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Date

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Dear Mr Hull

Transmission Price Control Review: Updated Proposals – Cost of Capital

Please find attached the WPD response from Western Power Distribution South West and Western Power Distribution South Wales to Ofgem's consultation on the Transmission Price Control Review.

Yours sincerely



ALISON SLEIGHTHOLM
Regulatory & Government Affairs Manager

Cost of Capital

Differences Between Electricity Distribution and Transmission Risk

Background

1. As part of the Transmission Price Control Review, Ofgem has published proposals for the cost of capital for electricity transmission companies that compares directly the cost of capital set in DPCR4 and that proposed for the current TPCR. Ofgem have also published a comprehensive report from Smithers & Co dealing with the cost of capital of network utilities.
2. Neither Ofgem's TPCR proposals nor the Smithers & Co report seek to directly address the issue of why the WACC for transmission should be different to that for distribution, or in the case of the Smithers & Co report, why the WACC's for electricity transmission, electricity distribution, gas transmission, gas distribution and for water only or water and sewerage companies should be different from one another or the same – rather, the different sectors are taken together as “network utilities”.
3. The purpose of this short paper is to point out some of those differences in the risk between electricity distribution and transmission that impact on the WACC. A complete inter-sectoral comparison between all sectors might be interesting but is outside the scope of this discussion.

Differences in Business Risk

4. The UK electricity transmission system is a single economic monopoly owned by NGG plc. NGG's system operates largely at 400kV over 26,550km of network. NGG is also responsible for frequency control and, separately, is the UK's ISO.
5. DNO's connect to NGG's system at a relatively small number (around 400) of bulk supply points where the electricity is transformed to 132kV. DNO's then distribute the electricity over local distribution networks at various voltage levels to large numbers of customers who receive the power at 240V, although the primary distribution voltage is 11kV.
6. WPD operates 80,000km of network (more than 3 times the network of NGG) and has approximately 2.5 million exit points to its system.
7. NGG's system security is of national importance and as such its network is constructed to much higher levels of network security than those of DNO's. This higher security level and differences in the nature of the assets make it significantly more expensive to build and maintain. For example:
 - a. NGG's RAV is £2.4bn, or around £90,000 per network km, whereas WPD's RAV is around £1.4bn, or around £17,500 per network km.

- b. NGG's opex allowance in Ofgem's TPC proposals is £293m for the five year period, i.e. £11,035 per network km. WPD's opex allowance in DPCR4 is £395m or £4,938 per network km.
8. Given the differences between the consequences of failure between NGG and WPD, NGG's risk of failure is lower than WPD's because NGG's system is constructed, in terms of built in security, to ensure a higher degree of availability.
9. WPD's (and most other DNO's, with the exception of London Electricity) are much more susceptible to weather and third party damage than NGG's because of network length and the number of exit points with no automated alternative supply.
10. Therefore, availability is engineered into NGG's system whereas DNO availability is more personnel-based and therefore inherently more risky.
11. In summary, because of NGG's importance as a national strategic asset, its operating risks are "engineered out" by building the system to higher security levels at a higher cost than the security levels available to, or worthwhile for, DNOs.

Other risks, the effect on cost of capital and other comments

12. NGG also has lower corporate structure risk than DNOs. As owner/manager of a national strategic asset NGG has a "golden share" that ensures its independence. As such, NGG are treated by capital markets as having quasi-sovereign risk.
13. NGG's lower business risk, lower management risk (consequent upon the lower business risk) and lower corporate structure risks are reflected in their costs of capital.
14. For example, Standard & Poor's require lower coverage and easier leverage tests to be met for electricity transmission companies than they do for DNOs. Moody's are not as explicit about the differences but although they discuss the regulation of UK electricity transmission and distribution together, the ratio tests they cite as examples only apply to DNOs, not to NGG.
15. Smithers & Co consider all "network utility" companies together in their report on cost of capital. Whilst this is understandable given the shortage of market data from the various sectors, it serves to mask differences between the risks of companies that are significant for the cost of capital. The differences between electricity transmission and distribution have been briefly discussed above but there are also significant differences in risk between the water/gas/electricity sectors that should be taken into account. For example:
 - a. WASCs are significantly more capital-intensive than DNOs and as such have lower risks than DNOs. (In fact a DNO is analogous to a WASC with only

“maintenance capex”). The more capital intensive a sector, is the less it is exposed to management risk because the greater part of its revenues are calculated as return on and of RAV rather than opex

- b. Water companies are less exposed to corporate structure risks than DNOs given the provisions of the Water Act and Ofwat’s approach to ownership of multiple companies
- c. As a result, water companies share some of the lower risk features of NGG that DNOs lack
- d. Differences in the incentive regimes also have an impact. In particular, to the extent that less than 4% of revenues are at risk from operational performance, DNOs have more risk as a result of the IIS arrangements.

Conclusion

- 16. There are differences in the risks between network utility sectors that affect the WACCs of those sectors. In particular, because it is more capital intensive, built and maintained to a higher level of system security and is protected from corporate structure risk, NGG’s electricity transmission system has, and should have, a lower WACC than that required for DNOs.