

11 May 2020

Dr Paul Paterson  
Chair  
Independent Pricing and Regulatory Tribunal (IPART)  
PO Box K35  
Haymarket Post Shop NSW 1240

Dear Dr Paterson,

### **Sydney Desalination Plant submission in response to IPART Draft Report on its approach to estimating equity beta**

Thank you for the opportunity to make a submission to IPART in relation to the consultation process on IPART's approach to estimating equity beta.

SDP refers to the Draft Report published by IPART on 27 March 2020, which sets out IPART's proposed approach to estimating equity beta.

### **Criteria for assessing modifications to estimation approach**

We begin by noting that IPART has evaluated potential modifications to its approach to estimating equity beta against a number of criteria. In particular:<sup>1</sup>

- IPART has sought to make modifications only where the new approach provides for a more stable and statistically reliable method to estimate equity beta than the current method;
- IPART has also noted that any new approach must contribute to its objective of maintaining the stability, certainty, replicability and predictability of its WACC method; and
- IPART also noted that it must be confident that any new method must produce reasonably accurate estimates.
- IPART particularly noted that submissions from stakeholders emphasised the importance of stability of outcomes, noting that equity beta is a parameter that is likely to vary slowly over time.

SDP concurs with these criteria. In particular, SDP notes the importance to all stakeholders of a stable equity beta, which is consistent with IPART's view that beta is a parameter that is likely to vary slowly over time.

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<sup>1</sup> IPART Draft Report, p. 2.

## Proposed approach to estimating equity beta and SDP views

The draft decision proposes a number of modifications to IPART's approach to estimating equity beta, which promote the criteria set out above:<sup>2</sup>

- IPART will use weekly returns rather than monthly returns and examine all five possible reference days (i.e., measuring weekly returns from Monday to Monday, Tuesday to Tuesday and so on).

SDP agrees with this approach. Weekly returns are frequently used in practice when estimating equity beta, including by leading data providers. Also, SDP notes that estimates can vary materially depending on which day of the week is selected as the reference day, so agrees with the approach of producing estimates for all five reference days and taking the mean.

- IPART will change the threshold for inclusion of a proxy firm to 60 months minimum available return data rather than 36 months.

SDP agrees that the statistical reliability of beta estimates is higher when a longer data period is adopted. SDP agrees that three years is insufficient to support the required degree of confidence in the robustness of an equity beta estimate. There is always a trade-off between having more data to improve statistical reliability versus not having such a long period that includes 'stale' data from a prior period when the firm had different characteristics. However, SDP agrees that beta is a parameter that is likely to vary slowly over time, such that there is little risk of a material change in the true systematic risk of the firm changing materially within a five-year period.

- IPART will use the market value of equity to calculate gearing and use the average gearing over the sample period to de-lever observed equity betas rather than gearing measured at the end of the estimation period.

SDP agrees with this recommendation. Market value gearing can vary over time as stock prices rise and fall. For this reason, it is possible that the end-of-period gearing can differ from the average gearing observed over the period that is used to construct the beta estimate. The returns that are used to construct the beta estimate will reflect the average gearing over the sample period, rather than the end-of-period gearing observed at a single point in time.

- IPART will use the Brealey-Myers de-levering formula, which omits the tax term, rather than the Hamada formula.

SDP agrees that what IPART refers to as "the Brealey-Myers de-levering formula" should be used. This is because that formula, which omits the corporate tax term, is consistent with a firm that maintains a constant proportion of debt finance, rather than a constant dollar amount of debt. Since IPART's regulatory model assumes that the benchmark firm adopts constant gearing (60%), the Brealey-Myers formula must be used.

- IPART will adopt the decision rule that before considering any revision to an established beta value for a price review:

- The prior beta estimate is more than one standard deviation from the mean of current sample; and
- There is persistent evidence over long period (i.e., a regulatory period or longer) of changed beta.

SDP agrees that the allowed equity beta should only be changed if there is evidence of a material and sustained deviation from the current allowance. Equity beta estimates can vary for two reasons – due to a change in the true level of systematic risk, or due to estimation error arising from statistical noise in the data. When estimating equity beta, there is usually a material degree of noise – the R-squared statistics of the relevant regressions are frequently less than 20%. Consequently, it is entirely possible for beta estimates to vary even when the true level of systematic risk remains constant. For this reason, SDP agrees with the proposed approach whereby the allowed equity beta is only changed if there is evidence of a sustained material change.

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<sup>2</sup> IPART Draft Report, pp. 1-2.

## Other equity beta estimation issues

The draft decision also considers the selection of the appropriate comparator set, proposing that the comparator set would be selected for each review, with opportunities for stakeholders to make submissions at that time.<sup>3</sup> SDP understands IPART's reasoning for this decision – the trade-off between comparability (favouring a smaller sample) and statistical reliability (favouring a larger sample) will vary across reviews. Consequently, SDP supports the proposal to consider sample selection issues at the time of each review.

Consistent with the approach of selecting comparator firms at the time of each review, SDP considers that there should be no blanket exclusion of comparators from certain countries (e.g., China and Russia) at this time. Whether firms from these jurisdictions are included in the comparator set will depend on the circumstances at the time of each review. For example, whether or not to include firms from these jurisdictions will depend on the number of comparator firms available from other jurisdictions.

## Next steps

Please direct any correspondence regarding our submission to Justin De Lorenzo – Chief Financial Officer ([REDACTED] or [Justin.DeLorenzo@sydneydesal.com.au](mailto:Justin.DeLorenzo@sydneydesal.com.au)).

Yours sincerely,



Phil Narezzi  
Chief Executive Officer  
Sydney Desalination Plant

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<sup>3</sup> IPART Draft Report, pp. 6-7.