Responses to further questions concerning the Orion CPP Final Decision

I have been informed by the Commerce Commission of the following:

- The Commission’s draft decision addressed Orion’s proposal to claw-back $86m of additional costs and revenue lost due to demand reduction (foregone revenue) between the September 2010 earthquake and the start of the CPP period on 1 April 2014.

- The draft decision provides for claw-back of $28.6m. This allows Orion to recover the following amounts:

  - All of the additional net costs (excluding insurance proceeds) it actually incurred between the first earthquake in September 2010 and 1 April 2013;[1] and

  - The Commission’s assessment of an efficient level of additional net costs to be incurred between 1 April 2013 and 31 March 2014. Claw-back for this year was calculated by making a downwards adjustment to Orion's proposed additional net costs (consistent with the Commission’s approach to the evaluation of forecast expenditure during the CPP period).

- The draft decision did not include any allowance for lower than forecast revenues experienced by Orion between September 2010 and 1 April 2014. It was noted in that draft decision that:

  - Orion was operating under a price cap, not a revenue cap.

  - Demand risk is largely symmetric; suppliers face both upside and downside risk during a regulatory period. Although Orion suffered a reduction in demand due to the earthquakes, suppliers in neighbouring regions are likely to benefit from unexpected increases in demand due to population relocations.

  - By diversifying across different regions, an investor is able to insure itself against the risk of population relocations due to a catastrophic event.

- The Commission also stated that “Consistent with the input methodologies, major categories of earthquake-related costs are recovered from consumers separately from claw-back.”

  - The approach to the regulatory asset base (RAB) means that all capital expenditure (once commissioned) is added to the RAB and able to earn a return on and of capital once the CPP is set. Therefore, expenditure to mitigate the impacts of catastrophic

[1] The ‘additional net costs’ represent costs incurred over and above the level of revenue Orion would have recovered had the earthquakes not resulted in reduced demand.

events gets recovered; as does any capital expenditure to repair, restore or improve services after a catastrophic event.

- The value of damaged and destroyed assets (to the extent that exceeds insurance proceeds) remains in the RAB and will continue to be recovered through future prices, once the CPP is set. The Commission indicated that the value of damaged and destroyed network assets that remain in the RAB is estimated to be $71.3m before tax. However, Orion has subsequently provided new information suggesting that the value is actually between $3m and $10m.

- The impact of reduced demand in future periods (after 1 April 2014) is borne by consumers. The Commission's final decision will reset Orion's price-quality path from 1 April 2014 to reflect the current actual level of demand. Therefore, Orion will be compensated for reduced demand due to the earthquakes from this date.

- The Commission received submissions on this paper on 20 September and cross-submissions on 11 October.

I have been provided with a summary of relevant comments from submissions and cross-submissions, a pointer to the location of the full submissions on the Commission's website, and a short list of claims made in these submissions which bear upon my earlier advice as follows:

- Orion has not received appropriate level of revenue – it is not able to recover its prudent costs under the Commission's draft decision;

- Orion should be able to recover revenue shortfall due to demand reduction;. The Act does not distinguish between how that shortfall is made up;

- The Commission's draft decision is inconsistent with purpose of Part 4 – in particular, s 52A(1)(a); and

- My earlier advice fails to take into account relevant considerations, in particular Orion's specific circumstances and need for it to respond to the catastrophic event.

I have now been asked, following a review of comments raised in submissions and cross-submissions, to provide the Commission with answers to the following questions:

"Please review comments made in submissions and cross-submissions provided on our draft reasons paper and clarify whether:

A. Your reports dated 30 May and 4 August 2013 were written with the specific circumstances / context of Orion's proposal in mind?

B. Under a scenario where it is not clear *ex ante* that specific risks are identified as being borne by the supplier, which appears to be the case for Orion's existing DPP, you would change your previous advice (dated 30 May and 4 August 2013)? If so, please explain why, and if not, please confirm your advice as to where it would be expected that the risks should or should not fall;

C. Given the scenario … above, do you consider that the draft decision reached by the Commission on claw-back is a reasonable approach? Is it consistent with approaches taken by regulators in other jurisdictions applying regulatory economic theory to their decision making? Can you give some examples of other regulators who have taken a similar approach?

D. Please indicate how your advice on the incentives and motivations for regulated suppliers would change under the scenario where the supplier knows that there will be compensation.

E. Please review comments made by Castalia on the experience with long-term infrastructure PPP contracts (see pp. 8 and 9 of Castalia's submission). Do these comments cause you to change your previous advice on this point (dated 30 May 2013 and 4 August 2013)? If so, please explain why."

In responding to these further questions, it is probably most helpful to start by considering how risks which are not specifically identified at the time of a price determination are generally handled under the RPI/CPI – X approach to regulation adopted in New Zealand and a significant number of overseas jurisdictions, including Australia and the United Kingdom. The other questions are more straightforward to answer once this general position is clarified.

Lack of ex ante clarity in whether specific risks are to be borne by the supplier (B)

RPI/CPI – X price reviews seek to pre-determine the path of maximum allowable prices or revenues for a period of years, among other things to provide incentives for cost efficiency. Among the relevant aspects of such an approach are the following:

- The price/revenue path so determined is a cap, not an entitlement. Whilst the cap is set so as to ensure that an efficient operator can recover expected (ex ante) costs, there is no guarantee that efficient or prudently incurred costs will actually be recovered *ex post*. *A fortiori*, there is no guarantee of recovery of costs that are higher than they could be. In this the regulated outcome reflects outcomes in competitive markets: even a highly cost-efficient firm operating in such a market may make losses if consumers switch away from its products. Regulated businesses are compensated for the consequential risk via a cost of capital allowance that reflects the level of risk. Thus, if *ex post* recovery of efficient costs (but no more than that) was guaranteed or, alternatively,

if such recovery was considered to be a near certainty, the allowed cost of capital would be much lower than it typically is in regulatory determinations (worldwide) and would be close to a risk-free rate of interest.

- Once set, the maximum prices/revenues are pre-determined for the period, except where there are specific provisions in the relevant determination for subsequent adjustment.

- An immediate corollary is that the distribution of risk is determined by the maximum price/revenue decision itself. Except where a particular risk is explicitly identified and explicit provision is made for *ex post* adjustment to the price / revenue cap in the light of new circumstances, it is inherent in the pre-determination of prices/revenues (which is central to the incentive properties of the CPI/RPI – X approach) that the distribution of all other risks, whether explicitly considered at the time of the price review or not, is also determined. Put another way, potential ambiguities are automatically resolved at the time the price/revenue determination is settled. It therefore does not follow that if a specific risk is not explicitly identified in the price review that its allocation is uncertain or open to interpretation.

The outcome is economically similar to the position created by a fixed-price contract that might be determined under more competitive conditions. When the price is set, the supplier *knows* that it will subsequently be exposed to both cost and demand risks.

As to where risks will fall, under the standard approach:

- Cost risks lie with the supplier

- Demand risk lies with the supplier if it is prices that are capped, and chiefly with customers/consumers if it is revenue that is capped. I say chiefly because there can be circumstances where a collapse in demand is so great that, even if the firm has price influence, it becomes impossible for the regulated firm to reach the revenue cap (London Stansted Airport has been a case in point); although I doubt that such a possibility is an issue in the Orion context.

- Mixed forms of price/revenue controls – comprising a capped revenue component and a capped price component – distribute demand risk between suppliers and customers/consumers in proportion to the relative weights given to the two components.

To repeat, in all cases the distribution of risks is determined once the form of the price/revenue control has been settled. The distribution of risks will in turn be reflected in the levels of the relevant caps that are set, usually (although not necessarily) via the cost of capital assessment. That is, compensation for the risks is also determined *ex ante.*

Lack of (*ex ante*) clarity about which *specific* risks are to be borne by the supplier has no implications for my earlier advice, subject only to the proviso that the price/revenue control in place at the time of the earthquakes was based on what might be called a 'standard' RPI/CPI – X approach to these matters. My understanding is that it was based on the price-cap alternative (rather than on a revenue cap or some hybrid of the two). As indicated, a price cap determination allocates both cost and demand risks, whether specified or unspecified (and, in practice, most risks are unspecified since it would be administratively infeasible to assess them all on an individual basis) to the supplier, and compensates the supplier for these risks via a cost of capital allowance that will typically be higher than a risk free rate of interest.

The specific circumstances/context of Orion's proposal (A)

As I hope should be clear from a plain reading of my previous two reports, they were written with the specific circumstances/context of Orion's proposal in mind. In particular, in reaching conclusions I was aware that Orion's DPP was not reset in 2012 in line with other Electricity Distribution Businesses, according to the new Input Methodologies, but rather continued to operate under arrangements that had been determined under a previous regime. Thus, for example, in considering insurance and risk sharing arrangements I have explicitly referred back to pre-earthquake circumstances (whilst recognising that the Input Methodologies themselves are not revolutionary, and that they incorporate a number of principles that are relevant to the issues at stake across jurisdictions, regimes and time periods). I was, however, directed toward a number of submissions that had been made to the Commission, and was not asked to conduct a detailed empirical examination of the type that the Commission necessarily has to make.

In this context, one of my criticisms of some of the submissions I was asked to review was they were characterised by a dearth of empirical content. For example, taking account of the relevant circumstances, a key matter for consideration was clearly the strength of Orion's balance sheet, which is a factor determining the amount of risk the company could absorb without having to act in ways that would be necessarily damaging to the long term interest of consumers.

Where much more detailed factual material about the relevant context was available in the material I was asked to review, I made explicit references to its relevance. Thus, the 4 August 2013 report points out that Orion had, in earlier years, taken out much more extensive (external) insurance than it had at the time of the earthquake; which was an indicator that, at least in those earlier years, the management was operating on the basis of an assumption that the company was expected to bear a significant amount of catastrophic risk.

The most salient aspect the Orion context for the questions I was asked to address was the nature of the price control in place at the time of the catastrophic events, since it is this that would have determined the allocation of risks at the time the events happened. The fact that *after the events* the price determination took a different course than it would have done if the events had not happened is irrelevant to the question of who was expected to bear what risks at a time just before the events occurred. In particular, a (post-earthquake) decision to defer the application of a new price control, to roll over an existing price control and to introduce the prospect of *ex post* re-assessment at some later date do not have implications for the risk sharing arrangements in place immediately prior to the events. Any *ex post* assessments should take these arrangements as a given and, as stated, I do not think that those arrangements are ambiguous, for the reasons given.

The Commission's decision (C)

In broad terms, I think that the decision reached by the Commission is a reasonable one, and within the range of approaches taken in other jurisdictions with which I am familiar in response to 'uncontrollable' events that have material impacts on business finances. Such approaches vary from 'black letter' or 'pure CPI/RPI – X' approaches which stick rigidly to the notion that prices/revenues are pre-determined *ex ante* and hence allow no claw-back or under any circumstances, to those which are willing to contemplate limited adjustments in exceptional circumstances. The Commission's position appears to fall within the latter, more 'flexible' end of the spectrum.

In the UK, the more black letter, pure ex ante approach – price/revenue caps are agreed *ex ante*, end of story – is particularly associated with telecoms regulation, which has become somewhat more legalistic than is the case in other sectors. In contrast, *limited* ex post adjustment in exceptional circumstances has found more support in some of these other major regulated sectors, where (aside from the enforcement of competition law) there has been something a little closer to a long-term 'bargaining approach' in which the repeated nature of the price review processes has been more explicitly recognised in the search for more effective incentive structures.

Although I personally have tended to favour the latter of these two approaches, there are arguments both ways. The black letter approach is closer to the textbooks, which stress the strong, shorter-term incentive effects of pre-determined prices/revenues, including the elimination of the classic gaming/opportunism incentives that can exist when *ex post* adjustment is allowed. Its supporters can also point to the risk that regulators can themselves game arrangements (act opportunistically) when *ex post* adjustments to a regulatory settlement are allowed. That is, if prices/ revenues are not pre-determined in ways beyond the control of the regulator, there is a potential tendency for regulatory risk to be increased.

An example of the potential eventuation of such regulatory risk with which I am familiar occurred in relation to Dublin Airport a few years ago when the regulator decided to claw back revenues from a previous price settlement on the ground that a particular part of the airport's capex programme had been delayed, that investments contemplated at the time of the previous settlement had not been made, and that the airport had therefore enjoyed an unintended financial gain at the expense of customers/consumers. The Aviation Appeals Panel, on which I served, referred the decision back to the regulator on the ground that the CPI/RPI – X settlement had not been made contingent on particular events, and that *ex post* adjustments on the basis of such events were only justified in exceptional circumstances, such as the provision of misleading information at the time of the original settlement (which was not the case in the relevant context).

Incentives when there is foreknowledge of compensation (D)

I have assumed, and have confirmed the assumption with the Commission, that this question relates to a scenario in which suppliers know *ex ante* that they will receive compensation for cost increases caused by a catastrophic event, but not for demand reductions.

If the supplier knows that there will be *full* compensation for any costs that are incurred, what we are left with is cost-plus regulation. There is very little downside in this situation for the supplier, and hence little incentive to contain costs in the post-event period. At worst, the higher prices consequent on the higher costs may lead to smaller volumes of purchases by consumers, and hence may lead to lower investment in the more distant future. Assuming returns on capital are a little above actual costs of capital (the normal situation), this may lead to a small reduction in economic profits (profits in excess of capital costs) in the future. The incentive effect is likely to be small, however, since demand for electricity tends to be price inelastic (the volume effect is small) and the profit effects, being in the more distant future, are significantly discounted. In contrast, the increased capital base consequent on any gold plating, financed by the cost-plus nature of the regulatory response, will produce profits that accrue nearer in time.

For these types of reason, there is a tendency (though it is not universal) in RPI/CPI - X regulation not to allow full cost pass through, *even in circumstances where there have been significant exogenous increases in costs* (i.e. costs have increased for reasons beyond the control of the supplier). In the UK we have just seen an example of this in Ofwat's rejection of the application by Thames Water for an interim determination that would have increased charges. As I think has been explained in earlier material, the most authoritative determination was that of the Competition Commission, on appeal of a decision by Ofwat in relation to the pension deficit of Bristol Water. The CC allowed 90% pass-through to take account of the fact that the pension deficit was largely beyond the control of the company,

but insisted that the supplier retain 10% of the risk to ensure that there was at least some motivation/incentive for the company to use its (very limited) influence to keep costs down.

In the case of earthquakes, the controllability of costs is likely to be somewhat greater than in the Bristol Water pension deficit case. It is obvious that a catastrophic event itself is fully exogenous, but the response to it is not: a supplier can respond in more or less efficient ways. Similarly, it may be possible to do things before an event that will affect the costs incurred as a result of the event. Thus, there is a real incentives problem to address: it is not just a matter of risk sharing. Hence, on standard principal-agent theory, increased insurance supplied by a regulator to a company – which is the effect of providing strong assurances about full cost recovery – will tend to dull cost-efficiency incentives.

This, of course, is the reason why much privately supplied insurance tends not to provide full compensation when risks eventuate: some of the risk is left with insured party, in order that there are at least some incentives to take both *ex ante* and *ex post* actions to mitigate the costs of the relevant events, including fully exogenous events.

The latest Castalia comments (E)

The most recent submission of Castalia does not give grounds for any change in my advice on the relevant point. Castalia's previous submission was distinguished by its attempt to bring empirical evidence to bear on the issues. On pages 8 and 9 of the recent submission, however, the authors appear to have reverted to abstraction, and to be relying on arguments that are speculative at best and wrong in places.

Issues surrounding the use of the concept of 'workable competition' were dealt with at some length by the Commission's experts when the input methodologies were being developed, and the Castalia paper adds nothing new to that discourse. By way of examples of the problems:

- It is not true, as claimed by Castalia, that a fall in demand necessarily leads to a fall in prices in a workably competitive market, particularly in the long run (e.g. because of the existence of scale economies or of external economies of scale). Forward looking regulatory assessments are based on long-run cost considerations – so as to protect against expropriation of sunk capital – but within any regulatory review period short-run considerations become relevant: there is, as already stated, no guarantee that efficient costs will be recovered *ex post*, over a review period (just as no such guarantee exists in a competitive market). It is a feature of electric systems – and hence a contextual factor of relevance – that short-run marginal costs tend to increase with load whilst long-run marginal costs may decline with load.

- Castalia seems to think that the Commission interprets workable competition in a way that requires the existence of a spot market. That is contrary to the advice of the Commission's experts when the input methodologies were being developed, and is not, as I understand matters, a view taken by the Commission.

Perhaps more importantly, I considered Castalia's original submission helpful in suggesting that the sorts of conditions in which there might be a claim for claw-back from Orion were similar to those that might trigger *force majeure* provisions in private contracts. This suggestion leads naturally to the question: were the financial impacts of the earthquakes so grave as to threaten Orion's ability to continue operating as a commercial concern? This leads in turn to more specific questions about Orion's financial strength at the time of the relevant events. Rather than addressing these empirical questions, the most recent submission appears to have begged them, and to have re-focused the discussion on speculations about possible outcomes (in a relatively undefined and abstract context) *if* it were the case that Orion had been commercially unable to continue operations at the regulated prices. In the absence of evidence suggesting that this latter condition was satisfied, the speculations seem to me to be irrelevant.

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