21 February, 2012

Ms Jennifer Harris,
Manager, Revenue Regulation
Powerlink Queensland
PO Box 1193
Virginia, QLD 4014

Dear Ms Harris,

Re: Correction to Debt Risk Premium estimate

Summary

Powerlink engaged PricewaterhouseCoopers (PwC) to provide advice on the debt risk premium in the context of the Australian Energy Regulator's (AER's) recent draft decision on Powerlink's revenue proposal 2012-13 to 2016-17. On 16 January, 2012 we provide you with our final report (our report) titled, 'Powerlink: Debt risk premium and equity raising costs.'[1] Since providing that report, we have discovered that our econometric fair value curves inadvertently included three bonds in the sample that we argued should be excluded. Removing these bonds raises the predicted debt risk premium for 10 year BBB+ debt from 367 (363) basis points for the Powerlink-updated (draft decision) averaging periods to 379 (378) basis points.

These revised results strengthen our earlier advice that a value towards the upper end of the range that we identified of 360 (355) to 391 (408) basis points should be applied. That is, we previously found that:

- an upper bound estimate of 391 (408) basis points was identified by the extrapolated Bloomberg curve, and
- a lower bound of approximately 360 (355) basis points was defined by direct reference to market data. That is, an average of:
    - the estimates obtained applying the AER's methodology correctly for the two averaging periods respectively (i.e. 351 to 356 basis points and 346 to 251 basis points); and
    - an estimate of 367 (363) obtained by regression analysis.

Now we have found that the estimated debt risk premium of 379 (378) using econometric analysis is closer to the extrapolated Bloomberg curve estimates than to the estimates obtained under the AER's methodology. We consider this to be more supportive of our recommendation for the AER to apply a debt risk premium that is close to the top of the range identified by the extrapolated Bloomberg curve.

[1] PricewaterhouseCoopers (16 January, 2012), *Powerlink: Debt risk premium and equity raising costs.*

The error we have identified in our report

When we recently reviewed the work undertaken for our report, we noticed that we made an error by including three SPAusNet bonds in the sample used in our regressions, whereas we had argued that these bonds should be excluded based on SPAusNet's ultimate parent being the Government of Singapore. In our report we noted that the AER's adviser, Oakvale Capital, had identified these bonds as being unrepresentative, noting that 'the risk is in fact the risk of the Government of Singapore.'[2] We therefore removed the SPAusNet bonds from the sample of bonds used when re-estimating the debt risk premium from applying the AER's methodology of taking a simple average of debt risk premiums for bonds with greater than 5 year terms to maturity, and intended to do the same when conducting our regression analyisis. However, in the latter analysis, the three SPAusNet bonds inadvertently were included.

The effect on our regression results

The effect of removing the SP AusNet bonds from the regression analysis that we undertook in our report is to raise our predicted value for the 10 year BBB+ debt risk premium estimate from 367 (363) basis points to 379 basis points (378 basis points) using the Powerlink-updated (AER's draft decision) averaging periods. These results correspond to the equations that were referred in our earlier report, namely the pooling of bonds across the BBB, BBB+ and A- credit ratings and the estimation of a quadratic functional form. The summary regression statistics for the equations for each of the averaging periods are set out in Attachment A.

In addition, we note that in the regression analysis presented in our earlier report, we identified an anomaly in the results for the with the A- credit rating band (that is, in the equations that included variables to allow for differences between the credit rating bands). In particular, we found that the predicted premium for A- rated debt increased initially, and then fell after a term of about 7 years, which we considered counter intuitive. However, by removing the A- rated SP AusNet bonds, the A- regression line is non-decreasing with term, as would be expected.

Reassessment of our conclusion

In our report we found that for the reference averaging period that Powerlink adopted in its revised proposal (the 40 business days ending 9 December, 2011), a debt risk premium range of 360 basis points to 391 basis points would have been appropriate.[3] We recommended that due to uncertainty in the market for funds, it would be appropriate for the AER to adopt a debt risk premium at the top of the identified range. That range was identified by reference to:

- An upper bound debt risk premium of 391 basis points obtained by extrapolating the Bloomberg fair value curve to 10 years,[4] and
- A lower bound of 360 basis points that was derived by reference to a direct interpretation of the market evidence, which in turn was based on the reference points of 351 to 356 basis points obtained using the AER's simple averaging method (after applying our corections) and the predicted premium of 367 basis points from the econometric analysis that we undertook.[5]

[2] Oakvale Capital (February, 2011), *Report on the cost of debt during the averaging period: The impact of callable bonds*, p.25.
[3] The corresponding values for the AER draft decision averaging period were 355 basis points and 408 basis points, respectively.
[4] The corresponding value for the AER draft decision averaging period was 408 basis points.
[5] The corresponding values for the AER draft decision averaging period were 355 basis points, 346 basis points, 351 basis points, 363 basis points, respectively.

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However, after remedying the error noted above, it is clear that our earlier report understated the premium that we should have estimated from the direct interpretation of the market evidence. That is, after making the correction, the econometric analysis – which used of a larger set of empirical information (all representative bonds with a remaining term of more than one year) and an application of more sophisticated statistical techniques – delivers a materially higher estimated debt risk premium than the AER's method, of 379 basis points for Powerlink's updated reference period.

This result strengthens our earlier advice that a value towards the upper end of the range that we identified of 360 to 391 basis points should be applied.

* * *

Please do not hesitate to call me (on 03 860 34973) or Michael Lawriwsky (on 03 860 34983) should you have any further questions regarding this matter.

Yours sincerely,

Jeff Balchin
Principal

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Attachment

Table 1 –Summary statistics – Quadratic functional form for the 40 business days to 14 October 2011

Dependent Variable: DRP

Method: Least Squares

Sample: 1 65

Included observations: 65

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.729896	0.218098	7.931732	0.0000
TERM	0.288008	0.083793	3.437115	0.0011
TERM^2	-0.008348	0.006239	-1.338103	0.1857

R-squared	0.462058	Mean dependent var	2.725394
Adjusted R-squared	0.444705	S.D. dependent var	0.75309
S.E. of regression	0.561189	Akaike info criterion	1.727536
Sum squared resid	19.52584	Schwarz criterion	1.827892
Log likelihood	-53.14492	Hannan-Quinn criter.	1.767133
F-statistic	26.62702	Durbin-Watson stat	1.186048
Prob(F-statistic)	0.000000		

Source: Bloomberg, UBS, PwC's analysis

Table 2 –Summary statistics – Quadratic functional form for the 40 business days to 9 December 2011

Dependent Variable: DRP

Method: Least Squares

Sample: 1 65

Included observations: 65

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.995982	0.241492	8.265193	0.0000
TERM	0.240323	0.093147	2.580048	0.0123
TERM^2	-0.006046	0.007033	-0.859716	0.3933

R-squared	0.35729	Mean dependent var	2.850843
Adjusted R-squared	0.336558	S.D. dependent var	0.762108
S.E. of regression	0.620752	Akaike info criterion	1.929285
Sum squared resid	23.89065	Schwarz criterion	2.029641
Log likelihood	-59.70175	Hannan-Quinn criter.	1.968882
F-statistic	17.23328	Durbin-Watson stat	1.73531
Prob(F-statistic)	0.000001		

Source: Bloomberg, UBS, PwC's analysis