Submission on the AER's consultation paper: *AER draft approach for measuring the debt risk premium for the Victorian Electricity Distribution Determinations*

Prepared and submitted jointly by the Victorian Electricity Distribution Businesses in the AER Victorian electricity distribution determination process

11 October 2010

Contents

1. Executive summary

On 27 September 2010, the AER released a consultation paper entitled 'AER draft approach for measuring the debt risk premium for the Victorian Electricity Distribution Determinations' (**Consultation Paper**). In the Consultation Paper, the AER stated that it is reconsidering its approach to the method for determining the debt risk premium (**DRP**) due to CBASpectrum's decision to cease publication of its fair value curves and the decision by the Australian Competition Tribunal (**Tribunal**) in the ActewAGL matter[1] (**ActewAGL decision**).

This submission is a joint response by the Victorian electricity distribution businesses (CitiPower, Powercor, SPI Electricity, Jemena Electricity Networks (**JEN**) and United Energy Distribution – the **Joint DBs**) to the Consultation Paper. It is submitted as part of the AER Victorian electricity distribution determination process in respect of each of the individual distribution determinations that the AER will make for each of the Joint DBs.

Attached as Attachment 1 to this submission is an expert report from CEG entitled *Use of the APT bond yield in establishing the NER cost of debt, A report for Victorian Distribution Businesses* and dated 11 October 2010 (**CEG Report**), which responds to the the Consultation Paper and provides CEG's expert opinion on the method for determining the DRP that it considers is compliant with the National Electricity Rules (**Rules**) and to be preferred based on considerations of accuracy and reliability.

Attached as Attachment 2 is an expert report from PricewaterhouseCoopers (**PwC**) entitled *Debt risk premium over the approved averaging period beginning 2 August 2010* and dated 5 October 2010 (**PwC Report**), which recommends a DRP for the agreed averaging period common to CitiPower, Powercor and United Energy Distribution of 413 basis points. The PwC report entitled *Methodology for the calculation of debt risk premium* and dated 19 July 2010 (**Earlier PwC Report**) provided to the AER under cover of the Joint DBs' revised regulatory proposals submitted to the AER in July 2010 (**Revised Regulatory Proposals**) recommended a DRP for JEN's agreed averaging period of 428 basis points and a further report from PwC will be provided to the AER recommending a DRP for the agreed averaging period for SPI Electricity (**Forthcoming PwC Report**).

The Joint DBs contend that reliance should be placed solely on the Bloomberg 6 year and extrapolated 10 year BBB fair value curves in estimating the DRP for each of the Joint DBs in the AER's forthcoming final distribution determination for Victoria (**Final Determination**). No reliance should be placed on the CBASpectrum fair value curve in the current circumstances and the estimation of the DRP should not involve any averaging of the yields on the bond issued by the Australian Pipeline Trust (**APT**) on 15 July 2010 (**APT bond**) and the DRP based on the Bloomberg BBB fair value curve.

The Joint DBs contend that the AER should apply the method employed by PwC in the Earlier PwC Report and the PwC Report to estimate the DRP. That is, the DRP should be estimated based on the DRP that is provided by the Bloomberg BBB fair value curve at 6 years extrapolated to 10 years using the change in the DRP that was observed under the Bloomberg AAA fair value curve between 6 and 10 years. In estimating the DRP for an agreed averaging period that occurs after the suspension of publication by Bloomberg of DRP estimates for the

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[1] *Application by ActewAGL Distribution* [2010] ACompT 4.

AAA fair value curve out to 10 years on 22 June 2010, the latest available AAA curve (averaged over an appropriate period, for example 20 days) should be used to perform the extrapolation.

The Joint DBs maintain their view outlined in their Revised Regulatory Proposals submitted to the AER in July 2010. That is, the method for estimation of the DRP should be that which passes and best performs under the 4 step test outlined by PwC in the Earlier PwC Report and reiterated in the PwC Report provided under cover of this submission. The Bloomberg BBB fair value curve at 6 years extrapolated to 10 years using the change in DRP observed under the Bloomberg AAA fair value curve between 6 and 10 years should be adopted to estimate the DRP because it passes and performs best against PwC's 4 step test.

The Joint DBs consider that the approach to estimation of the DRP set out in the Consultation Paper is unnecessary, legally impermissible and erroneous. In particular, the Joint DBs submit that contrary to the conclusions of the AER in the Consultation Paper:

- recent developments do not suggest that it would be imprudent to place sole reliance on the Bloomberg estimates or make it necessary for the AER to examine other ways to estimate the DRP;

- the use of the APT bond in estimating the DRP, in the manner contemplated in the Consultation Paper, is legally impermissible and erroneous;

- using Bloomberg's Commonwealth Government Securities (**CGS**) estimates to extrapolate the Bloomberg BBB estimates to 10 years where Bloomberg's AAA estimates are no longer available (due to the suspension of their publication on 22 June 2010) is erroneous; and

- using the APT bond to estimate the DRP for averaging periods occurring before data on the APT bond became available is erroneous.

The Joint DBs maintain that it follows from the above that there is no basis for the AER to amend the method of estimation of the DRP that they have proposed in accordance with clause 6.12.3(f) of the Rules.

2. Background

Clause 6.5.2(e) of the Rules provides that the DRP is

> *...the margin between the annualised nominal risk free rate and the observed annualised Australian benchmark corporate bond rate for corporate bonds which have a maturity equal to that used to derive the nominal risk free rate and a credit rating from a recognised credit rating agency.*

The AER's Statement of Regulatory Intent (**SORI**) did not determine a value or method for the DRP. However, the SORI determined that the credit rating for determining the DRP is BBB+ and the maturity for determining the nominal risk free rate, and thus also the DRP, is 10 years.

In its *Draft decision, Victorian electricity distribution network service providers, distribution determination 2011-15* (**Draft Determination**), the AER determined the DRP by considering the Bloomberg and CBASpectrum fair value curves and testing those two curves, and the average of them, against a sample of bonds selected by the AER. Based on this approach, the AER determined a DRP based on the CBASpectrum fair value curve.

In their Revised Regulatory Proposals, each of the Joint DBs did not accept the use of CBASpectrum to determine the DRP and proposed the following 4 step test, outlined in the Earlier PwC Report provided to the AER under cover of those Proposals, for testing which of Bloomberg, CBASpectrum or the average of them is the most accurate measure of the DRP:

- Step one: test the integrity of the method and inputs underlying the construction of the available fair value curves.

- Step two: test the predictive accuracy of the available fair value curves by applying the average error test and the weighted sum of squared errors test to examine whether the available fair value curves provide estimates that are statistically unbiased and represent a good fit to the underlying yield data.

- Step three: test the extrapolation of the curve beyond the data points.

- Step four: cross-check the results against other market evidence, which may include the yields on floating rate notes (adjusted to a fixed rate equivalent yield), evidence from other bond ratings and other estimates of fair yield curves.

During the averaging period used for the Draft Determination, the application of this 4 step test resulted in the Bloomberg fair value curve being the most appropriate method for assessing the DRP.

This approach of basing the DRP on either Bloomberg or CBASpectrum has been adopted by the AER and other regulators in a large number of previous regulatory determinations over the last decade. In particular, it was adopted:

- by the AER in its recent distribution determinations for each of NSW, ACT, Queensland and South Australia;

- by the AER in determinations under the National Gas Law including recent decisions in relation to ActewAGL and Jemena Gas Networks;

- by the AER in its 2009-11 AMI budget and charges applications final determination in relation to the Joint DBs' charges for the advanced metering infrastructure rollout (**AMI decision**); and

- by the Essential Services Commission of Victoria in its 2006-10 electricity distribution price review determination for the Joint DBs.

3. The AER's Consultation Paper

In the Consultation Paper, the AER observed at the outset that it 'is reconsidering its approach of relying on estimates from data service providers, such as Bloomberg and CBASpectrum, to estimate the debt risk premium'. It stated that this 'late change has been necessitated by CBASpectrum's ceasing publication of its fair value estimates (communicated to the AER on 19 August) and by the decision of the Australian Competition Tribunal in the ActewAGL matter…'.[2]

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[2] Consultation Paper, page 1.

The developments since the Draft Determination that led to the Consultation Paper

The Consultation Paper was released in response to two developments since the date of the Draft Determination.

On 19 August 2010, CBASpectrum advised the AER in an email that it would cease publication of all CBASpectrum fair value curves on 20 August 2010.[3] The reasons stated by CBASpectrum for this cessation of publication were that:[4]

> *Access to fair-value yield curves previously published on CBASpectrum has been suspended following a recent review of performance in the wake of the global financial crisis.*
>
> *Sparse and heterogenic data have always made it difficult to produce a broad range of reliable credit curves in Australia. CBASpectrum has sought to overcome this problem in the past through the use of a number of econometric variables and assumptions that take account of additional information such as implied default rates, sector composition, historical relativities and spread performance of other rating bands. However, disparity of the data has increased and many of these relationships have changed over the past few years, meaning that reliability of the models designed to indicate where various credits should trade has receded. Users have also tended to confuse these fair value estimates with alternative models estimating where generic credit curves have actually traded and used the data for purposes other than relative value analysis.*
>
> *Commonwealth Bank of Australia is currently conducting research and development into the identification of alternative methods that can group the Australian bond market according to systematic risk profiles. Additional, novel and unique features available in the forthcoming enhanced CBASpectrum product are expected to allow users to create fair value curves and analyse data using these new profiles.*

On 17 September 2010, the Tribunal made the ActewAGL decision. The Tribunal determined that the AER's decision in its ActewAGL gas determination[5] to base the DRP on CBASpectrum was unreasonable and that, in the circumstances pertaining to the Tribunal's review of the AER's ActewAGL gas determination, that determination should be varied to determine the DRP based on the average of CBASpectrum and Bloomberg.

The error found by the Tribunal did not relate to the AER's general approach of basing the DRP on CBASpectrum or Bloomberg or the average of them following an assessment of which of those two curves was more appropriate. The Tribunal stated that:[6]

> *In the absence of a deep market for corporate bonds, the AER will likely have to rely on published fair value curves to estimate debt financing costs.*
>
> *If the fair value curves differ substantially, the AER will need to choose between them.*

The aspect of the AER's approach that was found to be unreasonable was that the sample of bonds used by the AER did not provide a suitable basis for testing the accuracy of Bloomberg

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[3] In fact, CBA Spectrum only ceased publication of all CBASpectrum fair value curves in early September 2010 after the occurrence of the agreed averaging periods of JEN, CitiPower, Powercor and United Energy Distribution but before the occurrence of SPI Electricity's agreed averaging period.

[4] Email from A Donaldson of CBASpectrum to E McGinn of the AER dated 19 August 2010, provided by the AER to the Joint DBs on 28 September 2010.

[5] Access Arrangement, ACT, Queanbeyan and Palerang gas distribution network, 1 July 2010 - 30 June 2015, April 2010.

[6] ActewAGL decision, paragraphs 75-76.

and CBASpectrum because the number of bonds was too small and their maturities were too short to be sufficiently representative of the yield on 10-year bonds.[7]

The Tribunal stated that it had identified three methods that the AER could adopt to validly distinguish between the Bloomberg and CBASpectrum bonds, although this list was not intended to be exhaustive:[8]

- if there is sufficient available information, the AER could examine and compare the merits of the publishers' methodologies and data sources, as it has in the past;

- the AER could determine which curve has performed better in the past, although this approach may not be appropriate if there have been a material change in circumstances; or

- the AER could, as it did in its ActewAGL determination, compare relevant observed yields against the published fair value curves and an average of those curves, which would require the AER to:

    - assemble a representative population of observed yields of sufficient number and maturity, including floating rate bonds and bonds with observations from only one or two sources;

    - only exclude bonds where there are sufficient qualitative reasons to consider that they are not properly characterised as part of the population;

    - once a representative set of bonds has been chosen, select the fair value curve that most closely corresponds to the relevant set; and

    - use any other available information, such as observed yields on other rated bonds, to check that the selected curve remains likely to provide the best estimate.

The ActewAGL decision related to an AER determination under the National Gas Law and National Gas Rules (**NGR**). It is directly relevant to the AER's Final Determination and most of the Tribunal's comments and findings will be equally applicable to the Rules.

However, the Joint DBs note that the NGR provisions on how WACC is to be determined are significantly less prescriptive than the equivalent provisions in the Rules.[9] In particular, the NGR do not contain a formula for determining WACC similar to that in clause 6.5.2 of the Rules and do not contain a definition of the DRP. Accordingly, the Tribunal's comments and findings must be read alongside clause 6.5.2 of the Rules, which limits the AER's discretion when determining the DRP to a greater extent than under the NGR.

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[7] ActewAGL decision, paragraphs 38-39.
[8] ActewAGL decision, paragraph 77.
[9] See clause 87 of the NGR.

The AER's proposed approach to determining the DRP

In its Consultation Paper, the AER relied on the developments discussed above to conclude that it would be imprudent to continue to place sole reliance on fair value estimates provided by data service providers in estimating the DRP. It reasoned as follows:[10]

- The AER developed a method for testing the accuracy of the CBASpectrum and Bloomberg fair yield curves using a sample of BBB+ bond yields used in setting the DRP to address the concerns expressed by the AER, network businesses and their advisors about the proprietary (and thus non-transparent) nature of their methods but the Tribunal has, in the ActewAGL decision, questioned the information used by the AER's method.

- The withdrawal of the CBASpectrum fair value curve casts doubt on the reliability of the Bloomberg estimates, with the result that the Bloomberg estimates should not be exclusively relied on to estimate the DRP. In particular, the AER stated as follows:[11]

  > *A lack of data has recently become a critical issue for CBASpectrum in deciding to cease publishing its fair value estimates. The AER notes that Bloomberg has not made any announcements regarding the reliability of its fair value estimates and still continues to publish its 7 year BBB estimates. In view of the CBASpectrum decision and earlier concerns, the AER considers that it would be imprudent to place sole reliance on Bloomberg estimates given they are produced from the same type of market information as CBASpectrum.*

The AER noted the Tribunal's observation, in the ActewAGL decision[12], that the Tribunal did 'not intend to discourage the AER from investigating other ways to estimate the debt risk premium'[13] and concluded that, for the reasons set out above, the ActewAGL decision and the withdrawal by CBASpectrum of its fair value curve made it 'necessary for the AER to examine other ways to estimate the DRP'.

On this basis, in the Consultation Paper, the AER did not adopt any of the methods proposed by the Tribunal in the ActewAGL decision for estimating the DRP. Instead, the AER proposed to determine the DRP as a simple average of the yields resulting from the Bloomberg fair value curve and the APT bond.

The AER concluded that the APT bond represented 'a useful benchmark corporate bond rate' and a potentially preferable source of yield information to the Bloomberg fair value curve. The AER reasoned that:[14]

- The APT bond is a 10-year, fixed coupon BBB rated bond and represents a useful benchmark corporate bond rate because the yield calculation is transparent, it reflects a 10-year maturity and it provides an acceptable (indeed, conservative) proxy for a BBB+ credit rating.

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[10] Consultation Paper, page 2.
[11] Consultation Paper, page 2.
[12] At [79].
[13] Consultation Paper, pages 1 & 3.
[14] Consultation Paper, pages 3 & 4.

- Using the yields on the APT bond to set the DRP would contribute to a cost of capital that is consistent with clause 6.5.2(b) of the Rules. This is because:

  - clause 6.5.2(b) provides that the cost of capital is 'the return required by investors in a commercial enterprise with a similar nature and degree of non-diversifiable risk as that faced by the *distribution* business of the provider';

  - the risk of credit default is not properly and adequately reflected in the credit rating to which a fair value estimate relates because 'ratings opinions are not intended as guarantees of credit quality or as exact measures of the probability that a particular issuer or particular debt issue will default' as evidenced by the fact that '[i]nvestors use further complex tools to analyse the debt issuer and the setting within which it operates, to fine-tune their risk analysis'; and

  - the credit default risk of the APA Group would be similar in nature and degree to that of electricity distribution network service providers (**DNSPs**) as the nature of the APA Group's investments and markets provide a close match to those of the DNSPs.

- The APT bond potentially provides a preferred source of yield information to the Bloomberg fair value estimates because:

  - in determining the DRP using the Bloomberg estimates, it is necessary to rely on Bloomberg's estimates for BBB rated bonds and to extrapolate those to 10 years, whereas the yields on the APT bond reflect credit default risk similar in nature and degree to that of DNSPs and this extrapolation is not necessary for the APT bond as it is a 10-year bond;

  - whereas the AER, regulated network businesses and their advisors have expressed concerns about the lack of transparency in the methods used by Bloomberg to generate its estimates because of the proprietary nature of those methods, the yield calculation for the APT bond is transparent;

  - there has been uncertainty in the past over the reliability of the Bloomberg estimates; and

  - the withdrawal by CBASpectrum of its fair value curves raises further concerns over the reliability of the Bloomberg estimates.

The AER acknowledged, however, that, as the APT bond is only one relevant observation, it must be tested against other relevant information.

For this reason, the AER compared the spreads on the APT bond and Bloomberg's 7 year and extrapolated 10 year BBB fair value estimated with spreads to CGS to those on a sample of other long dated bonds with credit ratings from BBB- to A, a maturity currently longer than 7 years and/or observations which were reported on either Bloomberg or UBS. The AER included two floating rate bonds in this sample but observed that it was still considering how

much information can reliably be drawn from such bonds.[15] It included the BBB+ BBI bond (also referred to as the Dalrymple Bay Coal Terminal or DBCT bond) but concluded that the qualitative evidence it had presented in recent determinations suggests limited weight should be placed on the bond for the purposes of the AER's comparison.[16]

The AER concluded that the relative placement of the APT bond and the Bloomberg fair values, as compared to these other long dated bonds, did not enable definitive conclusions to be drawn on the appropriateness of using the APT bond and/or Bloomberg's estimates in estimating the DRP. Accordingly, the AER determined that it is reasonable to average the yields implied by Bloomberg and from the APT bond when setting the DRP.[17]

In so doing, the AER affirmed its view expressed in the Draft Determination[18] that the preferred method for extrapolation of Bloomberg's BBB estimates to 10 years is that based on the change between Bloomberg's AAA fair value estimates at the maturity of the relevant BBB estimate and 10 years, rather than the linear extrapolation method used by PwC in its report of November 2009 entitled *Victorian distribution businesses - Methodology to Estimate the Debt Risk Premium* (**Initial PwC Report**). The AER went on to observe that, in estimating the DRP for an agreed averaging period in which Bloomberg's AAA estimates are no longer available (due to the suspension of their publication by Bloomberg on 22 June 2010), 'Bloomberg's CGS estimates produce the next best (in terms of accuracy) method of extrapolation'. The AER stated that this conclusion was supported by the AER's analysis, set out in the Draft Determination[19], of the mean squared difference of estimates produced by various alternative extrapolation methods from Bloomberg's 10 year BBB estimate during the most recent period for which the Bloomberg 10 year BBB fair value curve was available, being 10 November 2005 to 9 October 2007.[20]

Finally, the Consultation Paper addressed the use of the APT bond to estimate the DRP for those of the Joint DBs that have an averaging period that occurred before data on the APT bond became available in mid-July 2010. The AER stated its intention to use the yield of the APT bond on 15 July (of 7.97%) as the yield that would have prevailed on the days of such an averaging period. The AER reasoned that this would not compromise the accuracy of the estimation of the DRP because there has been no systematic or material change in the spreads on BBB and BBB+ bonds as a group, or the DRP that would be derived from extrapolating the Bloomberg BBB fair value curve to 10 years, over 2010 (being the timeframe spanned by the Joint DBs' averaging periods).[21]

4. Joint DBs' Response to the Consultation Paper

The Joint DBs maintain that the DRP should be measured solely by reference to the Bloomberg BBB fair value curves extrapolated to 10 years. No reliance should be placed on the CBASpectrum fair value curve in the current circumstances and the estimation of the DRP should not involve any averaging of the yields on the APT bond and the DRP based on the Bloomberg BBB fair value curve.

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[15] Consultation Paper, page 5.
[16] Consultation Paper, page 7.
[17] Consultation Paper, pages 5-7.
[18] Pages 521-522.
[19] Pages 521-522.
[20] Consultation Paper, pages 6-8.
[21] Consultation Paper, page 8.

In this section, the Joint DBs first outline in greater detail the approach to estimation of the DRP that they consider is compliant with the Rules and to be preferred based on considerations of accuracy and reliability. They then set out why the approach to estimation of the DRP set out in the Consultation Paper is not necessary, legally permissible or appropriate. In particular, they explain that contrary to the conclusions of the AER in the Consultation Paper:

- recent development do not suggest that it would be imprudent to place sole reliance on the Bloomberg estimates or make it necessary for the AER to examine other ways to estimate the DRP;

- the use of the APT bond in estimating the DRP, in the manner contemplated in the Consultation Paper, is erroneous. In particular:

    - the use of the APT bond in this manner is not legally permissible;

    - the AER errs in concluding that the APT bond reflects the credit default risk of DNSPs;

    - the spread on the APT bond is not representative of the spread on BBB bonds from issuers with regulated investments that reflect the credit default risk of DNSPs equally as well as the APT bond;

    - there is no basis for concluding that the APT bond provides a preferred source of yield information to the Bloomberg BBB curve;

    - the use of the APT bond in the manner contemplated in the Consultation Paper is inconsistent with previous AER decisions;

    - the AER errs in adopting a bond sample for assessing the comparative performance of the APT bond and the Bloomberg BBB curve that is inconsistent with the ActewAGL decision; and

    - the CEG Report establishes that a DRP measured solely by reference to the Bloomberg BBB fair value curve is more accurate and reliable than a DRP based solely on the average of that and the yield on the APT bond;

- using Bloomberg's CGS estimates to extrapolate the Bloomberg BBB estimates to 10 years where Bloomberg's AAA estimates are no longer available (due to the suspension of their publication on 22 June 2010) is erroneous; and

- using the APT bond to estimate the DRP for averaging periods occurring before data on the APT bond became available is erroneous.

The Joint DBs maintain that it follows from the above that it is not open to the AER to depart from the DRPs for each of the agreed averaging periods or the method of their estimation that the Joint DBs have proposed. Clause 6.12.3(f) of the Rules provides that the AER may depart from the DRPs and method for their estimation proposed by the Joint DBs 'only to the extent necessary to enable [them] to be approved in accordance with the *Rules*'. No such departure can be said to be necessary to enable the AER to approve those DRPs and that method in accordance with the Rules.

What method should be adopted in the Final Determination to determine the DRP?

The Joint DBs contend that the DRP should be measured solely by reference to the Bloomberg 6 year and extrapolated 10 year BBB fair value curves for each of the Joint DBs in the AER's Final Determination.

In particular, the Joint DBs contend that the AER should apply the method employed by PwC in the Earlier PwC Report and the PwC Report to estimate the DRP, which the Joint DBs understand will also be employed in the Forthcoming PwC Report. That is, the DRP should be estimated based on the DRP that is provided by the Bloomberg BBB fair value curve at 6 years extrapolated to 10 years using the change in the DRP that was observed under the Bloomberg AAA fair value curve between 6 and 10 years. In estimating the DRP for an agreed averaging period that occurs after the suspension of publication by Bloomberg of DRP estimates for the AAA fair value curve out to 10 years on 22 June 2010, the latest available AAA curve (averaged over an appropriate period, for example 20 days) should be used to perform the extrapolation.

The Joint DBs maintain their view, outlined in their Revised Regulatory Proposals, that the method for estimation of the DRP should be that which passes and best performs under the 4 step test outlined by PwC in the Earlier PwC Report and reiterated in the PwC Report provided under cover of this submission. The Earlier PwC Report, the PwC Report and the Forthcoming PwC Report will, in combination with the CEG Report, establish that the estimation approach proposed by the Joint DBs is that which satisfies PwC's 4 step test in respect of each of the JEN agreed averaging period, the CitiPower, Powercor and United Energy Distribution agreed averaging period and the SPI Electricity agreed averaging period respectively.

After careful consideration of the AER's Consultation Paper, the Joint DBs maintain their view, outlined in their Revised Regulatory Proposals, that the method for estimation of the DRP outlined above should be preferred to a method that places any reliance on CBASpectrum estimates or involves any averaging of the yields on the APT bond and the DRP based on the Bloomberg BBB fair value curve. This is because:

- It would be incorrect to adopt the CBASpectrum fair value curve to estimate the DRP including for an agreed averaging period occurring before the withdrawal of that curve by CBASpectrum because:

    - as discussed in greater detail below, the reason for withdrawal of that curve, namely CBASpectrum's lack of confidence in the reliability of its models for estimation of that curve having regard to recent changes in the profile of the available data, impugns the reliability of the curve published by CBASpectrum including in the period leading up to its withdrawal; and

    - in the PwC Report, PwC expresses concerns regarding the reliability of the CBASpectrum fair value curve. PwC summarises the issues identified in its Report in respect of the CBASpectrum fair value curve as follows:[22]

        We have several concerns about the ability of the CBASpectrum fair value curve to provide an appropriate estimate of the debt risk premium for a 10 year BBB+ corporate bond for regulatory purposes. As in our 19 July report [i.e., the Earlier PwC Report],

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[22] PwC Report, pages 4-5.

> *we find that the CBA Spectrum yield estimates for several bonds are some distance from the opinions of other financial institutions, which may cause a distortion in its curve relative to the market. In addition, we are concerned that the current 29 basis points rise in the CBASpectrum BBB+ curve between 5 and 10 years is anomalously low, particularly given the fact that the most recent Bloomberg AAA curve had a rise of 70 basis points, and the yield differential between A rated 5 and 10 year term Telstra bonds is currently approximately 56 basis points.*

- The Bloomberg BBB fair value at 6 years extrapolated to 10 years using the change in DRP observed under the Bloomberg AAA fair value curve between 6 and 10 years should be adopted to estimate the DRP because it passes and performs best against PwC's 4 step test outlined above. The Earlier PwC Report, the PwC Report and the Forthcoming PwC Report, together with the CEG Report, will establish this in respect of the JEN agreed averaging period, the CitiPower, Powercor and United Energy Distribution agreed averaging period and the SPI Electricity agreed averaging period respectively. By way of illustration, for the agreed averaging period common to CitiPower, Powercor and United Energy Distribution:

    - Step one: The PwC Report establishes that the Bloomberg BBB fair value curve at 6 years passes step one. PwC conclude that the data used by Bloomberg, being the bond yield input feeds of a number of financial institutions, is sufficiently uniform to support the derivation of a reasonable estimate of the market rate, that Bloomberg's own estimate of the yield of bonds in its sample is a statistically unbiased reflection of the bank feeds provided to it and that Bloomberg's fair value curve passes through the centre of its own yield estimates.[23] The DRP should be based on the Bloomberg BBB fair value curve at 6 years (rather than 7 years) because it is the limit to which the accuracy of the curve can be tested against the BBB+ Australian corporate bonds on issue at this time.[24] As a result, PwC concludes that the Bloomberg BBB 6 year curve 'is likely to reveal a reasonable reflection of market opinion'[25].

    - Step two: The CEG Report establishes that (contrary to the AER's conclusion in the Consultation Paper) the Bloomberg BBB fair value curve has better predictive accuracy than the APT bond or an average of the two. The CEG Report discloses that, for each of the agreed averaging periods, the sum of squared errors test selects the Bloomberg BBB fair value and not the APT bond or an average of the two, when regard is had to the full set of available information.[26]

    - Step three: Both the PwC Report and the CEG Report conclude that the extrapolation of the fair value curve to 10 years should use the change in the DRP provided by the Bloomberg AAA curve between 6 and 10 years

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[23] PwC Report, pages 7-9 and 16.
[24] PwC Report, page 2.
[25] PwC Report, page 4.
[26] CEG Report, sections 3-5.

during the agreed averaging period where available or otherwise the latest available AAA curve between 6 and 10 years is the reasonable and preferred extrapolation method.[27] As discussed in greater detail below, in coming to this conclusion, the CEG Report performs mean squared difference of estimates analysis based on recent periods (including the period post-dating the global financial crisis) and considers a range of other information.

- Step four: The method for estimation of the DRP advocated by the Joint DBs perform well against other market evidence. In particular:

  - For the agreed averaging period common to CitiPower, Powercor and United Energy Distribution, the PwC Report concludes that the results of the method for estimation of the DRP adopted in the PwC Report perform well against other market evidence. In so doing, PwC relies on an independent, third party estimate of the DRP for BBB+ 10 year Australian corporate bonds that is similar to the DRP estimated using the methodology adopted by PwC in the PwC Report.[28]

  - The CEG Report establishes that, for each of the agreed averaging periods, the Bloomberg BBB fair value curve performs well against market evidence, whereas neither the APT bond nor an average of the two perform well against the full set of available information.[29]

- In any event, it would be incorrect to adopt the approach to estimation of the DRP set out in the Consultation Paper because, for the reasons discussed below, this approach is not necessary, legally permissible or appropriate.

Recent developments do not suggest it would be imprudent to place sole reliance on Bloomberg estimates or make it necessary for AER to examine other ways to estimate the DRP

In the Consultation Paper, the AER sought to justify a departure from its approach of relying on estimates from data service providers such as Bloomberg and to support its conclusion that continuing to place sole reliance on Bloomberg's estimates would be imprudent by reference to the Tribunal's questioning in the ActewAGL decision of the information used by the AER's method for testing the accuracy of Bloomberg fair yield curves and the withdrawal of the CBASpectrum fair value curve.

The Joint DBs maintain that, at the current time and as confirmed by application of PwC's 4-step test in respect of each of the agreed averaging periods, the Bloomberg BBB estimates are accurate and reliable and, accordingly, that there is no reason to limit reliance on those estimates in estimating the DRP.

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[27] PwC Report, pages 14-17; CEG Report, section 6.
[28] PwC Report, pages 17-18.
[29] CEG Report, sections 3-5.

Neither the ActewAGL decision nor the withdrawal of CBASpectrum's fair value curve supports the AER's conclusions. These developments do not cast any doubt on the reliability of the Bloomberg BBB estimates or suggest that it would be imprudent to continue to measure the DRP solely by reference to these estimates.

The conclusion in the ActewAGL decision that the sample of bonds used by the AER for testing the accuracy of estimates from data service providers was unsuitable does not render it imprudent to rely or rely solely on the Bloomberg BBB estimates as suggested by the AER. To the contrary, the Tribunal recognised that, in the absence of a deep market for corporate bonds, the AER will likely have to rely on published fair value curves to estimate the DRP.[30]

It went on to suggest that the AER could continue to test the accuracy of those curves by comparing relevant observed yields against published fair value curves, provided the AER broadened the sample of bonds considered by including bonds of longer maturity, floating rate bonds and bonds with observations from only one source, and performed a cross-check of its results using other available market information. This is precisely what:

- PwC does, in the PwC Report, when it applies its 4 step test to the Bloomberg BBB fair value curve at 6 years to conclude that this curve provides 'reasonable bond yield estimates that reflected market opinion';[31] and

- CEG does, in the CEG Report, when it in effect applies steps two and four of that 4 step test to the Bloomberg BBB fair value curve, the APT bond and an average of the two to conclude that the Bloomberg BBB curve performs better in estimating the DRP for BBB+ rated bonds with a 10 year term[32].

Accordingly, while the Tribunal observed that it did not intend to discourage the AER from investigating other ways of estimating the DRP, its decision does not necessitate a departure by the AER from its approach of relying on estimates from data service providers or suggest that continuing to measure the DRP solely by reference to those estimates would be imprudent.

Further, in concluding that the withdrawal of the CBASpectrum fair value curve suggests that it would no longer be prudent to place sole reliance on Bloomberg BBB estimates, the AER misconstrued CBASpectrum's explanation of the reasons for that withdrawal.

The AER asserted that 'a lack of data' was the critical issue in the withdrawal by CBASpectrum of its fair value curve and that, as the Bloomberg estimates 'are produced from the same type of market information as CBASpectrum', the withdrawal of CBASpectrum's fair value curve gives rise to 'concerns' with the Bloomberg estimates. But CBASpectrum did not withdraw its fair value curve due to 'a lack of data' and at no point has CBASpectrum conveyed to the AER that it did.

To the contrary, CBASpectrum's email to the AER of 19 August 2010 (which the AER has confirmed is the only communication it has received from CBASpectrum explaining its reasons

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[30] ActewAGL decision, paragraphs 75-76.
[31] PwC Report, page 2.
[32] CEG Report, sections 3-5.

for withdrawing its fair value curve[33]) cites concerns over the reliability of CBASpectrum's models for estimating the fair value curve and not 'a lack of data' as the reason for that withdrawal.

In this email, CBASpectrum informs the AER that '[s]parse and heterogenic data have always made it difficult to produce a broad range of reliable credit curves in Australia' but that, in the past, CBASpectrum has overcome this difficulty through the use of econometric variables and assumptions in its models for estimation of those curves that take account of additional information such as implied default rates. It goes on to state, however, that recent increases in the 'disparity of the data' and changes from the relationships between data points embodied in those econometric variables and assumptions mean that the 'reliability of the [CBASpectrum] models designed to indicate where various credits should trade has receded'.

In so doing, CBASpectrum recognises that 'a lack of data' of the kind referred to by the AER can be overcome by the modelling techniques employed in estimating fair value curves. In withdrawing its models because those models are not robust to recent changes in the profile of the available data, CBASpectrum does not suggest that these changes mean that there could be *no* model capable of providing reliable estimates. Indeed, CBASpectrum foreshadows its intention to make available an 'enhanced CBASpectrum product' that 'can group the Australian bond market according to systematic risk profiles'.

There is no evidence before the AER that suggests it would be reasonable to assume that the deficiencies in CBASpectrum's models that prompted the withdrawal of its fair yield curve are common to Bloomberg's models. The AER's method for testing the relative accuracy of the Bloomberg and CBASpectrum estimates is premised on the potential for there to be differences between Bloomberg's and CBASpectrum's models. The analysis of the Bloomberg and CBASpectrum fair yield curves in the PwC Report and the differing conclusions reached by PwC regarding their reliability suggest that there may be significant differences between Bloomberg's and CBASpectrum's models.[34] Indeed, CEG is of the opinion that there are material differences between CBASpectrum's and Bloomberg's methods of estimation.[35]

Accordingly, CBASpectrum's stated reasons for withdrawing its fair yield curve do not provide any information regarding the reliability or accuracy of the models employed by Bloomberg or its resultant estimates of the fair yield curve.

In any event, even if the AER were correct in construing the reason for the withdrawal of the CBASpectrum fair value curve as a concern with data availability and quality (rather than the implications of changes in the characteristics of the data for the reliability of CBASpectrum's estimation models), this would not support a conclusion that the Bloomberg estimates may be unreliable. PwC explicitly examines the quality of the data used by Bloomberg in the PwC

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[33] See email from Mr Anton Murashev of JEN, to Mr Lawrence Irlam, Director of the AER dated 28 September 2010 at approximately 11.45am and Mr Irlam's response of the same date at approximately 2.59pm.

[34] Whereas PwC concludes that 'Bloomberg's fair value curve is likely to reveal a reasonable reflection of market opinion', it concludes that it has 'several concerns about the ability of the CBASpectrum fair value curve to provide an appropriate estimate of the debt risk premium for a 10 year BBB+ corporate bond for regulatory purposes' (see PwC Report, pages 4-5).

[35] CEG Report, section 2.5.

Report, in response to the withdrawal of the CBASpectrum curve, and concludes that there are no data quality issues with respect to the data used by Bloomberg. It concludes:[36]

> *Data quality issues caused by the global financial crisis were recognised in our November report [i.e., the Initial PwC Report], which established a framework for testing the quality of the data (i.e. the three tests discussed above). Application of our methodology to the data used by Bloomberg gives us some confidence that the data are sufficiently robust for reliance to be placed on them to construct a fair value curve within the range of available data.*

Use of APT bond in manner contemplated in Consultation Paper is legally impermissible and erroneous

Use of the APT bond in the manner contemplated is not legally permissible

The primary reason advanced by the AER for its proposed utilisation of the APT bond for estimation of the DRP in its Final Determination is that the use of the APT bond to set the DRP would contribute to a cost of capital that is consistent with clause 6.5.2(b) of the Rules. It reasoned that this is because the credit default risk of DNSPs is not properly and adequately reflected in the credit rating selected for estimation of the DRP but would be similar in nature and degree to that of the issuer of the APT bond.

In so concluding, the AER misconstrues the provisions of the Rules governing its estimation of the DRP. These Rules prescribe how the credit default risk of the benchmark efficient DNSP may be taken into account for the purpose of determining a cost of capital of the kind described in clause 6.5.2(b) of the Rules. In so doing, they make plain that it is impermissible to import into the Rule provision defining the DRP a requirement that the DRP reflect the corporate bond rate for DNSPs or the benchmark DNSP or to otherwise consider only or place greater emphasis on a subset of the corporate bonds referred to in that provision.

As the AER outlined in the Consultation Paper, clause 6.5.2(b) of the Rules provides that the cost of capital is:

> *..the return required by investors in a commercial enterprise with a similar nature and degree of non-diversifiable risk as that faced by the* distribution *business of the provider…*

The Joint DBs acknowledge that the estimation of parameter values, such as the DRP, are only inputs to the estimation of the cost of capital as described in clause 6.5.2(b) above and that the AER is required to bear this in mind in estimating parameter values.

However, the Joint DBs observe that the Rules prescribe the approach to estimation of the DRP that is consistent with the estimation of the cost of capital described in clause 6.5.2(b). Clause 6.5.2(e) provides that the DRP is:

> *…the margin between the annualised nominal risk free rate and the observed annualised Australian benchmark corporate bond rate for corporate bonds which have a maturity equal to that used to derive the nominal risk free rate and a credit rating from a recognised credit rating agency.*

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[36] PwC Report, page 16.

Clause 6.5.4(d)(6) provides that the credit rating level referred to in this definition of the DRP may be prescribed by the AER's SORI and clauses 6.5.4(e)(3) and (4) require that, in considering the credit rating referred to in clause 6.5.2(e) in the SORI, the AER must have regard to:

- the need for the credit rating to be based on a benchmark efficient DNSP; and

- where the credit rating cannot be determined with certainty, the need to achieve an outcome consistent with the national electricity objective and for persuasive evidence before adopting a credit rating that differs from that which has previously been adopted.

It is evident from these provisions that the risk of credit default of the benchmark efficient DNSP is to be taken into account, for the purpose of ensuring the cost of capital reflects the nature and degree of non-diversifiable risk faced by the DNSP, through the determination of the credit rating referred to in clause 6.5.2(e). The Rules do not contemplate or permit the risk of credit default of the benchmark efficient DNSP to be reflected in the cost of capital by implying into the definition of the DRP in clause 6.5.2(e) limitations on the corporate bonds to be considered in determining the margin between the risk-free rate and the Australian benchmark corporate bond rate that are additional to those set out in that provision.

In the SORI, the AER assessed the level of risk incurred by an efficient DNSP and determined that the credit rating for the purposes of clause 6.5.2(e) was BBB+. Having done so, the AER must determine the DRP as defined in clause 6.5.2(e) in the Final Determination with the credit rating being that determined in the SORI unless there is persuasive evidence justifying a departure from that credit rating level (clause 6.5.4(g)).

The AER having determined in the SORI that the credit rating for determining the DRP is BBB+ and the maturity for determining the nominal risk free rate and DRP is 10 years, it follows that clause 6.5.2(e) of the Rules prescribes the DRP that is consistent with the estimation of the cost of capital described in clause 6.5.2(b) to be that which is 'the observed annualised Australian benchmark corporate bond rate for corporate bonds' with a 10-year maturity and a BBB+ credit rating measured over the same agreed averaging period as the nominal risk free rate. In so doing, clause 6.5.2(e) requires the derivation of a 'benchmark corporate bond rate' and not the derivation of a 'benchmark DNSP corporate bond rate'.

This is the DRP that the AER is required by the Rules to estimate. It is not open to the AER to read down the requirements in clause 6.5.2(e) for estimation of the DRP on the basis of the definition of the cost of capital set out in clause 6.5.2(b), for example by considering only or placing greater emphasis on the corporate bond rate for individual corporate bonds that are expected, due to the similarity in the investments and markets of the issuer to those of DNSPs, to reflect the nature and degree of credit default risk of those DNSPs. In particular, it is not open to the AER to import into the clause 6.5.2(e) definition of the DRP a requirement that the DRP reflect the corporate bond rate for DNSPs. This is what the AER has done in proposing to use the APT bond in estimating the DRP in the manner contemplated in the Consultation Paper and it is legally impermissible.

The AER should not place any weight on references in the ActewAGL decision, in discussing the DRP, to the margin over the risk free rate required by debt investors in the 'benchmark efficient service provider'. These references by the Tribunal reflect the language of the statutory provision under consideration by the Tribunal in that decision, namely clause 87 of the NGR, and the absence of any definition of the DRP or other express limitations on its estimation

in that provision. This NGR provision can be distinguished from clause 6.5.2(e) of the Rules which, as noted earlier, limits the AER's discretion when determining the DRP to a greater extent than under the NGR.

In summary, even if the APA Group's investments and markets were a close match for those of DNSPs (which, as discussed below, they are not), this would not enable the APT bond to be given a weighting of 50% of more in the measurement of the DRP.

AER errs in concluding that the APT bond reflects credit default risk of DNSPs

In any event, even if (contrary to the Joint DBs' contentions) the Rules did permit the AER, in estimating the DRP, to consider only or place greater emphasis on individual corporate bonds that are expected to reflect the nature and degree of credit default risk of those DNSPs, the AER erred in concluding that the credit default risk of the APT bond would be similar in nature and degree to that of DNSPs.

The AER reasoned that the credit default risk of the APT bond would be similar in nature and degree to that of DNSPs because the APA Group's investments and markets provide a close match for those of DNSPs. However, the Joint DBs disagree that the nature of the APA Group's investments and markets provide a close match for their own.

Attached to this submission as Attachment 3 is a series of pages from the APA Group's website (at www.apa.com.au) downloaded on 8 October 2010 that detail the APA Group's investments and the markets in which it operates. These pages disclose that the APA Group undertakes a number of diversified activities as follows:

- The APA Group's assets are almost exclusively gas transportation infrastructure. It has significant gas transportation infrastructure in Queensland, New South Wales, Victoria, South Australia, Western Australia and the Northern Territory. The majority of this gas transportation infrastructure is transmission infrastructure.

- It also has minority interests in a number of energy infrastructure vehicles as follows: Envestra Limited - 31%; SEA Gas Pipeline - 33.3%; Energy Infrastructure Investments - 19.9%; Ethane Pipeline Income Fund - 6.1%; and North Brown Hill wind farm project - 20.2%. Energy Infrastructure Investments, in addition to holding a number of gas assets, owns the Murraylink and Directlink transmission interconnectors, while the North Brown Hill wind farm project is a wind farm development at Hallet, South Australia, that is scheduled for commissioning in June 2011.

- In addition to its infrastructure investment activities, the APA Group provides asset management, operating and maintenance services to a number of related parties, including Envestra Limited, the Ethane Pipeline Income Fund and Energy Infrastructure Investments.

While many of the APA Group's assets are regulated, this is where the similarity between the assets of the APA Group and those of the DNSPs end.

Whereas, the assets of DNSPs are in the electricity industry and relate to distribution rather than transmission, none of the APA Group's assets are in electricity distribution, its interests in electricity assets are minor interests and its interests in gas assets are predominantly in

transmission rather than distribution. Indeed, some of the APA Group's activities are not even infrastructure investment activities.

Only a small part of the APA Group's asset interests are regulated electricity assets (being the Murraylink and Directlink transmission interconnectors) and, even then, the form of regulation is revenue regulation, rather than price regulation as applies to the Victorian DNSPs. As a result, unlike DNSPs, the APA Group is not subject to demand risk in respect of its interests in regulated electricity asset.

The remainder of the APA Group's regulated assets are gas transportation assets and, accordingly, are regulated under an entirely different regulatory regime. In some cases (namely in respect of the Moomba Sydney Pipeline (NSW), Central West Pipeline (NSW), Carpentaria Gas Pipeline (QLD) and Kalgoorlie Kambalda Pipeline (WA)), those assets are subject to light regulation only.

In addition, the overall credit default risk of an entity will vary with its gearing ratio. The lower the gearing ratio, the lower will be the overall credit default risk of the entity, all else being equal.[37] Accordingly, to the extent that the APA Group's and the DNSPs' gearing ratios diverge, their credit default risk would also diverge.

In summary, the APA Group cannot be said to be, in the language of clause 6.5.2(b) of the Rules, a 'commercial enterprise with a similar nature and degree of non-diversifiable risk as that faced by the *distribution* business' of the Joint DBs.

Spread on APT bond is not representative of spread on BBB bonds from issuers with regulated investments that reflect the credit default risk of DNSPs equally as well as the APT bond

If (contrary to the Joint DBs' contention) BBB bonds from issuers with regulated investments are to be preferred to the Bloomberg BBB estimates because they are thought to better reflect the credit default risk of the DNSPs, it follows that all such BBB bonds should be considered by the AER.

The CEG Report identifies a number of corporate bonds with a BBB credit rating and issuers with regulated investments. Significantly, a comparison of the spread on the APT bond to the spread on these other BBB bonds from issuers with regulated investments discloses that, for all of the agreed averaging periods, the spread on the APT bond is 'unusually low'.[38]

Given the nature of the APA Group's investments and markets, there is no basis for distinguishing between the APT bond and these other BBB bonds from issuers with regulated investments. These other BBB bonds are just as good a match for the DNSPs' investments and markets as the APT bond. Accordingly, the APT bond could not be expected to better reflect the credit default risk of DNSPs than any other BBB bond from an issuer with regulated investments.

It follows that, far from providing 'a useful benchmark corporate bond rate', the spread on the APT bond is not representative of the average spread on BBB bonds that could be expected to reflect the credit default risk of the DNSPs equally as well as the APT bond.

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[37] See, for example, the CEG Report, section 2.8.
[38] CEG Report, sections 3-5.

There is no basis for concluding that APT bond potentially provides a preferred source of yield information to Bloomberg BBB curve

The AER concluded that the APT bond potentially provides a preferred source of yield information to the Bloomberg BBB fair value curve. It reasoned that the APT bond is a 10 year bond with the result that the extrapolation to 10 years required for the Bloomberg curve is unnecessary, the APT bond reflects the credit default risk of relevance to determining the cost of capital, the yield calculation on the APT bond is transparent, there has been uncertainty in the past over the reliability of the Bloomberg estimates and the withdrawal by CBASpectrum of its fair value curves raises further concerns over the reliability of the Bloomberg estimates.

While it is true that the APT bond is a 10 year bond with the result that the extrapolation required in using the Bloomberg estimates is not necessary and the yield calculation on the APT bond is transparent, these attributes of the APT bond do not suffice to establish that the APT bond potentially provides a preferred source of yield information to the Bloomberg BBB curve and the other reasons advanced by the AER do not stand up to scrutiny. In particular:

- For the reasons explained above, the APT bond does not reflect the credit default risk of DNSPs.

- The application of PwC's 4-step test has confirmed that, at the current time, the Bloomberg BBB estimates are accurate and reliable. In circumstances where the Bloomberg BBB estimates have been demonstrated to be accurate and reliable, and have better predictive accuracy than the APT bond, for each of the agreed averaging periods, the non-transparency of Bloomberg's methods and past uncertainty over the reliability of its estimates do not provide a basis for preferring the APT bond.

- For the reasons explained above, the withdrawal of the CBASpectrum fair value curve does not raise *any* concerns over the reliability of the Bloomberg estimates.

In circumstances where, in addition to the above, the spread on the APT bond is not representative of the average spread on all BBB bonds that could be expected to reflect the credit default risk of the DNSPs equally as well as the APT bond, the proposition that the APT bond potentially provides a preferred source of yield information to the Bloomberg BBB fair value curve is not sustainable.

Use of APT bond in manner contemplated is inconsistent with previous AER decisions

Ascribing a weighting of 50% to the APT bond in estimating the DRP, as contemplated in the Consultation Paper, is inconsistent with previous AER decisions.

The AER has previously criticised and rejected attempts to base the DRP on a measure other than the Bloomberg or CBASpectrum fair value curves, particularly where those attempts place significant reliance on a single bond.

In particular, in a joint submission in relation to the AMI decision, the Joint DBs submitted that the AER should have regard to all relevant evidence and potential methods of determining the DRP and that, having regard to all of that information, the most appropriate measure of the DRP was a bond issued by Tabcorp. The AER rejected those submissions and determined that the appropriate approach was to base the DRP on the average of Bloomberg and CBASpectrum.

In its AMI decision, the AER stated that:[39]

> [T]he AER considers that sole reliance on the extrapolation of the Tabcorp issue is not robust enough in determining the DRP and it was not sufficiently established that the Tabcorp bond reflects the benchmark corporate bond. Accordingly the Tabcorp bond does not reflect the requirements of the revised Order.

The AMI decision was made in accordance with an Order in Council that provided that the WACC was to be determined in accordance with clause 6.5.2 of the Rules. Accordingly, the requirements for determining the DRP were the same as under the Rules and the AER's comments in the AMI decision on the robustness of determining the DRP based on a single bond are equally applicable to the determination of the DRP in its Final Determination.

AER errs in adopting a bond sample for assessing comparative performance of APT bond and Bloomberg BBB curve that is inconsistent with the ActewAGL decision

In the Consultation Paper, the AER proposed to measure the DRP by reference to a simple average of the APT bond and the Bloomberg fair value curve. It determined on this approach because a comparison of each of the APT bond and the Bloomberg BBB fair value curve with a sample of bonds in the period 1 August 2010 to 21 September selected by the AER did not enable conclusions to be drawn regarding the relative performance of the APT bond and the Bloomberg BBB fair value curve.

In the ActewAGL decision, the Tribunal makes clear that the AER should have regard to all relevant sources of information to test the accuracy of the potential measures of the DRP. The Tribunal finds that the AER must assemble a representative population of observed yields of sufficient number and, in so doing, take into account floating rate bonds, bonds with observations from only one or two sources and bonds with different credit ratings. The AER must only exclude bonds where there are sufficient qualitative reasons to consider that they are not correctly classed as being part of the relevant population.[40]

The sample of bonds assembled by the AER in the Consultation Paper is inconsistent with these views of the Tribunal in the ActewAGL decision in that the AER's sample:

- is comprised of only 8 bonds in total;

- excludes the majority of available data as the AER's sample is confined to bonds with a maturity of 7 years or more;

- largely excludes floating rate bonds; and

- notionally includes the BBB+ BBI bond but places limited weight on that bond, in circumstances where there is insufficient qualitative evidence to conclude that it is not correctly classed as being part of the relevant population.

The CEG Report concludes that it is precisely because of these attributes of the AER's sample of bonds that the AER was able to conclude, in the Consultation Paper, that the comparison did

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[39] AMI decision, page 60.
[40] ActewAGL decision, [77].

not enable conclusions to be drawn regarding the relative performance of the APT bond and the Bloomberg BBB fair value curve.[41]

CEG concludes, in the CEG Report, that:

- bonds with less than 7 years to maturity should be included and that this would, of itself, suffice to rule out the APT bond as a reliable basis for estimating the DRP;[42]

- the AER's exclusion of all but two floating rate bonds is not sustainable having regard to the similarities in the estimated yields for fixed rate and floating rate bonds from the same issuer and with the same maturity, as disclosed in the CEG Report;[43] and

- there is no qualitative basis for reducing the weight placed on the BBB+ BBI bond and [t]he placement of the BBB+ rated BBI bond so far above the BBB rated observations' that is referred to by the AER in the Consultation Paper as 'difficult to explain'[44] is explicable by reference to the limits on the AER's sample of bonds including in particular the fact that:

  - there are only two other BBB rated bonds in the AER's sample (the Bank of Queensland and the APT bonds) and one of the three BBB rated bonds must have the highest yield; and

  - if the AER's sample of bonds is expanded to include bonds with a maturity of 6 years or more, then there are two BBB rated AXA bonds with materially higher yields than the BBI bond and the placement of the BBI bond is no longer unusual.[45]

Similarly, in the Earlier PwC Report, PwC rejected the qualitative evidence presented in previous determinations relied on by the AER in the Consultation Paper to place little weight on the BBB+ BBI bond for the reasons that:

- as the pool of BBB+ Australian corporate bonds is small, and the BBI bond (as a long dated bond) provides more information about the shape and position of the DRP at 10 years, there should be a higher standard of proof applied to justify its elimination as an outlier;

- the AER advanced no direct evidence that the finance community considered the bond to be an outlier and, in contrast, Standard & Poor's confirmed its BBB+ credit rating for the bond issuer in February 2010;

- the AER's reasons for rejecting the BBI bond as an outlier are not persuasive for the reasons outlined in the Earlier PwC Report; and

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[41] CEG Report, section 2.8.2.
[42] CEG Report, section 2.9.
[43] CEG Report, section 2.10.
[44] Consultation Paper, page 7.
[45] CEG Report, section 2.11.

- while the BBI bond is followed by relatively fewer institutions, this is not, without more, sufficient to exclude it as an outlier.[46]

The AER should therefore have regard to a wider range of bonds in comparing the Bloomberg BBB fair value curve and the APT bond, including in particular bonds with a maturity of less than 7 years, additional floating rate bonds and the BBI bond.

CEG Report establishes that a DRP based solely on the Bloomberg BBB fair value curve is more accurate and reliable than a DRP based on average of that and yield on APT bond

The CEG Report discloses that (contrary to the conclusions of the AER in the Consultation Paper), if regard is had to a representative sample of corporate bond rates as required by the ActewAGL decision, a DRP based on the average of the Bloomberg BBB fair yield curve and the yield on the APT bond is not as accurate and reliable as a DRP based solely on the Bloomberg BBB fair yield curve.

For each of the agreed averaging periods, CEG compares the Bloomberg BBB fair value curve and the yield on the APT bond to a representative sample of corporate bonds and performs a sum of squared errors test. CEG's representative sample includes all bond yield data available for bonds rated BBB to A- (excluding A and BBB- rated bonds because they are too far removed from the BBB+ rating of interest) including bonds with a maturity of less than 7 years. In respect of each of the agreed averaging periods, both the comparison and the results of the sum of squared errors test unequivocally demonstrate that the Bloomberg BBB fair value curve has better predictive accuracy than the yield on the APT bond or the average of the two.[47]

In view of the evidence, analysis and expert opinion set out in the CEG Report, it would be erroneous for the AER to adopt an average of the Bloomberg BBB curve and the yield on the APT bond to estimate the DRP.

Using Bloomberg's CGS estimates to extrapolate the Bloomberg BBB estimates to 10 years where Bloomberg's AAA estimates are no longer available is erroneous

Regardless of whether the Bloomberg BBB estimates or an average of the Bloomberg BBB estimates and the yields on the APT bond are used in estimating the DRP, it will be necessary to extrapolate the Bloomberg BBB estimates to 10 years.

In their Revised Regulatory Proposals, the Joint DBs accepted the AER's view in the Draft Determination that this extrapolation should be based on the change between Bloomberg's AAA fair value estimates at the maturity of the relevant BBB estimate and 10 years rather than the linear extrapolation method used by PwC in the Initial PwC Report. The PwC Report, like the Earlier PwC Report accompanying those Revised Regulatory Proposals before it, acknowledges that the AER's method for extrapolation is to be preferred.[48]

However, the Joint DBs maintain the view, set out in their Revised Regulatory Proposals, that, where Bloomberg's AAA estimates are not available for an agreed averaging period, the Bloomberg BBB curve should be extrapolated to 10 years using the average of the latest available AAA curve.

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[46] Earlier PwC Report, pages 5 and 10-13. PwC affirms these conclusions in the PwC Report.
[47] CEG Report, sections 3-5.
[48] PwC Report, page 5.

As foreshadowed in the Earlier PwC Report, the PwC Report contends that, where Bloomberg's AAA estimates are not available for an agreed averaging period (due to the suspension of their publication on 22 June 2010), the latest available AAA curve averaged over an appropriate period, for example 20 days, should be used to perform the extrapolation.[49] This is the approach to extrapolation adopted in the PwC Report in estimating the DRP for the agreed averaging period common to CitiPower, Powercor and United Energy Distribution.

The Joint DBs submit that this approach is to be preferred to using Bloomberg's CGS estimates in these circumstances to extrapolate the Bloomberg BBB curve to 10 years, as proposed in the Consultation Paper, and that the use of Bloomberg's CGS estimates would be erroneous. In support of this contention, the Joint DBs rely on section 6 of the CEG Report.

The CEG Report concludes that the use of Bloomberg's CGS estimates to extrapolate the Bloomberg BBB curve to 10 years is unsound. CEG reaches this conclusion because:

- The use of Bloomberg's CGS estimates will result in the DRP remaining constant between 7 and 10 years, which is contrary to the current and historic information examined by CEG in its Report which information suggests that the DRP should increase with maturity, that is between 7 and 10 years.[50]

- The mean squared difference of estimates analysis, set out in the Draft Determination and relied on by the AER in support of its conclusion that where Bloomberg's AAA estimates are not available 'Bloomberg's CGS estimates produce the next best (in terms of accuracy) method of extrapolation', is deficient for the following reasons:

    - The analysis compares the mean squared differences of estimates produced by various alternative extrapolation methods from Bloomberg's 10 year BBB estimate during the period 10 November 2005 to 9 October 2007.[51] This period precedes the onset of the global financial crisis and is not representative of the current state of debt markets as the structure of yields and spreads to CGS on corporate bonds has changed significantly since the crisis. Accordingly, the analysis may result in the selection of an extrapolation methodology that does not reflect the current cost of debt.[52]

    - The analysis does not include at least one alternative extrapolation method that may be appropriate at the current time, namely using the most recent evidence available from Bloomberg's AAA fair value curve.[53]

- Analysis performed by CEG that compares the mean squared differences of estimates produced by various alternative extrapolation methods from a proxy Bloomberg BBB 10 year series that reflects more recent data[54] discloses that an

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[49] PwC Report, page 5.
[50] CEG Report, section 6.3.
[51] CEG Report, section 6.2.
[52] CEG Report, sections 6.1-6.2.
[53] CEG Report, sections 6.1-6.2.
[54] This proxy Bloomberg BBB 10 year series is formed as follows: between 10 November 2005 and 9 October 2007, Bloomberg's 10 year BBB fair value estimate; between 10 October 2007 and 19 August 2009, Bloomberg's 8 year BBB fair value estimate plus the difference between Bloomberg's 10 year and 8 year A fair value estimates; between 20 August 2009 and 22 June 2010, Bloomberg's

extrapolation based on Bloomberg's CGS curve does not perform best at extrapolating Bloomberg's BBB fair value curve over recent years.[55]

CEG concludes that, where Bloomberg's AAA estimates are not available, the extrapolation of the Bloomberg curve to 10 years using the latest available AAA curve is the most reliable extrapolation method. Its reasons are as follows:

- Bloomberg's latest available AAA curve:

    - is a measure of corporate debt and so should reflect changes in the structure of corporate debt since the global financial crisis;

    - is based on data contemporaneous with the JEN averaging period and otherwise on recent data on the increase in the DRP between 7 and 10 years;

    - based on the Bloomberg AAA fair value curve which was relatively stable in the 6 months leading up to the suspension of its publication on 22 June 2010; and

    - results in a plausible increase in the DRP between 7 and 10 years and one which is within the range of results estimated by alternative approaches.[56]

- Bloomberg's latest available AAA curve is to be preferred to its CGS estimates because:

    - as the Bloomberg AAA curve is a measure of corporate debt and Bloomberg's CGS curve is not, the AAA curve will better reflect changes in the structure of corporate debt since the global financial crisis; and

    - in contrast to using CGS estimates, using the latest available AAA curve does not result in an implausible result, namely an increase in the DRP between 7 and 10 years of zero.

- While CEG's mean squared difference of estimates analysis extending the AER's analogous analysis (referred to above) suggests that a linear extrapolation has performed best at extrapolating Bloomberg's BBB fair value curve over recent years, Bloomberg's latest available AAA curve is nonetheless to be preferred because:

    - the linear extrapolation method results in an increase in the DRP between 7 and 10 years that is not consistent with current and recent data; and

    - CEG's further mean squared difference of estimates analysis, conducted to determine the best fit to observed yields on bonds with 7 years to maturity in each of the agreed averaging periods, discloses that an extrapolation

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7 year BBB fair value estimate plus the difference between Bloomberg's 10 year and 7 year AAA fair value estimates.
[55] CEG Report, section 6.2.
[56] CEG Report, section 6.5.

based on the most recent data from the AAA fair value curve is the best fit to the observed data in all of these periods.[57]

Using the APT bond to estimate the DRP for averaging periods occurring before data on the APT bond became available is erroneous

The DRP is the margin between the nominal risk free rate and the observed annualised Australian benchmark corporate bond rate.

Clause 6.5.2(c) requires the nominal risk free rate to be determined using an agreed averaging period proposed by the DNSP and accepted by the AER, or a period specified by the AER if the proposed period is not agreed. The AER has agreed to the averaging periods proposed by each of the Joint DBs.

To be an accurate measure of the margin between those two rates, the DRP must be measured over the same agreed averaging period as the nominal risk free rate. This requirement is acknowledged by the AER in the Draft Determination where it states that the DRP for each of the Joint DBs will be updated in the Final Determination to use each of their agreed averaging periods.[58]

The APT bond was issued on 15 July 2010. Accordingly, no yield data for the APT bond is available for JEN's agreed averaging period which was 15 April to 31 May 2010 inclusive.[59]

Nonetheless, as discussed in section 3 above, the AER proposes to use the yield on the APT bond on 15 July as the yield that would have prevailed on each day of JEN's agreed averaging period. The AER concluded that this would not compromise the accuracy of the estimation of the DRP for JEN. However, its reasoning in support of this conclusion is erroneous.

In assessing whether the AER's proposed approach would compromise the accuracy of the estimation of the DRP for JEN, the relevant inquiry is whether there has been any systematic or material change over the timeframe spanned by the Joint DBs' averaging periods (being 15 April to 8 October 2010 inclusive) in the yield on the APT bond. This is because it is the yield on the APT bond on a date that falls outside the agreed averaging period that the AER proposes to use in estimating the DRP for JEN.

However, there is insufficient data on the yield on the APT bond to support a direct assessment of whether there has been any systematic or material change in that yield over this timeframe. As the APT bond was only issued on 15 July 2010, data on the yield on the APT bond is only available for about half of the relevant timeframe.

It may be possible to use changes in the spreads on BBB and BBB+ bonds as a group or the DRP that would be derived from extrapolating the Bloomberg BBB fair value curve to 10 years as a proxy for the changes in the yield on the APT bond but only where there is evidence demonstrating that the yield on the APT bond moves with these spreads or this DRP. In the absence of evidence demonstrating that the yield on the APT bond moves with these spreads

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[57] CEG Report, section 6.5.
[58] Draft Determination, page 523.
[59] Under clause 6.5.2(c)(2)(iii) of the Rules, the agreed averaging period for each of the Joint DBs is confidential until the period has expired. As the agreed averaging period for each of the Joint DBs has now expired, their agreed averaging periods are no longer confidential.

or this DRP, it is irrelevant that there has been no systematic or material change in these spreads or this DRP over 2010.

The AER's analysis in its Consultation Paper indicates that, to the contrary, the yield on the APT bond does not move with the spreads on BBB and BBB+ bonds as a group or the DRP that would be derived from extrapolating the Bloomberg BBB fair value curve to 10 years. For example, Figure 2 in the Consultation Paper discloses that, in the period from late August 2010, the yield on the APT bond and the DRP that would be derived from extrapolating the Bloomberg BBB fair value curve to 10 years have diverged significantly and have moved in opposite directions, with the former decreasing and the latter increasing.

In any event, the AER's conclusion in the Consultation Paper that there has been no systematic or material change in the spreads on BBB and BBB+ bonds as a group or the DRP that would be derived from extrapolating the Bloomberg BBB fair value curve to 10 years is not supported by the AER's own analysis set out in that Consultation Paper. For example, Figure 2 in the Consultation Paper discloses that the DRP that would be derived from extrapolating the Bloomberg BBB fair value curve to 10 years has varied between approximately 3.5% and approximately 4% in the period 1 April to mid-September 2010 and by approximately 20 basis points in the period from the commencement of the JEN agreed averaging period until the issue date of the APT bond on 15 July 2010. By contrast, the Joint DBs consider that any movement of 10 basis points or more in the DRP is material.