



The Pilbara Infrastructure Pty Ltd

ACN: 103 096 340

87 Adelaide Terrace East Perth

Western Australia 6004

PO Box 6915, East Perth, Western Australia 6892

Telephone: + 61 8 6218 8888

Facsimile: + 61 8 6218 8880

Website: www.fmgl.com.au

20 February 2015

ATTENTION: MR RICHARD BEGLEY

Regulatory Advisor

Economic Regulation Authority

PO Box 8469

PERTH WA 6849

Via email: publicsubmissions@erawa.com.au

Dear Mr Begley

SUBMISSION TO REVISED DRAFT DECISION OF WEIGHTED AVERAGE COST OF CAPITAL METHODOLOGY FOR REGULATED RAILWAY NETWORKS

On 28 November 2014, the Economic Regulation Authority (**ERA**) invited public submissions to the revised draft decision for the method of calculating the Weighted Average Cost of Capital (**WACC**) values to apply from 1 July 2015 for the regulated railway networks.

The Pilbara Infrastructure Pty Ltd (**TPI**) engaged HoustonKemp Economists (**HoustonKemp**) to review and provide comment to TPI on the methodology applied by the ERA in the revised draft decision to the TPI network.

HoustonKemp's findings are that the ERA's methodology for the regulated WACC for the TPI network in its revised draft decision is appropriately constructed and methodologically rigorous. The attached letter sets out reasons for this conclusion and comprises part of this submission.

TPI generally supports the ERA's approach to the WACC methodology and the determination of the 13.30 per cent indicative pre-tax WACC for the TPI network.

Yours sincerely

DENICE JOHNS

Assistant Commercial Compliance Officer

The Pilbara Infrastructure Pty Ltd



HOUSTONKEMP
Economists

Greg Houston Partner

Office +612 8880 4800

Email Greg.Houston@houstonkemp.com

Address Level 40, 161 Castlereagh Street
Sydney NSW 2000

Ms Denice Johns
Commercial Compliance Officer
The Pilbara Infrastructure Pty Ltd
Level 2, 87 Adelaide Terrace
East Perth WA 6004

20 February 2015

Dear Ms Johns

Weighted Average Cost of Capital (WACC) for the TPI network

This letter responds to your request that we review and comment on the soundness of the revised draft decision (the "revised draft decision") of the Economic Regulation Authority (ERA) entitled *Review of the method for estimating the Weighted Average Cost of Capital for the Regulated Rail Networks | Revised draft decision*, dated 28 November 2014.

The revised draft decision estimates the indicative real pre-tax WACC for below rail services provided by The Pilbara Infrastructure Pty Ltd (TPI) to be 13.30 per cent.¹

In my opinion, the ERA's revised draft decision on **the regulated WACC for TPI is appropriately constructed and methodologically rigorous**. In particular, the ERA has properly:

- adopted an estimate of the real pre-tax WACC that is of a standard form well accepted by Australian jurisdictional economic regulators;
- applied well-recognised and widely adopted methods for estimating the required return on debt and equity;
- estimated industry/business specific WACC parameters through a logical and well-reasoned assessment of comparator benchmarks; and
- estimated WACC parameters that are common to the wider market in a manner consistent with the requirements of the *Railways (Access) Code*.

I expand on each of these points below.

¹ ERA, *Review of the method for estimating the Weighted Average Cost of Capital for the Regulated Rail Networks | Revised draft decision*, 28 November 2014, page vii.

1. Form of the WACC

The ERA has retained the real pre-tax approach to estimating the applicable TPI WACC, which it has estimated by means of the following two steps, ie:

Step 1: Estimate the nominal pre-tax WACC, ie:

$$WACC_{nom}^{pre-tax} = E(R_e) \times \frac{E}{V} \times \frac{1}{1 - \tau(1 - \gamma)} + E(R_d) \times \frac{D}{V}$$

Where:

$E(R_e)$ is the nominal, post-tax expected return on equity

$E(R_d)$ is the nominal, pre-tax expected return on debt

$\frac{E}{V}$ is the assumed proportion of equity in total financing, ie, the sum of debt and equity finance

$\frac{D}{V}$ is the assumed proportion of debt in total financing, ie, the sum of debt and equity finance

τ is the corporate income tax rate

γ (gamma) is the market value of franking credits created

Step 2: convert the nominal pre-tax WACC to a real pre-tax WACC, ie:

$$WACC_{real}^{pre-tax} = \frac{1 + WACC_{nom}^{pre-tax}}{1 + \pi_e} - 1$$

This form of the WACC is commonly known as the "Officer" WACC, by its association with Professor Bob Officer. The "Officer" WACC is applied by Australian regulators because it adjusts the pre-tax WACC to take account of Australia's imputation tax system. Put another way, the pre-tax WACC is reduced by the value that investors place on the creation of imputation credits (ie, through the 'gamma' parameter) generated by the business through the payment of Australian corporate tax.

I note that this form of WACC has been applied in Australia at various times by:

- the NSW Independent Pricing and Regulatory Tribunal (IPART);²
- the Essential Services Commission of South Australian (ESCOSA);³ and
- the Essential Services Commission of Victoria (ESC).⁴

In my opinion, the form of the WACC adopted by the ERA is appropriate for estimating the required rate for return that should be earned by a rail network subject to a negotiate-arbitrate form of regulation that involves a 'ceiling test' applied to total revenues, such as that operated by TPI.

² IPART, *NSW Electricity Distribution Pricing 2004/05 to 2008/09 | Final Report*, June 2004, page 218.

³ ESCOSA, *2005-2010 Electricity Distribution Price Determination | Part A –Statement of Reasons*, April 2005 page 126.

⁴ ESC, *Rail Access Pricing Guideline V.2.0*, June 2009, page 36.

2. Method for estimating debt and equity

The ERA has adopted standard methods for estimating the benchmark cost of debt and equity for a regulated rail facility. In particular, the ERA deconstructs the cost of debt, into three constituent components and separately estimates:

- the risk free rate component;
- the debt risk premium; and
- debt raising costs.

I note that some Australian regulators – such as the Australian Energy Regulator (AER)⁵ – no longer allow for debt raising costs in the total cost of debt parameter, but instead provide for such an allowance in the regulated business' operating expenditure. However, other regulators – such as the Queensland Competition Authority (QCA) – routinely include an allowance for these costs in the WACC.⁶

In relation to the other components of the debt allowance, the ERA approach is consistent with the practice of all Australian regulators in that:

- the risk free rate is estimated using observed yields on Commonwealth Government securities; and
- the debt risk margin is estimated in a two-step approach (see section 3, below for further comments on the ERA's approach) that:
 - > first, makes an assessment of the characteristics of the benchmark bond, ie, the appropriate credit rating and borrowing periods; and
 - > second, uses public available yield data to estimate the prevailing yield on benchmark bonds.

The ERA has relied on the Capital Asset Pricing Model (CAPM) to estimate required return on equity, and specified the standard form of the CAPM, namely:

$$E(R_e) = R_f + \beta_e(E(R_m) - R_f)$$

Where

R_f is the risk free rate

β_e is the equity beta of a benchmark entity

$E(R_m)$ is the expected return on the market

The CAPM adopted by the ERA is the principal financial model used by all Australian jurisdictional regulators.⁷ I note that I have on several occasions advocated that regulators should have regard to a wide range of financial models in estimating the cost of equity. In addition to the CAPM, in my opinion regulators should also have regard to insights able to be derived from the Fama-French three-factor model, and dividend growth models. Having regard to a wider, rather than a narrower, body of relevant information must improve the quality of any estimates of required return on equity.

⁵ AER, *Powerlink | Transmission determination 2013/14 to 2016/17*, April 2012, page 36.

⁶ QCA, *Final report | Gladstone Area Water Board: Investigation of Pricing Practices*, June 2010, page 133.

⁷ See:

- AER, *Draft Decision | ActewAGL distribution determination 2015-16 to 2018-19 | Attachment 3: Rate for Return*, November 2014, page 3-173;
- QCA, *Final report | Gladstone Area Water Board: Investigation of Pricing Practices*, June 2010, page 118; and
- ESCOSA, *2005-2010 Electricity Distribution Price Determination | Part A –Statement of Reasons*, April 2005 page 126.

3. Estimating the company/industry specific parameters

When estimating the WACC, there are a number of parameters that need to be determined by reference to the same:

... degree of risk as that which applies to the service provider in respect of the provision of the rail services.⁸

In particular, those WACC parameters that depend on company/industry specific risks are:

- gearing;
- the debt credit rating; and
- the equity beta.

In my opinion, the ERA's approach to determining these business/industry parameters for the TPI network is robust and persuasive. Specifically, the ERA's conceptual analysis is well reasoned and consistent with conclusions that I would draw in that TPI's reliance on a single commodity – iron ore – transported across large distances:

- distinguishes its risks from either PTA or Brookfield Rail; and
- results in TPI's risks being at the upper end of those faced by the comparator companies contained in the benchmark sample.

I note that the group of comparable companies used by the ERA in its revised draft decision to estimate the business/industry specific parameters for TPI networks is unchanged from that it used to derive a TPI indicative WACC in 2009. In the absence of any reasonably held concerns in relation to the selection of the group of comparator businesses, there are considerable benefits in terms of regulatory stability and predictability associated with using an unchanged comparator group.

The ERA then consistently uses the group of comparable companies to estimate each of the business/industry specific parameters.

4. Estimating the general market parameters

In addition to the business/industry specific parameters of the WACC, there are a number of parameters that should be common to all estimates of the rate of return for all industries. These are:

- the risk free rate;
- the market risk premium; and
- the assumed value of the creation of an imputation credit (gamma).

In my opinion, the ERA has in generally reached appropriate values for its market parameters. The one value for which I have strong reservations is the estimated value of gamma. The ERA has reached a value of 0.5 for gamma, primarily due to its view that estimating the market value of imputation credits distributed (theta) should give little weight to dividend drop off studies and, instead, give greater weight to:

- tax statistics approach;
- equity ownership approach; and

⁸ ⁸ ERA, *Review of the method for estimating the Weighted Average Cost of Capital for the Regulated Rail Networks | Revised draft decision*, 28 November 2014, page ix

- some weight to the conceptual goal post approach.

By contrast, in my opinion the ERA should give more weight to findings of the Australian Competition Tribunal⁹ on this question, the essence of which is that, notwithstanding that dividend drop off studies have some potential limitations, they represent the best source of information on the market value of distributed imputation credits. Further, the most thorough dividend drop study is that performed by SFG Consulting, which finds a value for theta of 0.35 and so, when combined with a distribution rate of 0.7, gives a gamma value of 0.25.

Finally, I note that the ERA's decision to estimate a long term return on the market portfolio of 11.2 per cent represents a balanced approach that address a prevailing and reasonable concern that historically low risk free rates have resulted in downwardly biased estimates of the cost of equity by Australian regulators.

Yours sincerely



Greg Houston
Partner

⁹ Australian Competition Tribunal, *Application by Energex Limited (Distribution Ration (Gamma))(No.3)* [2010] ACompT9, October 2010.