# “Input methodologies review draft decisions”

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## Risk Allocation

between

## Suppliers and Customers

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for

## Major Electricity Users’ Group

Ireland, Wallace & Associates Limited

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**Appendix A**: The Treasury Public Private Partnership Programme:
"Appendix A: Risk Allocation Exampl**e."**

**Appendix B**: Draft Transpower Works Agreement analysis

**Appendix C**: Draft Transpower Works Agreement and Shareholder Consultation documents

## 1 Instruction

In relation to the Commerce Commission's "Input methodologies review draft decisions" (Draft Decisions), dated 16 June 2016, the Major Electricity Users' Group (MEUG) has asked Ireland, Wallace & Associates Limited (IWA) to:

1.1 respond to the Commission's explicit concern that submitters had not addressed the key economic principle of risk allocation that it has taken into account in making regulatory decisions;

1.2 review the Commission's application of the IM key economic principles relevant to the Part 4 regime with a primary focus on Transpower[1]; and,

1.3 arising from 1.1 and 1.2 make recommendations, if appropriate.

## 2 Key Economic Principles

2.1 The three underlying principles for the application of Part 4 are:

**Principle 1:** Real financial maintenance (FCM).

[captioned by a NPV=0 test over the long term]

**Principle 2:** Risks are allocated by the Commission to suppliers or consumers who might be best placed to manage them.

[by a subjective balanced approach to incentivising behaviour]

**Principle 3:** Recognising asymmetric supplier investment risk.

[by "marking up" the supplier cost of capital to the 67th percentile]

2.2 Under Principle 1 the supplier has the opportunity, ex ante, to earn the risk adjusted cost of capital return over the long term. This return is called a "normal profit". The Commission does not guarantee that a normal profit will be earned over any regulatory period or indeed over the life time of the assets. However, the Commission estimates/forecasts future cash flows, cost of capital, prudent capex and opex and demand that is free of systematic bias.[2]

2.3 The supplier can expect to earn a normal profit. "In order to determine the regulatory settings necessary to give effect to the FCM principle, we need to consider the allocation of risk. We aim to allocate risks to the party best placed to manage them. Once risks are allocated between suppliers and consumers, we

[1] Draft Decision, "Framework for the IM review", Chapter 4, para. 118-158.

[2] Para. 126.3 p108.

compensate suppliers and consumers accordingly through the price-quality path we set."[3]

2.4 Under a price-quality regulation the Commission can conduct ex post review of the cash flow outturn and actual costs of the supplier to ensure it is compensated for bearing risk.[4] CPP and IPP provisions provide further downside protection compared to DPP mechanisms.

2.5 The Commission states: "As such, the FCM principle has primacy over the risk allocation principle [2]. Under Part 4, consumers ultimately bear most risks over the long term, but there is some scope for ensuring suppliers bear 'within-period' risks that they are better placed to manage where this is consistent with s 52A."[5]

**"… if suppliers are not compensated for risks that are outside their control, then this might have detrimental incentives on investment.**"[6]

2.6 Clearly then, the price-path regulation aims to keep suppliers whole in respect to capital and investment return whatever the source of risk. Even though the Commission explicitly states (see para. 2.2 above) that the normal profit is not guaranteed, it is all but so given the Commission's position. For clarity the Commission should provide a summary and narrative of the risk allocations it has assigned to investor, supplier, customer and shared between the parties. The Treasury has a helpful guide of risk allocation analysis and table.[7]

"This principle (see 2.5 above) was not identified by submitters but is a key economic principle that we have taken into account in making regulatory decisions."[8]

2.7 It is very important that the Commission communicates in detail on how it identifies and allocates risks to suppliers and customers for each price setting period. This will enhance certainty for interested parties.

## 3 Risk allocation

3.1 In the section "Framework for the IM review" the Commission has helpfully drawn together its experience, precedent decisions, processes for identifying risks and allocating then to suppliers/investors and consumers and which are sometimes shared.

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[3] Para. 134 p110.

[4] Commerce Commission, "Input methodologies review Invitation to contribute to problem definition", 16 June 2015, para. 107.

[5] Para. 135 p110.

[6] Para. 129 p109.

[7] See: http://www.treasury.govt.nz/statesector/ppp/guidance/public-sector-comparator/ppp-public-sector-comparator-sep15.pdf, The summary table at p32-33 is attached as Appendix A.

[8] Para. 130 p109.

3.2 The relevant risk buckets can be summarised as:

(a) Systematic risk: that is attributable to market factors that generally affect all investors/suppliers. These factors include changes in real GNP growth, inflation, market risk aversion and in the long term real interest rate.[9] Other factors include change in tax laws and some regulations. Systematic risk generally can't be avoided. The current proposed asset beta of 0.34 is an index of systematic risk the Commission derived from a "Energy comparator" set.

(b) Asymmetric supplier investment risk; a mark-up of the cost of capital to the 67th percentile and represents the Commission's view of the balancing point at which the supplier would not be deterred from investing. The supplier cost of capital is then increased from a mid-point of 4.81% to 5.31%.[10]

(c) Industry or specific supplier risk: is that portion of total risk that is associated with random effects that can be generally eliminated through diversification by investors. Accordingly, no compensation is required for this risk. Examples include local earthquakes, uninsurable events, change in demand etc.

Under the Commission's Principles 1 and 2 relevant to Part 4 objectives it allocates risks attached to revenues and costs to suppliers or customers best placed, in its view, to manage them. Given a revenue cap defined by the Commission it then seeks to incentivise the supplier to better the Commission's forecasts and estimates of costs on the basis that it is in the best long term interests of consumers as prices (or risks reduced) are likely to be lower than they would otherwise be given a supplier's out performance in the long term. Potential stranded asset costs are borne by the customer.

3.3 The Commission has signalled the possibility of economic network stranding under revenue cap regulation but believes that there are incentives on a supplier to mitigate that risk.[11] The Commission is open to changing regulatory setting in the future recognising the importance of Principle 1.

3.4 The draft price-quality regulations have a number of "ancillary mechanisms' which are designed to manage, allocate and reduce risks.[12] These include "cost pass-through", "unders and overs", "catastrophic events", "change events", "error events", etc.

3.5 The Electricity Authority (EA), in a parallel consultation with and linked to the IM review, allocates risk related to "optimisation", a form of stranded assets to a "residual charge" pool and thereby socialising these costs to all customers[13]. The EA references "material change in circumstances" and "force majeure" events

[9] See Dr M Lally, "The Weighted Average Cost of Capital for Gas Pipeline Business", p 47-53.

[10] Commerce Commission: "WACC estimates as at 1 April 2016 based on the draft amended cost of capital IMs".

[11] Para. 93 p 334. A supplier is best positioned to manage this risk.

[12] See: Queensland Competition Authority, "Risks and Form of Regulation – a discussion paper", November 2012, p16.

[13] Electricity Authority, "Transmission Methodology: Issues and proposal" (TPM), 17 May 2016.

such as fire damage, earthquake, technological developments and reduced demand.[14] The EA's processes and risk allocations need to be reconciled to the IM for consistency in terminology, meaning and effect.

3.6 To derive a measure of systematic risk the Commission selected a sample of 74 Energy comparators. They covered three industry categories and four different regulatory regimes and geographies. In settling on an asset beta of 0.34 the Commission did not provide narrative on the matching set of factors with which explained the Energy comparator risk. The asset beta is locked in to a set of systematic risks by definition.

3.7 Transpower (and EDBs) are generally free to set prices and contract for services as they wish given the Commission's and EA's guidelines. A rational supplier can shed systematic risk to customers through contracting. As a result, the supplier's risk adjusted return is likely to increase without affecting its ex ante expected normal profit set by the Commission.

3.8 An example of how systematic risk may be transferred by a regulated supplier to customers is disclosed in a draft Transpower Works Agreement (TWA)[15] and referenced as a "new investment contract" in the draft Transpower Input Methodologies Determination. Such qualifying contracts are excluded from the Regulatory Asset Base.[16]

3.9 The TWA consultation papers are summarised as they relate to risk allocation in Appendix B.

3.10 At the option of Transpower payments can be varied if there is a:

(a) <u>Regulatory Change</u> is required by law

(b) change in the <u>Finance Rate</u>

(c) the <u>cost of the Works</u> exceeds that included in the initial charge

(d) change in the <u>tax rate</u>

(e) change in <u>rate of depreciation</u> for tax purposes and

(f) change in <u>Transpower's tax treatment</u> underlying the contract

3.11 A number of these risks are systematic. The main two would be the shocks from increases in term interest rates and tax rates. These two factors are the drivers of changes in the "regulatory WACC" and hence utility type investments generally.

3.12 The TWA "Finance Rate" includes the regulatory WACC (67$^{th}$). Through its contract it proposes to pass on systematic risk to the customer. The return to Transpower

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[14] TPM. See para. 7.158, 7.167, E59-60.

[15] See Appendix C.

[16] "[DRAFT] Transpower Input Methodologies Determination" 2016, 2.2.7 (d), p20

doesn't change but the systematic risk decreases. The "risk-adjusted" return increases.

3.13 The net result is that we have potentially two IMs: one from the Commerce Commission and the other one being created by Transpower. We have the same industry, same Transpower, same customer, and same grid yet a radical difference in risk allocations. The "risk adjusted normal profit and return" are also radically different under the two IMs.

## 4 Recommendations

4.1 As the Commission allocates risk through implementing the IM and in setting revenue caps it now could assist interested parties by describing the risk allocated to suppliers and customers in a summary table. It should also provide narrative on the reasons one or both parties are best placed to manage or share risk. This is key economic Principle 2.

4.2 The Commission should support its asset beta number with a narrative on what it considers the factors that explain it. The asset beta number and the risks underlying it are a package. If regulated suppliers follow Transpower's methodology in its TWA in pricing of its services interested parties will be more aware of potential for risk shifting and of course the concept of risk-adjusted return. This is key economic principle 1.

4.3 The Information Disclosure requirements should be changed to enable the Commission to detect risk shedding. At present risk shedding can't be detected as neither revenue nor the normal profit are affected.

**Appendix A**:

**The Treasury Public Private Partnership Programme:**
**"Appendix A: Risk Allocation Example."**

**Appendix B:**

**Transpower Works Agreement analysis**

1. The draft contract allocates risk between Transpower and a customer arising from a qualifying investment contract. Such agreements are not subject to price-control regulation.

2. It is intended that all Works will be built, owned and maintained by Transpower as part of the Grid. Transpower will charge and recover the whole cost of the Works from the customer by "levelised" monthly payments.

3. At the option of Transpower payments can be varied in the event of (with underlining added):

   3.1 a <u>Regulatory Change</u> is required by law [7.2, 12.2];

   3.2 a change in the <u>Finance Rate</u> [7.4, 12.2, Schedule 4 3.1, Schedule 7 3.3 (a)];

   3.3 the <u>cost of the Works</u> exceeds that included in the initial charge [7.3, Schedule 4 2, Schedule 7 3.3 (b)];

   3.4 a change in the <u>tax rate</u> [3.3 (c) (i)];

   3.5 a change in <u>rate of depreciation</u> for tax purposes [Schedule 7 3.3 (c) (ii)]; and

   3.6 a change in <u>Transpower's tax treatment</u> underlying the contract [Schedule 7 3.3 (c) (iii)];

4. Transpower has introduced a new concept: a <u>Finance Rate</u> [12.2] [with underlining added]:

   "Finance Rate means [x %] [Rate to be agreed between the parties prior to execution. TP will insert a recommended rate in the first draft given to the customer. For customers' information, the rate will likely be a combination of our <u>regulatory WACC</u>, plus some component for the <u>risk associated with the investment</u>. At this stage, we are considering that the factors that may increase the <u>riskiness of a customer or investment</u> would be contract duration (longer contracts introduce more risk); <u>counterparty risk</u> (distributors have less exposure to default than certain major users); and possibly <u>asset type</u> (bespoke assets that are hard to redeploy have greater risk). It will also include a component for the <u>risk of needing to replace assets</u> under clause 2(a), as the most efficient way of allocating that risk between the parties.]"

5. Based on the Commission's draft IM WACC estimates as at 1 April 2016 the regulatory WACC (post-tax) is 5.31% at the 67$^{th}$ percentile WACC. The difference between the mid-point WACC and the 67$^{th}$ percentile WACC is 0.5%. The mark up of mid-point WACC is to adjust for "estimation errors". The asset beta is 0.34 reflecting the systematic or market risk for the Energy comparator sample.

6. The asset beta of 0.34 is a measure of systematic risk based on how company returns fluctuate relative to the stock market as a whole (after adjusting for debt capital).

7. Relevant systematic risk factors include market wide shocks from unexpected changes in interest rates, tax rates, government policies, real GNP growth, acts of nature, etc. These risks generally cannot be avoided.

8. The terms of the TWA allocate a substantial component (arguably most) of the systematic risk to the customer without a compensating lower return for less risk.

9. Transpower proposes to transfer to customers any potential adverse changes in regulatory laws, changes in tax rates and rates for depreciation, change in government stock rate affecting WACC, etc.

10. As a result, Transpower bears potentially minimal systematic risk yet it has based charges on an asset beta 0.34. As an example, assuming a zero asset beta the mid-point WACC of 4.81% reduces by 2.39% to 2.42%. Given the risk passing to customers, the asset beta should be somewhere between an asset beta of 0.34 and zero. It certainly should not be not left at 0.34.

11. Transpower has also adjusted the Finance Rate to account for specific customer risks such as: risks associated with the asset/investment and duration of the contract, counterparty risk (higher for major users relative to distributors), related to specialised assets, etc. Arguably these adjustments should be reflected in the expected cash flows relating to the Works, and some may be considered partly systematic risk. Transpower intends to adjust its discount rate, as a component of the Finance Rate, to provide for these risks.

12. Construction risk is for account customer. Accordingly, the capitalised interest is included in the Total Cost. Transpower has no liability for cost overruns.

13. The potential stranded asset risk is clearly a customer liability and potentially exceeds the “Total Project Charges”. Transpower’s “Accelerated Payment Charge” includes dismantling and remediation costs and is net of alternative use value differences.

14. Based on my analysis of the TWA Transpower is bearing less risk than an asset beta of 0.34 for Grid additions justifies. Effectively a customer using the Grid and entering a Works Agreement is asked to pay two WACCs: under the Transpower IM 5.31% ($67^{th}$) and potentially a higher equivalent WACC of up to an additional 2.45% for a new investment given an unchanged asset beta of 0.34.

15. Potentially there are two IMs: one from the Commerce Commission and the other from Transpower. We have the <u>same industry</u>, <u>same Transpower</u>, <u>same customer</u>, and <u>same grid</u> yet a radical difference in risk allocations. The “risk adjusted normal profit and return” is also radically different under the two IMs.

16. The Commission comments on the risk-adjusted return:

"… in theory extreme forms of cost-of-service or rate of return regulation will result in the regulated supplier bearing minimal systematic risk, given that any cost increase is not borne by the supplier (and instead is immediately passed through to the consumer);"[17]

This position echoes the tenor of the TWA.

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[17] Draft Decision, Topic Paper 4, Cost of Capital Issues, para, 321.1 p448.

## Appendix C:

**"Draft Transpower Works Agreement"** *and* "**Key Stakeholder Consultation, November 2015"**