

21 August 2015

Regulation Branch
Commerce Commission
Wellington

by email: regulation.branch@comcom.govt.nz

SUBMISSION ON THE IM REVIEW

- 1 Orion New Zealand Limited (**Orion**) welcomes the opportunity to comment on the Commerce Commission's (the **Commission**) consultation paper "Input Methodology review, Invitation to contribute to the problem definition" (the **paper**) and the decision-making frameworks for considering changes to the input methodologies (the **draft frameworks**).
- 2 Orion has reviewed and supports the submission by the Electricity Networks Association (the **ENA**) on the IM review problem definition.

Framework for the review

- 3 The input methodologies (**IMs**) have been in place since December 2010 and have, for the most part, worked reasonably well.
- 4 Orion disagreed with some Commission decisions made when the initial IMs were set, for example the decision to set the initial RAB based on old 2004 ODV values. However, we recognise many of the decisions have been upheld by the High Court and are now embedded. We therefore do not believe it is useful to re-open these debates.
- 5 We have not seen evidence to suggest that substantial changes to the IMs are required at this time, with the exception of the customised price-quality path (**CPP**) IMs, which we discuss below. For the remaining IMs we support an approach of making incremental improvements where they can be demonstrated to better deliver the Part 4 Purpose.

- 6 It seems that the Commission has a similar view as the issues it has raised in the problem definition paper relate to solving specific problems and potential problems in the current IMs without changing the overall framework.
- 7 Orion welcomes the Commission's publication of two draft decision-making frameworks for amending the input methodologies, one that relates to the current IM review and one for more general (future) IM reviews. We support frameworks that provide clear guidance for industry and other stakeholders of when the Commission is likely to amend the IMs and how the Commission will approach decisions about amending the IMs. The drafts published by the Commission are a good start. We think more can be done to clarify how and on what basis decisions will be made. We support the recommendations of the ENA and Russell McVeagh in this regard, including:
 - 7.1 The frameworks should clarify what is meant by "policy intent". We agree that changes to better meet the policy intent is the right goal, but it should be clear in advance what that policy intent is, otherwise the certainty benefits may not be achieved. We consider that the policy intent is what was set out in the relevant Reasons Paper. It is also essential that the Reasons Papers do not contain any ambiguity about the policy intent – it should be clear to all parties what the intention is.
 - 7.2 The Commission should restate the core economic principles that applied when the IMs were determined. A high evidentiary threshold should be required for changes to the economic principles.
 - 7.3 The Commission should confirm that any change to an IM needs to be consistent with the core economic principles (e.g. the expectation of earning at least a normal return).
 - 7.4 Orion disagrees with the Commission's view that it cannot create new IM's. We consider that the initial response to the "new matter" question, provided in the Russel McVeagh advice to the ENA, which says that the Commission can introduce new subject matters as part of a review (or amendment) process is a more workable approach.
- 8 Orion supports the review of all IMs together as part of the statutory review process. Orion has been concerned by the frequency at which IMs have been amended since 2010. Orion does not consider that many of these amendments needed to be made with such urgency and certainty would have been better promoted if they had been held for consultation as part of this statutory IM review instead. We recommend the Commission only makes amendments to IMs within a regulatory period where necessary to

correct errors or ambiguities. More material amendments should only be considered in exceptional circumstances.

- 9 Orion continues to be concerned at the propensity of the Commission to produce interpretations of the IMs and their purpose which are at odds with what interested parties had understood the IMs to mean when they were developed or at odds with a plain reading of the documentation. The best example is the application of claw-back to recover losses following a catastrophic event. Orion cautions the Commission against making interpretations to fit ad hoc policy objectives that are not consistent with the plain meaning of the IMs. The Commission should ensure all IM Reasons Papers are as clear as possible regarding the intent of each part of the IMs to promote clarity and certainty and minimise the risk of competing interpretations.

Commission's proposed process

- 10 The Commission has issued the problem definition paper with a consultation period of just over nine weeks, plus two weeks for cross-submissions. During the consultation period it held a two-day forum to discuss key issues for the IM review. This is a reasonable amount of consultation for the problem definition round.
- 11 We found the IM review forum to be an effective way of getting views on the table and providing some scope to discuss them relatively informally. We suggest that any similar forums held in future have fewer presentations and more time for discussion.
- 12 Orion is concerned that the Commission's process for reviewing the IMs remains undefined up to the draft decision being issued in the 2nd quarter of 2016. Going from a problem definition phase to a draft decision stage is a big step. Once a draft decision is issued timeframes tend to be compressed and it can be difficult to make necessary changes. Orion strongly supports stakeholder engagement at the emerging views stage of the review. To facilitate this we recommend an emerging views consultation and the establishment of technical and expert working groups to ensure that the draft decision is made with expert industry input. This has been helpful in the past to ensure the final decision is workable, relevant and can be implemented in practice. Working groups could be useful for the cost of capital, CPP rules and processes and the form of control.

Topic 1: Risk allocation mechanisms under price-quality paths

- 13 The paper discusses various items within the IMs that affect the risk faced by consumers and suppliers. We discuss each of them below and raise additional points not covered in the paper.

Re-openers

- 14 It is important to be able to re-open price paths, including for claw-back, following a catastrophic event or change event and we support this aspect of the current IMs.
- 15 We also recommend creating a re-opener for remedying a component of the DPP that is clearly unreasonable for a particular EDB (as an alternative to applying for a CPP, which many EDBs cannot afford and is excessive when the aim is to correct a single building block item).

Pass-through and recoverable costs

- 16 In principle there should be no over or under-recovery of pass-through and recoverable costs. The pass-through balance approach introduced for EDBs at the last price reset should deliver this outcome, but this does not apply to Orion under the CPP.
- 17 In November 2014 the Commission amended the IMs to create a series of new recoverable costs and amend the definitions of some existing recoverable costs.

Distributed generation allowance

- 18 We recommend reviewing the definition of the distributed generation allowance. A strict reading of the IMs implies Orion may not be able to recover the costs of its avoided transmission payments as recoverable costs, meaning that Orion would need to change its current arrangements. This is because Orion does not make avoided transmission payments to distributed generators in accordance with Schedule 6.4 of the Electricity Industry Participation Code 2010, but instead makes payments under alternative agreements, which are permitted in the Code.
- 19 We also note that it is not possible to calculate the actual cost avoided because the cost reduction represents a collective effort across all contributing generators and those that provide load response. It is not possible to recalculate the costs that would have occurred (based on an altered timing of peak loads) in the absence of all responses, and then divide this savings between the parties.
- 20 A better approach would be to claim any net amount paid on an arm's-length basis and reasonably identified as representing avoided transmission costs

Investments that avoid transmission investment

- 21 There are numerous scenarios where a capacity constraint can be addressed either by a transmission upgrade or a distribution upgrade. Orion and other EDBs can prefer transmission solutions in such situations where a distribution investment would not be reflected in prices until the next price reset. This would be the case even if the transmission solution is more expensive.
- 22 We would support the ability to claim costs, including WACC, where we can show that an investment has been made that substitutes for an investment by Transpower but was not otherwise reflected in our asset base or operating expenditure. We face some significant upgrades at our remote grid exit points that are affected by this issue.

Option to apply for a CPP

- 23 This is not a cost-effective risk mitigation mechanism given the time, cost, opportunity cost and risks associated with making a CPP application. It is not a decision any Board would make lightly and should not be seen as a cure-all for forecasting errors within the DPP.
- 24 The Orion CPP decision indicates that suppliers face the risk of revenue losses due to demand reductions over the time period from when a catastrophic event occurs and the CPP (or DPP reopener) begins. Contrary to the Commission's statements this is **not** a risk that suppliers can manage, insure against or address through diversification. It was also not the risk allocation that was understood to apply at the time of the original IM determination in 2010. The best allocation of this risk should be carefully reconsidered as part of this IM review. In Orion's view, the current allocation is no longer in the long term interests of consumers.

Form of control and the treatment of stranded assets

- 25 These issues are discussed in, respectively, the form of control and emerging technologies sections below.

Topic 2: Form of control

- 26 Orion agrees the form of control for EDBs should be reviewed as part of the IM review. The ENA submission has set out a number of advantages and disadvantages of price caps and revenue caps and noted that there are various hybrid options that comprise elements of both.
- 27 We particularly want to highlight the following points:
- 27.1 The price cap currently applied to EDBs disincentivises investment in energy efficiency. The energy efficiency allowance mechanism in

the DPP does not remove this disincentive as it gives the Commission broad discretion to refuse to allow recovery, does not provide certainty regarding recovery before investments are made and does not provide an allowance for revenue reductions that result from tariff-based measures to promote energy efficiency. The allowance should also apply to the effect of current demand-side management initiatives being applied by EDBs. Otherwise a perverse incentive is created to stop existing initiatives and start new ones.

- 27.2 A revenue cap makes it easier for EDBs to restructure prices without either significantly under-recovering revenues or breaching a price path.
- 27.3 A revenue cap means the Commission would not need to forecast revenue growth for price resets and suppliers and consumers would not face the risk of these forecasts being wrong. The Commission's forecasts at previous DPP resets have not been very accurate and we suggest that the Commission should put more effort into achieving accurate real revenue growth forecasts as part of the DPP. We note the CPP experience is different as Orion proposed its own revenue growth / demand forecasts for the Commission's consideration. This may be a useful basis for developing DPP revenue forecasts.
- 27.4 If the form of control remains a price cap, the Commission should consider alternative means of addressing these issues.
- 28 As noted in the ENA submission the form of control can be viewed as a spectrum, with a WAPC at one end and a "pure" revenue cap at the other end. The form of revenue cap that applies to gas transmission businesses in New Zealand is just one form of hybrid approach that is available. Other hybrids have been applied internationally. There are therefore various options available for setting the form of control for ENBs.
- 29 Orion is concerned that the Commission has sought to link a change to the form of control to a change in the regulatory WACC. Our understanding is that there is no evidence to support making such a change or that the change to beta could be robustly identified. We request the Commission confirms quickly whether it thinks the WACC should change as a result of a change to the form of control and identify the evidence supporting this view. We are unable to make a meaningful decision on the most appropriate form of control until the Commission provides more indication of the package of IM changes that would accompany such a change to the form of control.

- 30 The problem definition paper has also raised the question of whether the form of control should continue to be specified in the IMs. We believe it should be – this provides some helpful certainty for suppliers and consumers. The form of control is not, generally, something that should change at each reset so reviewing it as part of the statutory IM reviews is appropriate.
- 31 At this point we have not seen convincing evidence that a change to the form of control is warranted.

Topic 3: Interactions between the DPP and CPP

- 32 Orion supports the question of the alignment between the CPP and DPP WACCs being reviewed in this IM review. The variance between DPP and CPP WACCs can inappropriately incentivise or disincentivise EDBs to make CPP applications.
- 33 Uncertainty regarding the WACC that will apply from the next DPP reset is a material issue for all parties when they make a CPP application, particularly when the CPP application is made late in the regulatory period. This was a key concern for Orion's board when making its CPP application; it meant Orion was unable to clearly identify the counterfactual to making the application.
- 34 There are a number of options on the table to resolve this such as using a trailing average cost of debt or setting the CPP WACC equal to the DPP WACC and adjusting for the difference with the next DPP WACC by way of recoverable cost. We note the solutions available are not necessarily mutually exclusive. The IM review needs to look at all options in detail to identify the optimal long-term solution. We do not object to the Commission making a decision on this topic through the fast-track process (which may involve implementing the most straightforward option due to time constraints), but emphasise that this should not preclude developing the best IM through the full review process.
- 35 It is also becoming urgent to clarify the process for how EDBs, especially Orion, will transition from CPPs back to DPPs. Leaving this to the Commission's discretion towards the end of the CPP opens up EDBs to unnecessary risk and uncertainty and does not promote the purpose of IMs.

- 36 The Commission has indicated that it will begin consultation on the process for Orion's transition to a DPP in the latter part of 2015.¹ We therefore look forward to this consultation starting in the next few months.
- 37 In parallel, we recommend the Commission also include, in the CPP IMs, the generic process the Commission will take for the transition of other EDBs subject to CPPs back onto DPPs. This process should include the consultation steps that will be taken and when they will occur. The CPP IMs should also include the factors the Commission will take into account when deciding whether to roll over the prices that apply at the end of the CPP or to reset the prices. For avoidance of doubt, this is not a suggestion that the methodology of setting the DPP price should be included in the IMs.

Topic 4: The future impact of emerging technologies in the energy sector

Overview

- 38 The potential impacts of emerging technologies on the electricity industry have been receiving considerable attention and debate. We agree it is worth including this topic in the review but are not yet convinced that the IMs need to change materially in response to emerging technologies. There may be some smaller adjustments that could be helpful.
- 39 Changes to the IMs in relation to emerging technologies should be co-ordinated with the Electricity Authority and the Ministry of Business, Innovation and Employment as they hold some other relevant policy levers (e.g. pricing methodologies, low-user fixed charge regulations). It is necessary to ensure the policy / regulatory directions are consistent.
- 40 We consider that rather than changing the IMs it may be better to change the source of the problems relating to these other policy levers. We urge the Commission to discuss these issues with other regulatory bodies.

Potential implications of emerging technologies for Orion

- 41 Our view is that the network will continue to be needed and valued by the overwhelming majority of consumers for the foreseeable future. We therefore consider the risk of asset stranding to be low, although acknowledge that utilisation patterns may change.

¹ Commerce Commission, Default price-quality paths for electricity distributors from 1 April 2015 to 31 March 2020: Main Policy Paper, 28 November 2014, paragraph A19.

- 42 As Orion presented at the IM review forum, we have undertaken some analysis on the potential impacts of known emerging technologies (solar photovoltaics (PV), electric vehicles and battery storage) on our network. From a technical perspective, we consider that these technologies and their impacts are reasonably well understood. The uncertainty relates to their pricing and hence their rate of uptake by consumers. Our analysis therefore considers scenarios relating to the uptake of these technologies.
- 43 The analysis relates primarily to our urban network. The rural network has different drivers, primarily irrigation, which could also be regarded as an emerging technology and has led to a tripling in the size of our rural network in the last 15 years. We emphasise that different networks, with different architecture and customer demographics may have different results.
- 44 Charts setting out the results of our analysis are provided in **Appendix A**. These results indicate that:
- 44.1 The introduction of solar PV and electric vehicles could make winter demand more peaky, but this can be offset by widespread use of batteries (charged from the network).
- 44.2 Subtransmission network: The existing network is well utilised so modest declines in overall peak demand are not material to the network, in the context of a growing population. New capacity will be required in urban sprawl areas.
- 44.3 Low voltage network: The introduction of solar PV is likely to require further investment to manage over voltage, unless export is managed /limited by the use of hot water or battery storage. There is significant industry work (Green Grid) being undertaken to develop PV connection guidelines to manage this (at the time of connection application) and reduce the risk of significant PV induced LV network investment. Electric vehicle charging could create new LV peaks leading to thermal or voltage constraints requiring reinforcement. Whether new technologies deliver efficiency gains or drive reinforcement will largely be dependent on successful management of distributed generation and demand-side management initiatives.
- 44.4 Battery technology could more than mitigate the effect of electric vehicle charging at peak times but introduces significant losses (greater than 8% battery losses plus 4% converter/inverter losses).
- 45 We consider the real uncertainty isn't with the known existing technologies but with the potential for currently unknown technologies to emerge that may be "game changers".

- 46 However, there is an opportunity to increase the utilisation of the existing network through co-ordinated management of load, distributed generation and storage. Regulatory settings need to support this to ensure it can happen and acknowledge the role of distribution networks in facilitating efficient outcomes. It is also important to recognise that different solutions may be appropriate for different networks and regulations should not prevent this.
- 47 We note the work undertaken by the Smart Grid Forum in relation to the Transform model.² We do not believe this model will necessarily be very useful to identify optimal investment profiles for EDB capex outside of the narrow focus taken by the model.

Potential IM changes

- 48 We understand that some parties have questioned whether the regulatory treatment of stranded assets needs to change as a result of emerging technologies. As discussed above, we consider the risk of stranding remains low. We see value in the current regulatory rules regarding stranded assets. Orion considers the key principle is $NPV=0$, which has been a core principle underpinning the IMs from the beginning. If $NPV<0$ it is unlikely that investment will be maintained.
- 49 One issue with the current IMs is that EDBs may not be able to achieve sufficient savings over the 5 year reset period to justify a large, long term, investment in demand-side management (DSM) or energy efficiency. The IMs could usefully include a mechanism where savings are retained for longer in order to justify investments that will deliver longer-term savings to consumers.
- 50 Many of the benefits (e.g. deferral or avoidance of peaking generation) of DSM fall to other industry parties but distributors face the costs. A mechanism to enable EDBs to recover a portion of these other benefits through recoverable costs (where the benefits can be robustly identified) would be a helpful incentive. This would assist the Commission to better meet its obligations under section 54Q.

² This model was developed by EA Technologies to assist electricity distribution companies to develop network investment strategies around emerging technologies. It is intended to provide strategic guidance about likely timing and nature of investment related to emerging technologies. It was developed originally for distribution companies in Great Britain and recently EA Technologies has sought to apply it to New Zealand EDBs.

Notionally efficient distributor

- 51 The paper has raised a suggestion of using a “notionally efficient distributor” as a benchmark to set price or revenue caps.³ It is not at all clear how this could work. We do not believe it would be feasible to develop a notionally efficient distributor that could be reasonably applied to all EDBs, given divergent natures of the businesses. It is also not likely that emerging technologies will be applied to each network at the same rate – e.g. some networks are better suited to solar PV than others.
- 52 Further, this suggestion appears to be contrary to section 52P(10) which prohibits the use of comparative benchmarking on efficiency to set starting prices, rates of change, quality standards or incentives to improve quality. We assume that using a notional distributor would involve benchmarking each EDB to the notional distributor, which is clearly comparative benchmarking. It would also seem to require a substantial change in the IMs as it would step away from the building blocks approach to a very different method of setting prices.

Topic 5: Issues raised by the High Court on the Cost of Capital

- 53 Orion agrees that the issues raised by the Commission need to be considered as part of the IM review. As the aspects of the cost of capital IM are interlinked, they should be considered together.
- 54 Orion supports a review of the treatment of the cost of debt. Assessing the cost of debt over a single month has led to a large degree of volatility in the regulatory WACCs used for price setting and information disclosure. We would support the use of longer-term averages to set the cost of debt.
- 55 Orion also recommends the IM review consider reverting to an industry-standard post-tax ROI measure for all regulatory determinations. This would mean the vanilla ROI and vanilla WACC would no longer be estimated or applied. Orion considers this would be beneficial as the vanilla terms are not widely understood and it is not always clear which measure is being applied (e.g. in analyst briefing slides for the Commission’s decisions).
- 56 Orion accepts the Commission needs to review the issues raised by the High Court but does not believe they require significant attention:

³ Paragraph 242.4.

- 56.1 The WACC percentile decision has been made and was made based on evidence available at the end of last year. Insufficient new evidence has emerged since that time to justify reconsidering the issue.
- 56.2 A split cost of capital approach is not desirable; it will signal to investors that investments they make today are at risk of future arbitrary WACC reductions.
- 56.3 The Brennan-Lally CAPM is not an unreasonable approach provided adjustments are made to fix its known shortcomings; i.e. the understating of the cost of equity for low-beta stocks.
- 56.4 The term credit spread differential allowance (TCSDA) has some theoretical merit although its financial impact has been minimal. The need for a TCSDA may reduce if adjustments are made to the cost of debt.

Topic 8: Cost effectiveness of the rules and processes for CPP applications

- 57 The CPP IM is the part of the IMs that is most in need of a serious overhaul. We are pleased to see this is a key topic for the review, but are concerned that it may not be properly addressed due to the fast-track process. Orion emphasises that the Commission should not gloss-over or only briefly consider issues in order to meet the fast-track timeframe. We support the fast-track process, but the full CPP IM should be reviewed in detail as part of the full IM review to make sure the best possible CPP IM is determined.
- 58 Orion and the ENA have previously submitted on problems with the current CPP IMs and ways they could be improved. We refer the Commission to those submissions and consider them to be on the record for this IM review.⁴
- 59 In this submission, we want to emphasise some key amendments that could be made to the CPP IMs. We agree with the comment of Bill Heaps of Strata at the IM review forum:

“So, I think again this comes down to the information requirements that the IMs may well be too detailed, too specific, not have sufficient context around them that’s actually guiding the business and the verifier and the Commission in how they should be applied in practice, and I think that sort

⁴ ENA, Feedback on setting Orion’s customised price-quality path, 14 April 2014. Orion, Feedback on setting Orion’s customised price-quality path, 14 April 2014.

of context would be extremely useful rather than just an enormous legal document to rely on.”

Verification

- 60 The value of the verifier is that they help the applicant ensure the proposal is robust and meets the IM requirements. However, we note the comments of Geoff Brown, the verifier for the Orion CPP application, at the IM review forum. Geoff Brown suggested there is a lack of clarity regarding what the purpose of verification is. We submit that this is a key area to clarify.
- 61 Geoff Brown also indicated that the Commission’s apparent requirement that there is a paper trail for all communications between the verifier and the CPP applicant created significant problems. It effectively meant all communications needed to be in writing, where less formal conversations or workshops would have been much more effective in developing a common understanding of the issues.
- 62 Further, there was some confusion regarding whether the Commission should have sight of Orion’s draft CPP application that was provided to the verifier. We submit that it is inappropriate for the Commission to seek visibility of a draft application (we note the Commission, quite reasonably, does not publish draft versions of its consultation papers). This information is confidential to the applicant. It is in draft for the very good reason that it has not yet been finalised and verification may lead to substantive changes to the proposal. Any requirement to provide draft documentation to the Commission would be a barrier to applicants making CPP applications as they will be concerned information in the draft proposal but not in the final will colour the assessment of the application.
- 63 The verifier was only used in a limited capacity after the CPP application was submitted. This created costs as the information and explanations Orion provided to the verifier had to be repeated. The verifier should be engaged for the Commission’s review of the CPP application.
- 64 The IMs require the verifier to have a full proposal before verification starts, which compresses an already tight timeframe. We query whether the verifier needs to see the entire proposal.
- 65 The verifier is required to review a large degree of information, much of which is unrelated to the CPP expenditure objective. We submit that the verification process could be made easier if the verifier only focused on topics relevant to the expenditure objective.

- 66 The process for engaging the verifier is unduly onerous. The process of preparing an RFP, interviewing, selecting the preferred verifier and developing the tripartite deed took a lot of time that could have been better used elsewhere. It may be better to have a pre-approved pool of verifiers available.
- 67 We also consider that the roles of the verifier and independent engineer could be combined.

Consumer consultation

- 68 The CPP IMs require the applicant to “adequately notify” consumers of the intention to make a CPP application, the impact of the application and the process for making submissions (among other items). This must be done at least 40 working days before the proposal is submitted.
- 69 The timeframe for the consultation alongside the timing for the verification stage compresses the consultation process and makes it challenging, to run a comprehensive consultation programme and to amend the CPP proposal based on feedback received, simply due to lack of time.
- 70 The CPP IMs also do not require the applicant to consult on options and the impacts the different options would have on price and quality of supply. It became clear in our CPP process that the Commission had an expectation that our consultation would include this. We recommend the CPP IMs set out clearly what is required. Where a CPP applicant has followed the consultation process set out in the IMs that should be sufficient.

Information required

- 71 The CPP IMs required Orion to provide significantly more information than was necessary to assess a CPP application. The detail and prescription of the requirements (e.g. Schedules D and E) could be substantially reduced.
- 72 There was significant duplication in the requirements and it would be helpful not to have to repeat information in the proposal that was available elsewhere (e.g. in Orion’s Asset Management Plan). Information provided in models should also not need to be repeated in the documentation.
- 73 Recasting Orion’s information into the format required by the templates, which did not match information disclosure or Orion’s reporting, was onerous and time consuming. More importantly, it led to confusion during the assessment phase as it required continual reconciliation between the data in the CPP proposal and the underlying information held by Orion. This made it more challenging for Orion to explain the basis for the

proposals as the information in the proposal had to be reconciled back to the information Orion staff worked with on a daily basis.

- 74 Schedule D could be better targeted to key information; much of the information required could be removed without harming the quality of the application and greatly reducing costs. The CPP IMs should permit EDBs to prepare and present information that reflects their own planning processes, systems and reporting practices.
- 75 The requirement for project descriptions needs to be reviewed. These project descriptions are an artificial construct written to meet the IM requirements. They have limited meaning in relation to opex and the AMP. Including sufficient project/programme information should be sufficient in relation to capex. The information provided should be based on the AMP, developed to support the CPP application as required.

CPP following a catastrophic event

- 76 Orion considers that a CPP is an inappropriate mechanism for addressing a catastrophic event. In our case it distracted staff from a focus on critical earthquake response and recovery. The uncertainty created by the impact of the catastrophic event makes it difficult to forecast demand and expenditure requirements. A two-year application window is too short under these circumstances.
- 77 Now the IMs provide a DPP reopener for catastrophic events, we consider that this may be useful to provide a short-term solution with a CPP application being made at a later stage.

Core information for a CPP application

- 78 Orion submits that the information that should be required in a CPP proposal should be limited to:
- 78.1 Why the application is being made.
 - 78.2 An AMP, including sufficient information on projects and programmes.
 - 78.3 Price path models that are consistent with the IMs.
 - 78.4 A quality standard proposal.
- 79 Consumer consultation information (with scope possibly agreed in advance between the applicant and the Commission).

Single-issue CPP

- 80 We also support the use of single issue CPPs where certain conditions are met (e.g. a particular aspect of the DPP is clearly unsuitable for an EDB). We refer the Commission to the ENA submission on this matter. However, the Commission should respect the narrow nature that single-issue CPP applications would have and not require information unrelated to the proposal. For example, Orion seriously considered applying for a quality-only CPP, but was advised by the Commission that it was likely the Commission would examine detailed forecast expenditure information before it could form a view on the quality-only CPP. This was a consideration in Orion's decision to apply for a full CPP.

Topic 9: Reducing complexity and compliance costs

- 81 Orion agrees that this is a useful objective, but we have not identified many material improvements that could be made without risking other benefits (although see our comments above regarding the use of the vanilla WACC and ROI).
- 82 Orion considers that deferred tax is a more complex methodology than tax payable but we have experience in applying deferred tax, so we support the status quo.
- 83 Orion is concerned about the complexity of the IRIS and that the IRIS does not work for the transition between DPPs and CPPs. The IRIS may also produce undesirable incentives in certain circumstances (e.g. to underspend for the period between a catastrophic or change event and the start of a CPP). We suggest it would be useful to assess the IRIS to see if a more straightforward method can be developed.

Concluding remarks

- 84 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



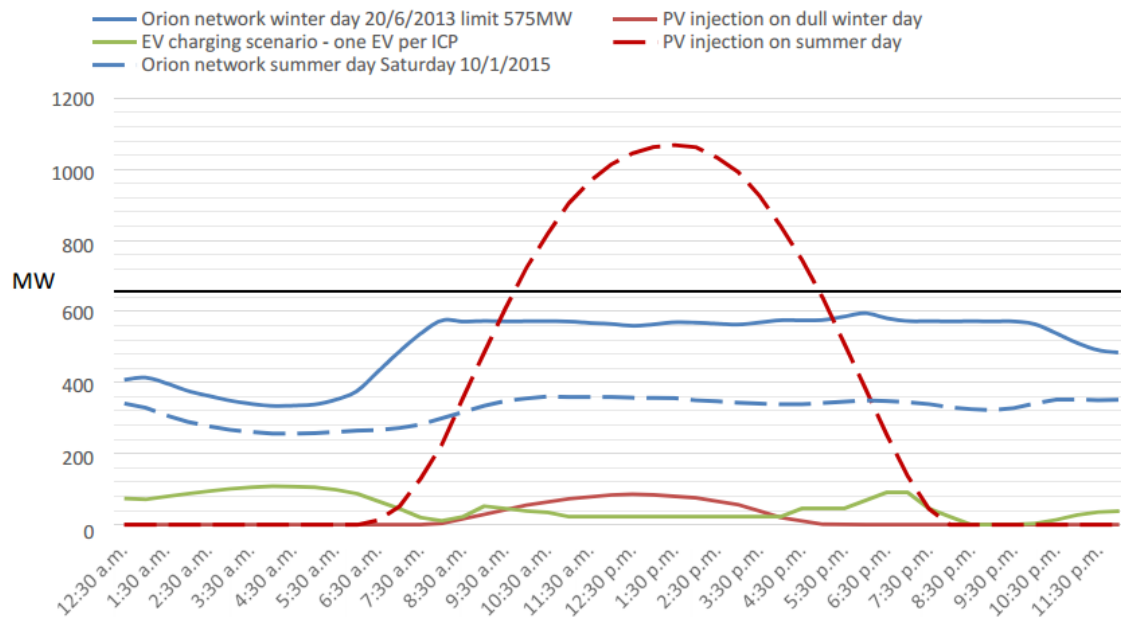
Dennis Jones
Industry Developments Manager

Appendix A: Results of Orion's analysis of the potential impact of emerging technologies

The charts in this Appendix summarise the results of the scenarios Orion has modelled regarding the impacts of emerging technologies on Orion's network. These scenarios are intentionally "extreme", projecting very high uptake of solar PV, electric vehicles and battery storage. Orion does not necessarily believe these uptake scenarios are realistic but puts them forward to test the potential outcomes that could flow from the technologies.

Subtransmission network

Load, solar PV and electric vehicle profiles



The solid blue line represents Orion's urban load on a cold winter day. This is relatively flat due to Orion's existing DSM programmes.

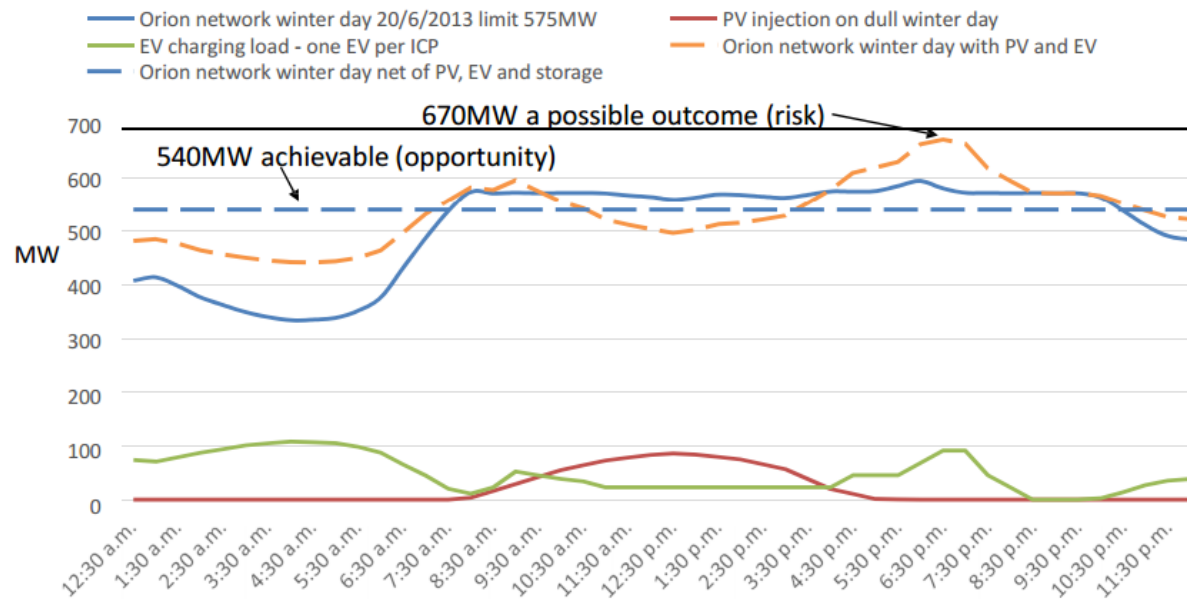
The solid red line represents projected PV injection on a cold winter day.

The dotted blue line represents a sunny summer day.

The dotted red line represents projected solar PV injection on a sunny summer day, with 6kW capacity per ICP and 50% of energy being supplied by solar PV.

The solid green line represents the impact of electric vehicles, assuming one EV per ICP. The shape of this line could change depending on assumptions of when EVs are charged. However, the impact is relatively low.

Potential impact of emerging technologies on a cold winter day



This chart examines the potential combined impact of electric vehicles, solar PV and battery storage on a cold winter day on the subtransmission network, based on “extreme” uptake scenarios.

The current demand profile is the solid blue line.

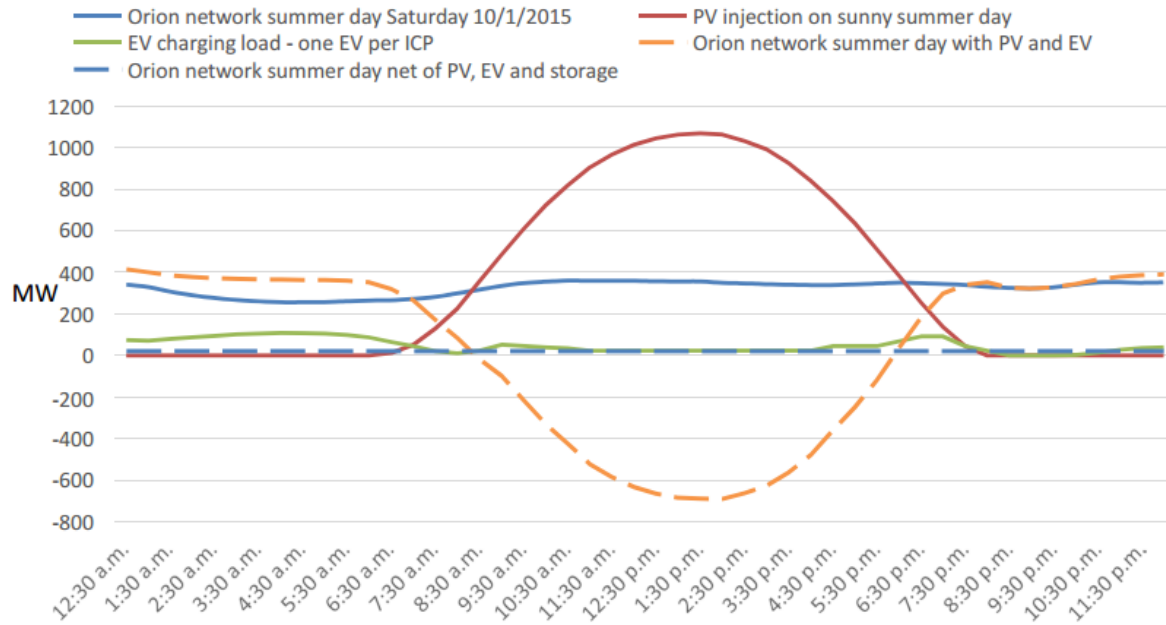
Solar PV injection on a cold winter day is the solid red line, while assumed electric vehicle charging load is the solid green line. Applying solar PV and electric vehicles without storage could deliver the dotted orange line.

However, if battery storage is included in the most efficient way possible the dotted blue line could be achieved. This is reducing a peak of potentially 670MW to 540MW.

We do not see this as creating a stranding risk, but there is scope for a 10-20% improvement in energy efficiency.

Achieving this outcome would require 45% of ICPs to have a 5-7kW battery unit.

Potential impact of emerging technologies on a sunny summer day



This chart examines the potential combined impact of electric vehicles, solar PV and battery storage on a sunny summer day on the subtransmission network, based on “extreme” uptake scenarios.

The current demand profile is the solid blue line.

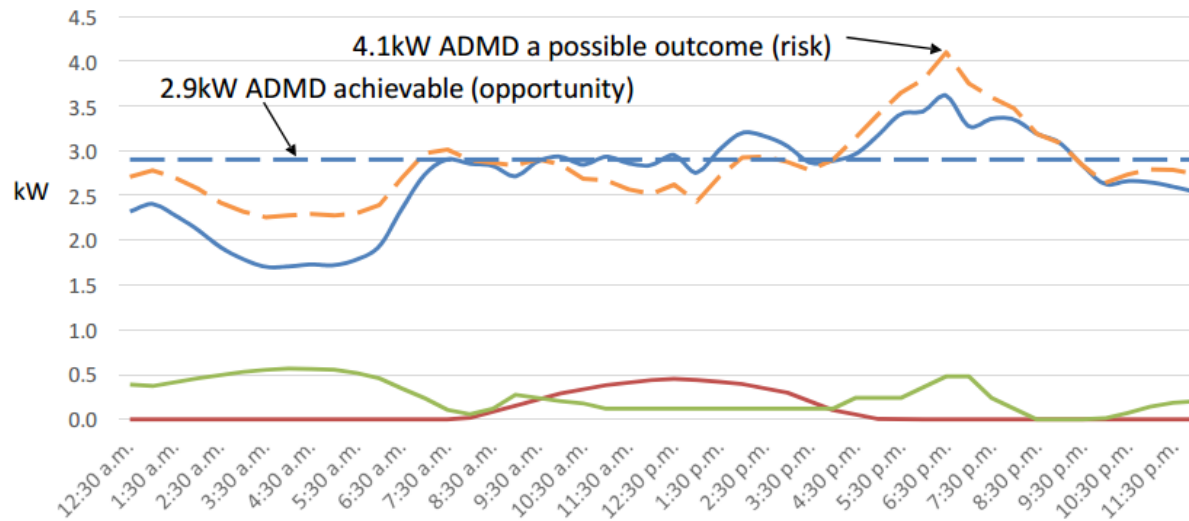
When solar PV is added to the scenario but no battery storage, the PV on the network would produce the solid red line, pushing Orion’s grid demand to negative – the dotted orange line. Orion would be exporting onto the grid. If all networks had a similar profile, the implications could be significant.

However, if battery storage is included in the most efficient way possible, demand on the network could be the dotted blue line. This could reduce summer demand from 360MW to 20MW.

Achieving this outcome would require 45% of ICPs to have a 5-7kW battery unit.

Low voltage network

Potential impact of emerging technologies on a cold winter day



This chart shows the potential combined impact of electric vehicles, solar PV and battery storage on a cold winter day on the low voltage network, based on “extreme” uptake scenarios.

The current demand profile is the solid blue line.

Solar PV injection on a cold winter day is the solid red line, while assumed electric vehicle charging load is the solid green line. Applying solar PV and electric vehicles without storage could deliver the dotted orange line.

However, if battery storage is included in the most efficient way possible the dotted blue line could be achieved. This is reducing a peak of potentially 4 kW per residential ICP to 2.9kW.