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US Allowed Cost of Equity vs Ofgem DD

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Background

NERA were commissioned by SPT to provide a comparison of the allowed cost of equity in the US and Ofgem's DD.

In this report, we show that:

- US electricity utilities allowed return on equity is around 240 bps higher than Ofgem's DD for ET, on a comparable 55 per cent gearing basis. (Section 1)
- There are a range of factors that suggest US regulated networks are typically lower risk than GB, not least it is common for US networks to be subject to shorter regulatory periods. Our view of risk is consistent with empirical evidence of lower betas for US relative to UK regulated energy networks. (Section 2)
- Ofgem's arguments in the DD regarding US-GB relative risk are by contrast not valid, and inconsistent with empirical beta evidence. (Section 3)

1. US allowed return on equity are around 240 bps higher than Ofgem's DD on a comparable basis

As per calculations from S&P Global Regulatory Research Associates[1], The average return on equity (ROE) authorised for US electric utilities was 9.68% for rate cases decided in the first half of 2024 (21 cases), and was 9.60% for rate cases decided in full year 2023 (63 cases). The US allowed ROE are in nominal terms and on a post-tax basis.

Since the US electric utilities have different gearing compared to Ofgem's DD, we need to un-lever and re-lever the average equity beta of US electric utilities using 55 per cent notional gearing so that the US allowed ROE is on a comparable 55 per cent gearing basis. As shown in Table 1, the US electric utilities average allowed cost of equity in 2023 and H1 2024 have been greater than 10 per cent (nominal, post-tax) on a comparable 55 per cent gearing basis. Historically, the average allowed cost of equity for US electric utilities has consistently exceeded 10 percent (nominal) when converted to a 55 per cent gearing basis, as shown in Figure 1.

In comparison, Ofgem's DD allowed cost of equity range is 6.86 to 8.58 per cent in nominal terms, with a proposed estimate of 7.75 per cent.[2] Hence, on a common 55 per cent gearing basis, the recent US electric utilities average allowed cost of equity (10.2 percent, nominal) is more than 240 bps higher than Ofgem's DD proposed cost of equity for ET (7.75 per cent, nominal).

Table 1: US Electric Utilities Allowed Return on Equity are above 10 per cent (nominal, post-tax) in 2023 and H12024 on a 55 per cent gearing basis

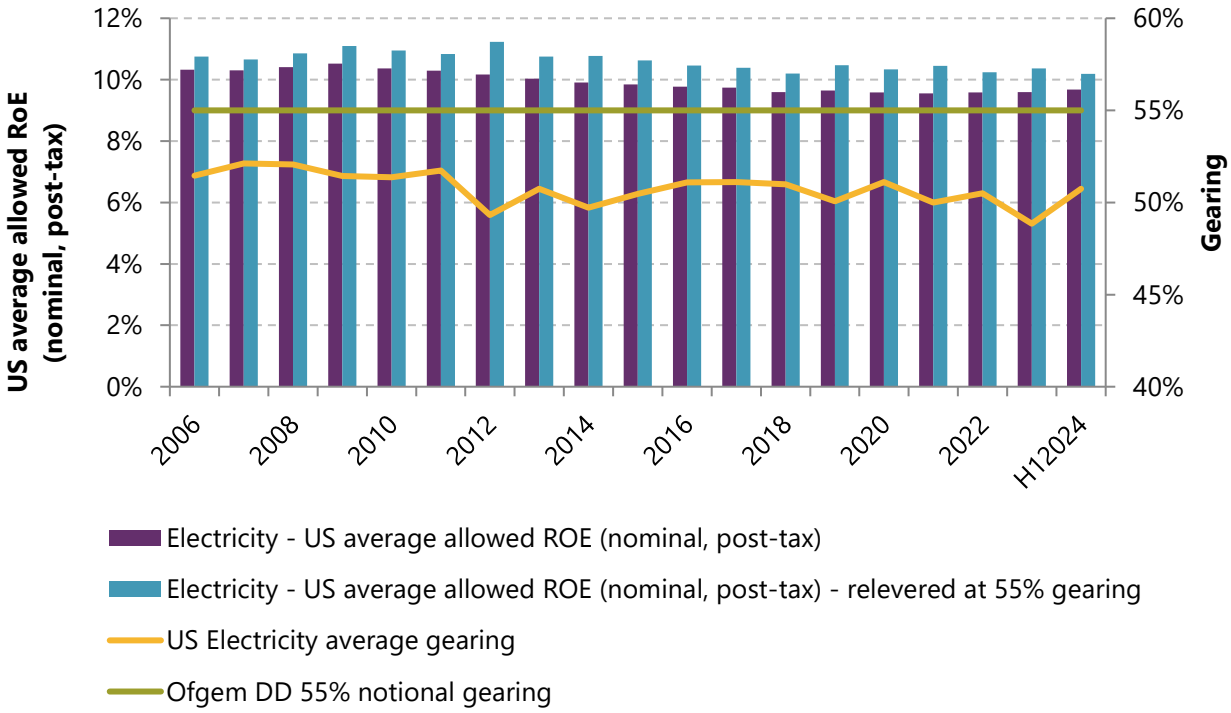
	2023	H1 2024
Electricity average CoE (nominal, post-tax)	9.60%	9.68%
RFR - US 20yr Treasury Yield	4.26%	4.56%
US MRP	4.33%	4.33%
Electricity average gearing%	48.85%	50.74%
US Electricity Equity Beta	1.23	1.18
US Electricity Unlevered beta	0.63	0.58
US Electricity Asset beta @55% gearing	1.40	1.29
Electricity average CoE (nominal, post-tax) @ 55% gearing	**10.3%**	**10.2%**

Source: NERA calculations based on S&P Global RRA data

1 S&P Global (29 July 2024), RRA Regulatory Focus, Major energy rate case decisions in the US, January–June 2024, Quarterly update on decided rate cases, link.

2 Adding 2 per cent CPIH inflation to the real CoE range of 4.76 to 6.45 per cent (proposed 5.64 per cent). Ofgem RIIO-3 DD, Table 18.

Figure 1: US average allowed ROE for electric utilities



Source: NERA calculations based on S&P Global RRA data

2. US regimes are generally lower risk, not least because of shorter regulatory periods

While the US and GB regulatory regime are both subject to revenue caps, we consider that the US regimes are considerably less risky than RIIO regime for a number of reasons, such as:

- **Shorter regulatory period:** The US regimes tend to have relatively short regulatory periods (mostly 3-4 years), which provides for frequent updating of allowed revenues in line with costs, and hence a relatively low within-period volatility of returns.[3] In contrast, the RIIO regulatory period is five years.
- **Greater objectivity in setting allowed costs:** in most cases, cost allowances are set based on outturn costs for a base year and projected forwarded, without explicit efficiency factors that reduce allowance over time. Some are also based on historical costs. The prudency standard for permissible costs sets a high evidentiary bar for the disallowance of incurred costs.[4] By contrast, the GB RIIO regime draws on more subjective comparative efficiency analysis and technical review of costs;

[3] We understand that in practice US utilities can file more frequently than the duration of the US price controls.

[4] As Makholm writes, "*The prudent investment standard, as defined by Brandeis, sets a high evidentiary bar for disallowances of utility costs, and thus significant imprudence disallowances of costs are comparatively uncommon for North American utilities.*" See: NERA (2015) Half a century of estimating the cost of capital, p. 7, link.

- **True-up of pension liabilities**: US regimes provide a true-up for pension and other post-employment liabilities, whereas GB electric utilities bear the risk on their post-2012 liabilities;
- **Less stringent output/quality of service incentives:** US companies generally have less stringent or financial performance related output and quality of service incentives;
- **The US regimes incorporate greater use of cost pass-through or true-ups**: For example, the US regime allows cost pass-through or true-ups for commodity prices, commodity related bad debt, some mandated capex, and environmental remediation costs. By contrast, the true-ups or pass-through provisions for GB electric utilities are more limited.

Overall, US regulatory regimes are determined with reference to case law which has been tested in the courts. The nature of the proceedings offers greater investor security relative to the more subjective approach, and weaker appeals mechanisms, associated with GB price controls. For example, the rate cases have enshrined principles in relation to the protection of property rights, and notions of prudency standards in relation to permissible costs.[5]

Empirically, previous studies have found that US electric utilities asset beta are lower than those of GB electric networks, supporting that investors perceive that US networks face lower equity risk than the UK networks.[6]

3. Ofgem's view of relative risk is not consistent with the nature of cost-of-service regimes, and empirical evidence

Additionally, in the RIIO-3 DD[7], Ofgem states several reasons why it considers the US allowed return is not comparable to GB. For instance, Ofgem argues that the US awarded returns are based on the book value of equity whereas GB allowed returns are based on a regulatory asset base indexed to inflation. However, whether the allowing a nominal return based on a book value of equity or allowing a real return based on an indexed RAB is irrelevant to risk - these are simply two approaches to compensating investors for inflation risks, and do not materially impact the equity risks faced by investors.

Ofgem also comments that[8]:

- "US utility regulation tends to be on an ex post basis whereas GB regulation is on an ex ante basis, this means there is greater risk for US utilities in recovering costs incurred.

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5 The regulation of utilities in North America faces a special kind of constraint that most other nations do not exhibit. Particularly in the United States, major regulatory statutes do not become settled methods of government control over private businesses until they are tested in the courts. There are established principles in relation to property rights, and prudency standards. See: NERA (2015) Half a century of estimating the cost of capital, Link: http://www.nera.com/content/dam/nera/publications/2015/PUB_Cost_of_Capital_1115.pdf

6 NERA (30 April 2018), RIIO-T2 Beta and Risk Assessment, Section 2.3. Frontier Economics (9 January 2020), Beta Decomposition

Report for National Grid and SSE, p.16.

7 Ofgem RIIO-3 DD, para 3.112.

8 Ofgem RIIO-3 DD, para 3.112.

- Equity investors in GB utilities are protected from inflation due to the indexation of the equity portion of the regulatory asset base whereas US utilities may need to recover unexpected inflationary costs via a supplementary rate case which the regulator may not grant.
- We also think, GB regulation has stronger performance-based incentives which means networks should, in principle, have greater opportunities to outperform than US networks."

The differences mentioned by Ofgem do not suggest that the US regime is higher risk than the GB regime. On the contrary, as explained above, we consider the US regime to be lower risk than the GB regime, due to its greater objectivity and certainty in allowing cost of service, less stringent output and quality of service incentives, increased use of cost pass-throughs and true-ups, and shorter regulatory periods. Our view is consistent with empirical studies on beta.

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