

# **Annex 28C: Alternative Cost of Capital**

December 2021

## Annex 28C Alternate Cost of Capital

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This annex sets out our alternate cost of capital proposal building on the analysis and conclusions in the Main Business Plan document and the Annex 28A Finance. It should be read in conjunction with these documents.

**Section one** acts as an introduction to our alternate cost of capital proposals.

**Sections two and three** examine Ofgem's proposals for the debt allowance and the equity return, the problems we have encountered in the methodology used and what the consequences of implementation might be. We then go on to suggest and review alternate methodologies and how these "sit" with historical regulatory decisions or CMA re-determinations.

**Section four** considers the implications of persisting with the proposed cost of capital and requiring equity to subsidise all debt underfunding, even when such underfunding is the consequence of regulatory policy and not management conduct.

**Section five** discussed the rationale for adopting a risk sharing mechanism in ED2.

**Section six** presents potential adjustments that Ofgem could apply to the Notional company debt allowance to deliver an improved outcome for the sector and customers.

**Section seven** considers the financeability gap contained within the Notional, Actual and FW Remedy Models and suggests a number of combinations of debt allowance and equity return that would deliver the improvement required.

**Section eight** looks at the impact of alternate cost of capital values on customer bills and demonstrates that the use of such alternative values will still mean that our customers continue to have lower bills in ED2 than during ED1.

## 1 Introduction

### Key points

- We have identified financeability challenges using Ofgem's working assumptions for cost of capital. These are set out in our main Business Plan document and Annex 28A Finance.
- These challenges exist both for the Notional company, and more importantly, for the Actual company. The specific challenges identified at an Actual company level do not arise as a result of inefficiency on our part, but instead relate primarily to the effective timing of our debt issuance.
- It is extremely important that licensees should be able to make investments confident that the cost of debt being raised will be appropriately funded, provided always that it is efficiently raised (which is best judged at the point of issuance in respect of knowable circumstances). This was essentially the commitment set out by Ofgem when the RIIO framework was launched in 2010<sup>1</sup> (although this was qualified at the slow-track determination). Passing risks to equity that equity is not able to manage (e.g. timing risk) is not in the interests of customers as it will act as a disincentive to investment in the sector.
- Whilst Ofgem has historically used a single cost of debt allowance for all companies, the unprecedented significant change in interest rates since 2009 has exposed licensees to a debt allowance-cost mismatch risk that they are both unable to effectively manage and which differentially impacts different sized licensee groups. As well as differential risks, Ofgem's proposal for a single debt allowance for all networks, based off the average sector cost, creates windfall winners and losers in respect of debt allowances compared to costs.
- It is not in customers' interests that some licensees are being over-funded for their efficiently incurred debt costs, with others suffering a shortfall. As the cost of debt allowance is broadly calibrated to the sector average, funding each network under a methodology which better reflects its efficiently incurred debt costs, and/or makes adjustments to balance risks across licensee groups, does not necessarily need to increase the overall bill to GB customers.
- In this Annex, we analyse and discuss the issues and shortcomings in Ofgem's approach to setting both the debt allowance and equity returns and propose alternate approaches that may be used by Ofgem to address the issues.

### The financeability assessment must reflect the circumstances of ED2

Financeability is essentially the ability of a business to raise finance to support both new investment and the refinancing of past investments.

With two major rounds of Quantitative Easing, financial markets have offered declining and unprecedented low rates of interest for over a decade. Post COVID, however, with increasing inflation,

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<sup>1</sup> [https://www.ofgem.gov.uk/sites/default/files/docs/2010/10/riio\\_handbook\\_0.pdf](https://www.ofgem.gov.uk/sites/default/files/docs/2010/10/riio_handbook_0.pdf), para 12.13

there is an increased risk that interest rates and equity risk pricing will prove more challenging in the period to 2028.

Coinciding with these financial market risks is the potential impact of the move to Net Zero, with an increased requirement for investment in response to customer/Net Zero needs, and the risk that our ability to access adequate financing to deliver that investment might be compromised by our ED2 settlement.

The financeability assessment that must be undertaken with respect to our ED2 Business Plan proposals needs to be made in the light of these risks – it is not in customers’ interests that investment be postponed (and progress to Net Zero delayed) because financial returns are insufficient to obtain the funding at the time that funded is needed. Therefore, the financeability assessment must be judged against the detriment to customers’ interests should new financing not be sufficiently available.

At the same time, we recognise that our customers, whose finances are already stretched by the impact of the energy crisis on bills, will also face their own financial challenges. Indeed, we would still anticipate a drop in the level of customer bills in ED2 from ED1 levels, even if our financeability concerns are addressed through framework changes and a higher cost of capital allowance<sup>2</sup>.

### **Ofgem’s cost of capital working assumption is insufficient**

On balance we believe that Ofgem’s working cost of capital working assumptions as set out in the Sector Specific Methodology Decision (SSMD) document, which apply a single annual cost of capital percentage rate to all companies regardless of size, risk, efficiency of operation, or ambition of their business plan, are both ‘below market’ and result in too high a financeability risk to the delivery of necessary investment during ED2.

### *Debt allowances*

In respect of the debt allowance, this includes a single rate for all networks, based on the average forecast cost of debt for the sector as a whole. Whilst such an approach may have been appropriate in the past, the consistent fall in market interest rates over the last decade, has highlighted the different inherent risks and costs that licensee groups of different sizes bear, as a result of this single rate approach. This policy now means that some networks are now being significantly over funded, and others, including us, are being significantly underfunded for their efficient cost of debt, driven largely by the unavoidable timing of their debt issuances.

In formulating the RIIO framework, Ofgem decided that *“if there is a commitment to remunerating efficiently incurred debt costs, it will facilitate a greater role for equity in the capital structure of*

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<sup>2</sup> Our forecast average customer bill for ED2 is £77.26 per annum, representing a £12.49 decrease (13.9%) over ED1. As detailed in Section 8, we consider an upper range for the potential bill impact associated with addressing our financeability challenges as £7.54 - with the two recommended framework changes costing £2.35 and the upper range in respect of cost of capital options costing £5.19.

*regulated companies*<sup>3</sup>. Ofgem then reaffirmed its “*commitment to remunerating efficiently incurred debt costs*” at the launch of ED1<sup>4</sup> however, it decided to apply this commitment at the sector level only, mirroring its decision to set a single debt allowance for the sector.

***Whilst the statement as set out in the RIIO Handbook was qualified in the ED1 determinations, the appropriateness of this qualification must be considered in the context of the prevailing circumstances at that time. The importance of the RIIO Handbook statement is undiminished.***

Consequently, any decision to continue with a single (unadjusted) debt allowance needs to be reviewed in light of the changes since that time (including market interest rates) and the particular circumstances that now prevail, such as the variance in embedded debt costs across the sector.

We agree that the “*commitment to remunerating efficiently incurred debt costs*” is in customers’ interests, but that this is not achieved when this commitment only applies at the sector level (i.e. ignoring the circumstances of the individual licensees) or when there is a differential likelihood of those licensees recovering their efficiently incurred debt costs.

In effect, this was recognised in the ED1 slow track decision, when Ofgem acknowledged the need to recognise exceptional “*circumstances which were exogenous to the company’s own financing decisions*”.<sup>5</sup>

### *Equity returns*

Similarly, a single equity return for the sector has been derived using the Capital Asset Pricing Model (CAPM) with set assumptions for the TMR (Total Market Return), Beta and the RFR (Risk Free Rate). The results of the CAPM derived cost of equity have then been considered against selected cross checks, before applying a 25bps reduction in equity return to reflect a perceived expectation of outperformance in the next price control (the ‘outperformance wedge’). In the light of the increased investment requirements of the sector to deliver Net Zero, and potentially changed economic conditions, we do not believe that this would be a good time to price returns at levels that risks a sector downgrade.

In setting the equity allowance, we believe that Ofgem should take into account the detailed issues that we have raised within our business plan. In context, the equity return has been set at a level that maintains a Moody’s AICR rating just sufficient to meet a BBB+ rating (1.40x times), *provided that* investment remains in line with ED1 levels. With the baseline investment contained within this plan, this falls to a BBB rating (1.37x times) and under a high investment scenario<sup>6</sup> Moody’s AICR would drop further to 1.31x<sup>7</sup>.

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<sup>3</sup> [https://www.ofgem.gov.uk/sites/default/files/docs/2010/10/riio\\_handbook\\_0.pdf](https://www.ofgem.gov.uk/sites/default/files/docs/2010/10/riio_handbook_0.pdf), para 12.13

<sup>4</sup> [https://www.ofgem.gov.uk/sites/default/files/docs/2014/07/riio-ed1\\_draft\\_determination\\_financial\\_issues.pdf](https://www.ofgem.gov.uk/sites/default/files/docs/2014/07/riio-ed1_draft_determination_financial_issues.pdf), para 2.31

<sup>5</sup> [https://www.ofgem.gov.uk/sites/default/files/docs/2014/07/riio-ed1\\_draft\\_determination\\_financial\\_issues.pdf](https://www.ofgem.gov.uk/sites/default/files/docs/2014/07/riio-ed1_draft_determination_financial_issues.pdf), para 2.32

<sup>6</sup> Equivalent to an additional totex investment of £752m (2020/21 prices) over the baseline plan

<sup>7</sup> ED2 average, calculated excluding the equity issuance assumption.

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### *Overall cost of capital*

There are no firm lines in financial markets, particularly so in times of stress or uncertainty. However, the lower the credit rating, the higher the cost and greater the difficulty in raising finance, and the greater the chance that the Notional company may well be compelled to defer investment. The probability of further investment deferrals increases in stress conditions and where investment requirements increase over the baseline.

Ofgem will be reviewing its working assumptions on the cost of capital as part of the business planning process. However, based upon the assumptions as given, we have concluded that the Notional company is not financeable.

### **The Notional company used to set the debt allowance does not adequately reflect our characteristics**

Our concerns about financeability are in part due to a methodology that sets a Notional company debt allowance based upon a 17-year debt trailing debt index, which result is then aligned to the actual sector average debt costs.

Whilst the Notional company is adjusted to reflect our customers' investment needs, it is not adjusted to take appropriate account of the differing structural characteristics of the various licensees. We consider that each and every licensee group (raising equity as a group of licensees)<sup>8</sup> should have broadly the same equity risk over each price control period – in effect have the same chance of getting their efficiently incurred debt costs funded, in line with the overall RIIO aim. To achieve this, the Notional company allowance must be properly tailored, through appropriate adjustments, to adequately reflect licensees' characteristics – including structurally higher costs and/or risk profiles.

It has already been recognised by Ofgem (for example at GD2) that a single licensee group, such as ourselves, which issues debt less frequently than larger licensee groups, is inherently likely to have higher debt costs than the average, and that the single notional debt allowance approach needs to be modified for this.<sup>9</sup>

It has also been recognised by Ofgem (for example in its interactions with SHETL), that the unavoidable ("exogenous") circumstances of the actual company (in that case a concentration of debt issuance to fund increased investment) should be taken into account and the single notional allowance approach modified accordingly.

Interest rates have, over the 17-year period used to calculate the debt allowance, fallen very significantly. As a consequence, licensees that issue infrequently are more likely to have a higher concentration of their issuances at times of low or high interest rates. They are therefore likely to have a higher risk of debt costs being higher than an average composed of more evenly issuing larger groups (and a chance of lower costs too – this is the risk of deviation from the sector average). This circumstance is compounded by the reduced arithmetic influence on the average sector cost.

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<sup>8</sup> Groups which comprise multiple licensees raise equity as one risk entity. References to 'licensee' when discussing financeability should be read to mean the licensee group to which individual area licensees belong.

<sup>9</sup> RIIO-2 Final Determinations – Finance Annex (REVISED), para 2.62

This is not only an issue in respect of embedded debt but is of heightened concern at this point in the economic cycle for future issuances – i.e. in the event of a significant upward movements in interest rates, particularly if this is also coupled with above average investment levels.

Licensees should each have an expectation that the cost of future efficient debt issuances will be adequately funded, price control period to price control period. However, an approach that effectively treats the sector average actual debt costs as the ‘efficient’ benchmark makes it incredibly difficult, if not impossible (particularly for a single licensee group with infrequent and/or smaller issuances) to have confidence that its financing decisions will meet that test of efficiency, as to do so would require foresight of:

- what the future profile of interest rates is going to be (i.e. if and when the 17-year trailing index will cover the issuance cost); and
- for what amounts, and when, will the other licensee groups will be issuing debt over the next decades (as the running index is aligned to the sector average every five years).

Left unadjusted, therefore, the Notional company approach leaves a single licensee group at greater risk of debt underfunding and reduced investment return certainty. This risk is reflected in both the embedded debt profile and in future debt issuance risk. The pattern of market interest rates over time since 2010, in contrast to the tighter range of interest rates prior to that date, and the risk that the future pattern of interest rates may be equally unpredictable, means that this risk has grown significantly since the ED1 determinations.

From an equity investor perspective, the one-size-fits-all approach to debt results in windfall gains and losses to shareholders regardless of the operational performance of the company. Companies with debt costs higher than average see the funding shortfall subsidised by equity, resulting in lower returns no matter how efficient they may be in incurring debt. This requirement to subsidise is unmerited and, most importantly, incompatible with good practice and investor confidence. It does not appear to protect the long-term interest of customers, in line with the original RIIO decision.

### **How can these challenges be addressed?**

In accordance with Ofgem’s business plan guidance, our financeability assessments are based on Ofgem’s working assumptions for cost of capital, the results of which are summarised in Section 7 of our main business plan document, with additional detail in the Annex 28A Finance and Annex 28B Ofgem Required Modelling.

#### *Framework changes*

For the reasons explained in those documents, our financeability assessment is focussed on the Actual company model. We have considered various financing and regulatory framework mechanisms that could be used to try to improve the outcome of the results arrived at under that Actual company model. In particular, we have recommended two framework changes to the regulatory capitalisation rate and Notional company gearing (see Annex 28A Finance Section 9) which improve our ED2 cash flows and provide some capacity for us to respond to a faster decarbonisation path without needing to attract new equity investment.

Whilst helpful to achieving our overall plan, these framework changes do little, however, to address the underlying financeability issue itself, i.e. the risk that we could fail to attract equity investment



and raise debt finance when needed to enable us to fulfil our commitments to our customers. This is demonstrated in Annex 28A Finance Section 9 which sets out our financeability tests on the Actual model with framework updates ('FW Remedy') and continues to show significant financeability challenges even after these changes are implemented.

Importantly, rating agencies and investors recognise that framework changes typically only time-shift cash flows and make adjustments to remove the associated benefit during their rating and credit assessments. Such adjustments alleviate, but do not eradicate, the financeability issue.

### *Mitigating actions*

We have reviewed a wide range of potential mitigating actions other than an adjustment to the cost of capital, including considering whether shareholders should be asked to inject more cash into the business. These are summarised in Annex 28A Finance Section 9. After careful consideration, we concluded that these non-WACC changes were not viable.

We have therefore concluded that an amended cost of capital is required if we are to have the ability to finance our current Business Plan.

### *CMA Energy appeals*

We note that the cost of capital issue has been considered in the CMA appeals in respect of RIIO-GD&T2, focusing largely on equity, but covering debt financeability in one case. The CMA's detailed final determination was published on 1 November 2021. As we have not been a formal party to the CMA's proceedings, we had not been able to see any of the detail of the CMA's thinking, or its exposition of the views expressed by Ofgem or the other parties before that point. The timing of the publication of the CMA's decision, and the date for submission of our final business plan, means that we have not yet had the opportunity to fully consider and reflect the detail of the CMA's findings. We will continue to do so over the coming months and look forward to engaging with Ofgem in this regard.

In the light of the above, instead of proposing a specific cost of capital figure in this business plan, we have instead set out in this Annex our views on the different ways in which this differential financeability risk might be mitigated. These include our thoughts on the debt allowance methodology, as well as the equity return.

We hope to work with Ofgem over the coming weeks and months to further explore our actual financeability challenges and the options available to Ofgem for updating the cost of capital methodologies, to address this financing risk.

### **In conclusion:**

The sector allowances must be set at a level that has a degree of financeability risk which is commensurate with the downside risk to customers if financing is not, in practice, able to be secured.

We also believe that it is key to regulatory confidence in investment in smaller licensee groups that, they have an equal or comparable risk profile (post adjustments) as larger groups.

Unless the Notional company structurally and sufficiently represents the actual company in both cost and risk terms, regard must be had to the financeability of both notional and actual companies.

To achieve this, the outputs from the Notional company being used to set debt allowances must be subject to appropriate adjustments to adequately reflect the differing structural characteristics and circumstances of each licensee.

## 2 The Debt Allowance

We have addressed the importance of financeability in the context of regulator obligations, licence restrictions and credit metric benchmarks in the main business plan document and Annex 28A Finance. These documents set out our key financeability concerns based on our own internal analysis.

In this section, we now turn to what we believe is the crux of the financeability issue – **that the Ofgem proposed debt allowance insufficiently funds our actual, efficiently raised, debt costs.**

### Key points

- The long-term interests of customers are served by attracting long term, patient equity investors by providing equity returns that are reflective of the risks of investing. The long-term interests of customers are not served if equity must bear unmanageable or unrewarded risks.
- Calibration of the 17-year trailing index effectively provides for pass-through of sector average costs – implicitly, sector average costs are deemed as efficient in the round, rendering any choice of benchmark index largely irrelevant, at least with respect to embedded debt.
- Whilst GB customers therefore pay, broadly speaking, the sectors' debt cost, this one-size fits-all approach creates windfall overfunding for shareholders in Lucky 'winners', whilst also creating Unlucky losers.
- The smaller licensee groups are more likely to be either Lucky or Unlucky, affecting equity risk, due to accessing the debt markets less frequently and/or in smaller amounts. They also have less ability to mitigate those risks than the larger groups which are able to efficiently access debt markets more frequently.
- This risk is further augmented by the consequence of being a smaller licensee: we will be more likely to incur debt costs above the sector average due to our accessing the debt markets less frequently and/or in smaller amounts.
- Our efficient debt costs are already underfunded in ED1, with our shareholders having had to subsidise the underfunding of efficiently incurred debt costs. Ofgem's proposals for ED2 will extend this unfair treatment further.
- A significant increase in market interest rates in the future could result in further underfunding of future efficiently incurred debt costs, as a result of the trailing indexation methodology.
- As in the past, timing of future issuances will be determined by re-financing and investment requirements, and interest rates determined by the market at the time. These are circumstances over which we have no real control.
- Ofgem intends to exclude index linked derivative costs from the sector calibration, resulting in no allowance for them despite them being a prudent and efficient way to manage risk in debt portfolios across multiple price controls, and particularly where they are used to create "synthetic" index linked bonds.

- In contrast, Ofgem intends to, inconsistently and illogically, include currency derivatives in the calibration, and include index linked bonds themselves.
- Our estimated shortfall between the proposed debt allowance and our efficiently incurred debt costs across ED2 is expected to be approximately £90-95m, the equivalent of 125bps on top of the proposed annual allowance, or approximately £3 pa on the customer bill.

**Long term customers’ interests are best served by ensuring investor confidence in the sector continues. The debt allowance mechanism, creating as it does some Lucky winners and some Unlucky losers, does not promote investor confidence. Similarly, as the mechanism does not allow a network to judge whether a proposed future issuance will be deemed “efficient”, it creates potential uncertainty in the making of investment decisions and additional equity risk.**

We note that debt financeability was considered in the CMA appeal in respect of WWU for RIIO-GD&T2. The CMA’s detailed final determination was published on 1 November 2021. As we have not been a formal party to the CMA’s proceedings, we had not been able to see any of the detail of the CMA’s thinking, or its exposition of the views expressed by Ofgem or the other parties before that point. The timing of the publication of the CMA’s decision, and the date for submission of our final business plan, means that we have not yet had the opportunity to fully consider and reflect the detail of the CMA’s findings. We will continue to do so over the coming months and look forward to continuing to engage with Ofgem in this regard.

As such, instead of proposing a specific figure for debt allowances in this business plan, we plan to work with Ofgem to further explore our actual financeability challenges and the options available to Ofgem for updating the cost of capital methodologies to address this financing risk. This could be achieved at minimal overall cost to GB customers, but with the overall benefit to GB customers of making equity investment in the sector lower risk by reducing future risks of underfunding as a result of circumstances that are not manageable by the licensee.

In this section we set out:

- a summary of Ofgem’s SSMD debt allowance proposal;
- our forecast ED2 underfunding position debt portfolio and costs;
- an overview of the rationale behind Ofgem’s debt methodology; and
- why there is a clear need for a different approach.

### Ofgem’s SSMD debt allowance proposal

Ofgem has set out in the SSMD its intention to retain indexation as an appropriate method on which company debt allowances should be based.

The key characteristics and consequences of Ofgem’s proposed approach are:

- **The same debt allowance for all networks.** The proposed ‘one-size-fits-all’ approach provides all companies in the sector with the same allowance, irrespective of its size or ability to spread

the risk of its funding over a number of years. Given the fall in interest rates over the last decade, a consequence of this policy is that many networks are due to receive a higher debt allowance in ED2 than their actual efficiently incurred debt costs, with others, including ourselves, being more likely to face a shortfall in funding.

- **Indexation methodology.** Ofgem proposes a full indexation methodology, using the iBoxx Utilities 10Yr+ as the reference index. This reflects a change from the average of the iBoxx A and iBoxx BBB non-financials indices used in RIIO-ED1. The trailing period is set at 17 years, representing a change from the 10-20 year tromboning period adopted by Ofgem at ED1 slow track and the 10 year period adopted by Ofgem at ED1 Fast track.
- **Calibration delivers a sector ‘pass-through’.** As with RIIO-GD&T2, Ofgem intends to ‘calibrate’ the results of the trailing index to deliver an allowance that covers the sector debt costs as a whole (excluding certain derivatives and based on detailed assumptions, such as floating rate debt elements). We note that, broadly, this policy has the same charging effect on GB customers taken as a whole, as that which a company by company pass-through approach would achieve. The key difference being the inherent difficulty of an outcome that currently sees some customers paying more than they should, and others paying less, relative to the actual efficiently incurred debt of their DNO.
- **Certain derivatives excluded.** Ofgem has chosen to exclude index linked derivatives from the calibration, despite the fact that these are a standard tool widely used in corporate financing. For example, the CMA, in its PR19 decision, included derivatives in its assessment of actual costs stating that they are a standard financing tool. Ofgem notes the complexity that can be associated with these instruments. However, it has then chosen to include currency derivatives which can also have the same degree of complexity. It has also included index linked bonds which deliver the same economic effect as derivatives coupled with nominal bonds. We do not believe the potential for complexity should, in itself, be a barrier to the inclusion of all index linked derivatives in calibration or financeability assessments. Those used for legitimate purposes to hedge a company’s exposure to fixed or floating rate debt efficiently incurred are particularly, we believe, completely legitimate candidates for inclusion in the relevant calculations. Information regarding derivatives is provided to Ofgem through the annual reporting (RFPR) process and networks are able to provide Ofgem with any additional information required to enable Ofgem to properly police the inclusion of properly incurred derivatives, on a case by case basis.
- **GD&T2 headroom.** The final determination for GD&T2 included an assessment of the debt allowance calibration for those sectors. Under the GD&T2 base scenario, Ofgem awarded effective headroom of 26bps<sup>10</sup> compared to the expected debt costs (21bps when derivatives were included)<sup>11</sup>. Notwithstanding the issues that we note with the current methodology, at determination Ofgem should, we believe, ensure that the ED networks are not discriminated against within the utilities landscape and are awarded a similar level of headroom to that provided in GD&T2.
- **Basis risk and the cost of CPI financing.** Ofgem has proposed to change the inflation measure from RPI to CPIH from ED2. This change will impact the financing risk for networks, particularly those with RPI linked debt, which may cause them to incur further costs to manage that risk. To compensate the networks for the basis point risk involved, Ofgem has proposed to uplift

<sup>10</sup> RIIO-2 Final Determinations: Finance Annex (REVISED), Ofgem, Feb 2021, Table 5

<sup>11</sup> As above, Table 6

the debt allowance by 5bps for all networks, based at the average level of inflation linked debt in the sector (approximately 25-30%).

- **Infrequent issuer.** Ofgem has not yet decided on whether an infrequent issuer uplift will be awarded to any ED network. This could cover the additional costs incurred by those infrequent issuers (i.e. relatively smaller) networks that, because of benchmark size limitations, have an increased cost, either/both from the costs of issuance themselves, or/and the cost of carry (the cost of raising money in advance of requirements to ensure funding is efficient).
- **No sharing of risk.** Setting a single debt allowance for the sector will always result in overfunding of some networks and underfunding of others, given the more recent interest rate environment. Risk and reward sharing mechanisms are embedded throughout the RIIO-2 regulatory framework – the Totex Incentive Mechanism (TIM), Uncertainty Mechanisms (UM), the Return Adjustment Mechanism (RAMs) to name but a few. They are a fundamental part of regulatory policy. The one material area where they are not employed is in respect of debt performance.

In Section 6, we consider the adjustments that Ofgem could consider making to its sector-average approach to address the concerns we note above.

#### Ofgem's view of 'efficiency' does not reflect factors that are within management control

It is uncontentious that all companies should be encouraged to issue debt at the lowest cost available, taking into account relevant risk concerns such as inflation risk or liquidity risk. Provided that such decisions are balanced, the licensee should know that the issuance will be deemed "efficiently incurred" and funded accordingly, both in the current price control period and in future periods as well, thereby supporting investor confidence. Equally, inefficient costs should not be funded by customers.

In setting the proposed cost of debt allowance, Ofgem utilises a 17-year trailing debt index, the result of which is then calibrated to the average cost of debt for the sector. Ofgem effectively treats the sector average actual debt costs as the 'efficient' benchmark. This means that Ofgem's view of what is 'efficient' is not reflective of any factors within ENWL's management control but is instead dependent on the pattern of future interest rates, and the actions/issuances of the other licensees in the sector, particularly the larger companies that influence the average sector cost more than the smaller licensees. The effect of this approach is to deem that those licensees' costs which are above the average are 'inefficient', and, therefore, should not be funded.

Ofgem has not, we believe, carried out any detailed work to support how it arrives at the above definition of debt 'efficiency'. In effect, the definition implies that Ofgem deems debt issued in the markets in 2009, at prevailing higher market rates, to be inefficient, compared to debt issued in 2019 at lower market rates. As a consequence of this approach, a licensee will be completely unable to assess whether the debt it will issue in 2023, for example, will be deemed efficient or inefficient (and, therefore, the extent to which it will be funded) until many years have passed, and until it can assess what the other networks have issued in the following decade, and how interest rates have changed over this time. Such an approach to debt allowance setting does not promote investor confidence, particularly at a point in the interest rate cycle when interest and investment rates are more likely to rise.

As is to be expected, for a sector that was privatised over 30 years ago, each individual company's debt portfolio and debt cost varies and has distinct characteristics such as the timing, tenor, refinancing dates and types of debt instruments used. Larger companies and groups with multiple licences that have higher debt requirements will typically have the opportunity to issue benchmark sized debt more frequently than smaller companies, enabling them to take the benefit of issuing when market rates are low to try to alleviate the cost of debt incurred when rates were high and, therefore, spread their risk. As a result, the larger companies and groups will be more likely to have a debt issuance profile that more closely matches the 17-year average indexation period. Their debt will also have a greater weighting on any sector average calibration. As a result, they are more likely to have their debt costs deemed to be 'efficient' and properly funded than smaller, infrequent issuers.

The smaller licensees, such as ourselves, with relatively smaller annual financing requirements will typically issue benchmark-size debt less frequently than the larger companies and (by virtue of the size of their debt) will have less impact on the sector average. It is these smaller companies and infrequent issuers that are more likely to be impacted by this policy (being potentially both under and overfunded). Given the natural 'lumpiness' of their historic debt issuance, they are more likely to have had larger proportions of their debt issuance at times of high interest rates (if they are unlucky) or, if they are lucky, at low interest rates. If they are unlucky, they are also less likely to be in a position to actively mitigate the risk through pro-active refinancing.

We do not believe that this policy represents a fair definition of "efficiency". It does not enable future debt issuances to be made with any confidence that they will be deemed efficient or inefficient and denies smaller companies the ability to manage their risk appropriately. As such, this approach creates unnecessary risk and uncertainty which is detrimental to investor confidence (and indirectly to customers' long term costs), which will be crucial over the coming years as we accelerate towards Net Zero.

Ofgem, rightly, wants to ensure that the networks are incentivised to deliver the most efficient outcome for customers. Any incentive to issue debt efficiently and prudently can only deliver that aim if it is capable of being achieved through management decisions. In the absence of companies developing perfect foresight over the timing and tenor of present and future debt issuances and market conditions that may be prevailing, which is unlikely, the incentive properties of the mechanism are compromised.

### **Our forecast ED2 underfunding position debt portfolio and costs**

Annex 28A Finance, Section 2 includes detail on our financing position and strategy.

On a nominal basis, we believe that Ofgem's approach will result in us being underfunded by approximately £90-95m in ED2. This is in addition to us being underfunded by approximately £95m in ED1. This is consistent with the underfunding position shown in the Actual company model:

**Table 2.1: Forecast ED2 debt underfunding using Ofgem’s working assumptions**

Nominal, £m	FY24	FY25	FY26	FY27	FY28	Total	Yearly Average
Debt allowance	61.6	62.2	63.4	64.2	64.7	316.0	63.2
Forecast debt cost	83.2	79.7	89.6	76.5	80.7	409.6	81.9
<b>Underfunding</b>	<b>(21.6)</b>	<b>(17.5)</b>	<b>(26.2)</b>	<b>(12.3)</b>	<b>(16.0)</b>	<b>(93.6)</b>	<b>(18.7)</b>
Allowance rate (%)	4.60 %	4.35 %	4.15 %	3.95 %	3.75 %		4.16 %
Finance cost (%)	6.21 %	5.58 %	5.87 %	4.70 %	4.68 %		5.41 %
<b>Underfunding (%)</b>	<b>(1.61)%</b>	<b>(1.23)%</b>	<b>(1.72)%</b>	<b>(0.75)%</b>	<b>(0.93)%</b>		<b>(1.25)%</b>

We would need an CPIH-real debt allowance of 3.31% to recover our efficiently incurred debt costs, which equates to the 5.41% nominal cost of our efficiently incurred debt costs.

We highlight that we have removed £18m from our forecast debt costs in respect of bonds that were issued at a premium in 2001/02 and therefore carry a higher ongoing interest cost than would otherwise have been the case. We do not believe it is appropriate for our customers to cover this higher interest rate and have excluded it from our underfunding estimate. In effect, we have deemed these costs “inefficient”.

### The rationale behind Ofgem’s debt methodology

The approach that Ofgem is proposing to use, when setting the cost of debt allowance, will result in an allowance that does not adequately fund our efficiently incurred debt costs over ED2. It is also highly uncertain as to whether it would adequately fund our debt costs over the long term (decades), as this depends upon an assessment of future interest rate movements, and the pattern of future issuances from both ourselves and, crucially, all the other 5 DNO licensee groups over which we have no control.

The decision to utilise a methodology which is known only to adequately fund efficiently incurred costs at a sector level, and not at the licensee group level i.e. not at the point of equity investment decision making, is not in the long-term interests of customers. Investors in a regulated sector need to be equally confident of the fairness of the regulated outcomes in so far as they relate to the setting of their price controls, given that such investors generally commit to investment for the very long term, well beyond the duration of any individual price control period. Damaging this investor confidence will, over time, lead to increased costs to customers in the long-term.

We understand that Ofgem has selected its proposed approach for three reasons:

#### 1. Regulatory consistency

The debt indexation methodology proposed for ED2 has similarities with ED1. However, prior to the RIIO framework, debt allowances were not directly correlated to an index.



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There is always a strong argument for regulatory consistency. However, the GB regulatory structure was designed precisely to allow the regulator to adapt to changing circumstances, rather than be hamstrung by past precedent. Policy should be reviewed to ensure that it remains appropriate for the circumstances applying at each price control period and, so far as possible, for the years ahead.

In the period since 2009, in the fallout of the financial crisis and with the invention of quantitative easing, real interest rates went through a fundamental and once in a century reduction. At the time of the consultation on the last price control, there was a significant level of uncertainty regarding medium term interest rates and it was not expected that rates would continue to fall across the eight-year price control.

As we have noted above, this persistent fall has meant that the debt costs of some licensees are lower/higher than others, based upon when debt was required to be issued. This deviation from the average is more likely to affect less frequent issuers than the larger issuers. The financial impact of the deviation can be significant. Given these changed circumstances, we question whether it is appropriate to continue with a broadly unmodified one-size-fits-all approach that was developed when interest rates were more stable.

Another aspect of interest rates being at the current levels, is that any return to historic 'normal' levels represents a far greater proportional change (for example, a 3 ppt increase in rates from 1% to 4% represents a quadrupling of interest costs, in contrast to 3 ppt increase in rates from 3% to 6% which represents only a doubling in interest costs), and has the potential for a far greater impact on financeability and cash flows, than during other previous price control determinations. Even since the ED2 SSMD determination was published, inflation and interest rate outlooks have evolved. There is now a far greater risk of a material increase in interest rates, potentially driven by an increase in inflation. In effect this is another changed circumstance that Ofgem ought to consider when determining the debt allowance and assessing for example, the requirement for risk-sharing mechanisms.

It is the nature of any trailing average methodology, that an increase in market rates will take a considerable length of time to feed into the allowance. As a consequence, there is a real risk that future debt issuances, made after any future material interest rate rise in the markets, will not be properly funded for many years. Indeed, they might never be properly funded under the proposed methodology if the interest rate rise is subsequently followed again by a fall. At a time when increased investment is required to achieve Net Zero, we believe that it is unhelpful for networks to be faced with having to raise debt and not to be confident that those costs (always assuming that they are efficiently incurred) would be adequately funded over a reasonable timeframe. This acts to discourage investment and reduce investor confidence and, particularly at a time when the UK is seeking to accelerate towards Net Zero, is not in the interest of customers.

In summary, we believe recent events have created an environment where networks have a higher risk of variance from the sector average.<sup>12</sup> This is more likely in the case of smaller networks and, given their inherent characteristics, gives rise to unavoidable structural risk imbalance between networks. There is no guarantee this will 'even-out-in-the-end' for the winners and losers, which is a core assumption on which conclusions that an 'average' approach will protect customers' interests are based. More significantly the resulting financeability issues faced by the 'losers' threaten the ability

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<sup>12</sup> A retrospective evaluation of cost of debt performance throughout ED1 shows a wide variation of debt performance level amongst licensee groups, 'Assessment of ENWL risk exposure for ED2'. KPMG, November 2021

of those persistently under-funded networks to attract equity and to fund the decarbonisation investment required of us by our stakeholders and in the customers.

***We would therefore argue strongly for the introduction of risk sharing or a similar mechanism to moderate or level the risk differential to equity amongst the licensees. We discuss the options available to Ofgem in Section 6.***

## **2. Incentivisation**

Ofgem has stated that the indexation mechanism is in the interests of customers as it incentivises licensees to be efficient in their debt raising.

Overall, we do not disagree with Ofgem over the benefits of incentivisation and we support it being an objective of an effective debt allowance methodology. We do, however, believe that, consistent with other aspects of the policy, the methodology should be calibrated to ensure that the incentivisation properties drive the desired future behaviour and the award and penalty structure is proportionate to the actions. Incentivisation on matters over which the licensees have no real control is not, however, true incentivisation.

With regard to the incentivisation effects of the current mechanism, we note the following:

- ***The incentivisation properties are limited*** – companies are price takers in the global corporate bond market. The most that networks can seek to achieve is to issue debt at as low a cost as possible on the date of the fundraising. It is not possible for networks to issue debt in 2022, for example, at market rates that prevailed a decade earlier.
- ***The incentivisation properties may be misaligned to the intended outcomes*** – Each licensee is incentivised to keep near term costs below the sector average. In normal bond markets, this will encourage shorter dated issuances by all companies, with increased refinance frequency and increased sector liquidity risk (subject to risk policies noted below). The sector is thereby being incentivised to herd together its debt. This becomes a dis-incentive to issue long dated debt (once interest rates have risen) to match long life assets.
- ***Customers do not share any outperformance within the price control*** – Ofgem has proposed to set RAMs before the over/under funding arising from financing is taken into account. Whilst customers do, in theory, achieve a very indirect benefit through the impact of every debt issuance on the industry cost, customers do not currently receive any direct benefit of incentivisation of debt costs through, for example, the kind of sharing factor applied to Totex.
- ***Governance structures and Directors’ statutory duties demand that management will seek to minimise funding costs within risk frameworks.*** No additional ‘incentive’ is required and whilst we concede that making debt costs a complete pass through to customers may have perverse implications for behaviours, we do not believe that the current risk allocation relating to debt issuance assists.
- ***The incentivisation properties of debt issued decades ago is minimal.***
- ***Ofgem should have oversight of network’s financial risk policies.*** – The networks should be managing their debt with appropriate regard to risk, both at licensee and sector level. This involves a balance between cost of debt on the one hand, and liquidity and inflation risks on the other. We believe that Ofgem should require networks to submit Treasury Policies to Ofgem and, subject to any observations that Ofgem might make, should work to an agreed

risk model. Within this model, the networks should then try to minimise their debt costs. Whilst equity could be seen as the primary manager of debt risk, the long-term damage to customers of a network falling into financial difficulty is too extensive not to have this supervisory oversight. Even a high level of supervision could manage any issues arising from, for example, intercompany loan arrangements.

We consider potential adjustments to the debt allowance methodology in Section 6. We believe that sufficient incentivisation is preserved, or enhanced, after these adjustments.

### **3. Ofgem's policy avoids a post-code lottery on cost of capital**

Using a one-size-fits all approach for setting debt and equity allowances means that all GB customers pay the same cost of capital. However, it achieves this at the expense of large variations in the allowed returns for equity investors, variations that are not dependant on operational performance or cost efficiency in the period and which not all licensees have the same inherent ability to mitigate.

Given the proposed reduction in Cost of Equity allowances for ED2, the variation in returns to equity arising from under or over funding debt are now even more significant as a proportion of the total equity returns - the real equity returns for investors in one area could be only 40%<sup>13</sup> of the returns in a neighbouring area, simply due to the relative funding position in respect of debt (figures based on ED1 performance).

The result of a single one-size-fits-all approach to cost of capital may result in one licence area being half as attractive for equity investment as another (both in terms of current returns and in terms of the risks to future returns). This approach would be justified if this was the result of true operational efficiency, but not because of an accident of timing. This approach has a clear implication - attracting and retaining equity at a time when vital Net Zero investment is needed is, in fact, a post-code lottery, generated by regulatory policy. Unjustly awarding average sector debt allowances to all, with such a diversity of historic market interest rates, inevitably leads to winners and losers across networks (regardless of true efficiency), which then directly impacts equity risk and returns.

We do not believe that it is in the interests of customers to have significantly different net equity returns on a regional basis, other than as a consequence of demonstrable operational inefficiency or efficiency.

### **The need for a different approach**

We understand that Ofgem will consider the appropriateness of its working assumption for the setting of the debt allowance during the draft and final determination stages and will consider what changes to the calibration are required. In this section we set out why, as part of that review, Ofgem should consider the issues we have identified with its approach, and our proposed mitigations.

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<sup>13</sup> In the absence of ED2 information, this assumes the ED1 forecast level of debt under/over funding compared to Ofgem's ED2 proposed Allowed Equity Returns

We assert that each network has a different financing profile, cost and refinancing requirement. This should not be contentious. Therefore, setting a single debt allowance for the sector will always over-fund some networks and under-fund others.

It should also be uncontentious, however, that such an approach will also result in the misallocation of debt cost funding between customers in different licensee areas. Over the course of a price control period GB customers, in aggregate, pay an appropriate amount overall that broadly reflects the debt costs of the sector - subject to the inclusion of all, rather than some, derivatives costs. If all networks have the same debt allowance, however, then across a regulatory price control period, customers in some areas will pay more than the efficiently incurred cost of debt of their operator, whilst others pay less than is needed to fund the efficiently incurred costs of their operator.

We think that both of these outcomes are undesirable and do not adequately protect the interests of customers. In effect, the larger networks, and the lucky, are benefitting from a policy that potentially penalises, or unjustly enriches, some networks.

### **Adjustments to the Notional Company approach**

Whilst a methodology that gives rise to a single debt allowance has basis in regulatory precedent (but noting how macro circumstances have changed), so too does the application of specific adjustments to reflect differences between the Notional company construct and the structural characteristics of networks. Ofgem has accepted this principle in the GD&T2 settlement, firstly with uplifts awarded for CPI issuance and basis risk, and secondly for infrequent issuers. This was also recognised by the CMA.<sup>14</sup> However, in light of the unprecedented and prolonged movements in interest rates since 2010, and the disproportionate effect on smaller networks, we would urge Ofgem to actively engage in ongoing consideration of whether its current approach remains appropriate and sufficient and whether it acts in the best interests of customers.

We also note the increasing use of Uncertainty Mechanisms within the regulatory framework, designed to transfer or share risk between networks and customers. Given the characteristics of networks as we enter ED2, the financeability challenges evident in our business plan and the potential implications for Net Zero delivery, we believe it is now appropriate for Ofgem to consider such as risk sharing mechanisms in respect of debt performance for ED2, particularly for smaller licensees / less frequent issuers of debt.

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<sup>14</sup> In its final determination in the GD&T2 Appeals the CMA noted that it “*agreed with GEMA that to avoid unfair skew in the data and/or the potential for unlawful discrimination, it is important to consider factors that are outside of the management’s control and adjust allowances accordingly*” (Vol. 3, para. 14.154).

We now explain the fundamental rationale supporting the application of these three adjustments to the Notional company approach in ED2. The concepts are developed further in Sections 5 and 6.

### (1) Meeting the additional costs associated with managing RPI-CPIH basis risk and CPIH issuance

For ED2, Ofgem proposes to use CPIH to index the RAV and to allow returns in real terms, moving away from RPI which has been used in previous price control periods. This change will impact the financing risk for networks, particularly those with RPI linked debt, which may cause them to incur further costs to manage that risk.

To compensate the networks for the basis point risk involved and the additional cost of CPI issuance, Ofgem has proposed a 5bps uplift to the debt allowance, as part of the 25bps other financing costs adjustment.

We have a higher level of RPI linked debt (bonds and composite) compared to the sector average (approximately 60% post-derivatives, compared to the Notional company assumption of 25%, which is broadly in-line with the sector average). The result of applying compensation for a regulatory change to a sector average means that some licensees will be overcompensated and some will be undercompensated.

Not being part of a larger group, and as a single licensee, we have sought to match the inherent risk and nature of the debt allowance structure with RPI linked debt (and RPI linked proxy debt) that both inflates in line with the RPI indexation on the RAV, and maintains more readily the gearing percentage, without the need for frequent additional borrowing.

The decision of Ofgem to move to a CPIH based framework was outside of the control of licensees and it could not have been foreseen at the time debt structures were put in place. As this is a regulatory change outside the control of management, signalled well after the RPI linked framework was put in place, we believe that it should be applied to each licensee according to the actual level of RPI linked debt held. This would be at no overall cost to GB customers, only a reapportionment of the allowance between networks, given that the sector cost is already included in the proposed settlement.

### (2) Meeting the additional costs of Infrequent Issuers

We engaged Frontier Economics<sup>15</sup> to analyse the additional costs faced by smaller networks compared to larger licensees and network groups.

Frontier Economics demonstrate that the financing cost for smaller networks is systematically higher than for the larger companies, that can raise larger amounts of debt more frequently at above-benchmark size. This point was accepted by Ofgem at GD2.

This structural difference in financing costs was similar for both *small frequent issuers* and *small infrequent issuers*, such as ourselves.

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<sup>15</sup> Transaction cost premium for infrequent debt issuers' *Frontier Economics*, September 2020

This systematic bias, without adequate compensating mechanisms, will always lead to unfair outcomes for smaller companies whilst the notional “average” company is funded appropriately.

### **(3) Balancing the financing risk across the sector**

Risk and reward sharing mechanisms are embedded throughout the RIIO-2 regulatory framework – the Totex Incentive Mechanism (TIM), Uncertainty Mechanisms (UM), the Return Adjustment Mechanism (RAMs) to name but a few. They are a fundamental part of regulatory policy.

The one material area where they are not employed is in respect of debt performance. While Ofgem consulted on the potential introduction of debt performance sharing mechanisms in the GD&T2 Sector Specific Methodology Consultation (SSMC), it was ultimately rejected.

The decision focused on the problems associated with such a policy. While the noted objections have some validity, we believe that the consultation decision did not attach enough weight to the material benefits associated with a risk sharing mechanism at a time when a sector is required to grow rapidly to respond to the requirements of a Net Zero future.

Most importantly, we believe the current policy creates a structural risk differential for some networks compared to the Notional company.

The proposed debt allowance mechanism, coupled with the large movement in interest rates, disproportionately exposes less frequent issuers to the risk of timing – of having to issue debt (either for refinancing or for investment) at periods where interest rates are high compared to what they will be in the future.

This is an issue that needs to be addressed through a risk balancing mechanism to ensure that risks are equal between networks, and the Notional company, after appropriate adjustments, reflects the innate circumstances of each licensee. Potential mechanisms to regulate risk include an overall sharing factor applied to debt performance, which could either be applied across the sector and/or tailored to balance the risk between licensees, and/or a time-weighting indexation approach, which would transfer the risk of issuance timing, which licensees in general and less frequent issuers in particular are unable to control or mitigate, to customers.

### 3 The Equity Return

- The rate of return proposed by Ofgem in the SSMD has been set at a rate that is too low, and, as a consequence, the risk that equity finance will not be available to support the business plan, is too high, judged in the light of the detriment to customers of a consequential delay in investment.
- Equity investors commit to the networks for multiple price control periods. As the returns to equity are reset for each price control period, it is important for investor confidence, that the resetting of the equity return is achieved with a fair outcome that meets the risk/reward trade off that all investors make. Damaging this investor confidence over time will lead to increased costs to customers in the long term.
- Ultimately the equity return setting process for a price control period has to reasonably ensure that the licensees are able to attract the equity needed to support network investment throughout that period. This financeability assessment needs to balance up the short-term bill impact with the potential detriment caused to customers if the business plan is not financeable.
- We have reviewed the proposed underlying assumptions that Ofgem has used to create its SSMD working assumption of the allowed equity return of 4.40%. This analysis forms the majority of this section and was largely prepared in advance of receipt of the CMA's detailed final determination of the GD&T2 appeal.
- By consideration of a range of equity allowances that align with key principles and thresholds, we conclude that the proposed equity return is too low, and it does not adequately reward the risk inherent in the sector. This range, which runs from 4.65% to 5.81%, with reducing risk of the plan being unfinanceable, is set out in Table 3.1.
- The dividend yield is an additional important consideration in equity investment decisions. We note that, as a consequence of higher forecast network investment in ED2, and, in our particular instance, material underfunding of our debt costs, dividends will be curtailed in ED2 and this is a further factor to consider in setting the cost of equity return.
- In this Annex, we discuss in detail the issues we perceive with the proposed equity return allowance.

The majority of the analysis contained in this section was prepared in advance of 1<sup>st</sup> November 2021, when the CMA published its detailed final determination on the GD&T2 appeal.

As we have not been a formal party to the CMA's proceedings, we had not been able to see any of the detail of the CMA's thinking, or its exposition of the views expressed by Ofgem or the other parties, before that point. The timing of the publication of the CMA's decision, and the date for submission of our final business plan, means that we have not yet had the opportunity to fully consider and reflect the detail of the CMA's findings.

As a consequence, we include the analysis as prepared prior to November without material modification. We accept that certain aspects may have been considered and rejected by the CMA in the GD&T2 appeals and we reserve the right to reconsider our positioning with respect to certain points following further analysis of the CMA findings.

We will continue to consider and analyse the detail over the coming months and look forward to continuing to engage with Ofgem in this regard.

As a consequence, we have not included a recommendation for a single target cost of equity allowance and instead consider a range of equity allowances that would align with key principles and/or thresholds.

### Oxera's analysis for the ENA

As noted above, getting the right balance between risk and reward is critical to maintaining investor confidence and attracting and retaining the patient long-term capital required in the business.

Over the past two years, the energy networks, through the Energy Networks Association (ENA), have worked with economic consultants, Oxera, to look at how the risk/reward balance should be assessed and how the allowed equity return should be determined.

A series of papers have been prepared for the ENA, addressing the critical questions arising from the RIIO2 consultation process. Each paper has constructively challenged Ofgem's methodological process and its evaluation of components. Valid, alternative evidence-based methodological and calibration approaches have been presented in respect of the cost of equity parameters.

We fully support Oxera's approach and its recommendations.

Following the ED2 Sector Specific Methodology Consultation and the subsequent SSMD, the ENA have asked Oxera to refresh its analysis. The updated report<sup>16</sup> recommends the following allowed equity return ranges which reflect updated market data and result in an allowed equity return range of 5.81% to 6.87%:

**Table 3.1: Oxera's summary of RIIO-2 Cost of Equity estimates**

	Oxera 2020		2021 update		Change	
	Low	High	Low	High	Low	High
Real TMR (%)	7.00	7.50	7.00	7.50	-	-
Real RFR (%)	-1.00	-1.00	-0.93	-0.93	0.07	0.07
ERP (%)	8.00	8.50	7.93	8.43	-0.07	-0.07
Asset beta	0.38	0.41	0.37	0.40	-0.01	-0.01
Debt beta	0.05	0.05	0.05	0.05	-	-
Equity beta at 60% gearing	0.88	0.95	0.85	0.93	-0.03	-0.02
<b>Real CoE at 60% gearing (%)</b>	<b>6.00</b>	<b>7.08</b>	<b>5.81</b>	<b>6.87</b>	<b>-0.19</b>	<b>-0.21</b>

Note: All figures are presented in CPIH-real terms and do not include a 25bp downward adjustment for expected outperformance as proposed by Ofgem.

Source: Oxera analysis.

Consistent with its prior papers, Oxera has approached the cost of equity assessment in line with the step-by-step approach taken by Ofgem, substituting and critiquing Ofgem's component calibration as appropriate, in three stages:

- **Stage 1** – The determination of a Capital Asset Pricing Model (CAPM) derived cost of equity based on reasonable assumptions for TMR, RFR and beta, grounded in economic rationale and sound empirical analysis;

<sup>16</sup> The cost of equity for RIIO-ED2, Oxera, June 2021



- **Stage 2** – A critique of Ofgem’s selected cross-checks on the CAPM outcomes; and
- **Stage 3** – Consideration of Ofgem’s proposed allowed vs the expected adjustment - UKRN has advocated that an adjustment to the allowed return could be justified due to information asymmetries. Ofgem has therefore proposed a 25bps adjustment down from its mid-point estimate. Oxera, and others, including ourselves<sup>17</sup>, do not agree with this adjustment.

Following the same three-stage process, we set out below the key issues with Ofgem’s proposed equity return and why we believe it to be insufficient:

### Stage 1 – Capital Asset Pricing Model (CAPM)

*The section below covers our assessment of the key CAPM assumptions. We note that many of the points raised below have been considered and commented upon by the CMA in the recent Energy Appeals. Although the CMA went on to find that, overall, Ofgem’s decision on equity returns was within its “range of appreciation”, best practice would indicate that Ofgem will consider again in detail observations in respect of the individual components in formulating its ED2 decision. In setting ED2, unlike Ofgem or other involved networks, we have not yet had opportunity to fully consider the detailed CMA findings and therefore to amend our position, if appropriate.*

- a. **The Risk-Free Rate (RFR) - Ofgem’s approach to setting the RFR is inconsistent with finance theory and results in an outcome that is too low.**

Ofgem’s estimation of the RFR is based on the spot yields on index-linked government bonds.

Modigliani-Miller corporate finance theory requires that the WACC should be invariant to the level of gearing. Ofgem’s assumptions for the CAPM inputs result in a positive relationship between WACC and gearing, thereby contradicting this long-established theory. *This is a strong indication that Ofgem’s approach may have an inherent problem.*

Oxera<sup>18</sup> has considered the root cause of this issue and has identified that Ofgem’s ILG spot rate approach is both incorrect and inconsistent with prior regulatory precedent. There are two key factors:

1. The CAPM assumes that all investors can borrow at the same RFR. It essentially assumes that all investors can borrow at the same RFR as Government. However, in reality, even investors with the highest creditworthiness face significantly higher borrowing rates than those faced by the government; and
2. The convenience premium - Government bonds have special properties that create excess market demand, i.e. there is more demand from purchasers for Index Linked Government (ILG) Bonds, than there is supply available. For example, pension funds are motivated to get a perfect match between their liabilities measured against inflation with ILG bonds. This excess market demand has the effect of pushing the bond yield below a normal market-clearing price based purely on risk-free cash flows. This is referred to as the “convenience premium”. Observed government bond yields are therefore lower than the RFR that is relevant to the pricing of equity.

<sup>17</sup> Incentive implications of OFGEM's outperformance wedge, Frontier Economics, April 2021

<sup>18</sup> The cost of equity for RIIO-ED2, Oxera, June 2021

To overcome these issues, and determine an appropriate range for the RFR, Oxera has proposed the following approaches:

1. Adjust to add a value equivalent to the convenience premium to the ILGs; or
2. Estimate the RFR using AAA bond yields making suitable downward adjustments to adjust for any expected loss and the liquidity premium.

The most recent regulator pronouncement by the CAA for Heathrow airport supports the use of AAA non-government bond yields in estimating the RFR:

*“We have not been able to establish a superior index on which to base an estimate of the risk free rate. However, as we have previously indicated, we nonetheless consider that ILGs exhibit a “convenience yield”, which means that they are likely to understate the “true” risk free rate. In the absence of a superior means of estimating this convenience yield, we continue to consider that it is appropriate to place some weight on the iBoxx non-Gilts AAA-rated 10+ years and 10-15 years indices, in line with the CMA’s approach to PR19. While we are aware of drawbacks associated with these indices, we consider their use to be preferable to relying exclusively on ILGs.”<sup>19</sup>*

As noted by the CAA, the CMA stated in its PR19 final report<sup>20</sup> :

*“We note that evidence provided on both the presence of a convenience yield within ILG yields and on market RFRs with different borrowing and lending rates suggest that the appropriate RFR for our CAPM is likely to sit above the ILG yield”<sup>21</sup>*

and concludes to calculate the RFR:

*“... by placing weight on both long-tenor index-linked gilts and AAA-rated non-government bonds (the highest quality commercial debt) and taking into account up-to-date market data”<sup>22</sup>*

### **Our conclusions on RFR**

Ofgem’s decision to use the ILG spot rate as the RFR results in CAPM observations that contradict Modigliani and Miller’s finance theory. This is indicative of there being a problem in the dataset. Oxera has proposed a rational and reasonable solution to resolve the issue, as indicated above. Use of AAA non-government bonds as a proxy for the riskless asset has been adopted by the CAA in its most recent Initial Proposals for Heathrow Airport<sup>23</sup> which is consistent with the CMA PR19 decision which acknowledged that RFR needs to include a weighting of AAA rated non-government bonds. We ask Ofgem to revisit their RFR calculation and consider adopting an approach more consistent with both the Oxera evidence and the CMA determination in the PR19 appeals.

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<sup>19</sup> Economic regulation of Heathrow Airport Limited: H7 Initial Proposals (Section 2: Finance issues) Section 9.127, CAA, October 2021

<sup>20</sup> Anglian Water Services Limited, Bristol Water plc, Northumbrian Water Limited and Yorkshire Water Services Limited price determinations: Final report, CMA, March 2021

<sup>21</sup> As above, para 9.264

<sup>22</sup> Anglian Water Services Limited, Bristol Water plc, Northumbrian Water Limited and Yorkshire Water Services Limited price determinations: Summary of Final Determinations, CMA, March 2021, para 85.b

<sup>23</sup> Economic regulation of Heathrow Airport Limited: H7 Initial Proposals (Section 2: Finance issues) Section 9.127, CAA, October 2021

## b. Total Market Return (TMR)

**TMR is too low** - for a significant portion of the historical period, CPI is only available on a modelled basis. The accuracy of this modelling cannot be ascertained and as such, we believe the modelled results should be disregarded in favour of more accurate observed RPI data. The Bank of England (BoE) advises caution in the use of its Millennium dataset of historical inflation assumptions<sup>24</sup>; while the Office of National Statistics (ONS) applies caveats to its own approach to estimating CPI (1949 to 1987) thus:

*“the method provides only approximate results and there is no way to determine how accurate our method is as sufficient data to calculate the CPI do not exist prior to 1987”<sup>25</sup>*

These issues, and the evidence highlighting them, have been raised on numerous occasions by the ENA with Ofgem during the development of the RIIO-2 price control.

Ofgem’s preferred approach to evaluating TMR is to estimate it by considering the historical long-run average of market returns. Ofgem consider this to be the best single objective estimate of investors’ expectations of the future. Additional consideration is also placed on forward-looking approaches. The broad approach is undisputed.

What is disputed, and represents an area of significant concern, is the interpretation and the use of inflation series to data to establish an historic TMR on a CPI basis:

1. The main area of concern is in respect of converting the nominal observed dataset into a ‘real’ CPI dataset.

There are two possible approaches to this in principle:

- a. adding the forecast RPI–CPIH wedge to RPI-real historical returns, restated using today’s RPI methodology; or
- b. deflating nominal returns by CPI inflation, adjusted for bias in the historical estimates of CPI.

Ofgem’s approach is more closely aligned to (b) in that Ofgem use a reconstructed CPI dataset to estimate the real CPI position back to 1900. However, the dataset used by Ofgem has, for a very significant part of the period, only had RPI as a measure. CPI as an inflation measure was only developed and recorded from 1997. Any estimates purporting use of CPI as far back as 1900 come with very significant uncertainty and are fraught with estimation issues.

This results in two challenges, namely (i) how to derive historical estimates of CPI and then (ii) how to remove historical bias, both of which result in high degrees of uncertainty in the outcome. The CPI estimates on which the approach is based were originally provided by the ONS but significant questions remain as to its replicability, technical robustness and reliability. These are considered in the latest Oxera cost of equity paper<sup>26</sup>

Given the significant issues with approach (b), Oxera advocate approach (a) and we support this view. The advantage of using RPI is its historic availability; the disadvantage is the known flaw in its calculation. Oxera’s recommended approach to overcome this disadvantage is to

<sup>24</sup> A millennium of macroeconomic data, Bank of England, Sept 2017, disclaimers

<sup>25</sup> Modelling a Back Series for the Consumer Price Index, January 2013, Office for National Statistics

<sup>26</sup> The cost of equity for RIIO-ED2, Oxera, June 2021

recreate the historical RPI measure, from the original data, but based on today's methodology.

Using this approach, Oxera find that *"The historical RPI series is not subject to the estimation error created by using a backcast of CPI and is therefore a more reliable basis for the purpose of calculating historical real returns to inform the estimate of future returns."*<sup>27</sup>

2. The second main area of concern is in respect of the conversion of the historic average to an unbiased market discount rate. Ofgem use geometric averaging with a subjective uplift to estimate the arithmetic average TMR. This approach sets a return lower than the actual arithmetic average, resulting in downward bias. Oxera argue that rather than applying a subjective uplift to a geometric average to address any potential concerns of serial correlation or predictability of returns, arithmetic averaging should be used directly. This is because there is no evidence of such concerns.
3. The third main area of concern regards historical consistency. Ofgem's findings are inconsistent with previous regulatory price control decisions. Ofgem acknowledged this in the GD&T SSMC document where they find the cross-checks to their TMR analysis, using different indexation and geometric averaging, support "...an estimate of TMR expectations lower than previous price controls"<sup>28</sup>. Given the dataset extends back to 1900, it suggests that either previous regulators had got it wrong on multiple occasions, or that something is now wrong with the current interpretation.

#### **Our conclusions on TMR**

Given the significant uncertainties involved in creating an historical CPI measure, we contend that it is better practice to estimate instead historic TMR by applying an RPI – CPI wedge to re-stated historic RPI numbers, as recommended by Oxera. This would serve to improve investor confidence in the regulatory regime. In order to ensure an unbiased discount rate, it would be preferable to use an arithmetic average, rather than applying a subjective uplift to a geometric average.

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<sup>27</sup> The cost of equity for RIIO-ED2, Oxera, June 2021, p23

<sup>28</sup> RIIO-2 Sector Specific Methodology, Ofgem, Dec 2018, para 10.42

### c. Beta

**Debt beta is too high.** The original debt beta estimate adopted by Ofgem of 0.125 was based on a CEPA report for the UKRN. This high estimate is also a contributory factor to Ofgem’s WACC calculation showing a sensitivity to gearing – contrary to Modigliani and Miller’s finance theory, and an indication of an underlying problem with the approach.

In analysing CEPA’s debt beta estimation approach, Oxera<sup>29</sup> demonstrated that the use of the spread decomposition method lacks robust theoretical support and relies on multiple uncertain parameters, whereas methods based on regressions (the direct and indirect methods) and structural models have the advantage of measuring the systematic exposure of debt to market risk. The evidence from the regression-based models suggested a debt beta estimate no greater than 0.05.

The PR19 CMA appeal final report found that a credible range was between 0.05 and 0.10. The midpoint at 0.075 was used to determine CAPM cost of equity.

**Equity beta is too low and does not reflect additional systematic risk of the Electricity Distribution sector.** Ofgem’s 0.76 working assumption relies on an estimation approach that includes water companies despite referencing on previous occasions that energy companies could be riskier than water<sup>30 31</sup>. Market evidence on beta supports the view that energy is riskier than water<sup>32</sup>, driven, in part, by the systematic risk uncertainties on the challenges of Net Zero as well as the DSO transition. This indicates that the equity beta for electricity distribution should be higher than water and potentially other energy sectors. In light of this evidence, Oxera, in its analysis, exclude water companies and include comparable European energy companies in their beta estimation analysis, concluding that the equity beta range is between 0.85 and 0.93.

**Our view on Beta:** The evidence continues to show that the debt beta estimate should be no greater than 0.05. Ofgem’s estimation of asset beta is downwardly biased by the erroneous inclusion of water companies in the sample set. Overall, with the exclusion of water companies and the inclusion of the more comparable European energy companies in the beta estimation analysis, the equity beta should be in the range identified by Oxera between 0.85 and 0.93.

### Stage 2 – Cross-check CAPM to market evidence

As set out below, it is clear that the wrong cross-checks have been applied in Step 2, compounding the downward bias in Step 1.

#### ***Ofgem’s position***

Ofgem has used information from infrastructure funds, offshore transmission bids, investment manager forecasts and Market-to-Asset ratios (MARs) to cross-check CAPM results to market returns.

In addition, Ofgem perform an overall WACC cross-check. In carrying out this check Ofgem found that, in using their assumptions on RFR and TMR, the WACC output was sensitive to the gearing assumption. This is referred to above. This is a direct contravention of long-established finance theory (Modigliani and Miller) and *strongly suggests a problem with the assumptions being used.*

<sup>29</sup> Estimating debt beta for regulated utilities, Oxera, June 2020

<sup>30</sup> RIIO-2 Draft Determinations: Finance Annex, Ofgem, July 2020, p46

<sup>31</sup> RIIO-2: Beta estimation issues, CEPA, July 2020, p5

<sup>32</sup> The cost of equity for RIIO-ED2, Oxera, June 2021

In its consideration of MARs, Ofgem observed:

*“We believe the MAR data both from public listed companies and private transactions is strong evidence that we have not derived a range for the cost of equity that is too low. Either UK regulators have set the cost of equity too high relative to the true cost of equity, and/or investors expect a degree of outperformance above the regulatory settlements. Our review of broker research over time shows that outperformance is embedded in their forecasts for the companies”<sup>33</sup>*

Ofgem’s overall step 2 market evidence conclusions resulted in its selection of a point estimate below the midpoint in the CAPM range.

### **Issues with Ofgem’s cross-checks**

We agree that CAPM should be cross-checked to ensure its outcomes are grounded in market evidence, but we strongly believe that these cross checks must use **appropriate** market measures. Ofgem’s choice of comparators have significant drawbacks and weaknesses giving rise to a downward bias that ultimately supports its low point estimate for equity returns.

Oxera has carried a review on behalf of the ENA and has identified significant issues with Ofgem’s choice of comparators:

- **Ofgem’s input assumptions for CAPM result in a WACC that is sensitive to gearing<sup>34</sup>, contrary to accepted finance theory**

There are two issues in the market measures used by Ofgem highlighted by Oxera in their report. Once these issues are corrected, it is highly noteworthy, the result of the re-gearing of beta reverts to that which is predicted under Modigliani and Miller’s accepted finance theory:

- i. The estimate of the cost of debt includes embedded debt; the Modigliani and Miller cross-check should only be used on new debt; and
- ii. Ofgem have set an erroneously low RFR by failing to uplift the spot rate for ILGs to account for the unique characteristics of sovereign bonds and the gap between corporate and sovereign risk-free financing rates (as noted earlier in this section).

**Our view on the WACC cross check:** It highlights a parameter estimation issue which should be corrected. The CAPM parameters should be appropriately recalibrated in line with Oxera’s recommendations.

- **The Market to Asset Ratios (MARs) cross check**

Establishing and evidencing a direct link between calibration of the allowed equity return and MARs is fraught with uncertainty for the following reasons:

- i. Estimates of the cost of equity based on a MAR are forward looking and based on assumptions that are significantly less reliable than the use of historical data;
- ii. Water companies MARs should not be taken as representative of the energy sector; the circumstances that give rise to a MAR are often complex and unique to

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<sup>33</sup> RIIO-ED2 Sector Specific Methodology Decision: Annex 3 Finance, Ofgem, March 2021, Section 3.60

<sup>34</sup> Are sovereign yields the risk-free rate for the CAPM? Oxera, May 2020

particular companies at given points in time. As such making a direct comparison between water companies and energy is highly unlikely to be representative; and

- iii. There are significant uncertainties associated with interpreting MARs.

Oxera submitted a paper to last year's PR19 CMA appeal<sup>35</sup> which provided evidence that water company equity market valuations can be explained by other factors, rather than by excessive allowed equity returns. Factors such as expected outperformance on totex, debt overfunding and incentive mechanisms along with the value derived from non-regulated businesses, legacy revenue adjustments, and expected takeover premia, were shown to be the main reasons behind MAR premia.

The CMA has also been cautious concerning the use of MARs. In the recent PR19 appeal CMA agree that *"On balance, we remain cautious about using market prices to determine the point estimate for the cost of equity or overall cost of capital"*<sup>36</sup> and conclude *"In the round, we do not consider any of the parties' MAR analysis to represent sufficient evidence to determine whether the CMA or Ofwat's cost of capital is more appropriate for the entire water sector, nor to arbitrate between an allowance that is at the midpoint or one that is 0.1% higher in WACC terms. As a result, we have therefore not given the MAR analysis significant weight in coming to a final view on the point estimate."*<sup>37</sup>

**Our view on the MARs cross check:** With so much uncertainty surrounding the use of MARs, we conclude that they form an unreliable basis upon which to place weight and that therefore no weight should be applied to them.

- **The Infrastructure fund discount rates cross check**

Ofgem reviewed the discount rates used by Infrastructure Funds in valuing their investments. Oxera has subsequently found that the asset composition of the funds selected by Ofgem is of lower risk than energy networks and therefore did not represent a valid cross-check. Oxera's analysis revealed significantly differing risk profiles.<sup>38</sup>

**Our view on the discount rate cross check:** To be put forward as a valid cross check, the composition of the investments funds must be comparable to the risk profile of the energy networks. Oxera's evidence has shown that this is not the case for Ofgem's sample of infrastructure discount rates. As a consequence, no weight should be applied to this cross-check.

- **The Offshore Transmission Owner (OFTOs) cross check**

Ofgem compared the returns of OFTOs as a cross check on the allowed equity return. Two key issues have been highlighted by Oxera with the use of OFTOs as an appropriate cross-check:

1. OFTO projects are operational assets with a very different risk profile compared to onshore energy networks and little or no ongoing investment requirement due to age profile of these assets. Any comparison of asset risk is likely to significantly underestimate the cost of capital for a network that undertakes capital and replacement expenditure in addition to operational

<sup>35</sup> What explains the equity market valuations of listed water companies? Oxera, May 2020

<sup>36</sup> Anglian Water Services Limited, Bristol Water plc, Northumbrian Water Limited and Yorkshire Water Services Limited price determinations: Final report, March 2021, para 9.1358

<sup>37</sup> As above, para 9.1362

<sup>38</sup> The cost of equity for RIIO-ED2, Oxera, June 2021

expenditure. In addition, the debt financing of OFTOs is typically put in place at the commencement of the project with maturity aligned to project length, thereby providing certainty of debt funding costs and little to no risk of equity being asked to subsidise debt underfunding.

2. Ofgem is using OFTO required equity returns as an upper bound comparator for setting the cost of equity. This contradicts the UKRN view that they should represent the lower bound<sup>39</sup>

**Our view on the OFTO cross check:** Once again, risk profile comparability against energy networks has to be a fundamental basis for inclusion as a cross-check. As a consequence, no weight should be applied to this cross-check.

- **The broker forecast cross check**

It had previously been highlighted in Oxera's 2019 report<sup>40</sup> that the TMR forecasts of investment managers have the primary purpose of providing estimates of future returns for clients. These forecasts are produced within an FCA regulated framework to ensure customers are not misled. This framework ensures that there will always be a prudent bias towards the estimates and that deriving meaningful comparison to energy network returns is highly problematic.

Their limited use has been further highlighted by the CMA recently in the PR19 appeal where the CMA indicate caution should be exercised in interpreting forecasts made by market analysts:

*"These estimates may also prove to be no more accurate than our {the CMA's} own assessment, or may be specifically tailored to particular investors or house views rather than representing the cost of capital demanded by the average or marginal investor in the sector."*<sup>41</sup>

Furthermore, the sample variance between investment managers and across time, and a change to Ofgem's investment horizon, gives rise to unstable estimates which do not provide for reliable estimates.

**Our view on the Broker forecast cross check:** There is too much subjectivity and inconsistent application for these to be valid cross-checks. This is an unreliable cross-check and no weight should be applied.

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<sup>39</sup> Estimating the cost of capital for implementation of price controls by UK Regulators, UKRN, March 2018, p172

<sup>40</sup> Review of RIIO-2 finance issues: Rates of return used by investment managers, Oxera, Jan 2019

<sup>41</sup> Water Redeterminations 2020: Choosing a point estimate for the Cost of Capital: Working Paper, CMA, Jan 2021, p22



### **Alternative cross-checks**

Given the uncertainty, lack of reliability and comparability issues identified above, we believe the following cross-check is more meaningful and relevant, and should be given more weight in validating CAPM outcomes to relevant market information:

- **The differential between the Asset Risk Premium (ARP) and the Debt Risk Premium (DRP):** This cross-check was included in Oxera’s report for the ENA in March 2019<sup>42</sup>, and subsequently developed further in its 2020 report.<sup>43</sup> The cross check seeks to compare Ofgem’s proposed cost of equity allowance with the pricing of risk for energy companies in the debt markets, where there are a good range of data points available.

It considers the excess return required by investors in return for providing capital to more risky assets (ARP) against the excess return required by investors in return for acquiring riskier debt (DRP). The positive differential should then be compared to an appropriate (ARP – DRP) benchmark which Oxera recommend should be derived from contemporaneous market evidence.

The approach has the following useful applications:

1. It is a cross-check to the cost of equity allowance;
2. It can be used to obtain conservative estimates of the allowed WACC; and
3. It can be used to assess financeability in a way that is neutral with respect to the treatment of inflation.

Oxera’s most recent assessment<sup>44</sup> found that the ARP-DRP differential implied by Ofgem’s determination for the GD&T networks, fell significantly short of the ARP-DRP differential expected from contemporaneous market evidence. Notably, the implied differential sat at the 15th percentile of the empirical distribution of market evidence for the six months preceding the publication date of the GD&T Final Determinations. Oxera has also tested the framework against other regulatory precedents and found that historical differentials have been far more aligned to the benchmark. The implication of Oxera’s work is clear: Ofgem’s proposed allowed cost of equity is too low.

The CMA considered Oxera’s ARP – DRP cross-check framework for the PR19 appeal stating that:

*“The Oxera analysis is based on what seems like a logical principle: that for a regulated business with capped returns, the cost of equity used in the WACC should still be assumed to remain sufficiently above the current cost of debt to promote equity investment in the sector.*

*We agree that this is conceptually sensible, and the principle that the ARP should be at a premium to the DRP is also potentially relevant to the choice of risk-free rate and the approach to de-gearing and re-gearing. However, we do not agree that the evidence provided by Oxera is sufficient in itself to justify an adjustment to the cost of equity. The calculation provided is itself based on a particular set of assumptions for ARP, which are different to those used in the CMA’s approach.*

<sup>42</sup> Risk premium on assets relative to debt, Oxera, March 2019

<sup>43</sup> Asset risk premium relative to debt risk premium, Oxera, Sept 2020

<sup>44</sup> The cost of equity for RII0-ED2, Oxera, June 2021

*It is unsurprising that the CMA's approach identifies a different ARP to DRP differential. In our view, given the number of assumptions required to estimate the ARP to DRP differential, the measure implied by the CMA's determination is of a sufficiently comparable scale to Oxera's sample that this analysis does not in itself suggest that we need to adjust the cost of equity."*<sup>45</sup>

The consideration of the ARP to DRP differential by the CMA reflects its usefulness as a sensible cross-check in setting equity returns and it should be used as a key sense-check by Ofgem

- **Financeability.** Another useful cross-check that was applied in the context of WACC was considered by the CMA in its PR19 Final report. It found that:

*"Our analysis of the cost of equity, including the ranges that result from parameter uncertainty, illustrates that the CAPM model could be used to derive a wide range of potential options for the cost of equity.*

*It is likely that the lower end of this wide range of estimates would ultimately result in ratios which are lower than necessary to support investment-grade credit metrics at the notionally-structured company.*

*The overall determination, in the round, needs to include a consideration of whether the WACC assumptions chosen are consistent with the credit rating assumed throughout the determination. We therefore disagree with Ofwat's submission that the need to maintain credit metrics can never be part of the WACC assessment."*<sup>46</sup>

This would seem to suggest that Ofgem needs to be able to demonstrate that its proposals for WACC are consistent with the ability of individual licensees to maintain an investment-grade rating in a stress scenario; a requirement that it has mandated upon us through our licence as being essential to protect the interests of customers in the long-term.

- **There is evidence that the one-factor CAPM model beta does not reflect the full level of risk faced by UK Energy networks.** Oxera's cost of equity update for PR19 CMA<sup>47</sup> found that the CAPM model tends to under-predict equity returns for assets whose equity betas are less than one. Their latest update<sup>48</sup> reiterates the issue. A separate report for National Grid<sup>49</sup> looked in more depth at the impact of political and regulatory risk and indicated that these can have an impact both on systematic risk (CAPM) and idiosyncratic risk (non-CAPM). Oxera has recommended that the best way to capture the non-CAPM risk in a CAPM environment is to aim towards the top end of the beta estimate range, something the SSMD assumption not done.

This single factor approach is particularly important for ENWL. We face additional risk as a consequence of:

- Infrequent issuers like us are more likely to be under-funded on the debt allowance, leading to greater variability in equity returns, as discussed in section 2;
- The compounding effect of new regulatory mechanisms (allowed v expected adjustment, RAMs, RPI to CPI, adjusting approaches to debt remuneration) alongside a reduction in

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<sup>45</sup> Anglian Water Services Limited, Bristol Water plc, Northumbrian Water Limited and Yorkshire Water Services Limited price determinations: Final report, March 2021, para 9.1386

<sup>46</sup> As above, para 9.1378

<sup>47</sup> The cost of equity for RIIO-2: Q4 2019 update, Oxera, Nov 2019, Section 3.4

<sup>48</sup> The cost of equity for RIIO-ED2, Oxera, June 2021

<sup>49</sup> Assessment of political and regulatory risk, prepared for National Grid Group, Oxera, March 2019

incentive opportunities has introduced a step-change increase to shareholder risk which has not been fully captured/recognised in this approach; and

- Smaller networks typically have higher operational leverage compared to the proxy companies used to estimate beta.
- These are as well as the additional risk associated with electricity distribution as a consequence of the investment required to support Net Zero and the transition to DSO.

These are examples of idiosyncratic regulatory risk and will be priced-in by investors but will not be included, and therefore not remunerated, under the current CAPM beta calibration.

Ofgem should add multi-factor modelling to its toolkit to cross-check the validity of the outcomes of the single-factor CAPM model. This will ensure risk has been captured and modelled appropriately.

**Our view on the suggested alternate cross checks not used by Ofgem:** The three cross-checks proposed above have a strong economic rationale and deliver empirical analysis that is both meaningful and relevant and we would strongly support their use in forming a balanced and credible cross-check of the CAPM outcome.

### Stage 3 – Allowed vs expected adjustment

Ofgem has introduced a new adjustment mechanism in its new RII02 price controls to address what it perceives to be information asymmetry between the Regulator and the networks. Ofgem states that information asymmetry has historically given rise to networks being able to outperform the allowed equity return. It argues that historical return outperformance evidences the existence of information asymmetry.

The basis of the new adjustment has theoretical underpinnings in the 2018 UKRN report <sup>50</sup> which, amongst other things, discussed the difference between the allowed return and the return expected by investors.

Ofgem concluded from its review of historical data, that a 25bps reduction in allowed equity is necessary to account for alleged information asymmetry.

In its proposed ED2 working assumptions, Ofgem has not only concluded that this downward adjustment is appropriate, but at the same time it has not aimed up or down within the cost of equity range determined by the CAPM. The net effect of these two factors has been to aim down within the CAPM determined cost of equity range.

We have strong concerns about the use of such an adjustment from a theoretical and empirical standpoint:

1. It creates risk for equity shareholders that is not factored in to the CAPM beta. Ofgem has based its assessment of future outperformance **on historical performance in past price controls**. These price controls were based on considerably different policies and calibrations, with potentially greater opportunity for incentive outperformance and without the investment risk associated with enabling Net Zero and the DSO transition. It is difficult to

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<sup>50</sup> Estimating the cost of capital for implementation of price controls by UK Regulators, Mason, Pickford, Wright, Burns, March 2018

understand how the read-across can be made and consistently applied. As a mechanism, it gives rise to concerns about future shareholder expectations and the uncertainty embedded into future price controls in how this mechanism may be calibrated.

2. It introduces further uncertainty by the inclusion of an ex-post compensating adjustment should the expected outperformance not be realised. This potentially creates cashflow risk as well as the uncertainty of the discretion of future regulators to award such an adjustment.

As we have previously set out in consultation responses, we believe that such a mechanism is unnecessary and can only lead to disincentives to invest at a time when investment for Net Zero is critical. Crucially, Ofgem is able to design a large range of performance sharing and uncertainty mechanisms that could manage any information asymmetry risk, should this exist.

### **Establishing a spot estimate cost of equity from a range**

The analysis conducted in the aforementioned three stages establishes a range from which a point estimate has to be established.

As mentioned in the Stage 2 Financeability section above the CMA final PR19 report noted that the CAPM model, with its ranges of parameter uncertainty, can be used to derive a wide range of potential outcomes for the cost of equity.

Ofgem's SSMD position maintains that a central estimate is the working assumption for business plan submission. For the GD&T determinations Ofgem considered three aspects to the aiming up argument framed in the context of the CMA PR19 provisional findings: aiming up to address asymmetry; aiming up to maximise consumer welfare or secure additional investment; aiming up to address financeability. In each case it highlighted the applicability of each point to the energy sector. Each is considered below:

1. It has been shown in two Frontier reports for the ENA<sup>51 52</sup> that aiming up in a cost of equity range:
  - a. Is an optimal regulatory response to the uncertainty inherent in estimating the cost of equity and the asymmetry of the consequences arising from setting the allowed return too high or too low, owing to the fact that it maximises societal welfare;
  - b. is common practice in UK regulatory regimes;
  - c. has been adopted by the CMA in its decisions, e.g. PR19<sup>53</sup>;
  - d. is evidenced by academic literature (eg. Dobbs<sup>54</sup>); and

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<sup>51</sup> Adjusting Baseline Returns for Anticipated Outperformance, Frontier Economics, March 2019

<sup>52</sup> Further Analysis of Ofgem's Proposal to Adjust Baseline Allowed Returns, Frontier Economics, Sept 2020

<sup>53</sup> Anglian Water Services Limited, Bristol Water plc, Northumbrian Water Limited and Yorkshire Water Services Limited price determinations: Final report, March 2021, para 9.1402

<sup>54</sup> Modelling Welfare loss Asymmetries Arising from Uncertainty in the Regulatory Cost of Finance, Dobbs, Feb 2011

- e. is supported by Mason, Pickford and Wright's model that aims up for new investments<sup>55</sup>.
2. Frontier illustrate that the proposed adjustment would penalise companies to outperform via a ratchet effect – the greater the outperformance in the current price control, the greater the clawback in future controls<sup>56</sup>. Companies have a diminished incentive to outperform and, as a consequence, customers are likely be worse off in the long-term.

## The Risk Reward Balance

Shareholders are willing to invest in a business in exchange for a fair return on their investment, proportionate to the risk faced by the company – the higher the risk, the higher return expected. Assessment of risk is therefore key to ensuring the risk/reward balance is achieved and appropriate equity return allowances are provided.

If the allowance is too high customers will pay more than they need to attract the necessary investment in the business. If the allowance is too low then money for investment in the business will be insufficient, risking deferment of investment and a delay in operational delivery. As a first step this might result in investment decisions being shelved or abandoned; a subsequent step could see a flight by equity investors.

It would be easy to categorise this as only a theoretical risk, but the PR99 experience as cited in National Grid Electricity Transmission's business plan provides evidence that this is a very real risk. Their case study<sup>57</sup> highlighted the issues to customers and investors alike following the imposition of a significant reduction in the PR99 allowed rate of return by Ofwat. The price control was seen as the cause of a flight of equity resulting in deferred capital investment, a general fall in water company market valuations below Ofwat estimations and, in the case of one company, financial distress.

The concept of financeability is equally applicable to both equity investors and debt investors; both should be considered separately and the returns for each should pass appropriate financeability tests on a stand-alone basis. Both equity and debt investment are critical to ensuring that networks have enough cash available to cover the day to day needs of the business, but crucially to support longer term investment and growth.

Equity investors, unlike debt investors, don't have a maturity or repayment date and, particularly in the utility sectors, they tend to hold investments over the very long term. Equity investors need confidence that the regulator will set fair price controls over many regulatory periods, and that they will receive a fair return for the risks they take in each price control. The more uncertainty shareholders have in this outcome, ultimately the higher the returns will need to be to attract investment in the sector.

This investor confidence is even more critical in the upcoming regulatory periods. Whilst, from a short-term bill perspective, it would be easy for Ofgem to reduce returns in order for customers to see larger

<sup>55</sup> Mason, Pickford and Wright also concluded that there should be a lower rate of return for sunk investments, although Frontier Economics consider that this conclusion rests upon an unrealistic level of myopia by investors to generate its conclusion and therefore should be disregarded.

<sup>56</sup> Incentive implications of OFGEM's outperformance wedge, Frontier Economics, April 2021

<sup>57</sup> National Grid Electricity Transmission RII02 Business Plan, Dec 2019, Ch15

bill reductions, once equity investors lose confidence in the sector, it would be expensive and take time to regain the confidence needed to attract new investment again. Delivering Net Zero carbon requires significant near-term, and long term, investment in the UK’s electricity distribution networks and it is critical that our ability to obtain equity finance is not hindered by setting equity returns too low. Failure to attract finance will result in our having to defer investment, in turn delaying the transition to Net Zero. Customers are keen to see us lead the way to Net Zero, so it is important for these returns to be set correctly<sup>58</sup>:

- *90% of stakeholders assessed the delivery of company outputs and the planned network investment as ‘Very important’ or ‘Quite important’*
- *“This is what we’ve all been working towards...”*
- *“If ENWL doesn’t invest appropriately it can have serious negative consequences down the line”*

Our conclusion, having reviewed and assessed Ofgem’s set of working assumptions and proposed ED2 cost of equity allowance of for the Notional company, is that 4.40% will be insufficient to address the investment, cashflow and financeability risks faced by shareholders.

In aggregate, the suite of assumptions used for the three-step cost of equity approach result in too low a cost of equity allowance that lacks appropriate risk/reward balance, against a backdrop of the importance to customers of maintaining and attracting essential investment needed both for business as usual investment and for Net Zero. It is also inconsistent with regulatory precedent where new, and highly subjective, concepts such as allowed vs expected adjustments (step 3) have been introduced.

For ED1, our agreed cost of equity was 6.0% (RPI real). We believe that the cash flow risks borne by licensees in RIIO-ED2 compared to RIIO-ED1 will significantly increase as a result of the compounding effects of tightening and restricting the financing allowances and potential incentive rewards. Given the pressing need to plan and invest for Net Zero we do not believe the overall ED2 proposal of 4.4% (CPIH real) is sufficient to retain and attract the required equity investment.

### Key reference points for equity returns

As noted earlier, we have not been involved in the GD&T CMA appeals into cost of equity. We have also only had limited time to digest and reflect upon the detailed CMA findings and will continue to consult with our advisors after the final business plan submission to understand the full suite of evidence considered by the CMA in reaching its conclusions.

We note that the appellants pointed out a number of issues with Ofgem’s analysis, although the CMA also concluded that the overall result was within Ofgem’s margin of appreciation. We expect Ofgem will be reviewing the findings and be incorporating the CMA’s observations on the inputs into its findings into its decisions for ED2, as part of its continuous improvement process.

At the same time, Ofgem will also be reviewing the CMA’s judgment and considering whether any aspects of its approach should be updated in light of the observations and evidence put forward during that process.


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<sup>58</sup> Electricity North West’s Plugged In Public Panel, Panel 8 report

As a consequence of the timing of the CMA publication, we have chosen not to propose a target equity return in this business plan submission.

However, we remain confident in our conclusion that Ofgem’s proposed equity return is too low. This is based on the observation that it is **below all our primary observed reference points**, set out in the table below:

**Table 3.2: Primary observed reference points for equity return**

Equity Return	Rate	Reference and rationale	
Reference point 1  Oxera Report for the ENA	5.81 %	As discussed in detail in this section, Oxera has estimated an equity range of 5.81% - 6.87%.  The 5.81% represents the bottom of this range.	
Reference point 2  75 <sup>th</sup> percentile of the Ofgem SSMD calculated range	4.99 %	This point estimate would be consistent with the CMA findings on GD&T2, but with an additional ‘aiming up’ in the range to reflect the relative risk of the sector versus GD&T2 <sup>59</sup> , plus both the likelihood of fresh equity requirements being required in ED2 and the potential of the detriment to customers if financeability is not delivered by the cost of capital determined by Ofgem.	
Reference point 3  Minimum equity return level required for the Notional company to attain a BBB+ rating under the base scenario	4.79%	As set out in Annex 28A Finance Section 7, this is the <u>minimum</u> level of equity return that results in the Notional company with the <u>baseline</u> level of investment attaining a 1.4x AICR (assuming no outperformance).  1.4x AICR is the <u>minimum</u> needed for a BBB+ rating under the Moody’s methodology. Whilst we would be concerned about the impact on the attractiveness of the sector with calibration based upon the use of a minimum level, and without factoring in the impact of higher investment requirements than baseline, this rate provides a useful reference point.	
Reference point 4  Ofgem SSMD calculated range	4.65%	The mid-point of the Ofgem calculated range.  This point estimate does not aim-up, but it does exclude the 25bps outperformance wedge adjustment in-line with the CMA findings on GD&T2.	

We note that the above table does not explicitly cover dividends. The dividend yield is an important consideration in equity investment decisions. To the extent dividends are curtailed in ED2, either as a consequence of higher forecast network investment in ED2, or, in our particular instance, material underfunding of our debt costs, this will factor into equity investment decisions and presents a further

<sup>59</sup> for example, the move to DSO and the additional investment uncertainty.

risk to securing financing. A higher equity return will help to mitigate this risk and aligns with the orange arrow of increasing confidence in financeability in the table above.

We reiterate that the level of financeability needs to be assessed against the detriment to customers if licensees are not, in practice, able to secure the finance required.

In Section 7, we consider how the above equity return levels, together with a range of adjustments to the Notional company allowance on debt, could alleviate the financeability challenges we face under Ofgem's working assumptions for the cost of capital, including its proposed debt allowance methodology.



## 4 The implications of keeping the proposed cost of capital approach

- We have identified financeability challenges using Ofgem’s working assumptions for cost of capital. These are set out in the main Business Plan document and Annex 28A Finance.
- Looking at the Notional company, the cost of capital proposed is insufficient to deliver an BBB+ investment grade credit rating and it has a real risk of further downgrade to BBB- in the event of any stress.
- We believe that the regulator should consider amending or adapting its proposed methodology, particularly in the instances where the policy threatens the financeability of the actual company. A sector average approach that results in a wide dispersion of debt over/under funding for reasons that sit outside of reasonable management control is a clear indicator that the approach requires modification.
- We also discuss the problems associated with requiring shareholders to subsidise debt under funding and we cover the implications of this policy in this section.
- In certain circumstances, for example where underfunding is a result of poor management decisions (i.e. inefficiency), there is an understandable economic rationale for that risk to remain with the company.
- However, to the extent that these are the result of a mechanism that fails sufficiently to take into account the characteristics of the licensee, and where there is any prospect of future efficiently incurred debt being materially underfunded, then regulatory confidence will be damaged.
- Given the importance of meeting the Net Zero challenge, the ability of the networks to attract both debt and equity investment to achieve this is crucial – investment delay would be very damaging to the ability of individual companies and the sector as a whole to meet that challenge. Consequently, it is important that the Notional company returns are set at a level that is, although not guaranteed, reasonably certain to obtain finance, commensurate with the detriment to customers of the reverse. With two major rounds of Quantitative Easing, financial markets have offered declining and unprecedented low rates of interest for over a decade. With uncertainty surrounding the economic outlook, particularly regarding inflation and therefore interest rates, coinciding with need to decarbonise as quickly as possible, the Notional company cost of capital returns should be set at a level that comfortably meets the BBB+ rating and offers equity sufficient returns to be certain that the networks remain competitive in raising debt and equity finance.

### Introduction

As set out in this Annex, the Financeability challenges associated with our ED2 Business Plan are the result of:

1. a debt allowance policy that sets a single cost of debt for all licensees in the sector essentially based on the sector’s average cost and the characteristics of the Notional company. The Notional company is insufficiently representative of the actual characteristics of smaller licensees and more infrequent issuers, and therefore gives rise to differential risk between

licensees of structural over and under funding. Provided always that a licensee operates efficiently, then each licensee should have the same reasonable expectation that it will be adequately funded for its efficiently incurred financing costs over a reasonable timeframe and bear a level of risk, comparable with all other networks, of being under or over funded for debt costs in any one regulatory period; and

2. an equity return that is set too low and carries a significant risk to customers from networks being unable to attract the equity investment needed to deliver Net Zero. This risk is compounded by the risk that, as a result of the debt allowance policy, future equity investors could have to bear the risk of debt underfunding, on both historic and, very significantly, future debt issuance, potentially for a considerable timeframe, depending both on the pattern of future interest rates and the debt issuance timings/volumes of other networks.

We also note that economic circumstances, and particularly the prospect of interest rate rises, are different from the recent past. The cost of capital mechanism needs to ensure that the licensees remain equally able to secure finance for ED2; this is more crucial than ever given the level of the Net Zero challenge and both the concomitant level of investment, and the uncertainty of this level, to achieve this in the regulatory period. That the level of investment potentially required will reduce or eliminate dividend flows is another new factor to consider in the returns setting process. This lack of dividends reduces the attractiveness of the industry to pension funds, being major infrastructure investors, who often rely on the dividend streams from their investments to fund pensions.

We have considered framework changes as potential remedies to our financeability challenges and have recommended two actions for Ofgem to consider ameliorating the impact of these challenges:

- a **reduction in our regulatory capitalisation rate to 65%**, being 3ppt lower than our natural, statutory capitalisation rate; and
- **maintaining the notional gearing level at 65%**, in line with the ED1 level (which reduces the potential level of equity required to be raised).

These two measures, if incorporated into our business plan would result in an increase in our domestic customer bills of £2.35 per year, but this would still mean that on average domestic customers are paying £10.15 (11.3%) less than in ED1 (20/21 prices). This is against a backdrop of our customers having told us that they would be willing to pay an additional £9.80 to achieve our business plan, see Annex 1, Customer research findings, WTP & Triangulation for more information.

As explained in detail in our Annex 28A Finance Section 9, these two changes primarily time-shift cash flows and decrease the relative proportion of network financing provided by equity. They do increase the potential level of dividends to equity investors, the importance of which is noted above, although the proposed framework changes have only minimal impact on our underlying debt creditworthiness or our ability to attract new equity.

The proposed framework changes also improve our pre-financing cash flows in ED2 and eliminate the requirement to de-gear, providing us with some limited capacity to respond to shock events and a potentially more rapid decarbonisation strategy.

As such, while the cashflow benefits of these proposed framework changes are clear, it remains evident that, even with these changes, Ofgem's cost of capital proposals still appear to be insufficient to secure the financeability of our network (see Annex 28A Finance Section 9) – a further uplift to cost of capital is required.

## The implications of implementing Ofgem’s proposed methodology

Our business plan submission contains extensive detail on our financing structure and the extent of our financeability challenges (see Annex 28A Finance Sections 7 and 8). As we have explained above, we consider that Ofgem’s working assumptions for the cost of capital are too low, and that this could have significant implications if it is not addressed.

The regulator should seek to ensure that the cost of capital is set such that the risk of any network being unable to finance its activities (i.e. raise new finance) is sufficiently low, calculated against the harm caused to Customers, were this not to be the case. This risk to funding should, at the very least, be structurally the same between licensee groups. Otherwise the policy would create a risk of differential attractiveness of infrastructure investment, by region.

At one extreme, setting the cost of capital too low will almost certainly result, over time, in a network losing its investment grade rating and its licence. This would be catastrophic to investor confidence in UK regulated assets and would ultimately drive up required returns and customer bills. Whilst customers might be protected in the short term under the Special Administration Regime that ensures continuity of supply in the event of a DNO failure, in the long-term they would be impacted by the re-pricing of risk across the sector. Confidence that the level of returns being offered are reflective of the risks is key to long term investor confidence, and therefore the long-term costs to customers.

In order to achieve the balance between the short and long-term interests of Customers, the regulatory framework should take into account the following:

- **Cost to customers vs downside risk to customers.** The cost-benefit to customers of pushing the cost of capital lower needs to be balanced against the increased financing risk and its potential consequences. While it may be possible to fine-tune returns with only a modest impact on the financing risk, Ofgem has proposed a 37% reduction in allowed equity returns for ED2 – this has significantly increased the risk that networks will have difficulty in financing their activities. It has done so at a critical time for Net Zero.

As set out in Section 3, there are numerous estimates and data points used in the calculation of the required equity return. All will include some margin for error and equity returns are typically quoted as a range for this reason. The regulator therefore has a choice between proceeding with its ‘best estimate’ of the required return or building in a level of protection by ‘aiming-up’ within the range.

This decision will have a cost implication for customers but is analogous to an insurance policy against errors in assumptions or future movements. In context, were Ofgem to ‘aim-up’ within its calculated cost of equity range, instead of ‘aiming-down’<sup>60</sup>, equity returns would be increased by 59bps. This would result in an additional cost of 76p per year<sup>61</sup> to domestic customers but would come with significantly increased likelihood of the networks being able to attract the financing required.

We believe there is a strong case to support ‘aiming-up’ in a normal, stable environment. In the context of the upcoming price control, with Net Zero delivery being contingent on securing huge investment – we believe that it is essential.

<sup>60</sup> The proposed equity return of 4.40% is 25bps lower than the mid-point of 4.65%, reflecting the Allowed versus Expected adjustment.

<sup>61</sup> Modelled as the removal of the outperformance wedge (including removal 25bps assumed incentive performance) and an increase in the allowed equity return to 4.99%

- **Ratings drift.** The most immediate and certain impact of reducing cost of capital allowances will be rating pressures in the sector. This dynamic is evident in our financeability assessments, where we note that the Notional company would be likely to be downgraded to BBB/Baa2 in delivering our proposed ED2 totex plan. This is despite the planned reduction in notional debt levels to 60%.

The cost of capital allowance has been calibrated at a level which provides the Notional company with, at best, a borderline credit assessment at BBB+/Baa1 ***under a stable totex spend forecast***. As totex spend increases (as in our ED2 plan), the Notional company's rating comes under increasing pressure. *Put another way, as the requirement increases for investment to support Net Zero, the credit position of the Notional company deteriorates.*

Ultimately, this dynamic will likely result in numerous rating downgrades to the sector, which will over-time result in higher debt costs. Therefore customers, whilst they may have a short-term bill benefit, will likely end up paying more in the long term.

In fair markets, a BBB/Baa2 rated company can access debt markets. However, this assessment places the Notional company only two notches away from sub-investment grade. In a downside scenario this results in a now-not-immaterial risk of downgrade towards 'junk' status.

Providing networks with adequate financial headroom should not be viewed as "*paying excess returns to shareholders*". Instead it provides debt investors and customers, with a degree of protection against adverse developments. We note that the support provided by networks to suppliers during COVID was possible due to the overall ED1 settlement. If there are no changes to the ED2 proposals, the capacity to repeat similar support in the future is likely to be severely curtailed.

Again, we believe the relative benefit of the short-term customer benefit obtained by setting the Notional company cost of capital at the margin needs to be weighed against the long-term credit implications for the sector and the risks and long-term costs to customers inherent with this.

- **Risk of underinvestment.** As noted in Section 2 above ED2 represents a pivotal period in the decarbonisation of the UK and delivery both of Net Zero by 2050, and the need to reduce emissions by 78% by 2035<sup>62</sup>. There is widespread agreement on the scale of investment needed to be made by DNOs, with the only uncertainty being the speed at which this investment is required.

It remains highly possible that sector spend in ED2 may need to be far more than baseline proposals to keep pace with requirements of GB customers. This would mean that new equity needs to be attracted into the sector, particularly once dividend flows are used up. That this new equity needs to be attracted into an environment where dividends have already been curtailed, and look likely to be curtailed beyond ED2, will make this task even harder.

For the ED2 price control period, the consequences of getting this wrong are higher than they have been in the past. In previous price controls, the implications of setting allowances too low has meant that the downside of an unattractive dividend yield for a period could be

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<sup>62</sup> <https://www.gov.uk/government/news/uk-enshrines-new-target-in-law-to-slash-emissions-by-78-by-2035>

revisited in future price controls, if the regulator saw evidence of patient capital moving out of the sector. For ED2 the risk is that equity cannot be raised and consequently investment is delayed, potentially impacting the EV rollout and delivery of Net Zero.

- **Interest rate risk.** Ofgem is proposing equity indexation for ED2, which will adjust returns for movements in the risk-free rate. This ensures that, as the interest rate environment changes, equity returns remain as attractive as they were when set, *all other things being equal*.

If interest rates do rise sharply - which is now forecast from the current historic lows<sup>63</sup> – the equity indexation mechanism would correctly conclude that equity returns would need to be higher to secure investment. An uplift of 24bps per 100bps increase in risk-free rate would be applied under the proposed mechanism. This would at least keep stable the differential in the equity allowance and equity returns from other potential investments that investors would be looking at in the future.

The flexibility of this equity mechanism is, however, severely contrasted by the proposed debt indexation methodology which trails on a 17 year look back.

Whatever the economic environment, licensees will need to refinance and raise new debt. In a rate reversion scenario, this could be at a cost that is potentially far higher than represented by the 17yr trailing average allowance. As such, a network will almost certainly be asking equity to subsidise debt underfunding, for an unknown period. At a time when higher returns are required to attract equity into the networks, equity will be being asked to subsidise debt costs. This subsidy would be required for ED2, and potentially for significantly longer, dependent upon the direction of interest rates (for example if they fell again) or the relative timings of others in the sector (for example if the average DNO issued debt slightly before a rate reversion). Such a scenario is a clear indicator that the mechanism is flawed.

These risks are exacerbated for those licensees that both issue debt less frequently and whose issued debt represents a smaller part of the sector average, thereby creating higher risks to equity investment returns in smaller licensee groups than larger licensee groups. Having such an unrewarded risk differential between licensee groups based on factors such as size or the timing of network investment plans represents a distortive impact on the sector.

The absolute level of capital allowances and the methodologies implemented need to safely secure financing in all reasonable scenarios, with an equal balance of risk between licensee groups.

- **Outlook for change.** The outlook for ED2 contains an unprecedented level of uncertainty, from the level of investment needed, to the impact of climate change, to macro-economic factors such as interest rates and inflation.

The cost of capital for ED2 needs to be sufficient to allow networks to access financing through to 2028. The level of tolerance provided in the cost of capital allowance must consider the potential for change in required returns over the upcoming price control period. While the proposed equity indexation provides some protection against movement in the risk-free rate, it covers one variable only. Aiming-up within the cost of equity range provides protection

<sup>63</sup> Bank rate is forecast to increase from 0.1% to 1.0% by Q4 2022, <https://www.bankofengland.co.uk/-/media/boe/files/monetary-policy-report/2021/november/monetary-policy-report-november-2021.pdf>

against both errors in its calibration in 2021 and the potential for change in other components through to 2028.

- **Interaction with other elements of the framework.** The removal of any tolerance or headroom when setting the equity allowance removes any capacity from equity to subsidise debt underfunding and still receive a return attractive enough to secure financing.

In addition, the safety mechanisms proposed to protect against exceptional returns, including the Return Adjustment Mechanism (RAM), also reduce the theoretical scope for subsidisation of debt by out-performance against other incentive mechanisms.

The legitimacy of incorporating a RAM in the price control is based upon the notion that equity should not be allowed to generate exceptional levels of outperformance. To make this assessment before debt performance is illogical as it does not reflect the actual return levels generated by shareholders. Its current design is therefore not aligned to its objective.

Setting the RAM at pre-financing performance, on the grounds that some networks will experience debt overfunding, and that this over funding (coupled with the RAM) reduces the incentive on them to seek operational outperformance, reflects the mis-setting of the debt allowance mechanism, rather than a logical justification not aligning the RAM with its objective of maintaining legitimacy of returns to equity.

The implications of revisions to other aspects of the price control should also be considered in the design of the methodology and approach for setting the debt allowance and the equity allowance.

- **Actual characteristics.** It is evident that every network has a different profile of debt issuance, giving rise to a different embedded debt cost and funding requirement during ED2. It follows simply that setting the same debt allowance for these networks will result in different equity returns for their shareholders for that period. In the main, the likelihood of differences from the average sector cost (and therefore the Notional company allowances) varies according to the size of the licensee group, as discussed below.

The variability of these actual outcomes can be seen in example 1 below, which illustrates how rational financing decisions can give rise to significantly differing funding results, depending upon the unforeseeable path of future interest rates. Setting a sector-average debt allowance could clearly result in one network having serious financeability issues, while another network receives an enhanced return over its actual cost of debt and therefore its customers pay significantly more than needed, for that regulatory period.

**Example 1*****An Illustration of the Impact of Unpredictable Future Events upon Investment Outcomes***

Network A and B both have £2.5bn RAV and £1.5bn of debt finance.

Networks A and B both raised finance in 2011. However, network A raised debt with a 20-year maturity (in-line with the asset lives/ depreciation policy at the time) and network B raised 10-year debt. Network B refinanced its debt in 2021.

The table below looks at the consequences of this original 2011 decision on the 2023/28 period.

All debt is assumed to be CPIH inflation-linked and at rates consistent with the iBoxx utilities index

	Network A	Network B	Sector-average
Debt finance	£ 1,500 m	£ 1,500 m	£ 1,500 m
Coupon	3.344%	0.202%	1.773%
Debt cost p.a.	£ 50.2 m	£ 3.0 m	£ 26.6 m
Allowance p.a. (calibrated to sector average)	£ 26.6 m	£ 26.6 m	£ 26.6 m
Debt over / (under) funding p.a.	£ (23.6)m	£ 23.6 m	£ nil
Debt over / (under) funding over ED2	£ (118.0)m	£ 118.0 m	£ nil

As a consequence of the sector-average approach, network A is faced with underfunding of £26.6m per year, resulting in a reduction of 0.5x on interest cover ratios compared to a funding neutral position, equivalent to a 3-notch downgrade in ratings impacts.

In contrast, network B customers are paying £118m more than needed to fund network B's efficiently incurred cost of debt.

While this example is simplified, the situation of network A is, in fact, not too dissimilar from the situation faced by ENWL in ED2. We have an estimated debt cost of 3.21% in ED2, against a sector-average calibrated allowance of 2.09% (being 1.84% iBoxx average plus 25bps to cover other financing costs).

Neither under funding nor over funding is desirable at a sector level. Any policy delivering these outcomes for individual networks, with such consequences, must be questioned, particularly when a number of different approaches could avoid this variation in outcome at no overall net cost to GB customers.

There are two elements to this scenario that are worth highlighting.

1. The Notional company is effectively a composite average of all licensee groups in the sector. However, not all groups are the same. Where the actual innate characteristics of each licensee/licensee group differ materially from the composite average, then adjustments to the Notional company approach must be considered. Unadjusted,

these differences give rise to structural under, or over, funding, which will not be reversed over time.

2. Even if these structural differences are ignored and it is assumed that each licensee has an equal chance of over or underperforming the average, the time horizon over which cumulative financing costs 'even out' across the sector could be decades, given the tenor of debt instruments. This in itself is problematic and undesirable. Persistent underfunding for a decade or more will have a long-term impact on investor appetite and credit ratings.

Again, this risk is different between network groups of different sizes. Larger groups, issue more frequently and are therefore more likely to meet an average sector cost over time. Equally, larger groups' debt forms a greater arithmetic component of the average. Both of these factors create a structural difference in the likelihood of material out/under funding against the debt allowance in any given price control period. If unadjusted, the sector average approach embeds these risk differentials between licensees and increases the volatility of equity returns for smaller groups.

Neither of these two elements are the result of management decisions or control; they are structurally related to the size of the licensee group.

An unadjusted sector average approach only works when the actual circumstances of each of the licensee group are sufficiently similar. In the event of significant over or under funding across networks, particularly over many years, then the sector average approach should be to be reviewed and modified accordingly.

Given the significant implications of the consequences of underfunding over a significant period of time, as described above, we believe that the Regulator should form a judgment as to whether any such under funding is arising as a consequence of inefficiency on the part of the licensee or as a result of structural differences between the Notional company and the actual characteristics of the licensee.

As a consequence, we believe that the regulator should consider the appropriateness of its methodology when setting the cost of capital, particularly in the instances where the policy threatens the financeability of the actual company. A sector average approach that results in a wide dispersion of debt over/under funding seems to us to be a clear indicator that the single Notional company debt allowance approach requires modification.

### **The problems with equity having to subsidise debt underfunding**

From an equity perspective, the one-size-fits-all approach to debt results in windfall gains and losses to shareholders regardless of the operational performance of the company. Companies with debt costs higher than average see the funding shortfall subsidised by equity, resulting in lower returns no matter how efficient they may be. This is unmerited and, most importantly, incompatible with good practice and investor confidence. It does not appear to protect the long-term interest of customers.

We have worked with Ofgem to ensure that Return on Regulated Equity (RoRE, essentially the real returns to shareholders) is reported after the impact of debt and tax under or overfunding, to ensure that stakeholders have proper visibility of all the returns to shareholders, rather than a partial view. We welcome this approach continuing.



In our specific case, equity investors will, in the absence of any change in the debt allowance, be again materially subsidising the cost of debt of the business, as they have been required to do in ED1. Were this to be the result of true inefficiency, this would be fair. Where, however, this is the result of the timing of debt issuance against market interest rates (notably in the context of a significant and unusually persistent fall in rates over the last decade), this cannot be in line with the long-term interests of customers. This regulatory review, more than any other, needs to give confidence to the market, ensuring that equity investors can invest in the sector confident in the risks that they are undertaking, confident in the regulatory environment and, overall, in line with Ofgem's Financing Duty.

We consider there to be four primary issues with equity holders being required to subsidise debt underfunding, namely:

- the debt funding position often reflects luck and/or systematic bias towards larger networks and groups;
- the reality that networks operate within a regulatory framework which deprives companies of the ability to defer investment in the face of economic uncertainty;
- the impact of time on investor perception; and
- the negative consequences associated with debt subsidisation in regulated companies.

Each of these is considered in more detail below:

**(1) The debt funding position often reflects luck and/or systematic bias towards larger networks and groups**

While company management and shareholders are better placed than customers to make financing decisions and manage finance risk, this has only limited effect in practice. Companies are essentially price takers in the global bond market and shareholders and management teams have no special ability to see the course of future interest rates or affect macro-economic factors.

Given the ramifications of debt underfunding on the attractiveness of future equity investment, we believe that the Regulator should investigate further and conclude on the reasons behind any licensee's underfunding position:

Firstly, the over/under funding positions of networks is more-often-than-not ***simply driven by the different profile of debt issuance timing between networks***. In example 1, network A is set to suffer severe financeability challenges in ED2 simply because it financed debt over 20 years. In contrast network B will benefit from windfall gains because it instead opted for 10 years debt maturity in 2011. In practice, such optionality may not exist – the tenor of an issuance is influenced by the willingness of investors to invest for the preferred duration at the time the market is accessed.

Network B has benefited due to the unprecedented fall in financing rates since the financial crisis. If rates had increased, network B would instead find itself with financing challenges. We would contend that this is not good management, it is simply fortuitous timing.

Making the recoverability of debt costs dependant on the timing of debt is likely to reduce the attractiveness of the sector to equity investment.

Example 2 below also demonstrates how a sector-average approach benefits larger networks and groups.

Firstly, as Group C represents 80% of the sector debt, the sector average debt is not mid-point between A and C debt costs (which would be 2.50%), but instead weighted heavily towards its group position and as such, it is at a much-reduced risk of being an outlier.

Secondly, as it able to issue benchmark sized debt each year, it is much easier to have a smooth debt issuance profile, again minimising the risk that it will be an outlier.

These examples serve to demonstrate the differential in risk between network groups arises from both the arithmetic impact on the average and the frequency of debt issuance. These are unalterable characteristics of the licensee groups, rather than any function of management decision.

We therefore conclude that the proposed sector average company approach imposes different levels of financial risk onto network groups according to their size.

#### Example 2

##### *Illustration of the Differential impact of Network Group Size on Outcome and on risk*

Network A is assumed to have adopted the same approach as in example 1. It has £2.5bn RAV and £1.5bn of debt finance at the start of ED2 having raised 20yr finance in 2011.

DNO Group C has £10.0bn RAV and £6.0bn of debt finance. It has raised debt in instalments spread evenly over the past 10 years, 2011-2021. To simplify the example, it is assumed that there are only these two groups in the sector.

All debt was CPIH inflation-linked and at rates consistent with the iBoxx utilities index.

	Network A	DNO Group C	Sector-average
Debt finance	£ 1,500 m	£ 6,000 m	£ 7,500 m
Coupon	3.344%	1.657%	1.995%
Debt cost p.a.	£ 50.2 m	£ 99.4 m	£ 149.6 m
Allowance p.a. (calibrated to sector average)	£ 29.9 m	£ 119.7 m	£ 149.6 m
Debt over / (under) funding p.a.	£(20.3)m	£ 20.3 m	£ nil
Debt over / (under) funding over ED2	£(101.5)m	£ 101.5 m	£ nil

Network A, influences the sector average by only 20%, whereas the sector average will be based off 80% of Group C's actual cost.

As a result of this, DNO Group C is charging its customers £101.5m more than it requires.

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## **(2) Networks operate within a regulatory framework**

It can be observed that companies operating in a competitive market must live with their financing decisions. To the extent that financing costs are higher or lower than competitors, it will affect the returns earned by that company's shareholders.

However, networks operate in a highly regulated environment, the benefits of which are seen through both increased ratings outcomes and lower equity costs. In such markets, investment timing is determined by the needs of customers. In other markets, were interest rates to rise suddenly, investment can and will be deferred until investment returns can be assessed with more certainty. This is not an option that should be open to DNO's, who need to continue to invest in response to customer requirements, and not shareholder risk/reward judgments.

The non-financing aspects of the price control, therefore, limit the ability of networks and management to adjust and respond to rises in interest rates. As such, the analogy with other commercial companies, which can delay investment in times of interest rate uncertainty, is not a directly valid comparison.

As a single licensee, we have to judge whether our debt issuance will be fully funded by future allowances, at the point of issuance. This judgement has (based upon the SSMD assumptions) to be made compared to the future issuances of the other 13 licensee areas (upon which we have no knowledge) and the direction of travel of future interest rates (of which we only have the present yield curve as a guide).

The importance of this judgment is exacerbated by the infrequency of issuance. A larger network is more likely to be issuing on a more regular basis, reducing the impact of any single issuance decision. This is not the case for smaller licensees and/or more infrequent issuers.

As such, we believe it is inappropriate to simply expect shareholders to take the full risk and reward of financing decisions in the business where the degree of management control may be limited and/or differential depending on the characteristics of the licensee. As with non-financing aspects of the price control, we believe there is a strong argument for risk-sharing mechanisms on debt, including possibly sharing factors or time-weighting of the index and inclusion of debt performance in the RAM.

## **(3) Impact of time on investor perception**

The notion that, any network, acting efficiently, will achieve the sector average cost over that same time, is an attractive proposition. We note that, where a network represents a greater proportion of the average, or has a greater frequency of issuance, the deviation from the average in any year, and therefore the time period in which it can expect to trend to the long run average cost is shorter than is the case with smaller networks.

It is in the nature of the tenor of debt instruments and the trends within market interest rate movements, that the period over which a smaller infrequent issuer will trend to the average will likely extend over multiples of price control periods. Bearing in mind the assessment horizon of ratings agencies, and the potential impact on the business both of ratings downgrades and of actual covenant consequences, the attractiveness of equity investment in smaller licensees is inevitably going to be influenced by long periods during which efficient incurred debt costs could be substantially underfunded.

By way of illustration, we forecast to be underfunded by approximately £95m in ED1, and are likely to be underfunded by approximately £90-95m in ED2. The position in ED3 will be

determined by the path of market interest rates in ED2 (and ED3), and the relative timings of our issuances, both compared to this path and compared to the timing of the other Network Groups

We note that we did not appeal the indexation methodology implemented by Ofgem in ED1. Whilst there was some expectation of underfunding on the debt allowance, we did not foresee the sustained and continuing fall in interest rates across period to the current (until very recently) unprecedented lows. In addition, supported by an appropriate equity return and incentivisation package, we were able at the time to accept the package ‘in the round’. This is unlikely to be possible in ED2, given the planned sharp reduction in equity returns alongside reduced incentive opportunities and heavy reliance on uncertainty mechanisms.

#### **(4) The negative consequences associated with debt subsidisation in regulated companies**

As outlined above, adopting the sector-average approach to the debt allowance can result in a material underfunding of debt costs, for long durations, particularly for the smaller networks, which, as they issue less frequently than the larger groups, are more likely to deviate from the average.

Networks also have restrictions around the non-financing aspects of the price control. If the underfunding position is not addressed directly through the debt allowance, then a licensee is reliant on shareholders to subsidise this position. This has the following implications:

- **Increase in financing risk.** Cash is diverted to service debt, reducing the amount available to be distributed to shareholders. Dividends represent the ‘shock-absorber’ for companies to deal with unexpected developments. They can be reduced in response to events, such as the impact of COVID on energy demand. However, once dividends are fully depleted, networks either need to raise additional debt finance (increasing gearing which has implications for tax clawback and covenants), raise fresh equity in stress circumstances, or defer investment.
- **Lowering of the threshold for equity injection.** For every £100m of network investment that is added to the RAV, equity is required to fund £40m (at 60% gearing). The distributions available to shareholders can be redirected into the business to support this network investment, but once dividends are fully utilised, fresh equity is needed.

This threshold is an important dynamic, as it means equity investors are no longer just accepting a reduced (or no) dividend payment but are instead required to raise funds themselves and invest into the network. Clearly an equity investor would look for higher return potential where dividend flows are constrained.

A large portion of investors in UK infrastructure are pension funds, attracted by stable dividend yields and lower volatility. The dividend payments are required to fund pensioner distributions. While a reduced dividend is problematic, the requirement for further investment completely changes the investment proposition – particularly if the equity requirement (and dividend restrictions) may be repeated, either in the current or the future regulatory price control period.

It means that the equity return set by Ofgem is put to the ultimate test – whether, in the circumstances prevalent in the market at the time, it is sufficiently attractive

compared to other investment opportunities. The absence of any tolerance or 'aiming-up' when setting the return increases the risk of it being insufficient.

For networks that are suffering debt underfunding against allowances, this equity funding threshold is attained at much lower levels of totex increases, potentially capping the ability of those networks to respond to elements of the price control captured by uncertainty mechanisms. Should those uncertainty mechanisms be designed in a way that at all delays cash flows into the business, then this threshold is hit even sooner and at greater scale.

- **Reduces confidence in the regulation of the sector.** A debt allowance methodology that leaves networks exposed to luck with timing and structural headwinds can only undermine shareholder confidence in the sector and, by implication, this then impacts equity return assumptions.

Debt underfunding cannot be dismissed as a "past mistake" problem. The proposed mechanism means that equity (especially in smaller networks) risks having to subsidise the costs of future issuances should these transpire over time to be higher than the average sector debt costs.

If an investor does not have confidence that allowances will adequately cover future efficiently incurred debt costs, they will require additional compensation for the risk that this may weigh heavily on their future returns (or in the ultimate, when combined with a downside scenario, result in a downgrade below investment grade level with the loss of licence risk). If the process for setting equity returns considers only the Notional company (making no allowance for any material divergence from the actual characteristics of any individual licensee) and contains no tolerance for error, then it is unlikely that this increase in the required return will be captured. Consequently, it follows that the design of the debt allowance mechanism must not distort the actual equity risk for each licensee, if there is to be an effective single equity returns allowance.

- **Changes the balance of risk between licensees** Having a single Notional company allowance, unadjusted for any network characteristics that are different to the average, changes the risk balance between networks, making investment returns in the larger operators (which are more likely to be aligned with the Notional company) more likely to be in line with the allowed returns over time. The risk associated with smaller companies, which are more likely to deviate from the average, will be greater. This latter risk is uncompensated.
- **Suppresses equity returns.** Subsidisation of debt costs reduces equity returns. The level of returns generated by the investment (and the likelihood of achieving this over each regulatory period) will influence the decision on whether to provide fresh equity.

In a theoretical scenario, it can be shown that incremental equity will receive the regulatory allowed return. However, this requires all shareholders to subscribe in-line with existing holdings. If a portion of the shareholder base refuses or is unable to invest and as a result outside investment is required, then the blended return level including debt subsidisation becomes more relevant.

However, this analysis ignores the fact that if the debt allowance methodology is unchanged and interest rates increase, any accompanying future debt finance (as in

the example of funding a high totex scenario) may lead to an immediate reduction of returns. This could be avoided if the methodology was instead weighted to time of issuance, giving greater certainty that future efficiently incurred financing costs would be met.

- **There is no quick fix.** Suggesting that shareholders restructure debt to solve the underfunding position both simply crystallises the problem and gives no certainty that the problem will not arise in the future. The best outcome for shareholders is that this simply changes the timing of the funding gap, at worst it incurs material friction costs and increases the cost further, leaving it more exposed to shock events and uncertainty mechanisms. Future shareholders will also have to factor the risk of such a restructuring event being required again, when assessing if future investment should be made.

In summary, automatically forcing shareholders to subsidise debt under funding, or buy out older debt because it is comparatively expensive, is problematic. Where this is a result of (and to the extent of) poor management decisions that can be avoided in future, there is some economic rationale. However, to the extent that these are the result of a regulatory mechanism that fails sufficiently to take into account the characteristics of licensees that differ from the average, and where there is a real prospect of future debt being materially underfunded, then regulatory confidence will be damaged. This does not mean that equity should not be liable for poor financing decisions, but rather that the definition of what is a “poor financing decision” should be more nuanced and judged, not with hindsight but taking account of the special characteristics of the licensee and its ability to influence the index used.

If equity needs to bear all the risk of the timing of issuance of debt - no matter how efficient its decisions are at the time - and that timing of issuance may, due to the size of the issuer and the frequency of issue, and the actions of others, result in a debt cost that is significantly higher than average, then we would contend that equity risk must vary significantly according to the size of the network (as noted above). Absent any other amelioration, the conclusion is that it would be riskier to invest in smaller networks than it is in larger networks.

### How do we address the issues?

For this Business Plan submission, we are not recommending a specific cost of capital figure as a remedy. This position reflects:

- **CMA Energy Appeals:** many of the issues addressed in this annex have been touched on in the CMA’s final determination in the RIIO-GD&T2 appeals. The detail of that decision was published for the first time only on 1 November 2021. As we have not been a formal party to the CMA’s proceedings, we had not been able to see any of the detail of the CMA’s thinking, or its exposition of the views expressed by Ofgem or the other parties before that point. The timing of the publication of the CMA’s decision, and the date for submission of our final business plan, means that we have not yet had the opportunity to fully consider and reflect the detail of the CMA’s findings, and our submissions in this annex must be read in that context. We will continue to reflect on the findings over the coming months with the support of our advisors and look forward to continuing to engage with Ofgem in this regard.
- **Uncertain funding requirements.** The scale of investment needed in ED2 is both unprecedented and uncertain. A more rapid decarbonisation trajectory together with upper estimates for the impact of the Access & Charging Review (ACR) could lead to an approximate £750m increase in spend (2020/21 prices) over our base plan. The equity investment to

support these scenarios is significant and cannot be delivered through dividend retention alone, even for the Notional company - fresh equity investment will be needed to support this growth. This is an atypical dynamic for UK Utilities and its dividend yield-expecting pension fund investor base. The cost of capital allowance needs to be set in such a way that the industry can be confident that it will be supportive of the need to attract future equity investment out to 2028. This is hugely important given how damaging the delay to future investment would be, particularly that investment required to meet the Government's Net Zero policy, coupled with the likelihood of a change in investment climate, especially with the risk of rising inflation leading to rising interest rates.

- **Uncertainty Mechanisms.** The design of the Uncertainty Mechanisms (UM) is not final. An inadequate UM design, together with retention of the current minimum 15-month price setting policy, could result in equity being expected to bridge both the debt funded and the customer funded elements of totex spend for up to 5 years. In addition, there is the risk that the UM structure is calibrated incorrectly or is asymmetric, where networks would be required to bear additional costs, but give up any savings or efficiencies. As outlined in Annex 28 Uncertainty Mechanisms and Annex 28A Finance, this could significantly increase the risk profile for networks. When combined with the scale of uncertain spend, the design of the uncertainty mechanisms themselves could have a direct impact on a company's ability and requirements to source equity and debt finance. We have submitted this business plan on the basis that the uncertainty mechanism design, yet to be determined by Ofgem, avoids all these issues and therefore does not compound existing financeability concerns, as set out in this annex.
- **Relative funding risk.** The sufficiency of specific return level to attract investment can only be proven when delivered. The outcome will be dependent on the circumstances at the time that new equity is required to be raised, including the relative attractiveness of UK infrastructure returns against those available globally. 'Aiming up' within an equity range would help to reduce the risk that networks would be unable to attract equity funding. The level of aiming up should be commensurate with the risk and impact of the potential investment delay, if funding is not available.

**Instead of proposing a specific cost of capital figure, we seek to work with Ofgem during the draft and final determination stages to explore further our actual financeability challenges and the options available to Ofgem for updating the cost of capital methodologies to address this financing risk, at minimal cost to GB customers. These are outlined in more detail in the following section.**

## 5 The rationale for a risk balancing mechanism on debt

- Risk and reward sharing mechanisms are embedded throughout the RIIO-2 regulatory framework, including the Totex Incentive Mechanism (TIM), Uncertainty Mechanisms (UM), the Return Adjustment Mechanism (RAMs). They are a fundamental part of regulatory policy.
- The one material area where they are not employed is in respect of debt performance. Ofgem has consulted on the potential introduction of debt performance sharing mechanisms previously. While it was ultimately rejected, we believe this decision did not attach enough weight to the material benefits associated with a risk sharing mechanism.
- In this section, we discuss the key supporting rationale for the introduction of some form of risk balancing mechanism on debt in RIIO-ED2 and conclude that it would be appropriate.
- We note that any risk balancing mechanism should be tailored to the size of the licensee groups. This would counterbalance the volatility of returns to equity in any given regulatory period, notably caused by different innate characteristics between the Notional company and networks of different sizes (and therefore different risks).

### The circumstances have changed

The financial crisis and unprecedented fall in interest rates, which together with the tendency of UK infrastructure to borrow funds at long dated maturities, means that there is a greater risk of some networks, especially smaller licensees, being outliers from the average position, and a greater likelihood of a material over/under funding position.

The experience of falling interest rates over the last ten years has revealed the differing structural exposure of licensees inherent in a single debt allowance approach. In theory, over time, companies, that issued longer dated bonds at interest rates which, with the benefit of hindsight may now seem high, will get the opportunity to issue long dated bonds at low interest rates and outperform in the future. However, the timescales involved in this pass over many decades, well beyond the returns analysis of equity investment. These timescales will tend to lengthen the less frequently new debt is issued.

This observation relates not only to the position of networks at the start of ED2 based in central forecasts, but also the range of potential outcomes in different macro-economic scenarios, such as rate reversion. The risk is as apparent for future issuance as it is for past issuance.

Each price control settlement is determined based upon the current known circumstances, and can be flexed to provide the desired outcome. Whilst precedent is helpful to achieving regulatory consistency, a strength of economic regulation is that methodologies can adapt to changed circumstances. Therefore, before any decision can be made to continue with an unmodified single debt allowance approach, the regulator should assess if this policy remains appropriate and/or has unintended and/or undesirable consequences.

We believe that Ofgem should consider the level of possible variance in the expected debt funding positions of networks both on the central case and under a range of plausible scenarios. A high degree



of variance from the average debt funding position would show that a simple sector-average approach (even adjusted for observed structural differences in cost such as infrequent issuance) would be a poor fit for networks with different characteristics from the notional/average network, potentially leading to financeability issues for some networks and windfall gains for others.

If this variation is shown to be correlated to the size of a licensee group, and/or any other uncontrollable characteristic of a licensee, then this should be weighted heavily by Ofgem against any desire to retain the certainty of regulatory precedent. This analysis will be complicated by the limited number of data points available, but this should not lead to a conclusion that, because it is difficult to do, the outcome should be presumed to default to a one-size-fits all approach.

We note that Ofgem has considered the 'fit' of its debt allowance methodology previously, resulting in an amended methodology being awarded to SHETL, recognising that its future investment programme would significantly influence its average debt costs, relative to a flat trailing average. This was, in effect recognising that the Notional company allowance for SHETL had to reflect the actual circumstances of SHETL because the profile of its issuances was significantly different from those of the unadjusted Notional company.

Only the Regulator will have visibility of all networks' business plans and models, and their forecast over or under funding on debt allowances, and therefore this is an analysis that ENWL is unable to perform. However, we do know that the current methodology results in an approximate £90-95m under funding for us in ED2 and that this underfunding would increase materially in a rate reversion scenario.

#### *The risk of being over/under funded is not the same for all networks*

The risk of being an outlier is greater for smaller independent networks than larger networks groups. Smaller networks can go through consecutive price controls being over or under funded and this can become embedded in the financing costs (through ratings), perpetuating the position.

The unmitigated Notional company approach creates more risk and volatility for the smaller licensees than the larger networks, as a consequence of the unavoidable characteristics of the smaller operators (including the risk of timing of issuance and composition of the average).

Smaller licensees, because of the need to conform to a benchmark sized issuance, issue less frequently than larger networks.

Larger companies, also have a greater influence on both the Utilities Index and the sector average. They are able to issue debt more frequently at or above benchmark size, and are therefore, more likely to match the movement in market interest rates over the trailing index, and therefore they are more likely not only to have more influence over the average but also to come closer to that average.

The use of the Utilities Index further compounds the effect on smaller companies because it is based on a small subset of utility only companies. This skews the average towards the larger utilities which are dominant in the index.

Infrequent issuers not only bear the additional structural costs noted by Frontier Economics<sup>64</sup>, but, if they also issue debt during a period of high interest rates, this issuance will have a more material impact on their weighted average debt costs, than it would do for a larger network.

Whilst all licensees can be lucky, with the benefit of hindsight, and issue when market interest rates turn out to be lower than the index, the reliance on chance should not, we would contend, be promoted as good regulatory practice. Luck increases equity investment risk, potentially to the long-term detriment of customers as risk affects the attractiveness of the sector to investors. This state is compounded if different licensees are structurally exposed to different levels of risk.

Infrequent issuers will find it almost impossible to match, or come close to, a rolling equal-weighted index and will therefore be more exposed to being at greater risk of being an outlier. To try to manage this risk by issuing debt on an annual basis in small tranches would result in the debt having little investor appeal (raising questions as to deliverability against a £1.5bn debt structure) and would consequently be at least more expensive. Even if this was possible, it would only be appropriate in a stable-RAV environment, such that size of the new issuances was comparable to the maturing debt. An equal-weighting index is a poor fit in a growing RAV environment (as is the case in ED, reflecting Net Zero delivery and the move to 45-year asset lives) and could effectively limit investment if companies were to prioritise matching the debt allowance.

In addition, like all networks, we are bound by our current debt structure, and the requirement to refinance issuances as and when they mature. This makes any ‘natural’ approach to restructuring our debt funding to match fully the allowance virtually impossible until at least the 2040’s (by when sufficient maturities will have taken place). The use of derivatives, to artificially create a similar economic outcome, might be theoretically possible but such a strategy would effectively lock-in our underfunding position and would consume hugely significant credit lines at a permanently increased cost level. It is not even certain that networks would have sufficient support from banking partners to deliver this type of structure.

Assuming credit lines could be obtained, there would remain the issue of how to maintain the structure’s alignment to future regulatory periods, noting the different mechanisms and indices used by Ofgem when setting the allowances for ED1 slow track, ED1 fast track, GD&T2 and the ED2 proposals. Furthermore, if Ofgem calibrates the allowance to the sector average, as it is now proposing to do, targeting any index and trailing period becomes far less relevant. True hedging can only be achieving by matching debt costs with the other 13 licensees, which would be impossible in practice<sup>65</sup>.

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<sup>64</sup> Transaction cost premium for infrequent debt issuers’ *Frontier Economics*, September 2020

<sup>65</sup> We have already discussed that this encourages issuance at shorter tenors (assuming a normal yield curve) and potential herding of policies, thereby moving away from true efficiency for customers

### *It is legitimate for there to be some risk sharing*

Networks are price takers in the global bond markets. Debt performance is not solely a consequence of 'good' or 'bad' management decisions, rather the key differentiating feature is simple timing of issuance – i.e. when networks raised their debt finance. While networks are to some degree better placed than customers to manage general financing risk, other than being able to issue more frequently (afforded to large companies only), any control over timing is very limited in practice, other than through deferral of investment. It follows that the debt markets and economic environment (both of which are outside the control of the company) are key drivers of debt performance and as such, it is legitimate to consider risk sharing of debt performance.

One of the key issues associated with the sector average approach is the relative impact that the debt issuance profile has on the debt funding position. The proposed methodology effectively assumes that debt was raised in equal amounts over the length of the indexation period, being 17-years for the current working assumption.

As outlined in Section 1, no two networks have the same debt construct. In addition, and as a consequence of smaller Regulatory Asset Values or independent status, some networks have a structural disadvantage in trying to match a smooth issuance profile.

As demonstrated later in this Annex (Example 1, Section 4), a simple decision to issue finance for 10 years rather than 20 years can have a disproportionate impact on the relative funding position of networks.

This cannot in any way be characterised as a 'poor management decision', nor should it be considered to be a 'bet' placed by management on future interest rates. It is simply a decision based on the information available and debt investor appetite at the time. As evident during the financial crisis, events can change quickly and two networks raising financing just a couple of months apart could be faced with drastically different choices.

The embedded debt profiles of networks are the result of these decisions, compounded over time. The majority of network debt is public bonds and this debt cannot be restructured easily. Even if it is possible to buyback the debt, it does not change the economics of the financing and the restructuring only crystallises its cost. As a result, the financing cost of networks is largely fixed, and under a sector average approach, they are rewarded or punished based simply on how their financing cost compares to their peers, effectively how lucky their timing compares to their peers. This is dynamic over which at least smaller networks have almost no control.

An overly simplistic approach, which characterises all financing decisions as being within management control and subsequently places all risks and rewards with the licensee, fails to adequately recognise the practical limitations and how these disproportionately impact smaller licensees. Licensees must raise debt at the point when investment is needed, or when refinancing is due. At this decision point, the licensees actually have very little choice or ability to change materially the overall cost – the choice of tenor for example may be determined, not by the licensee, but by the debt investors' willingness or desire to invest for longer/shorter periods of time. Larger licensee groups, because they issue more frequently, are less dependent than individual licensees, on the state of the market at any one time.

We also note that, where equity is asked to bear a risk over which it has no fundamental control, then, in order to attract and retain investment in the long term, these risks need to be reflected in equity returns. This was clearly recognised by Ofgem in formulating the RIIO framework: "*if there is a*

*commitment to remunerating efficiently incurred debt costs, it will facilitate a greater role for equity in the capital structure of regulated companies”<sup>66</sup>.*

#### **The requirement to attract investment to deliver Net Zero**

If there is no adjustment to the debt allowance, some smaller networks can end up being significantly over or under funded. This position is not desirable, and, for those networks that face significant financeability challenges, like us, the ability to raise fresh equity to support investment faces significant risk. This is a not simply a consequence of the underfunding position itself, but also the reduced confidence in a regulatory framework that leads to structurally different risk profiles for different licensees. There is significant uncertainty over the scale of potential investment required in ED2, from a quicker decarbonisation trajectory to the impact of the Access SCR, and any failure to attract equity when needed could have severe implications for delivery of Net Zero milestones.

In continuing to set a single cost of debt allowance rate for the whole sector, Ofgem significantly increases the risk of attracting investment to the sector, particularly amongst the smaller licensee groups at a time when the need for more investment to achieve the decarbonisation ambitions of GB is clear and pressing.

This risk increase will be accentuated when interest rates start to rise again, as equity investors cannot be certain that the licensee will have an allowance that will adequately cover the new debt costs, no matter how efficient they are in issuing the debt at the time.

We do not believe that it is in customers’ interests that the level of risk in investment decision making should be unnecessarily increased at a point in both the investment cycle and the interest rate cycle when the opposite should be true. At this unprecedented time of acceleration of the decarbonisation agenda, we believe that the regulator should be actively seeking to reduce risks that are beyond the control of equity to manage, to encourage investment, rather than causing hesitancy in the making of investment decisions.

The CMA has rightly recognised the critical need to attract investment into water infrastructure, including that required to mitigate against the impact of climate change. The CMA has acknowledged the risks to customers of underinvestment, which might arise if the cost of capital is set too low.

*“The broader concept of ‘promoting investment’ covers the overall willingness of investors to commit capital to the sector, and therefore to ensure that there is continuing investment in the water sector, not just in the specific investments identified in AMP7. Should the cost of capital be set too low and this led to an exit of capital from the sector, this would have an adverse effect on the sector’s longer-term attractiveness to investors. This would, in practice, be likely to result in a higher medium-term cost of capital and/or a risk to availability of finance for future investment. There are well-established arguments that underinvestment caused by a cost of capital being set too low damages the overall welfare of consumers (and potentially the wider economy) materially more than the welfare lost through bills that may be slightly too high.”<sup>67</sup>*

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<sup>66</sup>[https://www.ofgem.gov.uk/sites/default/files/docs/2014/07/riio-ed1\\_draft\\_determination\\_financial\\_issues.pdf](https://www.ofgem.gov.uk/sites/default/files/docs/2014/07/riio-ed1_draft_determination_financial_issues.pdf), para 2.31

<sup>67</sup> Anglian Water Services Limited, Bristol Water plc, Northumbrian Water Limited and Yorkshire Water Services Limited price determinations: Provisional Findings, CMA, Sept 2020, para. 9.667

As the CMA highlights, these systemic risks are materially more damaging than any welfare impact from bills being slightly too high. We agree that it is important to take steps to ensure investment in UK infrastructure, and in the electricity network in particular, remains attractive compared to international markets throughout the whole price control period, through allowing an appropriate level of expected equity returns.

The CMA has also recognised that this broader real-world view of investment incentives is intrinsically linked to providing adequate returns to investors: *“The main role of the cost of capital is to ensure that investors in a regulated business are given a sufficient incentive to invest (but not given a return in excess of that level”*<sup>68</sup>.

Clearly this is a balance between the short-term interests of customers in keeping near term bills low, with the long-term interests of customers in ensuring the investment that they need in the networks is made by attracting and retaining finance, at the lowest appropriate cost.

In this context, our forecast average customer bill for ED2 is £77.26 per annum, representing a £12.49 decrease (13.9%) over ED1. We consider an upper range for the potential bill impact associated with addressing our financeability challenges as £7.50<sup>69</sup>. Consequently, even at this point in the range, our customers would still see a significant saving of £4.99 per year (5.6%) over ED1.

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<sup>68</sup> Anglian Water Services Limited, Bristol Water plc, Northumbrian Water Limited and Yorkshire Water Services Limited price determinations: Provisional Findings, CMA, Sept 2020, para 9.180

<sup>69</sup> The two framework changes recommended would cost £2.35, with the upper range in respect of cost of capital options (as discussed in the Annex 28C Alternate Cost of Capital) would cost £5.15

*The practical and conceptual concerns can be overcome*

The key objections raised to a sharing mechanism in the GD&T2 SSMD related to concerns over how the debt performance may be impacted by factors such as financial policy, intercompany loans, derivatives and group-structure. We do not dispute these factors, we simply believe that they do not represent the key factors behind debt performance variance (i.e. issuance timing) and that it is easily possible for risk sharing mechanisms to retain the current benchmarking protection.

Regarding concerns raised in the GD&T SSMD in respect of the retrospective application of sharing, we note that all other aspects of the regulatory framework are 'reset' at the start of each price control – why should networks expect to carry inter-generational benefits on debt financing from one period to another?

Furthermore, to the extent that these concerns remain, a sharing factor (particularly one adjusted to the licensee size) remains a potent potential method of levelling the risks between the networks.

**A sharing factor could be applied across all licensees, at no overall cost to GB customers. However, it would be best applied differentially to level up the different structural risks of smaller licensee groups of not getting their efficiently incurred debt costs funded in any given price control period.**

Provided all debt is issued efficiently, all licensees should tend to the market average cost over time. As we have already stated, this time could be long. A sharing structure serves to reduce the extent of any over or underfunding in any given time period, rather than the long-term cost of debt to customers, which would still tend to be the market average cost over time for efficiently incurred debt.

Ofgem consulted on the potential introduction of risk sharing on debt performance in the GD&T2 SSDM. The policy was rejected on two key grounds:

- **Potential for distortion.** There is considerable scope for network companies' debt costs to be influenced by factors such as capital structuring, group activity outside the regulatory ring-fence, intercompany debt and derivatives. This could distort the fairness of sharing.
- **Retrospective sharing for previous decisions.** Any introduction of sharing would risk imposing retrospective sharing of risk for decisions that were made expecting no sharing of this risk and/or return. This may raise questions over regulatory stability.

We do not dispute the potential for distortion, but that, in itself, should not lead regulatory policy, particularly when there are serious implications of getting that policy wrong. We note that by calibrating the debt allowance to equal the sector debt costs, *GB customers would already be paying for the cost of this distortion (if any is indeed present).*

As set out in our submission, we consider that the key driver of over and under funding is timing of issuance. This is a characteristic over which management has little influence, particularly for those smaller networks that cannot issue debt frequently.

Through the Regulatory Financial Reporting Framework (RFPR) Ofgem already has access to granular information on network debt financing and can ascertain whether this is correct. Consistent with its

calibration of the debt allowance, there is no requirement to consider debt and financing flows outside the regulatory ringfence that do not affect the cash flows and risk of the regulated network.

We agree with Ofgem that derivatives do need to be considered in the assessment. The economics behind financing needs to be considered holistically to understand if there is distortion. As an example, in 2008/09, due to market dislocation during the financial crisis, we were unable to issue long dated inflation linked debt as planned and instead used an index-linked derivative and fixed rate bonds to deliver the same economic outcome. We believe that it is the economic outcome that needs to be considered, rather than the derivatives being disregarded and the economic outcome distorted. That element of our financing costs remains economically linked to the 2008 debt market, despite the subsequent refinancing of the fixed rate bond.

We also note that it is possible to implement risk sharing while retaining the benefits of external benchmarking. In Section 6, we discuss other options available to Ofgem regarding risk-sharing. One of these options is a time-weighted indexation policy – this would effectively share the issuance timing risk with customers, while retaining benchmarking and incentivisation.

Regarding concerns over retrospective application of sharing, we note that all other aspects of the regulatory framework are effectively ‘reset’ at the start of each price control – networks should not expect to carry inter-generational benefits on debt financing from one period to another.

Finally, we note that the introduction of a sharing mechanism on debt is aligned with the increasing use of uncertainty mechanisms proposed in ED2. Ofgem has removed the financial headroom in the settlement for the Notional company on the assertion that risk has been reduced. While we do not necessarily agree with this assertion, noting particularly the increased funding risk on a slow-acting uncertainty mechanism, adopting a debt performance sharing mechanism would appear to align with this general policy objective and direction.

## Derivatives

There has been considerable discussion about the complexity of derivatives and the regulatory burden to assess the efficiency of debt issuance. The CMA has expressed the view that *“in theory, it may be useful to count some derivative instruments when calculating an average actual cost of debt for a regulated sector”* and that the most useful to include would be *“those that are used to synthetically replicate debt instruments, such as index-linked debt – particularly when such approaches are used when useful debt instruments such as index-linked debt are not readily available in the size or tenor required”*<sup>70</sup>.

However, the CMA also notes that such an approach may be neither practical or desirable if companies *“use either more complex derivatives or use derivatives for other purposes”*<sup>71</sup> such as to time shift costs between regulatory periods for the benefit of cashflow management.<sup>72</sup>

<sup>70</sup> CMA final determination for RIIO GD&T2, Vol. 3 para. 14.250.

[https://assets.publishing.service.gov.uk/media/617fd092d3bf7f5604d83de4/ELMA\\_Final\\_Determination\\_Vol\\_3.pdf](https://assets.publishing.service.gov.uk/media/617fd092d3bf7f5604d83de4/ELMA_Final_Determination_Vol_3.pdf)

<sup>71</sup> CMA final determination for RIIO GD&T2, Vol. 3 para. 14.250.

<sup>72</sup> CMA final determination for RIIO GD&T2, Vol. 3 para. 14.252

We would continue to stress that where derivatives have been used to create index linked debt costs, the treatment of derivatives (and the underlying bonds) should mirror the regulatory treatment of economically equivalent index linked bonds.

Similarly, derivatives used to time-shift debt costs between periods to preserve financeability, in effect to support the deliverability of a business plan, should also be considered. The consequence of a single debt allowance policy has been to create underfunding and financeability issues in the past – where it has been in customers’ interests to defer some of these problems, these structures should also be considered.

As equity investors will always be bearing some risk of debt costs this sharing factor approach will maintain the required level of incentive to minimise cost. If consistently applied over regulatory periods, it would significantly reduce any incentive or need to time-shift costs between periods. As such, it would reduce the level of future regulatory burden, as all actual financial costs would be captured<sup>73</sup>.

### Conclusion

Combining these issues, we would therefore propose the introduction of a risk balancing mechanism on debt performance, to share the financing risks between customers and equity in any price control period.

We would propose that this risk balancing mechanism is tailored to the size of the licensee groups. This would counterbalance the volatility of returns to equity in any given regulatory period, caused by the factors noted in this Annex, notably caused by different innate characteristics between the Notional company and networks of different sizes (and therefore different risks).

An example of this under a simple mechanism would be that the under or out performance of the actual cost of debt and the allowance is shared between customers and equity on a 50:50 basis for larger licensee groups, and on a 75:25 basis for smaller licensees. We provide further details on our proposals in Section 6.

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<sup>73</sup> We also note our earlier comments on the need of licensees to set, and operate within, a Treasury Policy



## 6 Adjustments to the Notional company debt allowance

- This section considers the options available to Ofgem to address our concerns with the debt allowance methodology.
- If our concerns with the debt allowance are addressed, the differential financing risks faced by networks in the sector will be greatly reduced and the required equity return can be calibrated with far greater confidence that it will be sufficient to support the network investment needed.
- We make a recommendation for three adjustments to the Notional company approach, being (1) CPIH transition; (2) Infrequent Issuer; and (3) Risk Balancing
- There is wide flexibility in how these tools could be implemented by Ofgem and would strongly encourage their inclusion in the final determination.
- We consider that the most powerful option available to Ofgem is the use of a debt sharing factor to regulate risk in the sector and particularly to level risk between licensee groups.
- We look forward to working with Ofgem during the draft and final determination stage to solve the financeability issues highlighted in this section.

### Introduction

So far in this Annex we have outlined the concerns that we have with the current Ofgem approach and its potential implications for the sector and GB customers.

We now turn to the options available to Ofgem to address these concerns. We look forward to working with Ofgem during the draft and final determinations stages to find the right solution for ENWL and for its customers, both in their short term and long-term interests. We note that with the debt sector costs being largely funded as a whole, the potential solution does not have to result in a material increase to GB customer costs.

If our concerns with the debt allowance are addressed, the differential financing risks faced by networks in the sector will be greatly reduced and the required equity return can then be calibrated with far greater confidence that it will be sufficient to support the network investment needed.

We note the recent publication of the CMA findings into the GD&T appeal on cost of equity. While we have not had time to fully digest and reflect on these findings, we do note that simply aiming up in Ofgem's own range to 4.99% would cost an extra 76p per year for our domestic customers in ED2 (20/21 prices)<sup>74</sup>. In this context, our forecast average customer bill for ED2 is £77.26 per annum, representing a £12.49 decrease (13.9%) over ED1.

Together with our proposed framework changes discussed in Annex 28A Finance Section 9, we believe these updates *can significantly reduce the financing risks faced by networks in ED2, level up these risks between operators and ensure that networks can reasonably be expected to attract new equity*

<sup>74</sup> Modelled as the removal of the outperformance wedge (including removal 25bps assumed incentive performance) and an increase in the allowed equity return to 4.99%

***and investment in the sector (commensurate with the detriment to customers of failing to achieve this) but without customers overpaying.***

### Recommendation for Notional company adjustments

We believe that it is perfectly valid to start with a Notional company approach to setting debt allowances. We also agree with the broadly accepted principles that the Financing Duty does not oblige Ofgem to underpin the licensee for poor management and to fund inefficiently incurred debt costs. However, we believe that where that methodology results in, or creates significant risks of significant over or under funding, particularly over a number of years, Ofgem should consider whether adjustments are needed to that methodology and approach.

In proposing our adjustments, we have considered the following key objectives:

- **No net cost to GB customers.** The current approach provides the sector with its forecast debt costs, so an increase at an overall level is not required – simply a reapportionment.
- **Incentivisation.** The mechanism should retain incentivisation properties and encourage licensees to keep financing costs low (e.g. through issuance-market selection).
- **Easy to implement.** Any revised approach should be easy to adopt for the regulator, with minimal regulatory burden and complexity.
- **Financial risk control.** It should not reward networks for risk taking or inappropriate policies (e.g. short dated financing).
- **Responsive to events.** The mechanism should respond to material macro-economic changes, including a future rate reversion.
- **Confidence in regulator.** Investors need to have confidence that efficiently incurred financing costs will be capable of being funded by an appropriate allowance. Equity should only be having to subsidise debt costs where this is reflective of inefficient decisions – not when the need to invest or refinance has resulted in issuance at times which have proved, with hindsight, to have been relatively expensive.
- **Equality of risk.** It should take into account the relevant characteristics of each licensee in ensuring that they bear the same level of debt performance risk.

Any evaluation of the debt allowance methodology should include an assessment of whether the issues identified from its application arise from inefficiency on the part of the licensee. It should also consider whether the characteristics of the Notional company licensee are sufficiently representative of the characteristics of the individual licensee. This principle has already been accepted at GD2 with respect to an adjustment to the Notional company costs to take into account the additional cost of a smaller, and therefore less frequent issuing, licensee.

Our recommendation retains the notional sector-average company approach that Ofgem has included as a working assumption, but includes adjustments to address the issues we have outlined in this annex, notably those that arise as a consequence of the innate characteristics of the licensee. There are three elements, summarised in the table below:

Table 6.1: Adjustments to the Notional company allowance

Adjustment		Overview	Debt allowance proposal
1	CPIH Transition	<p>For ED2, Ofgem intends to use CPIH to index the RAV and to allow returns in real terms, moving away from RPI which has been used in previous price control periods.</p> <p>Ofgem has proposed a total cost of 10-15bps to manage CPIH-RPI basis risk and the additional costs of CPI issuance. This translates to +5bps uplift to all companies, based upon on the sector average percentage of RPI-linked debt at 30%</p> <p>We believe that this adjustment should be made in line with actual levels of RPI linked debt.</p> <p>The percentage of our debt that is RPI-linked is approximately 60% and the increased uplift to reflect this would be +5bps, based upon Ofgem calculations of the overall impact to the sector as an average.</p>	+5 bps uplift
2	Infrequent Issuer	<p>Smaller independent networks face structurally higher financing costs. Frontier Economics has demonstrated that both <i>small frequent issuers</i> (incurring higher transaction costs and illiquidity premia on below-benchmark issuance) and <i>small infrequent issuers</i> (incurring a higher cost of cash carry) incur higher costs than large issuers.</p> <p>Ofgem acknowledged this with an award of 6bps to NGN, SGN and WWU in the GD&amp;T2 determination.</p> <p>This award was based on the costs of new financing only, but then applied at 6bp across all debt, including embedded debt. We do not believe that this application is correct and propose that the infrequent issuer uplift should be provided to qualifying companies for all debt.</p>	+18 to 23 bps uplift

Adjustment		Overview	Debt allowance proposal
3	Risk Balancing	<p>A single debt allowance for the sector will always result in overfunding of some networks and underfunding of others.</p> <p>The unprecedented and prolonged fall in financing rates since the financial crisis, when combined with the tendency of UK infrastructure to raise finance at long dated tenors, has increased the probability of a network being an outlier and the likelihood that the funding gap will be material.</p> <p>In addition, this risk is not uniform across the sector, with large networks and groups likely to track much closer to the average - due to frequency of issuance and weighting.</p> <p>We contend that a risk balancing mechanism should be introduced, such as a sharing factor on debt performance or time-weighted indexation in order to better regulate and normalise this risk differential.</p> <p>In addition, it will moderate the undesirable consequences of overfunding and underfunding in the sector, retain incentivisation properties and reduce the funding risk associated with a rate reversion scenario.</p>	<p>Various</p> <p>A range of options are included for consideration</p>

### Adjustment 1 – CPIH transition

For ED2, Ofgem intends to use CPIH to index the RAV and to allow returns in real terms, moving away from RPI which has been used in previous price control periods.

To compensate the networks for the basis point risk involved and the additional cost of CPI issuance, Ofgem has proposed a 5bps uplift to the debt allowance, as part of the 25bps other financing costs adjustment. Given that this is a result of a regulatory change and is designed to compensate for an existing state of affairs, we would propose that the Notional company allowance be adjusted for the actual RPI debt characteristics of each licensee, at the point when this change is decided.

We have a higher level of RPI linked debt (bonds and composite) compared to the sector average (approximately 60% post-derivatives, compared to the Notional company assumption of 25%, understood to be broadly in-line with the sector), meaning that adopting the single adjustment approach overcompensates some and undercompensates others.

Not being part of a larger group, we have adopted a policy in which a high proportion of our debt funding is inflation linked. This reduces inflation risk as the cash interest payments matches the real debt allowance and the debt indexation matches the RAV indexation. This policy also allows us to maintain gearing levels without frequent inefficient incremental debt issuances.

The decision of Ofgem to move to a CPIH based framework was outside of the control of licensees and it could not have been foreseen at the time debt structures were put in place. Consequently, the compensation for the basis risk now introduced by Ofgem should take place on an actual basis, rather than a notional basis.

There needs to be no overall cost to GB customers as a consequence of this proposed adjustment, should it be applied across the sector, as this is the re-apportionment of the proposed overall sector cost, arising as a result of the decision of Ofgem to change inflation measures, to those directly impacted licensees.

**Table 6.2: Adjustment 1 checklist against key objectives**

Adjustment 1: CPIH transition		
No net cost to GB customers	✓	Met
Incentivisation	✓	Retained
Implementation	✓	Straightforward with minimal regulatory burden
Financial risk control	✓	Met
Responsive to events	n/a	Flat uplift in relation to existing characteristics
Regulator confidence	✓	Enhanced.
Fairness and risk	✓	Apportioned to those companies affected
ENWL debt allowance change above that proposed by Ofgem	+ 5bps	

## Adjustment 2 – Infrequent Issuer

The principle that the Notional company allowance should be adjusted for the additional costs borne by those smaller licensees that issue at below benchmark size or less frequently has already been accepted at GD2, in the award of 6bps to SGN, NGN and WWU for these costs.

This award was based on evidence provided to Ofgem by SGN and NGN in respect of the additional financing costs:

- **SGN** considered how a smaller network can mitigate the debt underfunding risk associated with issuance-index timing mismatches was through constant maturity swaps. SGN estimated the cost of the strategy as +26bps on the cost of future issuances.
- **NGN** argued instead that smaller companies could address this risk through issuing debt frequently at below benchmark size. NGN estimated the cost of this strategy at +15bps.

Both SGN and NGN proposed adjustments to the allowance in respect of new debt only. With new debt representing 23% and 40% respectively, this resulted in an uplift of 6bps for both companies when applied across the debt funded portion of the RAV.

In the GD&T2 determination, Ofgem agreed with the proposals, accepting the estimation of additional financing costs of between 15-26bps for smaller companies.

Fundamentally, we believe that the SGN proposal relates more to an additional cost of financial risk management for infrequent issuers, rather than a structurally unavoidable cost. We consider the risk associated with issuance-index timing mismatches is better addressed through a risk-sharing mechanism and we discuss this as part of our recommended 'Adjustment 3 Risk Balancing'.

Separately, we engaged Frontier Economics to independently consider the additional financing costs associated with being either a small **frequent** issuer or a small **infrequent** issuer compared to a larger network, or network group. Frontier Economics concluded that the smaller companies would incur a minimum of +18-23bps of additional financing costs versus larger companies.

Table 6.3: Additional financing costs faced by smaller networks

Company size	Small	Small	Large
Financing profile	Frequent	Infrequent	Frequent
<b>Key assumptions</b>			
RAV (£)	1800m	1800m	7000m
Debt issuance (£)	108m	324m	420m
Issuing frequency	Every year	Every 3 years	Every year
<b>Transaction costs</b>			
Illiquidity costs	15 bps	6 bps	6 bps
Issuance costs	15 to 18 bps	7 to 8 bps	6 to 7 bps
Cost of cash carry	1 bps	21 to 23 bps	1 bps
<b>Total transaction costs</b>	<b>31 – 34 bps</b>	<b>35 – 37 bps</b>	<b>13 – 14bps</b>
<b>Additional costs relative to large frequent issuer</b>	<b>18 – 20 bps</b>	<b>22 – 23 bps</b>	<b>n/a</b>

Source: Frontier Economics<sup>75</sup>

We highlight that the Frontier Economics estimate reflects the pure, unavoidable, structurally higher costs of being a smaller, independent licensee. It does not attempt to capture the relative risk or cost of risk management associated with either the frequent or infrequent strategies. It also does not cover the practicalities associated with delivering a small frequent issuer strategy, including whether sufficient appetite would be available when needed and whether there would be any potential restrictions on tenor, for example, in practice. We believe these factors may be significant obstacles to adopting this approach particularly given the upward trajectory on investment and debt financing requirements faced by the sector.

We consider that the findings of the Frontier Report are aligned to the general principles and higher costs accepted by Ofgem.

We disagree with both SGN and NGN, that these additional costs apply only to future debt issuances. If it is accepted that infrequent issuers incur higher financing costs, then this assumption must prima facie apply to embedded debt equally. If no separate allowance is made for these higher costs in embedded debt, then they are effectively shared across all networks through the sector calibration.

We do not consider this approach to be correct and our proposal is that the Notional company should be adjusted for the costs of the being an infrequent issuer for those affected for **both embedded debt and new issuances**.

We are unclear as to why SGN and NGN recommended this approach. It may be that SGN and NGN both expected to be fully funded with respect to embedded debt costs and that no further uplift was required for their embedded costs to be funded.

<sup>75</sup> Transaction cost premium for infrequent debt issuers' Frontier Economics, September 2020

Our estimate for the debt allowance change is aligned with the Frontier Economics range. It reflects the innate characteristic of being a smaller licensee, relative to the average licensee. The adjustment can be simply factored into the sector alignment compensation, ensuring that GB customers do not pay any more than the sector average.

**Table 6.4: Adjustment 2 checklist against key objectives**

<b>Adjustment 2: Infrequent Issuer</b>		
No net cost to GB customers	✓	Met
Incentivisation	✓	Retained
Implementation	✓	Straightforward with minimal regulatory burden
Financial risk control	✓	Met
Responsive to events	n/a	Flat uplift in relation to existing characteristics
Regulator confidence	✓	Enhanced.
Fairness and risk	✓	Apportioned to those companies affected
ENWL debt allowance change	+ 18 to 23bps	



### Adjustment 3 – Risk balancing

The basis for an additional risk-sharing adjustment to regulate funding risk in the sector is underpinned by the following principles discussed in detail in Section 2:

- (1) **There is a regulatory precedent for a single debt allowance with no risk sharing mechanism, but circumstances have changed, with the subsequent change in interest rates.**
  - Each DNO has a different financing profile, cost and refinancing requirement.
  - Setting a single debt allowance for the sector will always over-fund some networks and under-fund others.
  - The financial crisis and unprecedented fall in interest rates mean that there is a greater risk of networks being an outlier from the average position, and a greater likelihood of a material over/under funding position.
  
- (2) **The risk of being over/under funded is not the same for all networks and some networks are structurally disadvantaged**
  - The risk of being an outlier is greater for smaller independent networks than larger networks or groups.
  - Networks can go consecutive price controls being over or under funded and this can become embedded in the financing costs (through ratings), perpetuating the position.
  
- (3) **Fortuitous timing in issuing debt has an undue influence on financing performance. Some risk sharing is legitimate**
  - Timing of issuance drives the overall cost of finance. Management control over this is limited.
  - Networks are price takers in global bond markets
  
- (4) **The stakes are higher. Consequences of getting it wrong need to be balanced up with customers' interests in ensuring financing will be available over ED2.**
  - There is significant uncertainty over the scale of potential investment required in ED2, from a either decarbonisation or Access SCR changes.
  - Networks may have to raise substantial levels of equity in ED2 (dividends are already curtailed by the growth in baseline investment).
  - If returns are unattractive, investment could be delayed, impacting delivery of decarbonisation milestones.
  - Interest rate reversion would represent an additional risk, even at the sector-notional level.
  
- (5) **Practical and conceptual concerns can be overcome.**
  - The potential for distortion and a retrospective sharing of previous financing decisions are the key concerns regarding debt performance sharing.
  - We believe that issuance timing is the key driver of outperformance and that a level of risk sharing can be introduced while retaining benchmarking and incentivisation properties.
  - Networks should not expect to benefit from financing decisions for multiple price controls

To provide illustrative examples of how the Notional company could be adjusted for risk, we put forward four options for consideration by Ofgem:

**Table 6.5: Risk sharing impact of the proposed risk balancing adjustments**

Risk balancing adjustments		Risk sharing impact
1	Time weighted indexation	High
2	Sharing Factor	Moderate <sup>^</sup>
3	Close out mechanism	Low <sup>*</sup>
4	Post-financing RAM	Low

<sup>^</sup>Based on a 50:50 mechanism, could be adjusted

<sup>\*</sup>'Low impact' is based on sector-level adjustment, it could be modified to provide additional benefits at company level.

We note that these options are not mutually exclusive and elements of these options could be combined.

**Option 1 – Time weighted indexation or notional debt allowances, based off the pattern of issuance.**

Each network would receive a different notional debt allowance determined by reference to the issuance profile of its debt financing (a characteristic that it cannot change for its embedded debt nor for future issuances which are driven by investment requirements). In effect the Notional company would reflect the actual circumstances of the licensee at the time of the price control determination, i.e. factors that are beyond the ability of the management to alter.

There are numerous ways to implement this, example 3 sets out our suggested recommendation. In effect, this is very similar to the approach taken by Ofgem with SHETL, where the debt allowance was indirectly weighted to the issuance profile, indirectly in SHETL's case as the debt allowance was directly linked to the RAV value.

This Notional company approach, adjusted to actual circumstances, also has the advantage that it responds immediately and proportionally to changes in funding requirements and financing rates, unlike the proposed 17-yr trailing average which could leave networks underfunded on debt into ED3 and beyond in a rate reversion scenario. It also has the advantage that it significantly reduces the relative risk between small and large networks, of the current policy.

**Example 3:**

The table below shows Network D debt issuance profile at end of FY23, adjusted for the 'effective date of issuance'

Issuance date	Base £m	Effective date adj. £m	Final £m	% weighting
2005	500		500	20%
2010	-	250	250	10%
2012	250		250	10%
2015	500		500	20%
2018	250	(250)	-	
2020	500		500	20%
<b>Total</b>	<b>2,500</b>	<b>-</b>	<b>2,500</b>	<b>100%</b>

The debt allowance for FY24 would be based on prevailing iBoxx Utilities index for the effective date of issuance.

Issuance date	% weighting	iBoxx Utilities index (real-CPIH)
2005	20%	3.685 %
2010	10%	3.319 %
2012	10%	3.293 %
2015	20%	2.414 %
2020	20%	0.807 %
<b>Total</b>	<b>100%</b>	<b>2.042 %</b>
Allowance for other financing costs		0.250 %
Calibration adjustment		TBC
<b>FY24 allowance</b>		<b>2.292 %</b>

**Option 2 - Sharing factor**

A sharing factor assists to mitigate two aspects of the proposed Notional company approach.

Firstly, the risk to all licensees that there is a future market shift in interest rates, during a regulatory period, that is not reflected sufficiently quickly in the 17-year trailing index approach.

The Notional company, being based upon an average of sector interest rates, does not reflect the characteristics equally of all networks. In particular, the larger licensee groups structurally have significantly less chance of under (or over) performing the average sector cost of debt.

Secondly, a sharing mechanism also provides a risk sharing and incentivisation benefit with/to customers, aligning the debt risk to networks to their ability to manage the risk, providing less incentive to the networks to try to outperform the allowance in any regulatory period, at the expense of future periods.

The proposed sharing mechanism is in alignment with the regulatory precedent for other aspects of the RIIO regime, notably the Totex Sharing Mechanism.

As noted above, smaller, less frequent issuing, licensees face a greater risk that they will have to issue to finance investment or carry out refinancings of past investments at periods when interest rates are lower or higher than the average trailing index. This has applied in the past as well as applying in the future.

As smaller licensees constitute less of the average sector cost, their debt financings have less of an influence on the future alignments of the trailing index, resulting in greater risks of financings being out of kilter with the allowance.

The importance of incentivisation of debt cost reduction to customers has been frequently stressed, as has the actual level of influence over the cost of debt that the licensees possess, given the scale of the global bond market. The benefit of the incentivisation of licensees is only felt through the alignment of the allowance mechanism to the sector average debt cost every five years.

Ultimately, financing risk is borne by customers in the long term. Where this risk can be effectively managed by licensees, then it will form less influence on long term equity returns than when it cannot. As a consequence, it is proposed to reduce the risk to licensees of outperformance in a given regulatory period, recognising the actual ability of licensees to time investments and manage this risk. This would be achieved through a proposed sharing factor of the under or over performance of actual costs compared to allowances during the regulatory period.

In itself, however, this would not alter the fact that the Notional Company fails to represent equally the characteristics of each licensee groups, creating a different risk of under or over funding of debt costs. To adjust this consequence, we would propose variable sharing factors would be used, for example sharing under or over performance of a single licensee network, such as ourselves, at a 75:25 rate, for example.

This adjustment could be applied symmetrically across the sector, in which case there would be no additional cost to GB Customers. On the assumption that only efficiently incurred debt costs should be included in the actual debt costs, and the assumption that the regulatory structure aims to reward each network with its efficiently incurred debt costs over time, in theory there would be no cost to our customers over time.

This adjustment would maintain the incentivisation properties of the Notional company approach, only ensuring that the Notional company is adjusted for the actual characteristics of each licensees.

As the licensees currently report on their actual debt costs, there would only a small additional burden on the regulator of this approach although this burden would be more than outweighed by the value it would provide to customers. This burden would be similar to the work involved in the pensions reasonableness review carried out triennially, recognising that, after an initial exercise is carried out, only changes in borrowing structures would need to be assessed.

In the long term, customers' interests are best served by attracting equity at rates of return that reflect the risks to equity that equity can properly manage – the approach taken, for example, in setting the

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PSED deficit mechanism. Where equity is being asked to bear risks that are outside of the control of the licensee, over time customers will end up paying more.

In the event of a rate reversion during ED2, there would be less risk to equity investment, with this adjustment, that the future debt costs of debt being used to fund investment in the network will need to be subsidised by equity returns, and therefore less risk of hesitation in investment decisions.

### **Option 3 - Close-out mechanism.**

The objective of a close-out mechanism on debt financing would be to moderate risk and reward in respect of debt financing in the sector.

We have considered whether a re-opener mechanism would be required on the cost of debt allowance to deal with a significant increase in interest rate costs – a rate reversion scenario. We have concluded that this is a matter that warrants further consideration by Ofgem.

A close-out mechanism can be designed in a number of ways. At one end of the spectrum, it could simply act as a true-up for sector debt costs at the end of the ED2, with a uniform allowance or penalty provided to all networks. This would address the risk of rate reversion for the sector.

Whilst a close out mechanism would have some benefits to customers in ensuring equity investment does not have to consider the uncontrollable market interest rate risk on future funding, it fails (if not used in combination with other risk sharing mechanisms) to tackle the differential risks between licensees if only applied at a sector level.

### **Option 4 – Post financing and tax RAM**

Under its existing proposals, Ofgem plans to introduce a Return Adjustment Mechanism (RAM) assessed at the Operational RoRE level, i.e. before financing and tax performance.

The legitimacy of incorporating a RAM in the price control is based upon the notion that equity should not be allowed to generate exceptional levels of outperformance – i.e. in respect of the legitimacy of returns to equity. To make this assessment before debt performance is illogical as it does not reflect the actual return levels generated by shareholders. Its current design is therefore not aligned to its objective.

Ofgem has considered the possible implications of the RAM on network behaviour and Ofgem has stated that, whilst evidence was not overwhelming, it accepted that where companies were significantly over performing on debt, this could reduce the incentivisation to perform well on other measures. We would contend that, where the debt overperformance was solely the result of the luck of issuance timing, this argument raises perhaps further questions about debt performance, rather than RAM design.

We would strongly support the RAM assessment being conducted on a total RoRE basis, including finance and tax performance. Not only does this improve the legitimacy of the RAM itself, but it does also provide some limited risk sharing benefits, hence its inclusion here – particularly for network outliers and in the event of rate reversion and/or downside scenarios.

**Table 6.6: Adjustment 3 checklist against key objectives**

<b>Adjustment 3: Risk balancing</b>		
<b>No net cost to GB customers</b>	✓	Symmetrical adjustments to Notional company approach.
<b>Incentivisation</b>	✓	Retained.
<b>Implementation</b>	✓	Different level of complexity for each option, but with regulatory burden proportionate to the benefits to customers.
<b>Financial risk control</b>	✓	Met.
<b>Responsive to events</b>	✓	Moderation of impact associated with rate reversion.
<b>Regulator confidence</b>	✓	Enhanced. Not only would the regulator be seen to be balancing risks equally between licensees of varying size, the ability of the Regulator to have confidence in the financing of the licensees enhances regulatory confidence in the sector.
<b>Fairness and risk</b>	✓	Symmetrical adjustments to Notional company approach.
<b>ENWL debt allowance change</b>	Variable dependent on methodology.	

### Wider considerations

Whilst not an essential part of this proposal, nevertheless we would continue to advocate that Ofgem require each licensee to produce a Treasury Policy and to commit to financing its business within this Treasury policy.

Inevitably, either directly through a sharing factor, indirectly through the alignment of the sector average debt costs, or in the long-term funding cost implications on all of the failure of a network, Customers bear risk from financing decisions. Whilst there is some regulatory burden to having a treasury policy, it builds on the work that Ofgem already carry out to review the regulatory ring-fence structures and would not be significant in overall terms. It would also reduce any concerns about the actual cost inputs into the proposed sharing mechanism or the alignment of the Notional company allowance to the sector average costs. It would also assist to prevent the proposed single debt allowance aligned to the sector average becoming an incentive to networks to try to match/beat the sector cost by issuing at shorter maturities and increasing liquidity risk with more frequent refinancings.

### Potential outcomes of policy choices



The above table provides illustrative examples of how the different applications of the Notional company adjustments proposed in this section could result in different debt allowances in ED2.

We use these examples when considering our financeability gap in Section 7.

### Conclusion

In this section, we have set out in detail the issues associated with the current sector average approach and provided examples of some alternate methodologies available to Ofgem to provide a fairer outcome, protect GB customers and ensure that financeability challenges are moderated and do not limit Net Zero delivery.

We note that the adjustments relating to risk balancing are not necessarily mutually exclusive and Ofgem is able to consider mixing and matching elements to provide additional solutions.

Whichever options are proposed, it is important that where the assessment is based upon the use of the Notional company, the assumptions that underpin the Notional company are sufficiently reflective of the characteristics of each licensee, with particular attention paid to those who are, or at risk of, significant over- or underfunding. If risk is placed disproportionately on infrequent issuers, compared to larger issuers, then, at the same equity return, the relative investment attractiveness of the licensees is impacted, with the consequential regional impact of long term concern to customers.

As discussed in Section 5, we would continue to stress that where derivatives have been used to create index linked debt costs, the treatment of derivatives (and the underlying bonds) should mirror the regulatory treatment of economically equivalent index linked bonds. As such, any calibration of sector debt costs should include derivatives and any risk balancing mechanism should be applied on the debt performance including derivatives.

Finally, we highlight that the most powerful option available to Ofgem is a debt cost sharing factor. There is wide flexibility in how this tool could be implemented by Ofgem and would strongly encourage its inclusion in the final determination.

We look forward to working with Ofgem during the draft and final determination stage to solve the financeability issues highlighted in this section.

<sup>76</sup> These estimates of the debt allowance uplift associated with the different risk balancing mechanisms are indicative only. Further analysis would be needed during the determination stage to model these options in detail

## 7 WACC and the financeability gap

- This section brings together the outputs of the preceding sections in arriving at a matrix of the potential cost of capital outcomes for each combination of debt allowance and equity return considered.
- We then consider the improvement in cost of capital needed to address the shortfall or 'gap' identified in our financeability testing. We have focused on Moody's and Fitch interest cover ratios, reflecting that these ratios were the key driver of expected rating downgrades.
- We conclude that a Weighted Average Cost of Capital ('WACC') of 4.21% would deliver the revenue improvement needed to secure all key credit ratios, in both baseline and stress scenarios.
- This would be at a cost of £5.19 per annum (2020/21 prices) for our customers. Together with the framework changes recommended in the Annex 28A Finance Section 9, which would cost £2.35 per annum (2020/21 prices), this would put an upper range for the potential bill impact associated with addressing our financeability challenges as £7.54 (2020/21 prices). Consequently, even at this point in the range, our customers would still see a significant saving of £4.95 per year (5.5%) over ED1.

In Section 6, we discussed the requirement for three adjustments to be made to the Notional company debt allowance:

- **Basis risk and CPI financing** – an adjustment of +5 bps
- **Infrequent issuer** – an adjustment of +18 to 23 bps
- **Risk balancing** – the implementation of a risk sharing mechanism, with varying +bps.

Table 7.1 below summarises how the different applications of the risk balancing adjustments could result in different debt allowances in ED2, assuming basis risk and infrequent issuer adjustments also made (as per table 6.7):

**Table 7.1: Potential outcomes for the debt allowance for different risk balancing mechanisms**

	Time weighted	Sharing Factor 75:25	Sharing Factor 50:50	Close-out / RAMs
Revised debt allowance	3.14%	3.03%	2.81%	2.37%

Section 3 set out our key reference points for equity return:

**Table 7.2: Primary observed reference points for equity return**

	Reference point 1	Reference point 2	Reference point 3	Reference point 4
	"Oxera min"	"Aiming up"	"Notional BBB+"	"AvE"
Equity Return	5.81%	4.99%	4.79%	4.65%









## 8 Customer bills

- This section considers the impact on domestic customer bills associated with the cost of capital options discussed in Section 7.
- We consider an upper bound for the potential bill impact associated with addressing our financeability challenges as £7.54 per annum (2020/21 prices), factoring in both the cost of our recommended framework remedies (£2.35 per annum) and the upper bound for the cost of capital of 4.21% discussed in Section 7 (costing £5.19 per annum)
- Consequently, even at this point in the range, our customers would still see a significant saving of £4.95 per year (5.5%) over ED1.

Our forecast average customer bill for ED2 is £77.26 per annum, representing a £12.49 decrease (13.9%) over ED1.

In the Annex 28A Finance Section 9, we recommended two framework changes to help alleviate the equity funding requirements in ED2. The recommended changes were a reduction in regulatory capitalisation rate to 65% and the maintenance of notional gearing at 65%. The implementation of these framework changes would cost our domestic customers £2.35 per annum.

We now consider the cost of implementing the different combinations of debt allowance and equity returns discussed in Section 7. These are shown in the bill cost matrix in Table 8.1.

**Table 8.1: Range of domestic bill impacts for different combinations of debt allowance and equity return**

		Equity reference points			
		5.81%	4.99%	4.79%	4.65%
Debt allowance options	3.14%	£ 5.19	£ 3.34	£ 2.90	£ 2.59
	3.03%	£ 4.93	£ 3.08	£ 2.63	£ 2.32
	2.81%	£ 4.39	£ 2.55	£ 2.10	£ 1.79
	2.37%	£ 3.32	£ 1.48	£ 1.03	£ 0.72

We consider that an upper range for the potential bill impact associated with addressing our financeability challenges would include both framework changes (costing £2.35 per annum) and the upper point of the cost of capital combinations at 4.21% (costing £5.19 per annum), resulting in a simple aggregate cost of £7.54<sup>78</sup> per annum.

We note that the requirement for both framework remedies should be considered in light of any changes made to the cost of capital allowance. It may be that our financeability challenges could be addressed at a cost below this upper bound value. However, even at this point in the range, our customers would still see a significant saving of £4.95 per year (5.5%) over ED1.

<sup>78</sup> The two framework changes recommended would cost £2.35 (as discussed in the Finance Annex), with the upper range in respect of cost of capital options would cost £5.19