Response to the Economic Regulation Authority on accounting benchmarks

REPORT FOR GOLDFIELDS GAS TRANSMISSION PTY LTD

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1 Introduction

1 We have been asked to respond to a draft decision[1] by the Economic Regulation Authority of Western Australia (ERA) in relation to the Goldfields Gas Pipeline (GGP). The GGP is owned by Goldfields Gas Transmission (GGT). Specifically, we have been asked to consider the beta estimate. The beta estimate is used, in part, to estimate the cost of equity capital which flows through to the regulated rate of return.

2 In the Capital Asset Pricing Model (CAPM),[2] which is adopted by the ERA (2015), the cost of equity is estimated as the sum of the risk free rate of interest (r_f) and the equity risk premium. The equity risk premium is the product of the beta estimate (β) and the market risk premium ($r_m - r_f$).[3] So the equity risk premium can be computed as $\beta \times (r_m - r_f)$ and the cost of equity can be computed as $r_f + \beta \times (r_m - r_f)$.

3 In its draft decision, the ERA (2015) estimated beta at 0.8[4] on the following basis.[5]

a. The ERA states that the beta estimate will be drawn from within the range of 0.3 to 0.8.[6] The range is derived from running regressions of stock returns on market returns for energy network businesses listed in Australia over a five year period.[7]

b. The ERA selected a beta estimate at the upper end of this range for the GGP according to two rationale. First, the ERA made a judgement that the beta estimate for a typical energy network in Australia would be 0.7. The figure of 0.7 is above the mid-point of the range of 0.3 to 0.8 because of a lack of empirical support for regression-based beta estimates.[8] Second, the ERA made a judgement that the GGP should have a beta estimate above the 0.7 estimate for the typical energy network on the basis of firm-

[1] ERA (2015).

[2] Sharpe (1964), Lintner (1965) and Mossin (1966).

[3] r_m is the expected return on the market portfolio of all risky assets. The market risk premium is the difference between the expected return on the market portfolio and the risk free rate.

[4] ERA (2015), para. 653.

[5] ERA (2015), para. 743.

[6] ERA (2015), para. 813.

[7] ERA (2015), para. 600.

[8] ERA (2015), para. 650,

specific comparison of risks compared to other firms. This comparison was made on the basis of accounting metrics.[9]

4 Our task in this report is to comment on the rationale and conclusions reached by the ERA (2015) in its benchmarking analysis. Specifically, we have been asked to address whether the analysis performed by the ERA provides a risk assessment which fully accounts for the risks faced by the GGP, associated with its concentrated customer base of mining companies.

2 The ERA's benchmarking analysis

2.1 General rationale

5 In paragraphs 597 to 653 of the ERA's draft decision, the ERA considers the issue of systematic risk of the GGP. GGT presented the ERA with evidence that the set of comparable firms used by the ERA to estimate beta, by regressing stock returns on market returns, does not lead to an accurate measurement of the risk of the GGP. The basis for this claim is that none of the firm's in the ERA's sample is comparable to the GGP.

6 The ERA (2015) notes that the GGP submitted three points which suggest that the regression-based beta analysis adopted by the ERA would not appropriately capture the risk of the GGP.[10] Specifically, GGT has had difficulty in re-contracting replacement demand, the benchmark firms relied upon by the ERA have much larger customer bases, and the customer bases of benchmark firms are more diversified across sectors.

7 With respect to the first point, the ERA (2015) has decided that the forecast demand reduction is irrelevant for beta estimation.[11] The basis for the ERA decision is that the ERA's beta estimates for the future are based upon analysis of historical returns, as per the guidelines[12], so the forecast demand challenges are irrelevant.

8 The historical returns rationale adopted by the ERA (2015) is not a reasonable justification for not considering the challenges of replacing demand. The point being made by GGT is that it faces a market exposure that is not faced by the benchmark firms used by the ERA to measure risk. In submitting information about the difficulty the GGP has faced in replacing demand, GGT has presented information which supports its claim.

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[9] ERA (2015), para. 633 to 653.

[10] ERA (2015), para. 599.

[11] ERA (2015), para. 600.

[12] ERA (2013).

9 The ERA (2015) has considered the hypothetical situation that a concentrated customer base in mining might affect risk, and then proceeded with accounting benchmarking to give some indication of GGP-specific risks. GGT has put forward information to suggest that it faces a risk that is not purely hypothetical, but is actually impacting on demand projections. It does appear to be a systematic risk because the reduction in demand has coincided with the fall in commodity prices. The decision by the ERA to excluding this information from consideration appears to be based upon definitional grounds – that it has a process for estimating beta that relies upon historical information and so only historical information can be used.

10 The CAPM is a model of expected returns. The process of regressing stock returns on market returns in a measurement technique used to estimate one parameter, beta. There is no requirement in the CAPM for beta to only be estimated using past returns, and the ERA is not bound to only use historical stock returns because it adopted a particular estimation procedure in the past.

11 It is the second and third points mentioned above – the size of customers and industry diversification of customers – that is considered further by the ERA (2015). The ERA acknowledges that the customer base on the GGP is concentrated amongst resources companies and that this is unusual.[13] But the ERA is not convinced that GGT has made the link between the customer base and systematic risk above other utilities.[14] The ERA notes that there are no particularly good comparable firms, listed either in Australia or in other markets, which allow it to easily compile regression-based beta estimates for similar firms.[15]

12 This is the point at which the ERA's (2015) accounting benchmarking analysis is used. The approach adopted by the ERA is to assess, on a ranking basis, how risky the GGP is compared to other utilities for which accounting benchmarks can be compiled. The idea is that, if the GGP shows up as relatively risky according to a set of accounting benchmarks, its beta estimate could be set at the upper end of the ERA's beta range of 0.3 to 0.8. This was ultimately the conclusion of the ERA.[16]

2.2 Specific analysis

13 The ERA (2015) compiled a set of five Australian-listed companies which were classified as Utilities under the Global Industry Classification System (GICS) and

[13] ERA (2015), para. 601.

[14] ERA (2015), para. 602.

[15] ERA (2015), para. 606 to 607.

[16] ERA (2015), para. 653.

which fit an industry sub-group of Electric-Integrated, Gas-Distribution, Electric-Distribution, Gas-Transportation, Electric-Transmission, or Pipelines.[17]

14 The ERA (2015) evaluates the relative riskiness of the GGP based upon five accounting-based measures of risk. The figures relied upon by the GGP are presented in Table 1.

15 The table shows that GGT ranks highly in terms of risk when measured by degree of operating leverage, degree of financial leverage and degree of total leverage. Where GGT ranks low in terms of risk is when considering the coefficient of variation in operating margin and the coefficient of variation in return on equity.

16 The coefficient of variation figures are based upon the year to year fluctuations in earnings, relative to a scaling factor. In the case of the operating margin the measure of earnings is earnings before interest and tax (EBIT) and the margin is computed relative to sales. In the case of the return of equity, the measure of earnings is net profit after tax and the scaling factor is the book value of equity.

17 What the table shows is that, for the GGT, fluctuations in sales flow through to large changes in operating profit (high degree of operating leverage), and fluctuations in operating profit flow through to large changes in profit after interest (high financial leverage).

18 Where GGT appears to have low risk is on measures based upon the year to year variation in profits. During the period examined by the ERA (2015) profits did not vary greatly over time for the first four years from 2009 to 2013. According to the figures compiled by the ERA (2015), based upon a regulatory model with adjustments for volume, earnings before interest and tax ranged from $41 million to $45 million over four years.

19 Then in 2014, revenue fell by 6% to $77 million, EBIT fell by 17% to $34 million and net profit after tax fell by 35% to $9 million. The coefficient of variation measures do not convey a full appreciation of risks faced by the GGP because there happened to be a sustained mining boom which has now come to an end. The coefficient of variation figures will only pick up a risk exposure if there are events which happened to have affected profits from one year to the next over the measurement period.

20 Put another way, a firm can be exposed to risk such that it has a four year profit of sustained high profit, followed by a four year period of low profit. This pattern of earnings does not mean it is a safe firm, in comparison to a firm that has smaller variations in profits from one year to the next. But the latter firm, with annual profit variations, will show up as riskier when we measure the coefficient of variation.

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[17] ERA (2015), para. 630.

The ERA's benchmarking analysis

Table 1. Risk metrics compiled by the ERA (2015)

Firm	Operating margin (%)	Coeff. of var. in operating margin	Degree of operating leverage	Degree of financial leverage	Degree of total leverage	Coeff. of var. in return on equity
GGT	50.47	0.08	3.23	2.31	7.47	0.19
AGL	9.28	0.31	1.52	1.20	1.83	0.26
APA	55.57	0.50	3.67	2.30	8.46	0.55
DUE	41.85	0.16	1.30	6.44	8.37	1.71
EPX	41.22	0.09	2.61	1.07	2.79	0.26
SKI						0.28

3 Implications

21 The ERA's (2015) benchmarking analysis based upon accounting figures does not represent a complete picture of the risk exposure of the GGP. The ERA (2015) has been presented with information:

a. relating to volumes falling below projections in the previous regulatory period, in particular in the year 2014;

b. about challenges in re-contracting for the next regulatory period;

c. about the specific risks faced with the more marginal profit customers of the GGP;[18] and

d. about the concentration of customers to commodities, in particular, to nickel.

22 In aggregate, this information suggests that GGP faces risk due to a concentration of customers in mining that cannot be replaced with customers in other industries. The risks are not shared by benchmark firms the ERA (2015) relies upon for its regression-based risk analysis.

23 The accounting metrics used by the ERA (2015) show the GGP has having high operating, financial and overall leverage. But measures based upon profit variations from year to year suggest low risk. These contrary risk indicators occur because from 2009 to 2013 there was not sharp variation in annual profits. Yet

[18] SFG Consulting (2014), para. 256 to 266.

the overall volume for that four year period was below projections, and fell sharply in 2014. This shows up in the ERA's (2015) computation of profits.

24 In sum, a complete assessment of risk should encompass more than consideration of profit movements in past years. Annual profit movements are not the risks that GGT has presented evidence of. It is the challenge of potentially losing volume for a sustained period that represents the risk exposure, and this risk flows through to the equity holders because of the operating and financial leverage.

4 References

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