme load management situations, regardless of whether this results in export from the connection. This payment is distinct and unrelated from payments made when the network is congested (eg for transmission emergencies).

- 6 The Electricity Commission has been established and, when giving effect to the Government Policy Statement, now has to develop rules and/or model approaches that deal with many of the issues addressed in the draft regulation. For example, we would expect the Electricity Commission's model distribution pricing methodologies to include pricing policies relating to distributed generation and the rules to cover metering of embedded generation.
- 7 Orion believes that the case for regulation in relation to distributed generation is now far less than when this issue was first considered.

Linkages with other regulation

- 8 The draft Regulations and MED discussion paper are silent on how the Regulations will sit with other regulation in the energy sector. This has created significant uncertainty for distributors and potential commercial risk. Certainty and clarity for connection of distributed generation must be achieved while maintaining certainty and clarity of existing rules and regulation in the electricity sector.
- 9 Of particular concern is the relationship with the Part 4A thresholds regime. For instance:
- It is unclear how the costs and benefits of distributed generation as determined by the distributor or the Electricity Commission's Rulings Panel will be treated by the Commerce Commission in the event of a post breach inquiry or an intention to declare control.
 - How will revenue from and payments to distributed generators be treated?
 - In the event that the Rulings Panel is required to determine the connection charges payable under the Distributed Generation regulations, how will consistency with the Commerce Commission's decisions be ensured?
- 10 These are areas of genuine uncertainty. As discussed in this submission, the distributed generation may be of a substantial size and the capital expenditure, expenses and revenues resulting from the distributed generation may also be sizeable.
- 11 There is a similar level of uncertainty over how these Regulations would relate to other Electricity Governance Regulations and Rules. For example, larger distributed generators will be required to place offers with the System Operator, which may then dispatch the offered generation. The draft Regulations are silent on how this is reconciled with the

distributor performing a more localised congestion management role. Another uncertainty is the outcome if a distributed generation proposal has implications for transmission investment. These points are discussed further in our submissions below on specific regulations.

- 12 Of course, each of these areas can be addressed and sensible outcomes reached. Individually none are showstoppers. However, there is currently no assurance that sensible solutions will in fact be put in place in each area. Orion submits that the MED should consult on the desirable outcomes in each area, preferably prior to the Regulations being finalised.

Capping the size of regulated distributed generation

- 13 Orion has previously submitted that the Regulations should only apply to distributed generation of less than 5MW. Above this size it should be a matter of commercial negotiation whether the generator connects to the distribution network and on what terms. Both parties are likely to be substantial commercial entities and the generator will have the option of connecting directly to Transpower's grid.

- 14 There are technical, practical and regulatory reasons why a cap is appropriate. The larger the distributed generation, the greater the likelihood it will create significant issues at a network level. Generation over 5MW is more likely to create issues in areas of:

14.1 network capacity;

14.2 network fault levels;

14.3 voltage fluctuations and harmonic interference to other network users; and

14.4 operational issues, such as load/generation imbalance, or network equipment availability.

- 15 These issues are explained in more detail in Orion's submission to the MED dated 3 November 2003.²

- 16 Importantly, it is too simplistic to state that these issues will be addressed by the draft Regulations relating to operating standards and avoided cost pricing. Significant generation will create a plethora of complex network issues with real financial implications. At some point the network

² Orion submission to the MED on *Facilitating Distributed Generation*, 3 November 2003, pp 11 to 13.

management issues created by significant distributed generation exceed these relatively simple regulatory mechanisms. Orion submits a cap of 5MW is appropriate, representing the level at which a regulated approach should give way to a negotiated approach.

- 17 Such a cap would also manage the risks of failure in the links between these regulations and other parts of the regulatory environment, discussed above. The larger the distributed generation, the larger the co-ordination or overlap issues with the Part 4A thresholds regime and the other EGRs. Again, a sensible cap would prevent the regulatory framework from being pushed beyond its limit.

ORION'S COMMENTS ON SPECIFIC REGULATIONS

- 18 Orion comments below on specific regulations and clauses in the schedules. In some instances, our comments traverse a number of regulations together, as indicated. Where appropriate, we also suggest amended wording for the draft Regulations.
- 19 As a general comment, while we have continued the MED's approach of using real power in kW or MW, we consider that it would be more appropriate to specify generation ratings in the draft Regulations in terms of apparent power in kVA and MVA. Metering should also include (at least for generation of 30kVA and above) either apparent power or reactive power measurement in addition to the real power measurement. This would provide the generator with the potential to receive a benefit from any voltage support it may provide to the network, which these measurements could quantify.

Regulation 3 - Purpose statement

- 20 We think the purpose of the Regulations as provided under regulation 3 is too narrow and does not reflect the Government's objectives for the Regulations (as set out in paragraph 18 of the September 2006 discussion document³).
- 21 Put simply, we submit the Government's objectives in their entirety should be replicated in regulation 3 as the purpose of the Regulations. In the absence of a full statement of objectives, there is the risk that important objectives (e.g. certainty and clarity of process, and connection charges that are fair and reasonable) will be overlooked in interpreting the Regulations.

³ Ministry of Economic Development, *Facilitating Distributed Generation*, September 2006.

- 22 Given the important role a purpose statement can play in influencing interpretation, we submit this is a significant omission in the current draft Regulations. If the omission was intentional, we request that MED consult on the policy behind a narrow purpose statement.

Regulation 6A – Congestion management policy

Schedule 2, clause 7(a) – Generator must comply with congestion management policy

Schedule 2, clause 12 – Interruption and temporary disconnection

- 23 The draft Regulations require a distributor to have a congestion management policy. As already mentioned above, this raises a number of concerns for Orion, as distributors are being required to take on a role that they do not perform and which may conflict with established rules and processes in the electricity sector.

Development of necessary infrastructure and rules to support a congestion management policy

- 24 Orion currently does not have a congestion management policy of the nature described in the draft regulations (nor are we aware of any other distributor having such a policy). Orion agrees that some form of congestion management policy will be required, but we think that the rate of installation of distributed generation provides time for this issue to be developed.
- 25 Developing the rules and building the infrastructure required to operate and enforce a congestion management policy will take considerable time and require consultation among interested parties. We are concerned that the haste with which the draft Regulations are proposed to be enacted will not allow sufficient time for such work to be undertaken.
- 26 We think the overall benefits of the electricity regulatory regime are enhanced by amending regulation 6A(2) to the effect that distributors are required to “adopt, as soon as practicable, a congestion management policy”. This provides flexibility for distributors to develop a considered congestion management policy based on consultation with interested parties including (in particular) generators wishing to connect substantial generation capacity to the distributor’s network.

Potential conflict with the role of the System Operator under the Electricity Governance Rules

- 27 Under Part G of the EGRs, generators with generation capacity in excess of 10MW must submit offers to the System Operator to sell electricity. Electricity is then dispatched in the manner determined by the System Operator.

- 28 In circumstances where the distributed generation is in excess of 10MW, dispatch instructions by the System Operator may conflict with the requirements of the congestion management policy, e.g. the dispatch instructions of the System Operator to the generator are to increase active power, while the congestion management policy requires the generator to decrease power.
- 29 Our concern here is the potential for confusion, destabilising both the grid and distribution networks. That is not to say a congestion management policy could never be devised that can operate consistently at all times with the role of the System Operator. What is clear to Orion is that more thought needs to be given to how the operation of a congestion management policy will sit with the role of the System Operator under the EGRs. We think it important that these issues be fully explored with Transpower and the Electricity Commission.
- 30 As a suggestion, Orion proposes that Transpower should amend its policy statement to include a policy for managing potential conflicts between a distributor, acting in the capacity of a congestion manager, and the System Operator. This would provide greater clarity and certainty as to the role the distributor would be required to undertake in relation to congestion management. As the policy statement is required to be consulted on with participants this would also provide for input from affected parties.

Recoupment of congestion management costs

- 31 The trading arrangements managed by the System Operator under Part G of the EGRs is a service for which the System Operator is remunerated by the Electricity Commission.
- 32 If it is intended that a distributor perform a congestion management service akin to a system operator on its network, then we consider it appropriate that the distributor be entitled to a reasonable charge for this service. The Regulations should expressly provide for this.

Creation of a capacity right?

- 33 We consider that the requirement under regulation 6A(2) that a congestion management policy must “*take into account the connection charges paid or payable by generators for the congested parts of the network that they share*” could be interpreted to imply generators have a capacity right in relation to the network (and therefore that the competing “rights” need to be managed).
- 34 Orion does not (and indeed distributors throughout New Zealand do not) grant capacity rights in respect of their network. We submit that the description of a congestion management policy in regulation 6A should

expressly provide that the connection of distributed generation does not create a capacity right to any part of the network.

SCHEDULE 1

Schedule 1 clause 4(2)(a) and clause 6(2)(b) – Application process

- 35 There is an inconsistency between what a generator is required to include in an application for connection of distributed generation and the circumstances in which a distributor must approve an application.
- 36 Clause 4(2)(a) of Schedule 1 requires the Generator to include in an application “*information to show that the distributed generation to be connected complies with the Distributor’s **reasonable connection and operation standards***”.
- 37 Clause 6(1) of Schedule 1 refers to clause 5 which does not exist in this schedule.
- 38 Clause 6(2)(b) of Schedule 1 requires a distributor to approve an application to connect distributed generation “*if the information provided in the application would reasonably support an assessment that connection of the distributed generation would be consistent with **reasonable and prudent operating practice***”.
- 39 We submit that clause 6(2)(b) of Schedule 1 should be amended to state as follows:
- “the information provided in the application would reasonably support an assessment that connection of the distributed generation would be consistent with the distributor’s reasonable connection and operation standards.”*
- 40 It is foreseeable that distributors and generators may have different views on what constitutes “*reasonable and prudent operating practice*”, but objectively both views constitute “*reasonable and prudent operating practice*”. In such circumstances, the reasonable and prudent operating practice reflected in the distributor’s connection and operating standards⁴ should prevail and a distributor should have the right to refuse an application to connect if the distributed generation does not comply with the distributor’s reasonable connection and operation standards. More than simply being an issue of clarity of the draft Regulations, this issue

⁴ Draft Regulation 6 requires that the connection and operation standards reflect or are consistent with reasonable and prudent operating practice.

relates directly to the safety of the distribution network and is of paramount importance to distributors.

Schedule 1 Clause 6B(a)

- 41 There is a typographical error - replace the word 'regulation' with the word 'generator'.

Schedule 1 Clause 9 (4)(c) - Requirements of a notice to advise that an inquirer is eligible

- 42 Clause 9(4)(c) includes a requirement that the inquirer is eligible to make an application for a minimum of 12 months. Orion considers that this minimum time period is too long and may restrict other potential distributed generation. We recommend that the minimum time period be reduced in proportion to the size of the generation. Larger generation should be given longer time periods up to a maximum of six months (total).

Schedule 1 Clause 9 (4)(e)

- 43 Clause 9(4)(e) includes a requirement to *"provide information to which connection and operation of the distributed generation may result in a breach of the relevant standards for safety, voltage, power quality and reliability of supply to other parties"*.
- 44 This raises two issues:
- 44.1 First, we do not consider that a distributor would advise a generator that they were eligible to make an application for connection if the distributor had information that indicated the possible breaches referred to above.
- 44.2 Secondly, we do not consider that the distributor would be in a position to provide this advice in the first place. We consider that this clause should be deleted.

Schedule 1 Clause 9 (4)f)

- 45 We consider that a distributor would be in a position to provide advice in relation to the modifications to the design and operation of the distribution network or in relation to the capacity of the distribution network referred to in sub clause 4(d). However we do not consider that a distributor would be in a position to provide other information (including modifications to the design and operation of the distributed generation).

Schedule 1 Clause 14 – Requirement for distributor to approve application

- 46 For the same reasons given above in relation to Clause 4(2)(a) and Clause 6(2)(b) of Schedule 1, we submit that applications for distributed

generation (in excess of 10 kW) must comply with reasonable connection and operation standards of the distributor. Clause 14(b)(i) should be amended to state:

“connection of the distributed generation would be consistent with the distributor’s reasonable connection and operating standards”

Schedule 1, Clause 14 – Conditions of approval of application

47 Clause 14 suggests that the distributor has the power to specify conditions for approval of any application to connect distributed generation in excess of 10 kW (clause 14(b)(ii)).

48 It is unclear whether there is any restriction under the Regulations on the nature of the conditions that can be imposed by the distributor. To the extent there is doubt over the ability of the distributor to impose conditions that maintain the safety and integrity of their network, we consider it important that the Regulations expressly provide that *“such conditions as are required to ensure compliance with the reasonable connection and operation standards of the Distributor”* may be imposed by the distributor on approving an application.

Schedule 1, clause 15

49 There appears to be a typo in clause 15(1) – we think the word *“must”* should be inserted after the words *“clause 12”*.

Schedule 1, clause 15A(2)

50 This provision is ambiguous as to the status of the generator’s application if the generator fails to give notice to the distributor under clause 15A(1) within 10 working days. For clarity, we think this clause should expressly provide that the generator’s application shall be deemed to be withdrawn if the generator fails to give notice to the distributor under clause 15A(1) within 10 working days. Indeed, clause 15A(3) suggests that this is the intention of the Regulations.

Schedule 1, clause 8 to clause 15B and clause 17 and 18 – Provision for timetable for approval of application, etc

51 These clauses prescribe a timetable for:

51.1 an enquiry into connection of distributed generation;

51.2 an application for connection of distributed generation; and

51.3 a period of negotiation on a written contract, after which the regulated terms will prevail.

- 52 Simply put, in our view the timetable currently provided for in the Regulations does not reflect the practical reality of the process for connection of distributed generation. In particular, the Regulations currently contemplate any required network upgrade be carried out before the application to connect distributed generation is approved and a connection contract is negotiated and finalised (or, in the absence of negotiated terms, the regulated terms are deemed to apply). Regulations should be aimed at mimicking commercial outcomes. In no commercial setting would a distributor commit to upgrading its network before finalising commercial terms with the customer. The current approach in the draft Regulations will lead to perverse outcomes, such as the distributor carrying out network upgrades for distributed generation that is ultimately not connected to the network, without recourse to the generator for costs of the upgrade.
- 53 Set out below is a description of the process which we follow when we are approached by a generator who wants to connect distributed generation. We have set out this description to assist MED in reconsidering its prescriptive timetable (and actions) for approval of an application under the draft Regulations.

<p>Initial enquiry</p>	<p>Orion considers that this process is started when the Generator first contacts the Distributor by fax, mail, email or voice mail.</p> <p>The Distributor should acknowledge the enquiry in writing explaining how the enquiry and application process works. Send out an information pack which includes a list of the information that the generator must provide.</p> <p>When formal enquiry document received from Generator (Distributor's enquiry documentation), Distributor reviews information and:</p> <ul style="list-style-type: none">- Checks availability of network capacity- explains if major network upgrade required- provides an estimate of the order of the potential costs <p>The Distributor then provides the inquirer with the above information and the distribution design requirements and information requirements for formal Application. The Distributor also provides general information on the where to find regulations and standards which may apply.</p> <p>The above is all indicative information to provide the Generator with advice to decide whether or not to proceed with a formal application.</p>
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<p>Application</p>	<p>Distributor receives written application and conducts initial investigation.</p> <p>Distributor determines the scope of the application. This will determine whether consultants are required to assist with the design.</p> <p>Distributor may, depending on the scope, advise the Generator of approved designers, and/or contractors who can provide a design build proposal. The time period will vary depending on the size and nature of the application.</p> <p>The level of analysis that would be required will vary depending on the size of the generation</p> <p>The following would be applicable to larger generators 1MW and above</p> <p>Distributor may carry out system modelling to provide advice on:</p> <ul style="list-style-type: none"> ❖ the method of connection that will need to be employed; and ❖ the voltage level at which the connection should be made. <p>Distributor would advise on protection requirements to:</p> <ul style="list-style-type: none"> ❖ approve the settings of any protection which controls a circuit breaker, or the operating parameters of any automatic switching device at any Network Connection Point; ❖ ensure that the relevant protection settings are compatible with the target clearance times that are specified by Orion; ❖ Consult with distributed generator with regard to any special arrangements or protection that may be necessary due to the characteristics of the Distribution Network; and ❖ Check on fault level implication <p>Depending on the size of the distributed generator and the characteristics of the part of the Distribution Network to which it is connected:</p> <ul style="list-style-type: none"> ❖ advise if continuously acting fast response automatic excitation and/or governor control systems are required to control the distributed generator voltage and frequency without instability over the entire operating range of the distributed generator; ❖ determine if islanding is a credible possibility and determine if the generator will be permitted to continue generating under these conditions
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<p>Negotiation of connection contract</p>	<p>Distributor and generator negotiates terms and conditions of connection, including detailing the obligations on both parties in relation to the design, technical, operational and physical requirements.</p>
<p>Upgrade of network (if necessary) and commissioning of distributed generation</p>	<p>On agreement of the terms and conditions of connection, the distributor issues work instruction for any required network related work to be undertaken. This may be to the generator's approved contractor.</p> <p>Construction time will vary depending on work required.</p> <p>Generator gives notice before commissioning.</p> <p>Distributor gives notice of their representative (if we wish to witness the test) being on site during commissioning.</p> <p>Distributor, after reviewing off line commissioning tests and regulatory requirements, will approve generator's operation by issuing a "ready for livening notice".</p> <p>On completion of on-line commissioning tests, the distributor's authorised representative will complete an operational acceptance certificate.</p>

- 54 The problem can be resolved, and clarity and certainty for both parties enhanced, by redrafting clause 15B(1) of schedule 1 to provide as follows:
- 54.1 When the generator gives notice under 15A, the distributor must, within 10 working days, issue work instructions for any network related work required to be undertaken in order to connect the distributed generation. This may be to the generator's approved contractor.
 - 54.2 Construction time will vary depending on work required.
 - 54.3 The generator will give 21 working days notice for any HV connection before on-line commissioning tests are required. A 10 working day notice period would be acceptable for low voltage connections.

- 54.4 If the distributor wishes to witness the test, the distributor must give at least 5 working days' notice (before commissioning) of their representative being on site.
- 54.5 After reviewing commissioning tests and regulatory requirements, the distributor will approve the generator's operation within 5 working days of the commissioning date.
- 55 In addition, Orion considers the Regulations should require that the inquiry relate to a specific project, i.e an "inquiry" must be more than a general, non-specific request for information of how a distributor handles distributed generation.

Schedule 1 Clause 15B(1)(a)

- 56 There is a typographical error - replace the word 'regulation' with the word 'generator'.

Schedule 1, clause 15B(2)

- 57 We think the reference to the "*duty of the generator*" should be a reference to the "*duty of the distributor*".

SCHEDULE 2 - REGULATED TERMS FOR CONNECTION OF DISTRIBUTED GENERATION

Schedule 2, clause 1A(b) – interpretation of "business efficacy"

- 58 This clause provides that regulated terms must be interpreted so as to give "*business efficacy*" to the relationship between the distributor and the generator created by these regulations.
- 59 It is entirely unclear what "*business efficacy*" means and we consider this uncertainty in interpretation raises the risk of interpretation disadvantageous to both the distributor and the generator and outcomes inconsistent with normal commercial arrangements. We propose that this clause be deleted.

Schedule 2, clause 4 – Indemnity for damages claim by third parties

- 60 Draft clause 4 provides that each party must indemnify the other for damages claimed by third parties where the cause of the loss is largely attributable to the action or omission of that party.
- 61 This indemnity is unreasonably broad as it imposes liability even where a party has not acted in breach of the regulated terms, nor negligently or in breach of reasonable and prudent operating standards.

- 62 This clause is also inconsistent with the existing mechanisms in the electricity industry for apportionment of liability and damages. For example:
- 62.1 Under the Model Use of System Agreement (MUOSA) between distributors and retailers drafted and promoted by the Electricity Commission, parties to the MUOSA indemnify the other party for any direct loss to or damage to the physical property of a third person only where the direct loss or damage results from a breach of the MUOSA, negligence or failure to use Good Industry Practice.
- 62.2 Under the draft Benchmark Transmission Agreement between distributors and Transpower, Transpower will only be liable (in contract, tort, equity or otherwise) to a customer connected to the grid for any loss (whether direct, indirect or consequential), if such loss is caused by an act or omission of Transpower which constitutes a breach of the Benchmark Agreement.

- 63 We suggest that clause 4 be amended to state that;

“Each party must indemnify the other party for direct loss to or damage to the physical property of any person where the direct loss or damage results from the breach of the regulated terms, negligence or failure to use reasonable and prudent operating practice by the first party or any of its officers, employees, agents or contractors.”

Schedule 2, clause 6 – Insurance

- 64 Draft clause 6(1) requires the generator and the distributor to maintain general liability insurance for liabilities that may arise under these Regulations, without any exclusion.
- 65 It is unclear whether such insurance is either obtainable at all, or obtainable at a commercially realistic price. We do not consider it appropriate that the Regulations require insurance coverage to be taken in excess of what would ordinarily be undertaken by the distributor or a generator in the ordinary course of business.

Schedule 2, clause 8 – Metering

- 66 Clause 8(1) provides a requirement for the generator to install a meter or meters to separately record the inflows and exports of electricity that fully comply with the rules. Orion is fully supportive of having a meter or meters to separately record the inflows and exports of electricity.

67 However, we note that the requirement for the generator to install these meters is in conflict with the rules and the Electricity Commission's Model Contract. While the rules in this area are currently being modified, both the existing rules and the proposed rules provide that the embedded generator is only responsible for ensuring a metering installation is provided where they sell electricity to the clearing manager rather than a retailer. If they sell to a retailer then the retailer is responsible.

68 Under the proposed rules⁵ in Part D:

"3.1 Retailers responsible for quantification at points of connection

Each retailer must ensure that the conveyance of electricity is quantified either by using a metering installation or a method of calculation approved in accordance with the rules, at each point of connection in relation to the ICPs for which it is responsible;

3.4 Responsibility for metering installations for embedded generation

Each embedded generator with a point of connection to a local network or an embedded network, who sells electricity to, or purchases electricity from, the clearing manager, and which does not sell electricity to or purchase electricity from a retailer at that point of connection, is responsible for ensuring that a metering installation is provided at that point of connection;

3.5 Net metering not to be used

Where electricity may flow in either direction through a metering installation the quantity flowing in one direction must be measured separately from the quantity flowing in the reverse direction;

3.6 Net metering to be replaced

Where a metering installation does not comply with rule 3.5 as at the date rule 3.5 comes into effect then the metering installation shall be brought into compliance by the reconciliation participant responsible for that metering installation on or before the date falling six months after the date on which this rule becomes effective, or 1 January 2007, whichever is the later;"

69 Schedule 1 of the Model Domestic Contract for delivered electricity (interposed - August 2005) also reinforces the concept of the retailer being responsible for the metering. It states:

⁵ Rule 3 of part D of draft rules, 27 September 2006

“Meters

8. You are not entitled to payment for your Exported Electricity unless you have a meter at your Premises to measure your Exported Electricity (called in this schedule an “Export Meter”).

9. If you do not have an Export Meter at your Premises, we will arrange for one to be installed. You may not install an Export Meter yourself.

10. We will choose the appropriate Export Meter and charge you for the installation of that Export Meter.”

70 We note that the proposed rules also require the use of a meter or meters to separately record the inflows and exports of electricity and have a requirement for any existing net metering to be replaced.

71 Orion also considers that the use of half hourly interval metering for distributed generation should be compulsory for distributed generation to a lower level than currently required by the rules. The Electricity Governance Rules require half hourly metering above 346kW⁶. Orion considers even this value is too high in respect to distributed generators where we recommend that sites above 30kW or that generate more than 10,000kWh should be required to have half-hour metering fitted. This will facilitate greater accuracy in the reconciliation process by avoiding undue use of profiling and also permit the generator to receive the price paid by the wholesale market.

Schedule 2, Clause 8(1)(c)

72 The term “internal and cumulative data” needs to be clarified.

Schedule 2, Clause 9 – Inspection and testing

73 It is probable that some commissioning tests will have to be carried out after the generator is connected. This has the potential to cause adverse operating effects and needs to be managed with the distributor. For reasons of clarity and network safety, the draft Regulations should provide for this.

Schedule 2, clause 10 – Connection authorisation

74 Clause 10(3) requires the distributor to make reasonable endeavours to facilitate the generator meeting all relevant requirements (for connection of distributed generation to the distributor’s network). The potentially wide interpretation of “reasonable endeavours” risks giving rise to unacceptable commercial outcomes for the distributor, for example, requiring a distributor

⁶ Rule 3, Part D, Schedule D1, Code of Practice 1.

to make modifications or upgrades to its network at the sole cost of, or significant cost to, the distributor to enable connection of the distributed generation to the distributor's network.

- 75 We recommend that this clause be amended by replacing the requirement that the distributor make reasonable endeavours to facilitate the generator meeting the connection requirements, with a form of negative assurance that the distributor will not do anything that unreasonably prevents the generator meeting the requirements.

Clause 10(4)

- 76 This clause provides that the generator must not make any modification to its distributed generation that may have a material effect on the distribution network or other connected parties without prior authorisation from the distributor.

- 77 We do not consider that this provision gives sufficient comfort to the distributor that a modification will not adversely affect the distributor's network, as the generator may be unaware of the potential effect of a modification on the distributor's network. We recommend this clause be amended to require the generator to give prior notice of any modification to its distributed generation, with the distributor then having the ability to require the generator to cease carrying out the modification until such time as it is authorised by the distributor.

SCHEDULE 3

Schedule 3, clause 2 – timetable for negotiated settlement of disputes

- 78 There is currently no timetable for negotiation by the parties to resolve disputes, before the dispute can be referred to the Electricity Commission. It is normal commercial practice to provide at least 10 working days for the parties to attempt to resolve a dispute by negotiation before the matter can be referred to a third party.

SCHEDULE 4 - PRICING PRINCIPLES

- 79 Orion supports the use of avoided cost pricing. We do not, however, consider that it is appropriate to include pricing principles in the regulations. However, if pricing is to be included, we support the decision to keep the regulations at the level of pricing principles rather than detailed pricing methodology. The wide range of potential distributed generation proposals, and the range of network issues created by distributed generation, makes it very difficult to prescribe a detailed methodology.

- 80 As a general comment, Orion considers a number of factors when assessing the benefits arising from generation. The credit price (estimate of benefits) that Orion pays takes into account:
- 80.1 The size of the generation and its location. Larger generation may provide less benefit per kVA to Orion than a number of smaller generators.
 - 80.2 The value of the export as an alternative to delivery. Orion provides delivery with an appropriate degree of security, whereas, the alternative of generation provides much less security (e.g. it is exposed to customers' decisions not to respond). This risk associated with export is reduced as generation is aggregated across many customers. However it is not a one-for-one substitute for delivery, and there are currently very few exporting customers. At points in the network, close to an exporting customer, export is a very poor substitute for delivery. This risk factor is recognised when setting the credit price.
 - 80.3 Average pricing applies to sites where the total rated generation capacity does not exceed 1 MW (regardless of the export levels).
 - 80.4 Orion individually considers the benefit of total generation rated in excess of the 1 MW limit, and sets individual prices and conditions accordingly.
- 81 In most cases, Orion returns the benefit to generators via their retailers on the basis of how much the generation contributes to reducing our peak demand.
- 82 The following submissions set out in paragraphs (83 – 96) are directed at improving the avoided cost pricing principles, to ensure that the connection charges are fair and reasonable, consistent with the Government's objectives.
- 83 Orion considers that the drafting of the Regulations leaves room for a generator to argue that the Regulations provide that a distributor must contribute up front a present value of future potential benefits of the generation, before they are in fact realised. Orion considers that the Regulations should ensure that there is no doubt that this is not the case. The stream of benefits and costs are to be paid as they occur.
- 84 Unless this is clarified there is the potential for the NPV argument to be raised, which implies that a distributor would have to carry the risk of

paying the NPV of the future benefit stream and then the distributed generator failing to deliver the benefits. This is clearly unacceptable.

Clause 2(a)

85 Principle (a) does not explicitly identify the avoided cost as a net concept. A net concept is clearly appropriate, and is currently used by Orion. The MED discussion paper indicates the policy is for a net avoided cost concept. Orion submits this should be made explicit.

86 As a separate issue, principle (a) implies the avoided cost if the generation were not to be connected is the same as the avoided cost if the generation were to be disconnected. This is unlikely to be true in any practical setting and will only hold over a time frame that is so long as to be of little practical use. It may be that the intention is for the different approaches to be used depending on whether distributed generation is already connected to the network. If so, this should be made explicit.

Clause 2(d) and (i)

87 Orion disagrees with the introduction of ad hoc and ex post adjustments to forecasted or average estimates of avoided costs. Forecasts will be made on the basis of averages – the fact that actuals depart from averages in a particular year does not undermine the forecasts. Introducing the possibility of ex post adjustments on an ad hoc basis will introduce significant uncertainty into the cost exercise, and undermine the principled basis for any particular pricing calculation.

88 Orion submits these proposals for ad hoc and ex post adjustments are not pricing principles. At best they are elements of a pricing methodology. For this reason, they conflict with the intention of Schedule 4.

Clause 2(j) to (n)

89 Orion disagrees with the proposals for sharing as there is no principled support for the regulation of sharing, the regulation will impose material compliance costs, and the “fairness” that seems to be the objective ignores the wider inconsistencies it introduces.

90 It is appropriate that each distributed generation proposal be assessed against the avoided costs it creates at the time it is connected. Once connected, the decisions made cannot be undone and the network assets are sunk. It serves no economic purpose to reallocate these costs after they are sunk. In fact, reallocating the sunk costs only distorts the price signal for later generators.

91 The objective seems to be a non-economic objective of fairness between generators. Orion submits this has no place in economic regulation. In

addition, in this context, the narrow objective of fairness between generators ignores the possibility that the assets may be used later for other purposes, such as to supply customer loads. The draft Regulations rightly do not propose to include loads in the ex post sharing scheme. The complexity means that this cannot practically be done and illustrates the brittle nature of this fairness objective.

- 92 Even limiting the ex-post sharing scheme to generators will place a significant compliance cost on distributors. Records must be kept of the relationship between distributed generation, particular network expenditure caused by the generation, and subsequent generators. This will require a not-insubstantial overhead.
- 93 Orion submits the best solution is to remove the sharing scheme. It has no principled foundation and will be potentially expensive to administer.
- 94 If this is not accepted, Orion submits the second best alternative is a time limit, of say three years. This will limit the compliance costs of this regulation.

Clause 2(o)

- 95 There are several issues with this proposed principle. First, although the intention seems to be to give the distributed generator capacity rights over a limited set of connection assets, the wording captures all network expenditure made in response to the distributed generation. This could include assets deep into the network. This would introduce a capacity rights scheme, which would be a fundamental change to the way distributors operate.
- 96 More fundamentally, this pricing principle is not needed. The concern seems to be that a distributed generator might in the future be denied the use of “its” assets. But the assets will be owned and operated by the distributor, and included in the accounts of the distributor for Part 4A purposes, for example. This concern should be addressed by getting the rules right in relation to subsequent generation proposals. Where a subsequent generator would cause capacity problems, network investment is required. Orion submits this is the outcome in practice and will be the outcome under the draft Regulations. For this reason principle (o) is not needed and should be omitted.

EXPLANATORY NOTES

- 97 While the explanatory note is not part of the regulations we note it is intended to indicate their general effect. We therefore consider that the reference to the Distributor’s application of the “*regulated pricing*”

methodology” in paragraph 6 is incorrect. At best it should refer to regulated pricing principles.

- 98 Thank you for the opportunity to make this submission. If you have any questions please contact Dennis Jones (Industry Developments Manager), DDI 03 363 9526, email dennis.jones@oriongroup.co.nz.