

# INPUT METHODOLOGIES REVIEW

## Cross-submission on Problem definition and decision-making frameworks

4 SEPTEMBER 2015

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## EXECUTIVE SUMMARY

We welcome the opportunity to comment on submissions made in response to the Commission's consultations on problem definition for the Input Methodologies (IMs) review and the draft IM decision making frameworks (draft DMF). We think the review has had a positive start.

The submissions helpfully detail what stakeholders consider the priority areas to be, and the process steps the Commission should take, for the review. Many of the views expressed, including our own, reflect formative thinking in key areas. This is unsurprising, given the challenges and uncertainty around potentially game-changing technologies, but it highlights that an iterative approach is needed.

At a high level, we broadly agree with most of the content of most of the submissions and disagree only on a small number of matters in a small number of submissions. Having considered submissions and associated reports we make the following observations.

1. **A good start to the review process.** We welcome the Commission's early engagement with stakeholders in the review process. We consider that continuing this approach, including additional consultation and through working groups, will help ensure confidence in the process and contribute to the success of the review.
2. **Thresholds are the key gap in draft DMF.** The draft DMF is widely supported but thresholds for changes to the IMs is recognised as a key gap in the draft DMF. While thresholds may be very low for minor changes, high thresholds, including quantified cost benefit analysis (CBA) where possible, are needed for major changes. It is important the DMF recognises this.
3. **Efficiency, adaptability, investment.** The challenges and opportunities of evolving market conditions are best met by efficient and adaptable suppliers that have the capacity and willingness to invest. This can be achieved by strengthening the incentives for efficiency improvements, incentives to innovate and invest, and cutting low-value complexity and compliance costs.
4. **Caution is needed on WACC.** Supplier and investor confidence, already shaken by the WACC percentile review, is being further impacted by technological and market uncertainty. Focussing on efficiency enhancing improvements over changes that may simply shift value would improve supplier and investor confidence.
5. **The role of the IMs is more critical now than ever.** Increasing technological and market uncertainty make the role of the IMs in promoting regulatory certainty and predictability more critical than ever.

We touch on these points below and discuss these more fully in the body of the submission.

### A good start to the review process

We consider that the Commission has made a good start to the IMs review.

Most submitters, including ourselves, strongly support the early consultation on problem definition and the DMF. In our view this is good public policy practice and particularly helpful given this is the first statutory review of the IMs and the context of increasing market uncertainty.

There is also clear desire for more rather than less engagement and for the next steps in the process to include consultation on the Commission's views on problem definition and then on IM amendment options.

There is also an appetite for the Commission to establish working groups on matters such as WACC issues and complexity and compliance costs. We support this approach and would welcome the opportunity to actively participate in such processes.

### Strengthening the draft decision-making framework

An additional next step we would like to see, perhaps in conjunction with a problem definition consultation paper, is further development of the draft DMF. It is clear from submissions there is strong support for the DMF but a general view the Commission should tighten the draft framework to make clear, for example:

- error correction should be done at any-time, and as soon as possible after identification
- major changes to the IMs, particularly where they impact on reasonable investor expectations or “core economic principles”, should only be undertaken as part of the 7 year statutory review process, and “should require a very high evidentiary and economic threshold ...”<sup>1</sup>
- quantified evidence and CBA is an important part of the decision-making process.

These views are consistent with our recommended changes to the DMF. We consider that establishing clear thresholds and criteria for amending the IMs is one of the most effective steps the Commission could take to improve regulatory certainty and predictability.

### Promoting efficiency, adaptability and preserving incentives for prudent investment

We share the view of parties such as CIAL, Orion, Powerco and WIAL that the review should focus on incremental improvements to the IMs. For example, helping suppliers meet the challenges and opportunities of evolving market conditions by improving efficiency and adaptability alongside the capacity and willingness to invest, including in new technologies.

It is clear that the effectiveness of the IMs in ensuring the costs of prudent and efficient investment can be recovered is a particular concern amongst suppliers. particularly in light of emerging technologies and other market changes. Reflecting this, suppliers support consideration by the Commission of matters such as whether a revenue cap should be applied to all suppliers, accelerated cost recovery and reform of the current CPP arrangements.

We also support a strengthening of incentives to improve efficiency and to innovate, particularly where new alternative technologies can substitute for traditional network expansion. A separate point, but also an important one, is the work needed to tidy up the IMs to reduce unnecessary complexity and compliance costs.

### Caution is needed on WACC

The Commission reviewed the energy network WACC percentile last year, despite widespread opposition from suppliers. A decision was subsequently made to reduce the WACC percentile, which suppliers did not agree with. Investor confidence, already shaken by that review, is being further impacted by technological and market uncertainty.

In our view, focussing on efficiency enhancing reforms over simply shifting value will yield the greatest benefit to consumers in the long-run. In this respect, we note growing support for adoption of a trailing average cost of debt - something that would improve efficiency and reduce risk without adversely impacting on consumers or suppliers.

We are particularly wary of and sceptical about MEUG’s comments in relation to WACC percentile and a two tier WACC. We consider that the Commission should avoid divisive and distracting debate in these areas.

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<sup>1</sup> ENA, Response to the Commerce Commission’s Input Methodologies review paper, 21 August 2015, paragraph 51c).

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# 1. INTRODUCTION

We welcome the opportunity to cross-submit on the Commerce Commission's *Input methodologies review: Invitation to contribute to problem definition*, dated 16 June 2015, and the draft Input Methodologies (IMs) *Decision-Making Frameworks paper* (draft DMF), dated 22 July 2015.

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## 1.1. INCREMENTAL AND TARGETED CHANGE

While it is clear there are many aspects of the IMs that different stakeholders disagree with, there is general recognition the IMs have already undergone considerable review, including through extensive legal challenges.

This position is summed up by Orion: "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".<sup>2</sup>

In our 21 August submission, we emphasised a preference for incremental change, and the importance of stability and predictability. This preference was supported by many submitters. WE do recognise, however, that more changes to the IMs may be required for electricity distribution than electricity transmission (or other sectors).

Barriers to applying for CPP applications are a good example (which overlaps our recommendations for adopting a trailing average cost of debt) raised by distributors. Also the issue adopting a revenue cap in place of the existing price cap (or an intermediate option) and indexing of the RAB are not issues that need to be considered in relation to electricity transmission.

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<sup>2</sup> Orion, Submission on the IM review, 21 August 2015, paragraph 4.

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## 2. IMS REVIEW PROCESS AND DECISION-MAKING FRAMEWORK

In this section, having considered submissions on the IMs review process and draft DMF, we make the following points.

- The IMs review process will set an important precedent for regulatory certainty. This, coupled with elevated market uncertainty, increases the importance of stakeholder engagement throughout process.
- Problem definition should include the Commission’s assessment of how the regime has operated e.g. how accurate forecasts have been in ensuring regulated suppliers can recover their costs.
- Clear thresholds that differentiate between minor changes and significant changes are needed. Any change should be utilise quantified evidence, where available, and CBA as part of the evaluation process.

We expand on these points below.

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### 2.1. NEXT STEPS AND PROBLEM DEFINITION

We agree with NZAA that “As the first review of its kind, the precedent established by the IM Review will be important for providing regulatory certainty”<sup>3</sup> and “in the interests of regulatory stability and predictability, the Commission should avoid pursuing changes in the search of the “perfect IM”, which does not exist ...”<sup>4</sup>

It is clear stakeholders want to actively engage with the Commission throughout the entire review process. There is a clear desire for the next steps in the review process to include consultation on the Commission’s views on problem definition and, then, on the Commission’s “emerging views and potential solutions to the problems that have been identified”.<sup>5</sup>

We support the view of ENA, PwC and RMV that the problem definition should include the Commission’s assessment of how well Part 4 has performed. As noted by PwC, “it is important to start with an assessment of how well the current IMs are meeting the statutory purpose. It is not clear this question has received much, if any, attention in this IM review so far”.<sup>6</sup>

There is also an appetite for the Commission to establish industry working groups on matters such as WACC and complexity and compliance issues, and for targeted forums following the success of the July Forum. We would welcome the opportunity to participate in such processes.

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### 2.2. DECISION-MAKING FRAMEWORK

There was broad agreement over the need to establish thresholds for changing the IMs, including, in RMV’s advice to ENA and NZAA, that there should be “minimum thresholds in order to promote the statutory purpose”.<sup>7</sup>

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<sup>3</sup> NZAA, Submission on Commerce Commission’s IMs Review paper, 21 August 2015, paragraph 9.

<sup>4</sup> NZAA, Submission on Commerce Commission’s IMs Review paper, 21 August 2015, paragraph 56.

<sup>5</sup> ENA, Response to the Commerce Commission’s IMs review paper, 21 August 2015, paragraph 41(c).

<sup>6</sup> PwC, Submission to the Commission IMs review paper, 21 August 2015, paragraph 51.

<sup>7</sup> RMV, IMs review: Advice on legal questions and decision-making framework, 21 August 2015, paragraph 32(c).

We agree with ENA “A framework to apply to all IMs will necessarily be high level. However, a key objective should be to avoid a framework that is so high level it risks maximising, rather than constraining, the ability to exercise judgement and discretion when changing IMs” and “When proposing or making a change to an IM, the Commission should clearly identify how each of the section 52A objectives (and certainty) will be better promoted for the long term benefit of consumers (rather than relying on broad judgements as to whether the purpose statement is promoted or not)”.<sup>8</sup>

We note suggestions from various submissions in the table below:

<p><b>Low</b></p>	<ul style="list-style-type: none"> <li>For error correction, the minimum thresholds should be low enabling, as per PwC’s view, “errors ... be corrected as soon as possible an updated versions of the IMs should be provided”.<sup>9</sup></li> </ul>
<p><b>Intermediate</b></p>	<ul style="list-style-type: none"> <li>Powerco: “The Commission should ... be wary of re-opening some of the more contested elements of the IMs. While stakeholders would almost certainly take the opportunity to express their positions, if invited to do so, it is likely that all the Commission would achieve is a re-litigation of the same issues. Accordingly, when deciding whether to change an IM in response to a concern that has been the subject of previous discussion, <u>the Commission should consider whether or not circumstances have changed, or new information or reasons are advanced</u>, that would warrant looking at the issue afresh (as opposed to simply a re-litigation of views that have already been aired)” [emphasis added].<sup>10</sup></li> </ul>
<p><b>High</b></p>	<ul style="list-style-type: none"> <li>RMV (supported by ENA/NZAA) advocate “A high threshold for change should apply where the change is likely to have a material impact on regulated revenue (given the potential adverse impact of change on regulatory certainty and incentives to invest). Such changes should be supported by weight of the evidence and / or analysis (demonstrating that the change is necessary to better meet the specific objectives in the Part 4 purpose for the long term benefit of consumers)”.<sup>11</sup></li> <li>RMV (supported by ENA / NZAA) also advocate “A change to a core economic principle should require a very high evidentiary and economic threshold ...”,<sup>12</sup> and with examples of core economic principles including “(i) the expectation of earning at least normal returns over the life time of an asset (expected NPV=0); and (ii) favouring outcomes that promote dynamic efficiency where there is a trade-off between dynamic efficiency and allocative efficiency”.<sup>13</sup></li> <li>PwC: “other than for error correction, the Commission should strive to avoid making changes to the IMs between the 7 yearly statutory reviews”.<sup>14</sup></li> <li>ENA and MEUG: “the Commission include a formal cost-benefit analysis step in its processes for reviewing and amending IMs”.<sup>15</sup></li> <li>NZAA “... changes to the IMs without rigorous testing and assessment are likely to have a detrimental impact if both investors and interested parties perceive that the detail of IMs are subject to change at each review over the lifetime of infrastructure investments. That is, from an industry wide perspective, it is in the interests of all parties to maintain investor confidence in the IMs, and specifically that</li> </ul>

<sup>8</sup> ENA, Response to the Commerce Commission’s IMs review paper, 21 August 2015, paragraphs 51(g) and (h).

<sup>9</sup> PwC, Submission to the Commission on IMs review, 21 August 2015, paragraph 51.

<sup>10</sup> Powerco, Submission on IMs review: Invitation to contribute to problem definition, 21 August 2015, paragraph 19.

<sup>11</sup> RMV, IMs review: Advice on legal questions and decision-making framework, 21 August 2015, paragraph 18(iv).

<sup>12</sup> ENA, Response to the Commerce Commission’s IMs review paper, 21 August 2015, paragraph 51c).

<sup>13</sup> ENA, Response to the Commerce Commission’s IMs review paper, 21 August 2015, paragraph 51d).

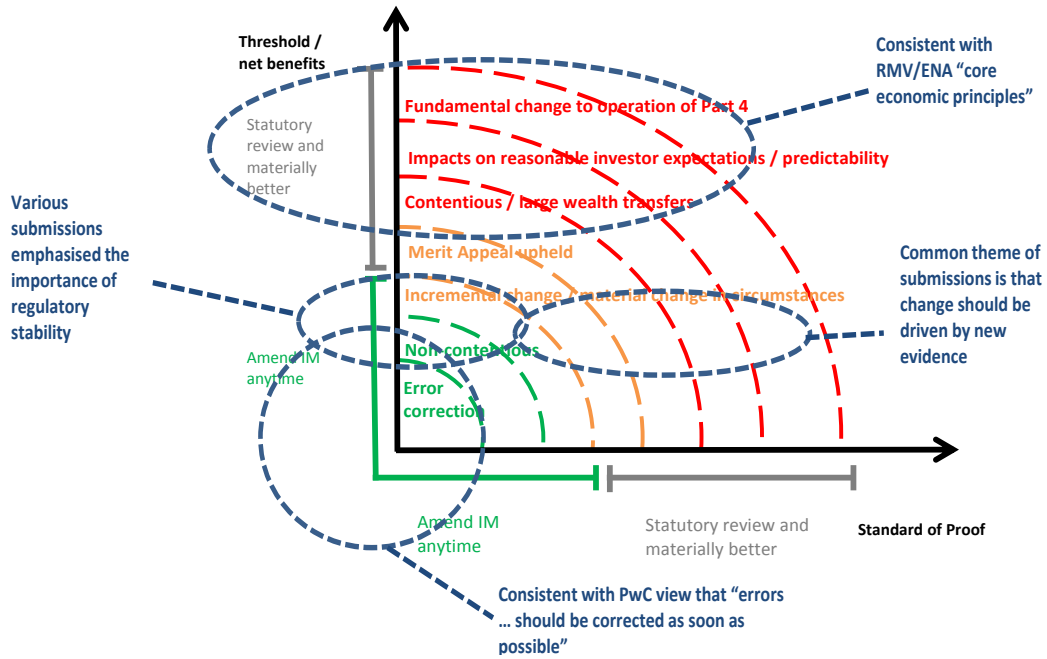
<sup>14</sup> PwC, Submission to the Commission’s on IMs review paper, 21 August 2015, paragraph 51.

<sup>15</sup> ENA, Response to the Commerce Commission’s IMs review paper, 21 August 2015, paragraph 55.

they are adequately designed to preserve the ability of regulated suppliers to earn normal returns consistent with workably competitive market outcomes”.<sup>16</sup>

We consider these submissions to be entirely consistent with our proposed criteria and thresholds for amending the IMs (repeated with additional comments in Figure 1 below), and with the High Court’s views on reasonable investor expectations.<sup>17</sup>

Figure 1: Proposed criteria for amending the IMs



<sup>16</sup> NZAA, Submission on Commerce Commission’s IMs Review paper, 21 August 2015, paragraph 56.

<sup>17</sup> Wellington International Airport Ltd & Ors v Commerce Commission [2013] NZHC [11 December 2013], paragraph [605].



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## 3. EMERGING TECHNOLOGIES AND RISK ALLOCATION

In this section, having considered submissions on emerging technologies and risk allocation, we make the following points.

- Technological change is happening and needs to be addressed through this IM review
- Key objectives of the review should be ensuring confidence in the ability to recover costs, promoting efficiency, adaptability and the efficient integration of new technologies
- The IMs are one important piece of the puzzle, the overall solution to which also depends on commercial, other regulatory and economic policy decisions.

We expand on these points below.

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### 3.1. TECHNOLOGICAL CHANGE IS HAPPENING AND NEEDS TO BE ADDRESSED

The general consensus in submissions appears to be that emerging technologies should be dealt with in the IMs review. We note Vector's view that "In reality, no-one can determine what the market environment will look like going forward. Technology and consumer behaviour is changing rapidly, and utility businesses will need to adapt ..."<sup>18</sup>

We also note Powerco's view that questions about emerging technologies "... cannot be answered before the advent of the next regulatory period, and consequently the Commission cannot be confident that it will be able to reach a well-supported and robust decision in relation to these issues in the course of this review".<sup>19</sup> While we agree with Powerco that there are challenges to attempting to address the impact of emerging technologies when they remain nascent we are also mindful of the risks of deferring consideration of these potential impacts until the next review (including delaying reforms until the 2025 reset).

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#### 3.1.1. EXPERIENCE FROM OTHER SECTORS AND JURISDICTIONS

While one needs to be careful importing experience from other sectors or jurisdictions, we consider that the Commission could usefully consider, as part of its problem definition work, how technological change has impacted other sectors and jurisdictions.

For example, the telecommunications sector has experienced rapid technological change that has necessitated fundamental changes in policy, regulatory and commercial models. For example.

1. **Slow starts can quickly yield exponential growth.** Adoption of new technologies can be slow at first but then grow exponentially – as experienced with mobile voice and SMS, fixed line broadband (now including fibre) and more recently mobile broadband which, though available since the early 2000s, only took off with the emergence of smartphones (and in particular the iPhone in 2007).

The flip side of this is that promising technologies and services sometimes do not take off as expected. For example, the WiMAX technology and the video calling service that underpinned deployment of 3G networks failed to take off.

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<sup>18</sup> Vector, Input methodologies review – Invitation to contribute to problem definition, 21 August 2015, paragraph 3.

<sup>19</sup> Powerco, Submission on IMs review: Invitation to contribute to problem definition, 21 August 2015, paragraph 50.

2. **New uses can be found for existing assets.** The emergence of new technologies such as ADSL (then VDSL) and demand for broadband services gave fixed lines a new lease of life and, over time, broadband has overtaken voice as the primary fixed line service.

Absent the emergence of broadband technology (and demand) fixed line operators would have been much more vulnerable to fixed-to-mobile substitution. That is because mobile voice services are a strong substitute for fixed line voice services, while mobile broadband (due to speed and cost) is not a substitute for fixed line broadband services for most users.<sup>20</sup>

3. **Regulatory and pricing structures matter.** Free local calling has, perhaps inadvertently, provided an accurate signal to consumers of the incremental cost of voice calling. An interesting thought experiment may be to consider the extent of fixed-to-mobile substitution if calling prices were required to be variabilised (as electricity tariffs are).

Perhaps the Commission could develop case studies that help tease out and test the nature of and extent of potential problems with the current IMs (and to help inform potential reform options). Potential case studies, in addition to telecommunications, could be postal services, where the 'death spiral' term was first applied, and broadcast media where first digitisation and then the internet have dramatically changed business models.

The experience of other jurisdictions can also provide valuable insight. Australia is an obvious example, both because of the level of familiarity and its ongoing experience dealing with significant PV adoption.

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## 3.2. ENSURING RECOVERY OF PRUDENT AND EFFICIENT COSTS

The emergence of new technologies highlights the importance of innovation and investment (embracing new technology) and providing services that reflect consumer demand (including desire for choice).

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### 3.2.1. IMPORTANCE OF COST RECOVERY

One of the consistent messages from regulated suppliers, including ourselves, is the importance of ensuring investors have confidence the cost of past prudent and efficient investment will be recovered. The potential for new, disruptive, technology creates new challenges for cost recovery and it is critical the IMs continue to support prudent and efficient investment.

We note and agree with the following statement from ENA:

The core principle remains the ability to earn at least a normal return, or that expected NPV=0 at least. We therefore do not see any justification for changing the treatment of stranded assets within the current regulatory framework.<sup>21</sup>

There are a number of suggestions for changes the Commission could adopt to facilitate cost recovery, such as adoption of revenue caps and non-indexing of investment, consistent with the approach taken to electricity transmission, and adopt shorter asset lives and accelerated depreciation, as the Commission has applied in telecommunications.

These are relatively straightforward changes to make. From an intergenerational equity and efficiency perspective the changes would mean greater recovery now of costs of assets that are needed now, rather than relying on recovery in the future when there may not be the same need or demand (particularly in terms of capacity).

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<sup>20</sup> Mobile voice and broadband services are also compliments for fixed line voice and broadband services.

<sup>21</sup> ENA, Response to the Commerce Commission's Input Methodologies review paper, 21 August 2015, paragraph 18.

### 3.2.2. THE IMs SHOULD FACILITATE INNOVATION AND INVESTMENT IN NEW TECHNOLOGY

The potential impact of emerging technology cannot, however, simply be addressed by front-loading cost recovery on the basis that it will be easier to recover now than in the future. Rather, the IMs also need to facilitate, or at least not inadvertently impede, regulated suppliers making efficient decisions to adopt and adapt to new technology. It may be necessary to take additional steps to ensure that this investment in these technologies is objectively justified i.e. investment is prudent and can be held to promote the long term interests of consumers.

No one can predict the extent to which investment in these technologies may be needed and the extent to which, if at all, these technologies may complement or help defer investment in traditional electricity networks. We expect the optimal mix of traditional and new technologies may differ markedly for different networks depending on a mix of geographic, network configuration, socio-economic and other factors.

Potential issues relating to the emergence of new technologies, changing consumer choices and the impact of these on the electricity sector that might be addressed through the IM review include:

1. **Blurring of the lines between monopoly and competitive services:** The distinction between natural monopoly, networks, and competitive market activities will become increasingly blurred. Similarly, competition issues may arise in an environment where energy retailers and distributors already compete alongside third party retailers of PV and battery solutions.
2. **Price-quality questions:** Traditional utility regulation has been focused on maintaining or increasing quality of service while containing cost. However, as consumer energy preferences evolve so to may price-quality preferences for grid delivered electricity.
3. **Efficiency incentives beyond the 5 year cycle:** Electricity networks face the challenge of whether to continue to make investment, on a 'business-as-usual' basis, in traditional assets, or to adapt and embrace new technology where the potential benefits may not be realised within the usual 5 year regulatory reset cycle. As noted by Orion:

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.<sup>22</sup>

4. **Changing underlying risk profile:** The current regulatory framework is predicated on electricity network businesses being low risk (as reflected in the asset beta, and retention of potentially stranded assets in the RAB). Changes to the IMs may be required to offset the increased risk that networks will be unable to recover their prudently incurred costs.
5. **Greater forecasting uncertainty:** Traditional techniques that extrapolate historic trends are likely to become less reliable as emerging technologies change consumer choices. This uncertainty presents a conundrum for network planners but also for the Commission in setting price paths, including the nature of the network solutions e.g. battery storage versus network capacity upgrade.

We would caution, in balancing the impact of emerging technologies, against suggestions such as prohibition on rebundling by retailers (the focus should be on how to set pricing methodologies that make it simple for retailers to reflect in retail tariffs<sup>23</sup>) or moratoria on new connections where the network is at capacity. We recognise, however, that non-traditional network solutions may be preferable in some circumstances and there should be the flexibility to utilise these solutions.

<sup>22</sup> Orion, Submission on the IM review, 21 August 2015, paragraph 49.

<sup>23</sup> Realistically, it is difficult to see how regulation of electricity retail tariffs would be within the Commissions jurisdiction, unless it concluded competition in the retail market was limited.

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### 3.3. TECHNOLOGICAL CHANGE MEANS GREATER RISK

While we agreed with much of NZIER's analysis we found its analysis on the impact of emerging technology and their assessment of network business risk difficult to follow.

NZIER acknowledged "that emerging technology in the generation and storage of electricity is eroding ... monopoly power",<sup>24</sup> and questioned the IMs implicit assumption that networks will continue to be natural monopolies.<sup>25</sup> NZIER articulates the impact of emerging technologies on traditional business models:<sup>26</sup>

Declining demand growth for energy, climate change concerns, strong growth of renewable local generation of electricity, energy storage systems and demand management, as well as the use of smart technology in the operational management of grids have all combined to jump start what is now regarded as potentially the most profound changes to the energy industries since the initial development of the networks...These changes appear to be neither short term nor cyclical. They are structural, long term and are changing the economics of the energy system. ...

Yet, juxtaposed against NZIER's view that "Replacing and augmenting existing networks is going to be a very risky business because those investments are at significant risk of being stranded",<sup>27</sup> they also adhere to the low risk, low return paradigm of network regulation and maintain the view that "the WACC appears to be too high for both Transpower and the EDBs for the risk profiles of these businesses".<sup>28</sup>

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### 3.4. BROADER POLICY, REGULATORY AND COMMERCIAL ISSUES

Emerging technologies present a number of opportunities and challenges for firms regulated under Part 4. The nature and extent of these opportunities and challenges (and potential solutions) depends in part on economic and environmental policy decisions, action by regulatory bodies including (but not limited to) the Commission, commercial choices and of course consumer choices.

While the Commission is best placed to address certain matters through the IMs, it cannot address all these matters through the IMs or the wider Part 4 framework. However, these are important 'environmental factors' that the Commission should be alert to and be mindful of when undertaking the IM review. Salient issues include:

1. Economic and environmental policy choices including subsidy or other intervention to support particular technologies. Calls have been made for state intervention to subsidise or support the development of various technologies (mainly for the adopters of particular technologies to be subsidised by other consumers).
2. Prevailing retail tariff structures and its underpinnings including
  - i. Distribution tariffs: the number and design of distributor tariffs is currently under review by the ENA and the Electricity Authority
  - ii. Low user fixed charge regulations: the economic and social policy outcomes of these regulations are currently the subject of work by the Electricity' Authority's retail advisory group

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<sup>24</sup> NZIER report to MEUG, Identifying problems with current IM's, 21 August 2015, paragraph 4.

<sup>25</sup> NZIER report to MEUG, Identifying problems with current IM's, 21 August 2015, paragraph 5.

<sup>26</sup> NZIER report to MEUG, Identifying problems with current IM's, 21 August 2015, paragraph 37-8.

<sup>27</sup> NZIER report to MEUG, Identifying problems with current IM's, 21 August 2015, paragraph 54.

<sup>28</sup> NZIER report to MEUG, Identifying problems with current IM's, 21 August 2015, paragraph 8.

Decisions in these areas could materially affect the consumption and investment choices of consumers. As such they influence the extent to which these technologies promote (or degrade) the overall efficiency of the power system, as well as the welfare of different classes of consumers.

Although these issues may be beyond the direct scope of the IMs review decisions by the Commission, for example over the form of control, can increase the tariff setting flexibility.

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### 3.4.1. INCREASING IMPORTANCE OF EFFICIENT PRICE SIGNALS

Increased consumer choice over how energy is supplied will put network pricing increasingly in the spot-light. This was illustrated in the recent ENA consultation paper on distribution pricing.<sup>29</sup> While network pricing methodologies are principally within the jurisdiction of the Electricity Authority we consider that it will, as alluded to above, be an important ‘environmental factor’ in the Commission’s assessment of emerging technologies.

Failure to send efficient network pricing signals could result in under or overly strong incentives for consumers to suppress demand when there is no benefit to doing so (or not to suppress demand when it would be efficient to do so). Similarly, they may lead consumers to make poor investment choices and could also result in behaviours that adversely impact network operation. As we noted in our previous submission:

If demand from electric vehicles is not carefully managed, e.g. through peak/off-peak distribution network and retail electricity pricing signals, this could result in an increase in demand during existing evening peaks e.g. if people plug in their car to be recharged when they arrive home from work.<sup>30</sup>

ENA note “Cost reflective pricing helps to signal to consumers when to make efficient consumption decisions and is important to achieving efficient investments in alternative supply options”<sup>31</sup> and “can facilitate equitable treatment of all consumers”.<sup>32</sup>

In a similar vein, NZIER comment:<sup>33</sup>

The pricing of distribution services should reflect the cost of the services provided. The principles of efficient network pricing suggest that prices need to be set to recover the costs of the existing network assets with as little effect on consumer demand as possible while also sending a clear signal about the long run marginal cost of the network. These principles ensure that consumers receive accurate signals about the cost of using the network and therefore have the right information to maximise their welfare.

Various submitters have raised concern that the Low Fixed Charge Regulations impede efficient distribution and retail pricing, and results in artificially strong incentives for domestic consumers to cut electricity consumption, or invest in alternative electricity sources that may not otherwise be cheaper.<sup>34 35</sup>

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<sup>29</sup> ENA, Distribution Pricing: a discussion paper, 11 May 2015.

<sup>30</sup> Transpower, Problem definition and decision-making frameworks, 21 August 2015, footnote 33.

<sup>31</sup> ENA, Distribution Pricing: a discussion paper, 11 May 2015, paragraph 29.

<sup>32</sup> ENA, Distribution Pricing: a discussion paper, 11 May 2015, paragraph 79.

<sup>33</sup> NZIER report to MEUG, Identifying problems with current IM's, 21 August 2015, page 17.

<sup>34</sup> NZIER report to MEUG, Identifying problems with current IM's, 21 August 2015, paragraph 76.

<sup>35</sup> ENA, Distribution Pricing: a discussion paper, 11 May 2015, paragraph 79.

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## 4. WACC + SBL CAPM MODEL

In this section, having considered submissions on WACC and the SBL CAPM model, we conclude the following.

- Adoption of trailing average cost of debt should be prioritised, as a win-win for regulated suppliers and consumers, and a more explicit and structured approach is needed to assessing the evidence available to estimating the market risk premium.
- There is virtually no appetite for revisiting the energy WACC percentile (despite disagreement with last year's decision) and no credible case for doing so (MEUG appears to be the sole exception).
- The two-tier WACC concept is fundamentally flawed. It should not be adopted and should also not be allowed to become a vehicle for re-litigating the WACC percentile.
- The SBL CAPM has a downward bias. If a substantive review of the WACC methodology is undertaken it should address the issues identified in the Frontier report appended to our 21 August submission.

We reiterate our view that the WACC percentile review has shaken supplier and investor confidence in the Part 4 regime. With the exception of the largely non-value shifting change to a trailing average cost of debt and adoption of a more explicit and structured approach to determining the market risk premium we recommend the Commission refrain from destabilising change to the WACC methodology at this time.

However, if the Commission intends to make broader changes to the WACC methodology or review the use of the SBL model, then the Frontier Economics' report provides a discussion on the limitations of the model and recommendations to help ensure a more accurate estimate of WACC.

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### 4.1. WACC PERCENTILE AND SPLIT WACC

There was no appetite (apart from MEUG) for re-litigating last year's energy network WACC percentile review.<sup>36</sup> ENA summed this up by noting they "agree there is unlikely to be sufficient new evidence to justify reopening the topic", even though they considered that the "available evidence ... did not necessarily support a reduction in the percentile".<sup>37</sup>

Our submission expressed concern the split WACC issue would be used by MEUG as a Trojan horse for re-litigating WACC percentiles. This is borne out by MEUG's statement that "Top of the list must be problems with the cost of capital because, for example, there is still a problem in understanding

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<sup>36</sup> The Commission will need to consider the Airport WACC percentile given its decision to consider the energy and airport WACC percentiles separately. We note that AIAL is in a not dissimilar position to Transpower a decade ago – with substantial projected investment needs that will dominate future RAB valuations. The importance of airport investment to tourism (Auckland Airport is the first experience of NZ for most tourists), and the economy more generally are relevant considerations for the review.

We caution, as per the energy network WACC percentile review, that the review of the airport WACC percentiles should go hand-in-hand with other aspects of the WACC which, if amended, could potentially raise the WACC. The Commission should not just consider factors that could lower the WACC. We also caution that the Commission should ensure the de facto airport price control mirrors CPI-X rather than ROR regulation – the greater the focus on a single allowed return number the higher the risk of generating cost plus rather than efficiency incentives.

<sup>37</sup> ENA, Response to the Commerce Commission's Input Methodologies review paper, 21 August 2015, paragraph 159.



why Transpower and distributors have a WACC set at the 67<sup>th</sup> rather than 50<sup>th</sup> percentile when we know the capital investment needs are not increasing”.<sup>38</sup>

The submissions for MEUG/NZIER: (i) recognise the threat from emerging technologies (“In some scenarios the materiality of the issue at stake is very large; for example wide spread stranding of assets built to provide no longer needed regulated line services”<sup>39</sup>); and (ii) want to expose regulated suppliers to face greater exposure to these risks – for both sunk and new investments. We find it difficult to reconcile these positions - a low return model is simply not compatible with a high risk framework (as noted in our 21 August submission).

We agree with PwC that “the split cost of capital approach would damage investment incentives ... and we are not aware of it being applied by other regulators – it does not need to be given much credence”.<sup>40</sup> We also share ENA’s support for the Commission’s view that a split WACC has “potential to distort investment, increase the risk of under-investment and increase administrative costs”, and the ENA view that the IMs review should “not devote significant effort to considering this approach”.<sup>41</sup>

One of the central problems with the High Court’s reasoning in recommending consideration of a two tier WACC is the notion that a regulator can discount returns on (or otherwise devalue) sunk investments and expect investors to ignore this when making new capital allocation decisions. In our view this thinking is fundamentally flawed. It fails to recognise that regulation is not a one-off game and that treatment of sunk investment will impact on suppliers’ expectations about treatment of future investment (which will become sunk after it is made).

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## 4.2. SBL-CAPM MODEL AND MARKET RISK PREMIUM

There were competing degrees of appetite for reviewing use of the SBL model.

Our submission recommended the Commission refrain from further destabilising change to the WACC methodology at this time and, in terms of the thresholds and criteria we have advocated for changes to the IMs we would put use of the SBL model squarely in the red zone (high net benefits and compelling evidence should be required).<sup>42</sup>

Powerco also expressed the view that “While the SBL-CAPM has acknowledged flaws, it has been intensively debated prior to this review. There is no new information that would support re-opening this issue”.<sup>43</sup> The PwC submission stated “the SBL-CAPM approach is widely used in New Zealand and had significant support when it was adopted in the IMs in 2010”.<sup>44</sup>

The ENA, alternatively, argued that “... there may be value in reviewing the use of the SBL-CAPM to test whether a better approach is available”.<sup>45</sup>

The Frontier report, we commissioned, and the Houston Kemp report for Powerco both note “The SBL-CAPM has a number of identified shortcomings ... Most notably, the model has a tendency to introduce a downward bias in the WACC estimates for low beta stocks”.<sup>46</sup>

The Frontier report provides a discussion on the limitations of the model and recommendations to help ensure a more accurate estimate of WACC, including that the Commission adopt a more explicit

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<sup>38</sup> MEUG, Submission on IMs review paper, 19 August 2015, paragraph 25.

<sup>39</sup> MEUG, Submission on IMs review – Invitation to contribute to problem definition, 19 August 2015, paragraph 16.

<sup>40</sup> PwC, Submission to the Commission on IMs review paper, 21 August 2015, paragraph 111.

<sup>41</sup> ENA, Response to the Commerce Commission’s Input Methodologies review paper, 21 August 2015, paragraph 166.

<sup>42</sup> Refer to Figure 1 in this cross-submission.

<sup>43</sup> Powerco, Submission on IMs review paper, 21 August 2015, Table 1, page 4.

<sup>44</sup> PwC, Submission to the Commission on IMs review paper, 21 August 2015, paragraph 111.

<sup>45</sup> ENA, Response to the Commerce Commission’s Input Methodologies review paper, 21 August 2015, paragraph 162.

<sup>46</sup> Houston Kemp, Comment on the Commerce Commission’s Input Methodology Review, 20 August 2015, section 2.1.1.

and structured approach to assessing the evidence available to estimating the market risk premium and estimate the cost of equity by using results from the SBL CAPM, Black CAPM and the Fama-French model, rather than relying solely on the SBL CAPM.

We would stress that if the Commission does revisit the use of the SBL model, we are unlikely to support its replacement, but agree with Frontier that a more accurate estimate of WACC would be produced if the Commission did not rely solely on the SBL model.

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### 4.3. TRAILING AVERAGE COST OF DEBT

Our submission advocated the Commission adopt a trailing average (indexed) cost of debt. The Frontier report detailed how indexing of the cost of debt would improve efficiency by reducing debt price risk, substantially moderate inter-period price (and revenue) volatility and alleviating the DPP-CPP transitional WACC issue.

We consider that our position is supported by submissions from other parties. There was a common thread in regulated suppliers about barriers to CPP applications, including the gap between the DPP and CPP WACC – a trailing average cost of debt would mitigate this. In terms of specific submission commentary, we note the following views:

- Orion “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”<sup>47</sup>
- Powerco: “... the current methodology [for estimating the cost of debt] does not align with the prudent and efficient debt-raising strategies used by comparable unregulated businesses. We recommend that the Commission ... adopt a trailing average methodology ...”<sup>48</sup>

PWC, the ENA, Houston Kemp, NZAA and WIAL all made similar points.

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### 4.4. BLACK’S SIMPLE DISCOUNT RULE

We struggle to see the relevance of MEUG’s proposal for the Commission to adopt Black’s Simple Discount Rule as a cross-check against the WACC.

The Black approach seems to only be appropriate in a valuation context. The generic way to value an asset is to take a stream of cashflows and discount that to obtain a net present value. You have to take account of risk in the valuation exercise which can be done by applying a risk-adjusted discount rate (e.g. one derived using the CAPM) or adjust the cash flows directly for risk (e.g. the Black approach). How this would assist with the determination of WACC is less than clear.

At best, all the proposal does is substitute uncertainty about the asset beta with uncertainty about future cashflows.

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<sup>47</sup> Orion, Submission on the IM review, 21 August 2015, paragraph 54.

<sup>48</sup> Powerco, Submission on the IMs review paper, 21 August 2015, Table 1, page 3.