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# ED3 FRAMEWORK CONSULTATION RESPONSE

Economic Insight's  
Response



# CONTENTS

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<b>1. Introduction and Executive Summary</b>	<b>3</b>
<b>2. Regulatory framework</b>	<b>6</b>
2A Drivers for change	7
2B Regulatory framework	8
<hr/>	
<b>3. Networks for net zero</b>	<b>13</b>
3A Network investment and load-related expenditure	14
3B Anticipatory investment	17
<hr/>	
<b>4. Responsible business</b>	<b>20</b>
4A Outcomes and incentives	21
4B Cost assessment	24
4C Real price effects (RPEs) and ongoing efficiency	26
4D Finance	28
<hr/>	
<b>5. Smarter networks</b>	<b>32</b>
5A The DSO Role at ED3	33

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1

# INTRODUCTION AND EXECUTIVE SUMMARY

# INTRODUCTION



Economic Insight is an economics consultancy, advising companies and regulators across the energy, water, telecoms, and transport sectors in the UK and abroad.

This document sets out our response to Ofgem’s consultation on the ED3 framework.

Rather than provide question by question responses, we focus on key issues relating to the following chapters of Ofgem’s consultation:

- (i) drivers for change and regulatory framework;
- (ii) networks for net zero;
- (iii) responsible business; and
- (iv) smarter networks.

## OUR KEY MESSAGES

To ensure the UK’s infrastructure is fit for purpose, supports the energy transition, and delivers economic growth, Ofgem will need to pick a regulatory framework that promotes investment.

This should include more network reinforcement, including increased anticipatory investment, but also more innovative, flexible solutions.

To achieve this, Ofgem will need to adapt several aspects of its ‘building blocks’.



**RIIO-ED3 will need to incentivise companies to undertake significant investment to support Ofgem’s (and government’s) net zero and growth ambitions.**



Against the backdrop of increased electrification of the grid, and government’s net zero and growth ambitions in the future, electricity networks will have to undertake significant investments.

To be able to do this in the most effective way, Ofgem needs to provide a robust regulatory framework for RIIO-ED3.

*Overall, we consider that Ofgem’s consultation covers several important aspects for RIIO-ED3. We think that the regulator will have to carefully consider the following three key points:*

- **Ofgem will need to pick a regulatory framework that promotes investment.** A switch to input focussed regulation could lead to inefficient outcomes and stifle innovation, whilst incentive regulation alone might not be as effective as rate of return/cost-pass-through regulation in promoting the required investment.
- **Under Ofgem’s revised framework at ED3, DNOs will need to be incentivised to increase investment to reinforce the network ahead of time.** Therefore, Ofgem should balance protections for the investments that are required to facilitate the government’s decarbonisation objectives (and NESO’s projections), while retaining an incentive to identify the most cost-effective options (including innovative options) and deploy them efficiently. As such, there will be a role, at ED3, for early, anticipatory investment, increased deployment of network flexibility, and, in some cases, deferring investment decisions until precise investment requirements are clearer.
- **To facilitate these objectives, Ofgem will likely need to adapt several aspects of its ‘building blocks’,** including its measurement of outcomes, its approach to comparative benchmarking, and its determination on the allowed return. Building on the concept of ‘investability’, Ofgem will need a robust approach to meeting its financing duties in this context. This includes an enhanced approach to ensuring the overall price control package represents a ‘fair bet’ for investors.

# 2

# REGULATORY FRAMEWORK

In this chapter we set out our responses to consultation questions 1 – 9.

## 2A

## Drivers for change

*Q1. Do you agree with our characterisation of the wider context for ED3? Are there any other areas of context that you consider material for ED3?*

Ofgem’s characterisation of the wider context for ED3 covers many of the most important issues facing the sector at ED3, though there will of course be other factors that are material for particular companies. However, Ofgem should be careful not to overinterpret this context.

- **It is important to avoid overconfidence in projections about future electricity demand**, for instance, forecasts of the uptake of battery electric vehicles (BEVs) and the electrification of heat, which may be overstated – particularly over ED3 – given, as Ofgem identified itself, various key targets have not been met (so far). For example:
  - In relation to BEVs, recent evidence suggests that uptake is *slowing down*, rather than *increasing* at speed. This includes Ford’s announcement of 800 job cuts in the UK over the next three years, due to a mixture of high energy costs, weaker than expected demand for BEVs, and growing competition from overseas manufacturers.<sup>1</sup>
  - In relation to heat pump installations, although the National Audit Office (NAO) found that average installation costs have fallen, the same progress has not been made in relation to running costs. Additionally, the NAO found that DESNZ does not have the information to monitor whether heat pump installations are progressing on track,<sup>2</sup> and it found that DESNZ is relying on *optimistic assumptions about consumer demand and manufacturer supply of heat pumps* increasing substantially to achieve 600,000 installations per year by 2028.<sup>3</sup>
- **It is also important to avoid being overly optimistic about the ability of NESO’s new strategic planning role to facilitate accurate and reliable strategically planned energy systems.**
  - Regardless of *who* develops the plans and undertakes the forecasts, there will always be underlying uncertainty as to whether the plans/demand forecasts set out in the RESPs are correct. Although NESO will seek to ensure they are as accurate as possible, they are, nonetheless, still prone to be imprecise and unreliable, as forecasting is inherently difficult. These difficulties apply even though NESO is not starting from scratch in terms of its forecasting and planning capabilities (as it is taking over some roles previously undertaken by the National Grid’s ESO). They also apply to the current FES plans, upon which many stakeholders are relying.

<sup>1</sup> See: <https://www.bbc.com/news/articles/c20626dy9d6a> [accessed 18/12/2024]

<sup>2</sup> “Decarbonising home heating”, paragraphs 16-17, National Audit Office (March 2024)

<sup>3</sup> “Decarbonising home heating”, paragraph 19, National Audit Office (March 2024)

- Further, it is important not to have unrealistic expectations of NESO's planning and forecasting capabilities. NESO is a new organisation, and the strategic planning role is a new function this organisation is taking on – and not a continuation of previous roles of the ESO, such as system balancing. Newly established organisations can make mistakes due to inexperience, lack of established processes, political pressures, insufficient resources, and unforeseen challenges.

## 2B

## Regulatory framework

Ofgem considers the same archetypes it used for its review of regulatory options for Future Systems and Network Regulation (FSNR), namely:

- **Plan and Deliver.** Where regulation is a mechanism for implementing investments consistent with the longer-term strategic planning of the system.
- **Incentive Regulation.** Where regulation is used to provide incentives to network companies to deliver against pre-specified output requirements at low cost and high quality, with rewards and/or penalties set against specified targets.
- **Freedom and Accountability.** Similar to ex post regulation, where regulation is focused on ensuring that network companies are meeting broad objectives, with incentives focused on overall delivery.

We agree with Ofgem that it is likely that a mix of archetypes will be needed. However, in contrast to Ofgem, we consider that there are compelling reasons to place some weight on the *Freedom and Accountability* archetype for ED3 and place less weight than Ofgem indicates on the *Plan and Deliver* archetype.

- **The *Freedom and Accountability* archetype is most suited to promoting investment.** Increased investment is essential to achieve net zero and growth. As we have explained previously,<sup>4</sup> we consider that a new regulatory approach is necessary to help the UK economy (and regulated networks) out of the current low investment–low productivity rut. As the *Freedom and Accountability* archetype is – in essence – a *rate of return* or *cost-pass-through* approach to regulating, it is the one most likely to achieve this.
- **Input-based (or *Plan and Deliver*) regulation could lead to inefficient outcomes.** This archetype is predicated on there being an accurate plan, which identifies the right outcomes to be attained (and relatedly the right investments to achieve those outcomes). There is the further considerable challenge of whether, and to what degree, a central plan that is coherent and efficient can be identified in the first place.

<sup>4</sup> “*Consultation on frameworks for future systems and network regulation: Economic Insight’s response*”, pages 4-8, *Economic Insight (May 2023)*

- **Finally, *Freedom and Accountability* is better able to deal with the high rate of change and uncertainty facing DNOs over ED3.** Specifically, one of the key drawbacks from any input-based (or *Plan and Deliver*) type model is that any plan may quickly become out of date. Compounding this, once tendering (or efficient procurement) processes are put in place, it is hard to change direction. Similarly, an ex ante regulatory framework (such as *Incentive Regulation*) is limited in its ability to accommodate changing needs. More uncertainty mechanisms (UMs) and/or re-openers provide a degree of flexibility, but the benefits of fixed costs (or outcomes) related efficiency targets under a modified incentive regime may be limited. On the other hand, under a rate of return or cost-pass-through approach, companies are free to alter their plans to respond to changing needs, secure in the knowledge that, so long as those plans are necessary to deliver against the changed need, investors will be compensated. This allows vital investment to proceed, without unnecessary delay or cost.

We elaborate on each of the above, in turn.

### Picking an archetype that promotes investment over ED3 is key

This section provides responses to Q7, Q8, and Q9 from Ofgem’s consultation. (We respond to questions 3 to 6 below.)

*Q7. Using RII0-ED2 as the counterfactual, what alternative regulatory models or characteristics are needed in ED3 to ensure the DNOs deliver the above consumer outcomes? What are the trade-offs we should consider?*

*Q8. Do you agree that the regulatory framework for ED3 should have features of the Plan and Deliver model for network investment and Incentive Regulation model for other elements?*

*Q9. Do you think that there is a greater role for elements of ex post regulation or of cost pass through in ED3, either specifically in assessing cost changes resulting from changes to investment requirements during the period, or more broadly to reflect the changing context?*

To achieve the required investment to enable net zero and economic growth, Ofgem needs to place most weight on a regulatory framework that **promotes investment**. *Rate of return* regulation as implied by the *Freedom and Accountability model* allows companies to earn a specified rate of return on their capital investments. This is generally found to incentivise more investment in infrastructure for the following reasons:

- Companies’ allowed revenues are directly tied to their capital base (base rate). The more they invest in infrastructure, the higher their allowed revenues.
- Companies are assured a regulated return on their investments, making infrastructure projects low risk. This reduces the financial risk of overinvesting, even in uncertain markets.
- Since operating expenses are often passed through to customers without profit, companies may prefer capital-intensive solutions, which expand their base rate and increase returns.

On the other hand, a regulatory framework more akin to *Incentive Regulation* aims to control costs and encourage efficiency (rather than investment). This was well-suited post-privatisation, to address inherent inefficiencies from the regional monopolies, as well as to reward outcomes (and innovation to deliver them). These mechanisms often provide weaker investment incentives, however, for the following reasons:

- *Incentive Regulation* emphasises cost containment rather than capital investment. Here, companies may prioritise lower-cost operational improvements over expensive infrastructure projects. Indeed, a concern over ‘capex bias’ was one driver of the move to a totex framework for cost recovery.
- Unlike *rate of return* regulation, revenues under *Incentive Regulation* may not increase directly with capital expenditures. For instance, under price caps, revenue is tied to pre-determined allowances rather than actual investments. Companies might underinvest in infrastructure in line with the price/revenue cap in place.

An example of rate of return models leading to increased investment includes Canada’s National Energy Board (NEB) Regulation. Here, TransCanada Corporation (now TC Energy) expanded its natural gas pipeline network under NEB’s rate of return framework. Guaranteed returns on investment encouraged the development of extensive pipeline infrastructure connecting gas-rich regions like Alberta to markets in the US and eastern Canada, for example through the Keystone Pipelines project.<sup>5</sup>

Rate of return regulation therefore provides stronger financial incentives for companies to prioritise capital projects or upgrade existing systems, as it directly ties profitability to capital deployed. Some concerns with a *pure* rate of return type model are valid, as this can lead to inefficiencies such as gold-plating, where companies overinvest to maximise their returns. A combination of Ofgem’s regulatory archetypes that includes *Freedom and Accountability* alongside others is therefore likely to be optimal for ED3.

## Input-based regulation could lead to inefficient outcomes and stifle innovation

This section provides some views of relevance to Q3 from Ofgem’s consultation.

*Q3. Do you agree that the network investment elements of the framework should be more input based?*

Putting aside the challenge of whether, and to what degree, a central plan that is coherent and efficient can be identified in the first place, we consider that input-based regulation could lead to inefficient outcomes and stifle innovation. Even where, in principle, a regulator is able to specify a coherent plan, ex post it may become clear that the path pursued according to the central plan has not been optimal. Input-based regulation is liable to tie companies to sub-optimal plans for longer than other regulatory models, thereby crowding out superior or more innovative solutions.

To illustrate some of the risks of moving more towards an input-based approach, we note that European regulators encouraged the adoption of diesel vehicles in the 1990s and 2000s by offering tax incentives and promoting diesel as a low-carbon alternative to gasoline.<sup>6</sup> Later research showed that diesel vehicles emit high levels of nitrogen oxides (NOx) and particulate matter, contributing significantly to air pollution and public health problems.<sup>7</sup> Subsequently, the “Dieselgate” scandal, involving fraudulent emissions tests, further highlighted this regulatory failure.<sup>8</sup> Many cities now restrict or ban diesel cars, reversing earlier policies.

<sup>5</sup> See: <https://apps.cer-rec.gc.ca/PPS/en/pipeline-profiles/keystone>

<sup>6</sup> See: <https://www.theguardian.com/environment/2015/sep/22/the-rise-diesel-in-europe-impact-on-health-pollution>

<sup>7</sup> See: <https://www.theengineer.co.uk/content/in-depth/fact-check-are-diesel-cars-really-more-polluting-than-petrol-cars/>

<sup>8</sup> See: <https://www.bbc.co.uk/news/business-34324772>

Notwithstanding the above, to the extent that Ofgem will rely on plans more over RIIO-3, such as the CSNP and RESPs, it will be important to consider how inefficient outcomes can be mitigated. For example, Ofgem could consider similar approaches to those proposed in its RIIO-ET3 methodology, where it is looking to introduce an Independent Technical Adviser (ITA) – an independent organisation providing assurance to Ofgem – for CSNP projects to provide assurance of design decisions, procurement processes, and overall project delivery.<sup>9</sup>

Ofgem’s goal appears to be to ensure that companies deliver investments which *facilitate* the forecasts that NESO provides, and that therefore “keep alive” the decarbonisation pathways and specific targets (such as Clean Power 2030) that the government set out. In particular, there are parts of the energy transition, for instance, related to consumer behaviour and new energy supply, that can only be delivered if network capacity is available.

It is, therefore, sensible for Ofgem to consider providing greater protection to DNOs to make investments which are in line with these projections, notwithstanding the risk they do not materialise in the future. However, this protection should not apply ‘across the board’ or in such a prescriptive way as to prevent DNOs from innovating in how they achieve these investments. In essence, it is important for Ofgem to adopt a framework which provides insurance for companies relying on official projections about future electricity demand (in terms of its location, nature and time), but retains the incentive for networks to develop innovative solutions to deliver the network required to satisfy this demand.

In practice, we consider that this means:

- Networks would need to be protected if they make an investment which is necessary to achieve a government target/objective, and if that target/objective were to change (e.g. related to EV charging infrastructure, or home heating policy). At a project/investment-specific level, this involves ensuring that companies are able to recover the costs of investments which prove redundant.
- Companies should still face incentives to assess how future demand and energy use will affect their network requirements, and make well-informed, efficient choices about what network solutions are most appropriate for facilitating that demand. Therefore, Ofgem should retain the financial incentive on DNOs (embedded in the current RIIO regime) to identify solutions and innovate to achieve these objectives at lowest cost.

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<sup>9</sup> “*RIIO-3 Sector Specific Methodology Decision – ET Annex*”, paragraph 2.104, Ofgem (July 2024)

## DNOs will face a high pace of change and uncertainty

This section provides a response to Q4, Q5, and Q6 from Ofgem's consultation.

*Q4. Do you agree that we should consider introducing additional controls around network investments and what features should these controls contain?*

*Q5. Do you agree that the incentives on DNOs will need to adapt from RIIO-ED2 and if so, how?*

*Q6. Do you agree that there is still a role for re-openers in ED3, particularly given the timing of the future full RESP output and how should these be triggered?*

Finally, the fast pace of technological change in the distribution networks, as well as changes in consumer behaviour and the high degree of uncertainty that goes with that, highlight the advantages of a *Freedom and Accountability* model. If a change in approach is necessary, this model provides greatest incentive for this change to go ahead (without delay) to the benefit of society. Suppose a network company proposes a change in approach (i.e. different, or larger, investments are needed than originally proposed). Under this model, the costs of this change are allowed, the new investment proceeds, and the company earns its return (although this also has the disadvantage of blunting incentives for efficiency).

A *Plan and Deliver* model has the drawback that it requires central planners (e.g. NESO) to determine what is needed. In a world of rapid change, those plans might change quickly. Equally, under competitive tendering, the *winner* signs up to deliver a specified investment with an associated risk-reward balance. If that investment is then deemed unnecessary or inefficient, changing course is difficult. The advantage of this model, however, is that it reduces the risk of compensating incumbent networks for making *wrong choices* as to what is needed in the first place and/or incurring inefficient costs.

Ex ante price-cap regulation (*Incentive Regulation*) is less well-suited to a fast pace of change and uncertainty. Though re-openers and UMs provide a way for this regulatory framework to deal with uncertainty to a degree, it is not as well placed as a *Plan and Deliver* or *Freedom and Accountability* type approach to deal with technological change. Notwithstanding this, where Ofgem does decide to place more emphasis on *Incentive Regulation*, it is important to ensure:

- that the framework incentivises DNOs to promote investment through other means (rather than stifling it); and
- there are UMs and re-openers available for DNOs, especially in light of the future timing (and potential changes to the content) of NESO's RESPs.

# 3

# NETWORKS FOR NET ZERO

This chapter sets out our response to consultation questions 11 to 24.

3A

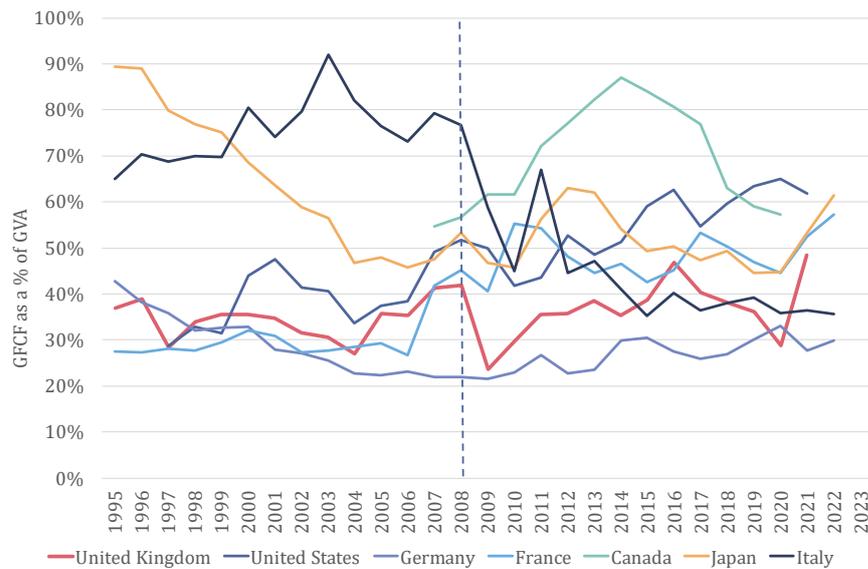
## Network investment and load-related expenditure

### DNOs should be funded to deliver increased network reinforcement

*Q12. Do you agree that the risk and downside for consumers of network underinvestment in network reinforcement would be greater than the downside of overinvestment?*

Multiple factors point towards a presumption in favour of higher investment in networks. Economic Insight is strongly of the view that underinvestment is a serious issue in both the energy sector and the wider UK economy. We recently conducted a survey of leading academics and wider literature, which found insufficient investment to be a key determinant of the UK’s productivity slowdown since 2008.<sup>10</sup> Further, recent evidence suggests that UK investment in the energy sector has lagged behind that of several comparable countries, as set out in Figure 1.

**Figure 1:** Investment, measured by Gross Fixed Capital Formation (GFCF), as a proportion of GVA for the UK energy sector compared to other countries



Source: Economic Insight analysis of OECD data.

The negative consequences of underinvestment in the electricity distribution sector are likely to have increased over time, given the critical role network investment plays in achieving net zero and supporting the energy transition. Specifically, we agree that the risk balance of underinvestment relative to inefficient overinvestment is likely to have changed since RIIO-ED1, and Ofgem should err on the side of supporting investment in network reinforcement earlier than might be necessary, over ensuring demand is proven before reinforcing the network.

<sup>10</sup> <https://www.economic-insight.com/wp-content/uploads/2024/07/The-UK-Productivity-Puzzle-A-Survey-of-the-Literature-and-Expert-Views.pdf>

Importantly, given the evidence of historical underinvestment, the risks of overinvestment in the future appear significantly diminished, given that investment is required not only to allow for future demand, but to compensate for prior years of underinvestment.

Whilst there is still considerable uncertainty as to the full role of the DNOs in delivering net zero, there is sufficient certainty as to the role of electrification in sectors such as transport and domestic heating, which reduces the risk of capacity investments today being unnecessary tomorrow. As noted in section 2A, we agree with Ofgem that increased electrification is likely to materialise over ED3.

We also note the potential “crowding-in” benefits of additional investment in energy networks and the scope for the energy transition (and the UK economy more broadly) to benefit as a result. By illustration, a higher margin of “spare capacity” on electricity networks is likely to attract additional investment in new energy supply and other infrastructure (e.g. energy storage), which in turn will attract additional investment in low-carbon industries and sources of energy demand.

### Promoting investment should not come at the cost of deterring network flexibility

We agree with Ofgem’s diagnosis that, in order to meet net zero (and intermediate targets) at lowest cost and widest benefit to consumers *over the long-run*, it should remove restraints which have prevented network investments from getting built. However, in attempting to remove regulatory barriers to increased investment, Ofgem should preserve key incentives which encourage innovation, through technology such as network flexibility, which allow networks to transform for net zero at the lowest cost to consumers.

*Q.13 What are the benefits and risks to deliverability if network reinforcement is deferred to future periods?*

If investments are deferred in such a way that creates a “bottleneck” of projects in the future, there is a risk that the cost of delivering these projects in the future is much higher due to the need to do so at speed and at the same time as many other projects (creating supply chain, resource and skills challenges). Conversely, making widespread reinforcements today can be more expensive than making more targeted investments in the future, when the scale and location of requirements is clearer. This is particularly true given uncertainty about the location and nature of electricity demand in the future – and innovation in network flexibility helps networks to respond in an agile way to quickly evolving forecasts.

- The extent to which deferred investment – or, on the flip-side, anticipatory investment – may be desirable depends on (i) **the level of certainty over its need**, including *when* and *where* the need will materialise; and (ii) **the relative efficiency of delivery** (and ability to deliver) now rather than later.
- Where there is significant uncertainty over the need of an investment, it might be prudent to hold off, such that a proper appraisal can be made once the benefits are clearer. This reduces the risk of inefficiently allocated investments, e.g. “building the right assets in the wrong place”. Also, spending on reinforcement in one area might prevent funds from being available to undertake a critical, but unpredicted reinforcement project elsewhere.

- With the unprecedented level of investment required to meet the energy transition, deliverability constraints could bite, or the cost of delivery could rise (as a result of global competition for supply chains, for example). Investing early and spreading the profile of capacity upgrades over a longer period may protect networks from skills shortages and supply chain pressures that might otherwise hinder delivery if they go to market at a later date.

*Q14. What do you see as the role of distributed flexibility, both in the short and longer term, to manage distribution network constraints?*

*Q15. How do we ensure that network flexibility is used only when it is in consumers' long-term interests in ED3?*

We agree with Ofgem that innovative distributed flexibility has a key role to play in decarbonising the energy system, and agree that RIIO-ED3 should fund networks to invest in their capability to support more widespread use of flexibility solutions.

However, in parts of its thinking in this consultation, there is a risk of Ofgem oversimplifying the trade-offs between flexibility and network reinforcement. On one hand, Ofgem is right to recognise that network reinforcement carries long term benefits, and significant investment in reinforcement will be required in order to deliver the net zero transition. On the other hand, Ofgem should be wary that it does not consider network flexibility to be a purely short-term solution, used in the interim, to delay reinforcement decisions: given the scope for LCT uptake, the growth of flexibility markets and other technological changes, there is significant potential for network flexibility options and capability to grow in the future.

Furthermore, (and as discussed in Section 2A above), given the potential for short-term forecasts of low-carbon technology uptake to be overstated and network requirements being difficult to predict, short-term use of network flexibility is an important tool for allowing networks to respond to changing requirements quickly and in an agile way, even as new evidence emerges.

In this context, there is a key role for bespoke cost-benefit analysis (CBA) in all (material) investment decisions, to ensure that the 'best' solution to manage distribution network constraints is taken, aligning with the government's net zero goals, yet ensuring investment efficiency.

A key success of the RIIO regulatory regime has been its ability to support innovation, through its focus on outcomes and neutral treatment of opex and capex solutions where trade-offs exist. Ofgem should avoid any changes to the regulatory framework that undermine the incentive or ability of DNOs to pursue innovative solutions where they can avoid costs for consumers.

3B

## Anticipatory investment

### Ofgem does not need to rip-up its outcomes regime in order to support anticipatory investment

*Q.18 Can anticipatory network reinforcement be used to smooth the long-term build profile to avoid creating pinch points for the supply chain and workforce? What are the risks and trade-offs?*

As we set out in response to question 13 above, the benefits and costs of anticipatory investment are the converse of those for deferring network investment. Ofgem can therefore evaluate the role of anticipatory investment in similar ways to its assessment of deferring investment.

In cases where investments are to be delivered early, e.g. to reduce deliverability issues in the future, investments with the greatest certainty over future requirements should be prioritised, to reduce the risk of inefficient allocation of resources to investments that may not turn out to be optimal.

*Q19. Do you agree that investment optioneering should aim to reduce the lifetime costs by sizing elements of works for long-term need, including considering the impact of thermal losses?*

We agree that investment optioneering should be used in a way which supports investments that minimise lifetime costs in light of anticipated future requirements. There are challenges in conducting CBA and optioneering assessments in light of intrinsically uncertain assumptions about future energy demand (and network requirements), and as a result it is natural for such analyses to focus on costs and benefits which are more certain. However, investment planning should always capture – and place sufficient weight on – the *options* value of solutions which avoid potential future costs (e.g. should demand increase, again, further in the future).

As we discuss in response to questions 3 to 9 in section 2B above, Ofgem should ensure that its overall regulatory framework promotes investment for the long-term interest of customers. Long-term infrastructure investments with the least regrets (i.e. the lower probability that the investment is eventually not needed) should be prioritised.

*Q20. Is a 5-year price control (2028-33) the right duration to achieve the objective of securing timely network capacity for the net zero transition at least cost to consumers over the long run?*

We do not believe that changes to the duration of the price control should be a priority for Ofgem at this point in time.

In principle, there are benefits to consumers and companies from longer price controls in terms of providing more investment certainty and supporting long-term decisions – certainty that is particularly valuable in the context of increasing investment requirements. However, a longer price control would also risk locking in projections, forecasts and assumptions about the future which are inherently uncertain, including in relation to medium- and long-term energy policy.

Since the RIIO framework was introduced, there has been a significant increase in the use of uncertainty mechanisms to make within-period determinations and adjustments to allowances to reflect evolving circumstances – for example, load-related reopeners and volume drivers. In the future, these kinds of mechanisms are likely to be vital for balancing regulatory certainty (e.g. over the financial package and incentives) and the need to update the settlement as and when requirements become clearer.

*Q.21 To what extent should the price control be more directive on specific anticipatory and strategic investments to achieve the ‘networks for net zero’ consumer outcome?*

Under the RIIO framework, companies are incentivised to deliver customer outcomes in the most efficient way. Given the difficulties in predicting *how* best to deliver these outcomes *ex ante* – in particular, the difficulty in predicting ‘innovative’ delivery strategies – it is important that the regulator is not overly directive in setting precisely the investments that companies are required to make, so as to retain the benefits of the RIIO framework, particularly in encouraging further innovation in the future.

If an ‘anticipatory’ or ‘strategic’ investment is directly linked to a financially incentivised outcome (e.g. an ODI), whether in the short or long term, there is no need to be directive over the delivery of this investment – so long as (i) incentives are calibrated correctly; (ii) companies and Ofgem work according to common forecasts of demand, and (iii) the regulatory framework – including its approach to incentives – is stable over the long-run.

As such, it is only necessary for Ofgem to be directive about how (or when) anticipatory investment is delivered in the rare, limited cases where the outcomes delivered by an investment cannot be linked to financial incentives. Examples might include certain investments related to resilience (where it is hard to test *ex post* if an investment has been delivered).

*Q.22. Do you agree with our characterisation of strategic and anticipatory investment and our expectation that these activities would have different regulatory drivers and controls?*

As we discuss in response to question 13 above, anticipatory investment (alongside deferral and flexibility) is an important tool for delivering the transition at the lowest cost. While there are differences between these and different types of investments, it is unclear why anticipatory and strategic investment would need to be treated significantly differently from conventional investment for the purpose of the regulatory settlement.

There are significant risks to applying different regulatory treatments for different costs, in terms of distorted incentives, intransparency and difficulty in measuring outputs and performance. In addition, further complications to the price control also carry risk of unintended consequences, which could far exceed the risks that can be anticipated. Customers will also suffer if companies are deterred from developing and proposing anticipatory investments.

It is true, however, that when companies propose large, bespoke anticipatory investment schemes, Ofgem is unlikely to be able to rely on its main cost-assessment, benchmarking tools. However, assessing large (atypical) schemes outside of “base costs” is not unusual or unprecedented in regulated industries. An obvious parallel is Ofwat’s approach in the water sector to assessing costs of major enhancement schemes (e.g. reservoirs) outside of its benchmarking models, as well as Ofgem’s approach in Gas Distribution for various atypical and bespoke investment areas.

*Q23. Should the price control provide more guidance or guardrails around the use of particular network solutions to achieve the 'networks for net zero' consumer outcome?*

The RIIO framework allows companies the freedom to make efficient trade-offs as and when they arise, incentivising them to find innovative solutions to deliver the outcomes that customers care about at a low cost. This focus on outcomes is a key benefit of Ofgem's regulatory framework. To maintain this tenet of the regime, it is important that any "guardrails" (or restrictions) as to *how* outcomes are delivered are introduced carefully and sparingly, such that they do not prevent companies from making these trade-offs efficiently.

There are only limited circumstances where it is likely to be necessary for Ofgem to ensure a particular solution is used, and Price Control Deliverables are likely to be an appropriate tool for protecting customers and maintaining incentives in these circumstances:

- cases where funding is provided for a particular solution, for which its outcomes cannot be reliably assessed at the point of delivery; or
- there is a significant 'options' value from the delivery of certain capex-intensive solutions, that outweigh the benefits of alternative, cheaper solutions; which would be foregone if companies were to pursue a cheaper solution instead (even if that solution might avoid costs).

# 4

# RESPONSIBLE BUSINESS

This chapter sets out our responses to consultation questions 25 to 47.



## Outcomes and incentives

### It will be important to think about the trade-offs and tensions that are inherent when providing incentives to improve customer outcomes

*Q25. How can we better strengthen accountability for consumer outcomes?*

As a matter of principle, Ofgem is right to focus on strengthening accountability for consumer outcomes. Ofgem is also correct to highlight that the price control has typically focused on improvements that are measurable and that the use of regulatory tools has focused on delivering value for money. These observations highlight some of the tensions and trade-offs that arise when networks seek to improve consumer outcomes, or when regulators seek to provide incentives to do so. These tensions and trade-offs are interrelated and include: focus on the long-term versus the short-term; focus on value-for-money and affordability versus security and safety; and tension between quantifiable improvements versus important but difficult to measure outcomes.

By way of example, improvements in outcomes that are beneficial for consumers over longer timeframes may not be apparent in the short-run. This includes improvements to network resilience and asset health that require higher initial investment to achieve benefits that are difficult to observe and quantify; indeed, it may be that the benefits of such improvements are only ever experienced by consumers as the *absence* of negative outcomes. Excessive focus on short-term value for money and affordability may give consumers the initial benefit of lower bills, but at the expense of lower resilience and with the potential need for greater remedial expenditure in the future.

To strengthen accountability for consumer outcomes, it will be important to have a coherent, evidence-based view of how consumer outcomes might be improved and the trade-offs involved in making such improvements. First and foremost, this requires an understanding of the level of outcomes that have been funded through historical allowances and the efficient cost of any improvements to outcomes that companies might be expected to deliver in the future. A key component of this is consistency across the price control framework, for example between the regulator's position in relation to ongoing efficiency and the baseline service quality improvements that it expects companies to achieve.

## More stretching targets imply higher cost allowances

*Q31. Has the BCMS incentive served its purpose in driving performance improvements and how can we adapt the metrics to better incentivise performance across a wider range of interactions between DNOs and their customers, particularly relating to connections?*

In thinking about whether to apply more stretching targets, it will be important to consider the trade-offs and tensions set out in relation to question 25 above. Given their incentives, in achieving the improvements in performance that have already been delivered, networks will have focused on actions that delivered highest benefits to customers at lowest costs. As such, the remaining actions that could be taken to improve service are likely to be more expensive and/or deliver lower benefits to customers than those already undertaken. Given the risk of gold plating the price control, it will be important to understand the point at which the costs of delivering improvements exceed the benefits to customers of those improvements. There may also be trade-offs between achieving improvements in the aspects of service to which the BCMS incentive relates and other aspects of quality that customers value.

If future targets are more stretching, this will need to be reflected in cost allowances. To the extent that Ofgem considers extending the range of interactions that are subject to incentives, it will need to think carefully about what each metric used measures, in order to avoid unintentional overlap between incentives, which may lead to certain aspects of service quality being ‘over-incentivised’.

## Ofgem is right to be cautious about the distributional impact of funding energy efficiency measures through the price control

*Q33. Should DNOs have a role in delivering energy efficiency measures to homes and businesses? What might the scope of these services be and how should they be funded?*

While there has been some uptake of energy efficiency measures by homes and businesses in the UK in recent years, barriers remain. The percentage of homes with an energy efficiency rating of band C has risen from 12% in 2010 to 48% in 2022.<sup>11</sup> However, in a 2024 report, the Committee on Fuel Poverty found that several barriers existed for more rapid energy efficiency improvements including lack of household knowledge and policy hiatus for the Minimum Energy Efficiency Standards.<sup>12</sup>

Inadequate rollout of energy efficiency measures can have important implications on the UK’s net zero emissions target for 2050 given the criticality of insulation to enable the adoption of heat pumps to decarbonise heating. Therefore, it is important not just to consider the benefits and costs of energy efficiency policy in isolation, but to recognise it is an important enabler of other government objectives.

With this context in mind, there could be a role for DNOs to help deliver energy efficiency measures to homes and businesses, but we agree with Ofgem on the need to be cautious.

<sup>11</sup> ‘Energy efficiency of UK homes’ House of Commons Library (2024).

<sup>12</sup> ‘Understanding the barriers and enablers to supporting fuel poor households achieve net zero’ Committee on Fuel Poverty (2024); see pages 32-33.

- DNOs have access to the local network information, for example the locations that could most benefit from energy savings, and continuously serve the households and businesses in their locations. This knowledge can give them an advantage over energy retailers who hold the customer relationship.
- However, while DNOs are likely to have knowledge that could add value to identifying and delivering energy efficiency measures, it is important to bear in mind that energy retailers may have different skills and/or knowledge relevant to delivering efficiency measures. There are already schemes that exist to deliver energy efficiency measures to households via energy suppliers, for example the Energy Company Obligation (ECO).
- It is important that any increase in scope is not unrealistic or takes DNOs' focus away from their primary existing role, especially in the face a sustained increase in investment requirements. It is also critical that any potential new requirement on DNOs as part of RII0-ED3 does not duplicate or interfere with existing efforts.

If DNOs are to deliver energy efficiency measures, it will be important to consider what energy efficiency measures can be most efficiently delivered by DNOs and how. Here, the focus should be on energy efficiency measures that deliver the highest benefit-cost ratio, factoring in both the private benefits to households and the public benefits to all consumers. An example of the latter would be reducing the amount of DNO grid reinforcement required due to household energy savings. DNOs could be in a good position to coordinate the supply chain for their areas, but any incentive under the price control would need to ensure that all relevant actors, including the energy suppliers, independent energy efficiency installers and DNOs, do indeed come together to deliver the relevant measures.

Many funding options are available. How the benefits of energy efficiency measures should be shared across the supply chain will require careful consideration. How benefits are split between companies and customers is especially important, in view of the need for customers to have appropriate incentives to take up efficiency measures. Two potential options, among many, for how this could be delivered include adding the delivery of energy efficiency measures as an outcome delivery incentive (ODI), and creating a funding pot with the value of subsequent energy savings shared between the consumer and the DNO, similar to The Green Deal (but without the household risk).



## Cost assessment

### A transparent, principles-based approach can help to determine which cost assessment techniques are appropriate in which circumstances

*Q41. How should our approach to cost assessment evolve, to enable us to better manage increasingly pronounced trade-offs between consumer protection, efficiency and investment in the distribution network?*

Ofgem is right to think about how the approach to cost assessment needs to adapt to the circumstances of RIIO-ED3. In addition to thinking about how network regulation delivers value for money when considering the whole energy system (and not only networks), regulation should also deliver value for money over the long term, and not just over the course of the next price control period.

In our view, there should be a transparent, principles-based approach to deciding which cost assessment techniques are most appropriately applied to which types of expenditure. In thinking about this question, it will be important to consider whether particular techniques are capable of accounting for system-wide and/or long-term benefits that arise from company expenditure. A key aim of such an approach should be to ensure that there is internal consistency between the output or quality that companies are expected to provide and their cost allowances.

A key risk in this context is that cost assessment methods mistakenly attribute prudent investment for the longer term to inefficiency, for example because longer-term benefits are not accounted for in the timeframe over which costs are assessed or because of difficulties in controlling for differences in output and quality. This challenge already applies, in particular, to top-down totex benchmarking, that is, assessing (the vast majority) of costs through econometric regression models using cost drivers which capture the broad characteristics of companies' networks. This challenge will increase further at ED3, where:

- (i) Historical expenditure and drivers of cost will become less representative of future drivers of cost due to evolving network requirements and types of investment; and
- (ii) There is growing diversity of solutions with different cost profiles over the lifetime of the investment – delivering capacity (and other, system-wide outcomes) far into the future (for capex-intensive anticipatory investment) or over the shorter term (for capex-light, flexibility solutions, deployed to defer capital investment).

These issues will make it more difficult to compare companies' costs during a single 5-year period, and, as discussed in response to Question 22 in section 0 above, may in particular require Ofgem to assess large, atypical, anticipatory investments outside of its totex benchmarking.

## Moving away from formulaic CBA analyses can help to support efficient investment decisions

*Q42. How should our guidance for cost benefit analysis evolve to better enable optioneering between different interventions, taking relevant long-term risks and benefits into consideration?*

At previous price controls, Ofgem's instructions on cost-benefit analysis has been relatively prescriptive about how investments should be evaluated, e.g. in terms about pay-back periods, discounting of benefits, scenarios to be considered, and which benefits and costs should be included in each side of the evaluation.

Ofgem will continue to play an important role in standardising how companies present their CBA (to Ofgem and other stakeholders), and ensuring that companies conduct robust analysis. Moving away from a prescriptive approach to the types of cost-benefit analysis carried out may be necessary, however, to encourage companies to propose and consider innovative solutions (including, but not limited to, network flexibility), novel delivery methods, and anticipatory investments which are intended to minimise whole-life costs, albeit in the context of uncertainty about the future.

To facilitate this, CBA guidance could evolve to provide principles-based guidance on best practice, while allowing companies discretion to evaluate the following in light of the specific circumstances faced by each investment decision:

- (i) Pay-back periods (and evaluation horizons) linked to the life of assets under consideration, rather than over-relying on regulatory assumptions about asset lives;
- (ii) Different types of costs and benefits, to reflect (a) that different solutions carry different levels and types of externalities, or whole system benefits (as discussed in Chapter 5), and (b) that different solutions carry different options values (in terms of protecting against future risk and/or avoiding possible future costs, as discussed in Section 3 above);
- (iii) Sensitivity analyses that capture the range of costs and benefits across different future scenarios (and making different assumptions about key inputs, such as costs); and
- (iv) Decision rules that allow for a holistic view of costs and benefits in light of the balance of uncertainty about the future.

## 4C

## Real price effects (RPEs) and ongoing efficiency

### The approach to RPEs is sound at a high level, but the methodology could be improved in several ways

*Q43. Do you agree that the current Real Price Effect (RPE) methodology should form the basis for adjusting allowances in ED3?*

Our view is that RPEs are important within the current price control framework to prevent network companies and consumers from being unfairly penalised or benefiting from differences between changes in actual network company input cost changes and CPIH. At a high level, we consider the principle of selecting a combination of indices to reflect company cost pressures, combined with annual ‘true ups’ to mitigate the distortionary effect of forecast errors, to be sound. However, we believe that there are a number of detailed changes that could improve the methodology, including:

- **Removing or relaxing the materiality threshold.** Our view is that costs should not be excluded from RPEs based on an arbitrary materiality threshold. This is because excluding certain costs implicitly assumes that they will rise in-line with CPIH. This is unlikely to hold given that CPIH is not designed to measure the input cost pressure faced by network companies. Instead, it is a measure of consumer inflation that is based on the change in prices of a basket of consumer goods, many of which, such as food items, are not representative of the cost pressures faced by electricity networks. Removing or relaxing the materiality threshold will allow RPEs to apply to a broader range of costs, ensuring that cost allowances more accurately reflect the price pressures faced by network companies.
- **Adopting a transparent, evidence-based, and data-driven approach to selecting price indices to ensure they are as reflective as possible of the input cost pressures experienced by companies.** The selection process should involve a detailed analysis of the network company costs and their alignment with relevant price indices, rather than relying on regulatory precedent. This analysis should include a comparison of the composition and historical trends of network company costs with those of the relevant price indices. This will ensure that the indices best reflect the actual cost pressures faced by network companies.
- **Applying a more comprehensive approach to forecasting.** The current approach to forecasting is based on the OBR forecast of the index where available and the long-term average historical RPE otherwise. Forecast accuracy could be improved by incorporating a broader range of forecasts for each index, such as: (i) considering the long-term average RPE alongside the OBR forecast where both are available; (ii) including forecasts of other independent bodies as well as the OBR; (iii) examining trends in the RPE over time to determine whether it has deviated from the long-term average; and (iv) employing econometric analysis to model price indices based on forecastable parameters, allowing the indices to be projected using the model and forecasted parameters.
- **Ensuring the RPEs are internally consistent with other areas of the price control such as ongoing efficiency.** Inflation measures like CPIH inherently have productivity gains ‘built’ into them because productivity improvements exert downward pressure on inflation. Therefore, it is important to ensure that RPEs and the ongoing efficiency are internally consistent by accounting for the productivity improvement already embedded in any inflation measures used.

## A principles-driven approach to ongoing efficiency could help to address difficulties in estimating the appropriate rate of productivity growth

*Q44. Do you agree that the current approach to setting the ongoing efficiency challenge is a suitable starting point for ED3?*

The current approach to setting the ongoing efficiency (OE) challenge broadly involves: (i) determining a range of OE estimates based on a benchmarking exercise using productivity data (often EU KLEMS); and (ii) selecting a point within this range, sometimes with further post-benchmarking adjustments. Applying this methodology encounters the following difficulties.

- OE is not directly observable; productivity growth can be driven by other factors, including catch-up efficiency and economies of scale.
- Measuring productivity is difficult and data sources display material volatility, especially at the industry level.
- Several complex analytical choices are required to implement any benchmarking approach, including: which measure of productivity to use (gross output or value added); which comparator industries to use; and the time period over which productivity is benchmarked.
- Selecting a point estimate within the final range and/or making post-benchmarking adjustments require a significant degree of judgement.

These difficulties are evident in the increasing divergence between regulator-determined OE and output productivity growth. Regulator's OE determinations have trended upwards since 2008, in the face of near-zero productivity growth across the UK economy.<sup>13</sup>

In our view, a **principles-driven approach to OE** should be established.

- The approach should be **transparent** and **robust**:
  - Economic theory supports the use of gross output rather than value added measures of productivity, as well as the use of TFP for all costs (rather than some combination of TFP and partial factor metrics).
  - Clear and transparent criteria should be used to identify comparator industries, such as similarity of activities, extent of competition and similarity of scope to benefit from economies of scale. It is, however, important not to place undue weight on the apparent similarity of activities, as this may lead to an insufficient number of comparators being included and resulting estimates being volatile.
  - The time periods over which productivity growth is benchmarked should be driven by considerations of internal consistency

<sup>13</sup> See '[Ongoing Efficiency for Gas Networks at RIIO-3](#),' *Economic Insight* (2024); page 8.

- The relevance of **UK-wide productivity performance** to energy networks should be considered. The main factors driving slow UK productivity growth are largely economy-wide and include insufficiency of: investment; infrastructure quality; human capital quality; and management quality. Regulation is unlikely to mitigate their impact on energy networks.
- Post-estimation adjustments to the range derived from benchmarking **should be avoided**. There are various reasons why such an adjustment might be appropriate in principle, however there is no reliable way to quantify their overall net impact and so it is not possible to determine reliably whether an upwards or downwards adjustment is appropriate.
- Point estimates from any benchmarked range should **generally be taken from values around the middle** of that range. This reflects the inherent uncertainty as to the true value of OE.

Finally, any estimates for OE need to be applied in a manner that preserves internal consistency. Estimates of OE based on benchmarking will be inclusive of productivity gains realised through improvements in quality. If companies are tasked with making additional improvements in quality, OE will be double counted. It is therefore essential to allocate the resulting estimate of OE between reduced costs and improved quality.

## 4D Finance

*Q45. Do you see any reason why we should not implement the proposed changes to the calculation allowed returns, consideration of investability and assessment of financeability that we set out in RII0-3 Sector Specific Methodology Decision – Finance Annex for ET, GT and GD?*

We set out our response to the following issues in turn: (i) the capital asset pricing model; (ii) provision of a nominal allowance for fixed rate debt; (iii) investability; and (iv) broadening the financeability toolkit.

### Capital Asset Pricing Model

In relation to the estimation of the cost of equity, we think further consideration should be given to whether it remains appropriate to rely only on index-linked gilt (ILG) yields when estimating the risk-free rate (RFR). While the existing approach has the advantage of simplicity, we note that there are several important reasons beyond just risk-return appetite why investors may hold ILGs, which can lower their yield below that of the true RFR. These include, among others, high liquidity of ILGs, the ability to widely use ILGs as collateral, and regulatory requirements for financial institutions.

Economic literature also supports the view that government bonds may lead to a yield that is lower than the true RFR. Campbell, Sunderam & Viceira (2016) found negative correlation between Treasury yields and stock market returns, implying ILGs may not be zero-beta assets.<sup>14</sup> In earlier research, Feldhütter and Lando (2008) identified a convenience yield (i.e. the value of government bonds to investors beyond being purely 'risk-free') for US Treasuries of between 30-90 basis points

<sup>14</sup> *'Inflation Bets or Deflation Hedges? The Changing Risks of Nominal Bonds'* Campbell, Sunderam & Viceira (2016)

between 1996 and 2005.<sup>15</sup> Given this and other evidence, the CMA stated in 2021 that ILGs “are unlikely to provide a perfect (or wholly sufficient) proxy for the RFR in isolation”.<sup>16</sup>

## Nominal allowance for fixed rate debt

In relation to providing a nominal allowance for fixed rate debt, in our view it is not clear that the impact of the inflation leverage effect is sufficiently material that this policy change is a proportionate response to the issue. Providing a nominal allowance for fixed rate debt involves a proportion of the RAV being de-linked from the inflation indexation mechanism and a semi-nominal (rather than real) WACC being applied. While both options, in principle, compensate for the impact of inflation on returns, there is a danger that de-linking a proportion of the RAV from indexation leads to greater uncertainty.

- Under the existing approach, investors are guaranteed the return of their capital in real terms, with the RAV indexed to the outturn values of an inflation measure transparently calculated by the ONS, plus a real-terms rate of return.
- Under the revised approach, investors are guaranteed the return of their capital in nominal terms (with a portion of the RAV no longer indexed), and are compensated for inflation through the nominal cost of debt, over which there is arguably greater discretion.

## Investability

In relation to investability, Ofgem is right to consider whether the allowed return on equity is appropriate for the needs of the sector. We emphasise that although the circumstances of RIIO-ED3 highlight the importance of getting this question right, consideration of this issue has always been an important part of the regulator meeting its financing duty.

In principle, for a firm to be able to finance its investments, the following must apply.

- It must be expected to generate a return commensurate with its level of risk, as typically measured by the WACC. This means that, for a regulated company:
  - (i) The overall allowed rate of return (and the allowed rates of return on debt and equity) must reflect the risks the firm faces.
  - (ii) The price control needs to be a ‘fair bet’ for investors, so that there is a symmetrical balance of risk.
- The firm must have cash flows that are consistent with it being able to make its debt payments and raise debt finance.

The considerations that Ofgem highlights under investability are clearly important when ensuring that the allowed rate of return on equity is estimated as accurately as possible. The issues are however, wider, and it will be important to pay particular attention to ensuring that the price control package represents a fair bet for investors. In this context, we think use of more sophisticated techniques, for example using Monte Carlo methods, could be helpful alongside scenario analysis.

<sup>15</sup> ‘Decomposing swap spreads’ Feldhütter and Lando (2008)

<sup>16</sup> ‘Anqlian Water Services Limited, Bristol Water plc, Northumbrian Water Limited and Yorkshire Water Services Limited price determinations’ CMA (2021); See 9.108

## Broadening the financeability toolkit

As set out above, for a firm to be able to finance its investments, it must be expected to generate a return commensurate with its level of risk and have cash flows that are consistent with making debt payments and raising debt finance. While the assessment of credit ratios for the notional company is often referred to as a ‘financeability assessment’ and is obviously relevant to the second of these points, it is clear that the overall issue of financeability is much wider, and the financeability toolkit needs to reflect this. The use of different terminology (“financeability”, “investability”, “financing duties” etc.) should not obscure the need to ensure that the above two conditions are met.

From a regulatory perspective, the two main challenges in assessing whether financing duties have been met are: (i) ensuring that the notional firm has been accurately identified, given that such a hypothetically efficient firm is impossible to observe in practice; and (ii) ensuring financeability over the long-term and thereby avoiding the conflation of short-term cash constraints with more fundamental issues and the use of revenue reprofiling to mask longer-term problems. Our December 2024 report for SP Energy Networks (*“Ensuring a Reliable Approach to Notional Financeability”*) sets out 12 recommendations for how regulators can meet these challenges. Examples of these recommendations include:

- The use of robust methods for determining the likely spread of outcomes for the notional company, with each relevant parameter set at the ‘most likely’ outcome.
- Attaching some weight to observable outcomes and data across actual companies when considering the appropriate calibration of individual parameters.
- Setting notional gearing using an empirical method (either directly, using or drawing on existing models in the literature), using a method that remains stable over time.
- Consistency between benchmarks used to inform the cost of debt and the target investment grade for the notional company.
- Consistency between productivity targets and the allowed equity return, in line with the ‘risk-compensation’ rationale identified in the economic literature.

*Q46. Do you see any reason why we should not implement the proposed updates to financial resilience requirements that we set out in RII0-3 Sector Specific Methodology Decision – Finance Annex for ET, GT and GD?*

Ofgem is right to think about the potential costs associated with financial distress or failure, such as higher costs of capital and potential impact on quality of service, as well as bankruptcy costs that would need to be recovered from consumers. However, we think that the following points merit additional consideration.

- Restricting companies’ flexibility or room for manoeuvre in their financial arrangements could result in their capital structures becoming less efficient. A higher gearing level than the proposed 75% dividend lock-up trigger could, in principle, be efficient in some circumstances. Although efficient gearing levels are difficult to estimate with any degree of certainty, the circumstances of ED3 point towards companies having more flexibility, rather than less, as they seek to undertake the significant investment programme required at lowest cost.

- There could be a material impact on costs as a result of the proposed changes. While Ofgem previously considered the measures to be “*cost neutral*” in the SSMD for GD, GT and ET, there could be circumstances in which the proposed changes do impose costs on licensees. For example, even if companies already meet the requirement to hold more than one investment grade issuer credit rating, they may nevertheless need to increase their cash buffer to ensure they meet this stricter requirement in plausible downside scenarios.
- Any impact on how companies operate as a result of these proposed changes can ultimately have an effect on the consumer. For example, if companies need to hold a greater cash buffer, it may divert cash from more productive activities that can benefit consumers.

### **A clear and objective framework for depreciation policy can help to mitigate systematic risk**

*Q47. What are the key factors (including benefits and costs to consumers) that Ofgem should take into consideration when conducting its review of the appropriate approach to regulatory depreciation in ED3 and beyond?*

In addition to the factors that Ofgem identified in its electricity and gas transmission and gas distribution RIIO-3 SSMD Finance Annex, such as the fair allocation of costs between current and future consumers, it will also be important to consider the impact of changes in depreciation policy on the perceived extent of regulatory discretion. For regulated utilities with long-lived assets, where depreciation rates can be flexed and asset life data is subject to a degree of uncertainty, there may be a temptation to push cost recovery further out into the future in order to keep bills lower in the short term. This, in turn, could lead to higher systematic risk, and therefore increase costs to consumers in the longer term. As such, it is helpful if the approach to depreciation is based on a framework that is as clear and as objective as possible. Aligning depreciation profiles with asset lives, and a robust and transparent approach to asset lives, are the minimum requirements for this.

# 5

## SMARTER NETWORKS

This chapter sets out our response to Questions 48 and 49 related to Distribution System Operator (DSO) regulation at ED3. It should be read alongside our observations on Ofgem's approach to network flexibility, discussed in Section 3A above.

5A

## The DSO Role at ED3

### There is a risk that Ofgem’s approach to DSOs is inconsistent

*Q48. How should the price control encourage ongoing development of the DSO role and activities to optimise whole system benefits for existing and future consumers?*

*Q49. What should the role of the DSOs be in identifying and delivering whole system benefits?*

In its consultation, Ofgem highlights the potential for flexibility to play an “important role”, and cites cost-benefit analysis evidence which shows the additional benefits to the whole energy system that can be achieved through distribution flexibility (beyond deferred distribution network reinforcement).<sup>17</sup> There is therefore a risk of inconsistency when Ofgem casts doubt on the value of using cost-benefit analysis to decide when to deploy flexibility and/or alternative solutions (in Chapter 6 of the consultation, for example).

While not framed as such, whole system benefits represent “externalities” to DNOs, in the sense that these benefits are accrued by other players in the energy system, rather than avoiding costs to the DNO themselves. It is common practice (and, indeed, very appropriate) in public policy for externalities to be considered when deciding which investments get built – but elements of Ofgem’s discussion and framing implies a view that the same level of externalities apply to all potential investments. In fact, the scale of wider system benefits is likely to vary significantly from case-to-case – and, given this is an area of rapid innovation and technological progress, is rapidly changing and hard to predict.

Therefore, top-down ex ante constraints on the type and rate of flexibility deployment may be unhelpful to ensuring that networks innovate and foster innovation in the rest of the energy system. Instead, Ofgem should ensure that its regulatory framework, as a whole, encourages companies to develop innovative flexible solutions in their business plans, but also provides the right incentives for networks to develop and deliver these solutions within the price control.

<sup>17</sup> See consultation, paragraph 8.14.

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