Grid Edge Policy

Regulation · Energy · Consumers

Understanding Asset Lives – Save Now, Pay Later?

A key issue for Ofgem in the ED2 Business Plans

By Maxine Frerk

Grid Edge Policy

January 2022

About the author

Maxine Frerk was previously Senior Partner Networks at Ofgem and led on the RIIO ED1 price control including defending Ofgem's decision at appeal to the CMA. She is now an independent consultant and thought leader through her company Grid Edge Policy focussed on bringing a consumer perspective to complex issues in energy regulation. She is also an Associate with the charity Sustainability First and a member of SSEN Distribution's Consumer Engagement Group.

Acknowledgments

I am grateful to Ian Rowson (previously Associate Partner of RIIO Finance and Investor Relations at Ofgem and part of the ED1 team) for reviewing this paper from a technical perspective. Any errors remain the responsibility of the author.

Executive Summary

In setting the RIIO price controls for the network companies one of the factors that Ofgem has to decide on is how quickly the money that companies spend each year should be recovered from customers.

This measure known as “asset lives” (or the depreciation rate) is hugely important in terms of its impact on customer bills but is only discussed in the financial sections of Ofgem’s consultations and of the company business plans.

The reason that it is so crucial is that it is about inter-generational equity and the balance of who pays for network investments between current and future consumers.

The simple concept that has gained traction – and underpins Ofgem’s proposals to move to a 45 year life – is that costs should be recovered over the life of the asset. However, because historically the asset life used was shorter, the act of switching from one basis to another creates an artificial “payment holiday” which benefits current customers and places a huge burden on future consumers.

In the ED2 Business Plans that were submitted to Ofgem at the start of December 2021 one of the companies (Northern Power Grid) has called this out and is arguing for a different approach. The other DNOs are all happy to accept Ofgem’s proposed approach – perhaps feeling they have bigger battles to take on. SSEN do however at least show what the profile of revenues and bills would be out to 2060 which highlights the scale of the problem. With a 45 year life as proposed by Ofgem, their figures show a very clear drop in revenues - and hence bills - through to the early 2030s followed by a doubling over subsequent decades (based on an assumption of flat expenditure beyond ED2).

This issue has a long history. The original decision to move to shorter asset lives was taken in 2011 but without a full analysis of the implications for DNOs. At ED1 Ofgem proposed a transitional arrangement. This was challenged by British Gas who wanted to see the full short term bill savings delivered. The CMA upheld Ofgem’s decision on transitional arrangements but through that process it became clear that there were more significant inter-generational issues than had been contemplated when the policy was first proposed. The CMA clearly saw the problems with a move to a longer asset life. The Ofgem team (which I led) told the CMA they would be carrying out a full review of the policy before ED2. However the team moved on and that review never happened.

Given this is a technically complex issue but one which urgently needs a strategic rethink, this paper attempts to provide a relatively accessible explanation of the issues and the history to help inform decisions on the ED2 business plans.

The paper also sets out an alternative approach, based on that adopted in water which in essence allows the parameters to be set on an annual basis to deliver a sensible bill profile which ensures that each year customers are paying their fair share of the costs.

While it is clearly too late in the day to be proposing a radical review of Ofgem’s approach there clearly are adjustments that could be made. An associated metric that is relevant here is the capitalisation rate (how much of the money is recovered over time rather than in year). Ofgem has, as in the past, suggested that this could be adjusted to ensure companies are financeable (although the companies have pushed back on this as an approach). Adjusting the capitalisation rate is an obvious way for Ofgem to address the “payment holiday” problem in ED2 and allow time for a proper review ahead of ED3.

Of course, with the energy crisis no one is going to want to see customer bills pushed up further in the near term. However a capitalisation rate that varies year on year over the period could be used to help smooth those costs as well and to produce what customers would recognise as a sensible profile of bills year on year and one that is fair between generations.

What is essential is that in reaching its decision on ED2 Ofgem has genuinely looked at the implications for future consumers (in line with its statutory duties). To do that it must explain why the bill profile that its asset lives policy would deliver (through to 2060 ie over the life of the assets) is fair between generations. At the minute it is hard to see how it can credibly make that case.

Understanding Asset Lives – Save Now, Pay Later?

1 Introduction

One of the technical design elements of a price control is how the money that is spent by the networks is recouped from customers over time. Because it's a technical financial issue it tends to get relegated to the financial annexes of documents and debated among financial experts. However it is fundamental to the question of inter-generational equity and consumer bills.

Northern Powergrid (NPG) have highlighted in their ED2 Business Plan that the approach set out in Ofgem's Methodology Decision in 2020 (of a move to 45 year asset lives) creates a real issue in terms of inter-generational equity.

This was one of the topics explored in the CMA appeals on RIIO-ED1 and at that time the Ofgem team (which I led) committed to undertake a full review of the approach. That review never happened and with the issue being raised through the Business Plan process this paper looks to explain the issue and recap on the arguments from the CMA hearings and then to consider the implications for ED2.

More work is needed to identify the right solution but this debate urgently needs to happen. NPG have described it as a car crash waiting to happen. As Sustainability First has consistently highlighted[1] there is a temptation in regulatory processes for all parties to simply focus on short term bill impacts. This must be addressed. We cannot ignore the impacts on future consumers of these ostensibly technical decisions.

The paper covers in turn:

- What are "asset lives"?
- What is the issue?
    - The depreciation holiday issue
    - The increased RAV issue
- The ED1 transitional approach
- The CMA appeal on ED1
- The ED2 Business Plans
- The approach in water
- What should Ofgem do?

2 What are "asset lives"?

This section sets out the technical building blocks in a price control to introduce the terminology and concepts that underpin the rest of the paper.

In setting a price control Ofgem will look at what the companies are planning to spend on both investment (capex) and running costs (opex) and determine what is a reasonable level of spend based on benchmarking and other modelling.

[1] See for example https://www.sustainabilityfirst.org.uk/images/publications/fair_for_the_future/Regulation_for_the_future_the_implications_of_public_purpose_for_policy_and_regulation_in_utilities.pdf

Given the long-term nature of many of the assets that companies are investing in and recognising that this expenditure may be "lumpy" the approach that is taken is essentially to recover the investment spend over time. This is at the heart of what is known as the RAV model of regulation where any expenditure that is not recovered in year is added to the Regulatory Asset Value (RAV) of the company. The revenue the company is able to collect from consumers (via suppliers) each year is then essentially made up of three components:

- the "fast money" recovered in year (which roughly equates to opex);
- "depreciation" which is repaying a share of what is in the RAV; and
- "return" which is the interest / equity return on the RAV itself.

Allied to this there are then three key parameters that determine the size of these revenue pots:

- the "**capitalisation rate**" which determines how much is recovered (as "fast money") in year and how much is treated as "slow money" and goes onto the RAV. In ED1 the capitalisation rate was around 70% which means 30% was treated as fast money recovered in year and 70% was treated as "slow money" added to the RAV. The figure is set roughly to correspond to the split between capital expenditure (in assets with a long life) and operating costs under statutory accounting rules, eg IFRS. However one innovation in RIIO was to focus on totex – to try to encourage companies to view opex solutions on an equal footing with infrastructure investment. As such the capitalisation rate will not necessarily exactly match the accountants' capex-opex split and is a parameter that Ofgem sets as part of its determination at each price control (and which will typically vary by company).

- the "**asset life**" which determines how much of the RAV is recovered through depreciation each year. Conceptually this is similar to the asset lives used in accounting depreciation but in accounting these will vary depending on the type of asset (eg between IT and traditional infrastructure). However, for determining how the RAV is recovered a single figure is used (notwithstanding that over time software, sensors and microprocessors will account of a growing share of expenditure and can be expected to have shorter lives). Again this is a parameter that Ofgem sets and is the main focus of this paper. This has tended to be set as a common figure across companies and across price control periods.

- the "**weighted average cost of capital (WACC**)" which is the return the company gets on the RAV in effect to cover the debt interest and equity return the company should earn on the money that it has spent but not yet recovered. A lot of attention is focussed on this figure in price controls which is understandable given the significant implications it has for customers' bills in the short term but also the attractiveness of the sector to investors in the longer term.

There are other elements of the calculations that can have a big impact on bills and inter-generational equity including the treatment of inflation. These are not explored in this paper but, as with asset lives, would merit a more open airing.

3 What is the issue with asset lives?

Historically – up until DPCR5 – the electricity distribution price controls had been based on asset lives of 20 years which was a figure set at privatisation taking account of the starting value for the RAV at that time and the need for a broadly sustainable level of regulatory depreciation.

In 2011 Ofgem carried out a wide review of asset lives focussed primarily on transmission (which was seeing a rapid growth in investment levels needed). In that review the conclusion was reached

that a 45 year life should be used for future assets reflecting their likely physical and economic life. The decision was taken at that point to apply the same principle to electricity distribution, although wider thinking about the ED1 methodology had not started. As a part of those proposals it was acknowledged that transitional arrangements might be needed.

As the RIIO ED1 team started to look in detail at the implications of a move to a longer asset life they realised that for the investment profile of the electricity distribution sector, changing the asset life created a major issue in terms of the profile of revenues with a big drop in revenues in the short to medium term. This had both financeability implications for the companies but also inter-generational equity implications.

There are essentially two inter-related issues – the "depreciation holiday" that results when you move from one particular asset life to a longer one (which reduces bills artificially in the short to medium term) and the "increased RAV" that goes with a longer asset life and results in a significantly higher cost in the longer term in the "return" element of the bill.

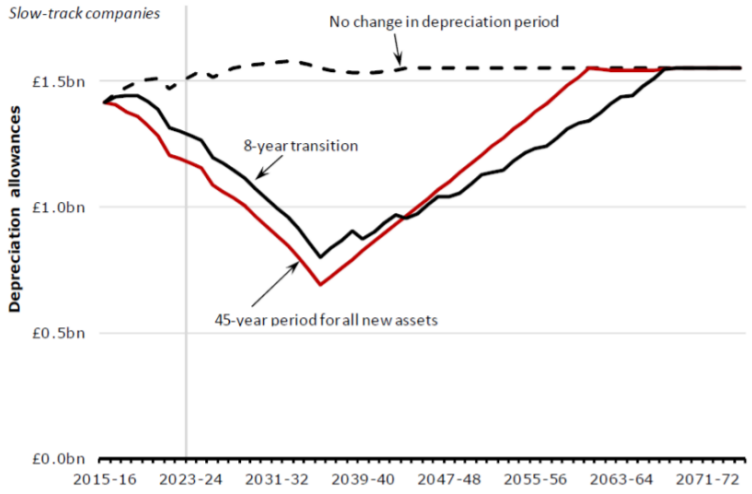
3.1 The depreciation holiday issue

The problem can be understood by thinking about a company that has a flat expenditure of £1m pa on capital maintenance (ie purchasing and maintaining an asset over its life). In that situation the asset life assumed does not make any difference to how much customers pay in terms of depreciation. You could decide to have a one year asset life and customers would pay £1m each year. You could have a 20 year asset life and customers would pay 1/20 of each year's expenditure for each of the last 20 years – a total again of £1m. Or you could have a 45 year asset life and customers would pay 1/45 of each year's expenditure for each of the last 45 years – a total again of £1m. In each case, there is broad equivalence between depreciation allowances and capital maintenance spend - a principle that lies behind Ofwat's approach to infrastructure renewals accounting.

The problem arises when you switch between asset lives mid-course. Thinking about the ED proposed change, moving from a 20 year asset life to 45 years, come year 21 in the new regime you will have depreciated all the assets that were in the RAV with a 20 year life and you will only have 20 years' worth of new assets with a 45 year life. So the depreciation charge will in effect be 20/45 of the £1m annual expenditure. Customers will be paying less than half of the true ongoing rate of consumption of capital. For ED this "trough" will occur in 2035 around the end of ED3 but revenues and bills will be gradually falling through to then with customers no longer paying their "fair share" of capital costs (which with broadly stable capex is fairly obviously the annual rate of spend).

It is not until 2060 that we will have a full 45 years of assets in the RAV on the new 45 year life basis and a steady state will be regained. This can be seen clearly in Figure 7 from the CMA decision shown below.

Figure 7: GEMA's analysis of the long-term effects on depreciation of the change in asset lives



3.2 The increased RAV issue

While it might seem appealing to be able to avoid paying depreciation for a period (and consumer groups in ED1 advocated for this model) there is no such thing as a free lunch.

The price that is paid for lower bills for today's customers is in terms of RAV growth and consequently higher bills for tomorrow's customers. Any expenditure that is not recouped by the companies goes onto the RAV. And a higher RAV results in higher costs in terms of the return that has to be paid on the RAV.

Having a longer asset life inherently results in customers having to pay more in terms of interest / equity returns – in the same way that you would on a mortgage for example.

Going back to the simple example of a steady expenditure pattern and a fixed asset life: if you had a one year asset life you wouldn't have much of a RAV, if any. With a 20 year asset life the RAV would represent 10 years' worth of annual expenditure. With a 45 year asset life the RAV would represent 22.5 years worth of expenditure – more than double the amount. And moving from one approach to the other simply makes things much more expensive for future customers.

A RAV that is twice the size means twice the level of financing costs which is a critical component of the overall costs in this capital-intensive industry. And while the cost of capital today is at a historically low level, in future it is liable to be higher. Future customer bills will likely be dominated by the costs of paying for the return on a much higher RAV, on top of a long period of increasing depreciation charges from about 2035, in a way that risks being politically unsustainable and which NPG have suggested could ultimately raise wider political questions about the future of the industry.

However, as regulators are all too aware companies generally have an incentive to want to increase their RAV. Could this be a reason why, apart from NPG, the DNOs are all going along with Ofgem's proposal?

4 The ED1 transitional approach

Having identified the problems with a shift from 20 to 45 years, the decision was taken in ED1 to move to a transitional set of arrangements with the asset life being extended gradually over the period.

This change in approach was presented in the Ofgem ED1 decision as being in response to financing issues raised by the companies. This was indeed the trigger for the team looking closely at the issue (in a way that had not been done when the 2011 decision was taken on moving to a 45 year life) but the reasons for pursuing that path also reflected wider concerns about the original decision and the implications for inter-generational equity, as became clear in the CMA appeal.

5 The CMA Appeal on ED1

The decision to introduce a transitional arrangement for asset lives in ED1 was then one of the elements of the ED1 decision that was appealed by British Gas (with Citizens Advice in support) who argued that the full change should be introduced straight away as it was clearly in consumers' interest as it lowered bills. Ofgem's defence was that British Gas were purely focussed on current customer bills and its remit was to look across current and future customers.

The hearings with the CMA were difficult[2]. We were left having to explain why Ofgem had taken the decision to move to 45 years in the first place, which the CMA clearly considered was a strange decision given the impact on bills over time - a position that we could only really agree with. Professor Jon Stern on the CMA panel was very familiar with all the issues around the privatisation discount and the impact that had on the RAV which is what led to the original decision to adopt a 20-year life. We also touched on the different approach in water (which is explored further below). The clear message from the CMA was that they understood why we were concerned about the shift and supported the use of a transitional arrangement as better than the alternative advocated by British Gas of an immediate move to 45 years.

In their final determination the CMA quoted Ofgem as saying:

"*It was becoming clearer to us that it would not be in the consumer interest to […] dive headlong into this deep valley of depreciation and that a transitional period would provide us with a somewhat softened approach, which would allow us time to reflect before we reached RIIO-ED2 as to how to take this forward*."

They also highlighted the significance of the issue (which applies again in the context of ED2):

"*This was a material decision. GEMA's use of a transition resulted in depreciation being over £500 million higher in ED1 than if it had moved immediately to 45-year asset lives for new assets. However, the context of the relatively higher depreciation charges in ED1 was that they represented a mitigation of what would otherwise be a reduction in charges of over £1.1 billion as a result of the decision to change the approach to asset lives*."

The CMA concluded that the use of transitional arrangements was an appropriate approach regardless of whether Ofgem ultimately proceeded with a 45 year asset life or adopted an

[2] The transcripts of the hearings were not published but all DNOs, Citizens Advice, British Gas and Ofgem will have copies and might usefully revisit what was said. Given this level of availability I do not consider there is any sensitivity in me summarising the debates that took place.

alternative arrangement with higher depreciation in ED2. In reaching that view it was quite clear that a review was justified and the CMA noted the limited analysis that had supported the original decision to move to 45 years. In their final decision they said:

"*7.47 We accept that there are some legitimate concerns about the underlying 45- year asset life policy and the rationale for it. This was brought into question by both the analysis within GEMA's witness statement and also the oral hearing evidence. The change in asset life would potentially put companies under significant financial strain in the intervening periods, followed by a material increase in equity and asset value.*

7.48 This does not show, in itself, that the use of a 45-year life was wrong, as it may have advantages in terms of the prices reflecting economic values which should be balanced against these risks. However, it highlights significant disadvantages with the policy and it is not clear that these have yet been fully assessed. We note that GEMA's choice of asset life was based on analysis from its advisers, a consortium led by CEPA that included relatively limited scenario analysis of the financial effects of the choice of asset lives – assuming a significant increase in assets would offset the shorter-term effects and excluding effects after 2050.

7.49 While we were surprised to receive the new evidence from GEMA at the hearing which, for the first time, provided a separate justification for the transition (that the underlying long-term policy was likely to be revisited), we consider that GEMA's evidence was credible. The option of undertaking a review within the period is, in our view, a sensible response to the identification of concerns with the underlying policy, as any conclusions should not affect the level of investment or the delivery of outputs within the RIIO-ED1 period. Furthermore, in a context where a review is to take place, there is a strong argument in support of transitional arrangements which soften the impact in ED1 of the risks associated with the long-term policy."

As an aside this is an example of where the appeals regime in energy works differently from water. In the Ofgem case the CMA only really had the choice between the Ofgem proposal and the British Gas proposal. In water they have the ability to decide what the right answer is and I think they may well have unwound the decision and reverted to a 20 year life – or taken a different approach entirely. That would have involved a lot more work on their part but would have meant we would have clarity on the question going forward.

6 The ED2 Business Plans

NPG

As highlighted above NPG has raised the issue of asset lives in strong terms in its Business Plan arguing in their executive summary that "*Ofgem must resist the temptation to push too much of the costs onto our children's generation just to keep current bills artificially low*".

In their waterfall diagram showing the changes from ED1 to ED2 on Ofgem's assumptions they show a reduction of £3.16pa as being the result of "future consumers pay more". They propose instead a regulatory depreciation period for business as usual investment that would be based on current average asset lives (25 years) and raise the idea of accelerating "backlog" regulatory depreciation from 2015-23 during 2023-28. A longer life for net zero investments could then be considered.

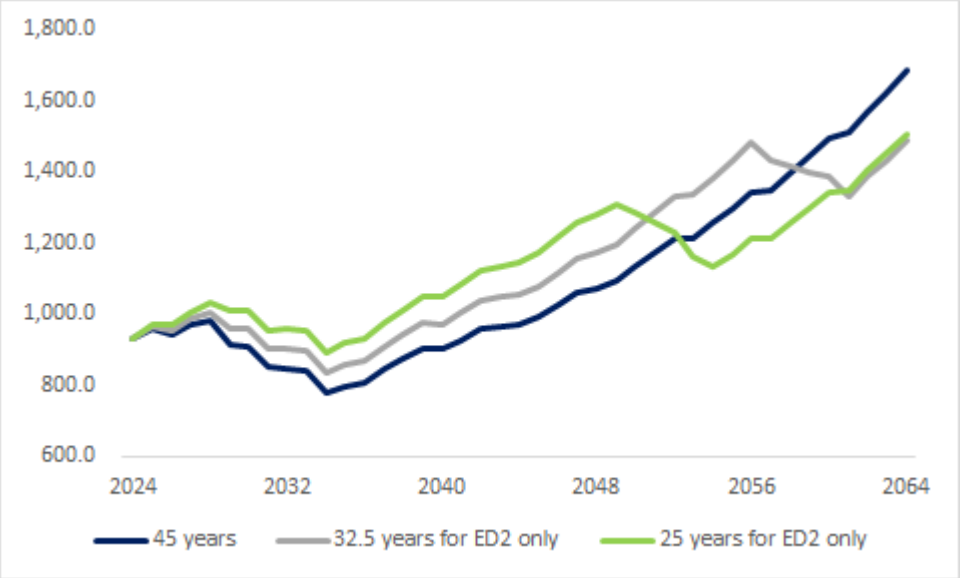
NPG are clear that from a business perspective they are concerned about the political risk of future bills and absolute returns being significantly higher than at present. They see this as unsustainable

and are concerned that it risks further pressure on rates of return or more radical action by government / the regulator as these effects are felt.

However, they also couch this in moral terms and argue for a regulatory depreciation period that establishes a fairer share of the costs across current and future generations and "*avoids compounding an intergenerational fairness problem that Ofgem's regulatory depreciation policies have created in 2015-23 which is set to become even worse if they do not change course*". They also quote the Treasury Net Zero Review which talks about inter-generational fairness.

SSEN

While NPG has led in terms of highlighting this issue, SSEN did, uniquely, include in their draft Business Plan a chart (see below) which shows long-term revenue profiles with different assumptions around asset lives. This demonstrates the strange pattern that results of a drop in revenues through to the early 30s followed by a doubling through to 2060 (in the case of a 45 year life). This chart is based on an assumption that spend will remain steady at ED2 levels – the ramp up in long term revenues (and hence bills) is purely the result of how the costs are recovered over time – the "depreciation holiday" and the build-up of the RAV.



Source: SSEN Business Plan Figure 19.9 Revenue profiles for different asset lives assumptions

SSEN also include in their Business Plan (Fig 19.4) a waterfall chart in which they show the factors leading to the difference in bills between ED1 and ED2. This shows that the change in asset lives is responsible for a £5 drop in the average bill. However as the chart above clearly shows this is not a genuine saving simply a transfer between generations.

Notwithstanding this transparency SSEN have continued to support Ofgem's proposal for a 45 year asset life. They have however proposed a 65% capitalisation rate – the lowest among the DNOs – which can have a similar effect in terms of helping to address the inter-generational balance (though it may also simply reflect SSEN having higher operating costs).

Other DNOs

None of the other DNOs explore the issue of asset lives in any depth and all simply support the Ofgem position. This is interesting in that in the ED1 appeal they all argued strongly for the transitional arrangements. They all argue that changes to asset lives or capitalisation rates should not be used to resolve underlying financeability concerns – which of course supports their argument for a higher cost of capital.

While not arguing for a different approach on asset lives some of the DNOs make related comments that are worth noting:

- UKPN does suggest that asset lives will need to be reviewed in future to reflect the increased use of shorter lived assets (IT, sensors etc);
- All the DNOs are proposing reductions in their capitalisation rate compared to ED2 with WPD, for example, being clear that this reflects greater reliance on short lived assets;
- ENWL did explore the bill profiles issue with customers who supported current customers paying and not leaving costs to future generations (see below);
- SPEN note the cliff-edge in revenues faced by Scottish DNOs as a result of the historical accelerated revenue stream.

Across the piece there is nothing to directly support Ofgem's proposed move to 45 years beyond an argument that this was considered in 2011 and that regulatory stability is important. None of the companies mention the ED1 CMA decision which re-examined the 2011 decision and supported a broader review.

6 How does this work in water?

The arrangements in water are ostensibly quite similar but the different terminology used seems to create more space for pragmatic approaches to be taken. As in energy there are two key parameters:

- the "**pay-as-you-go**" rate which determines how much of the expenditure is recovered in year ie the flip side of the capitalisation rate in energy. A 70% capitalisation rate is equivalent to a 30% pay-as-you-go rate;
- the "**run-off rate**" determines how much of the RAV is recovered each year through what would be termed depreciation in energy. A 20 year asset life is equivalent to a 5% run-off rate. One benefit of seeing it as a run off rate is that it can accommodate assets with a mix of asset lives (as exists in practice) whereas the Ofgem approach implies there is a single asset life across all asset classes.

In energy by terming the parameters capitalisation and depreciation the sense is created that there is an economic or accounting right answer. Ofgem says it will set the capitalisation rate at its natural level (ie reflecting the actual balance of capex and opex) and that asset lives should reflect economic lives.

In water by contrast the focus is on the companies setting these parameters to deliver a sensible profile of revenues going forward. The parameters can vary over the 5 years. Clearly this needs to be done in a way that is sustainable for customers and the company but by referring to them as pay-as-you-go rates and run-off rates Ofwat avoid any sense that these measures have to be rigidly tied to accounting notions.

A key concept in water is that of **infrastructure renewals accounting** which is based on an operational assessment of activity needed to maintain the serviceability of the underground infrastructure over a medium to long-term period (typically in excess of 15 years).

Companies in energy and water will always be concerned if these financial parameters are used by the regulator to address financeability issues by pulling forward revenues artificially. However setting them in a way that creates unnecessary financial problems is wrong and energy companies should not resist adjustments that attempt to create a smoother profile of revenues which benefits both the companies and consumers across generations and is consistent with an infrastructure renewals accounting approach.

7 What should Ofgem do?

7.1 Recognise the importance of the issue

The first thing is for Ofgem to recognise the importance of this issue and the need for a proper review. The issue of asset lives was raised in the consultation on the Sector Specific Methodology for ED2 but the clear default was to move to 45 years as originally envisaged. Ofgem did signal in the Sector Specific Methodology Decision that it would consider the issue further in light of the DNO plans which it should now do.

The temptation will be for Ofgem to stick with its decision because this allows the necessary significant investment to be delivered with typically flat or reduced bills in ED2 – and certainly lower bills in the short term than would be the case without the change in asset lives.

However Ofgem has started to acknowledge the issue of inter-generational equity. In his speech at the Ofgem COP26 event in May 2021 Jonathan Brearley said: "with such a long-term project there are questions about fairness between generations and the need for this generation to avoid placing a financial cost on our own children and grandchildren not only through climate change itself but also through the costs of the new energy system".

All of the companies have raised financeability concerns in their draft business plans and through the process of Draft and Final Determinations Ofgem will have to consider the options on how to address this which include adjustments to the capitalisation rate or asset lives.

7.2 Be transparent about the longer term impacts

In process terms, to inform its thinking on these parameters, Ofgem needs to:

- be clear about the longer-term bill impacts of its decision on these key financial parameters (ie looking out to 2060 not just presenting analysis of the ED2 impacts);
- ideally to underpin this with some sense of what the future long term investment needs are likely to be or to explore different scenarios (including flat expenditure to help separate out the impacts of the parameter changes).

There would also be value in engaging consumers on this broader question of what the bill profile should look like. Indeed ENWL did seek to engage its consumer panel on this topic as part of its ED2 development and found:

"*Over how long should the cost of planned network investment be spread?*

Overall, members took the view that it was better to spread the costs out over shorter periods to take responsibility for investments being made today and to benefit from this being anticipated to be the more cost-effective approach. Some members wished to see this approach taken after the economy has recovered from the Covid-19 pandemic. Members also discussed how important factors such as stable and predictable bills; [and] minimising the risk of higher bills …were".

While it may be hard to engage customers on the detail of the financial parameters simply sharing an equivalent chart to that produced by SSEN could be quite revealing. I suspect most customers would not see that "hockey stick" as a sensible or desirable profile of future bills.

7.3 Consider adjustments to avoid exacerbating the issue

Ofgem does not have the time in the ED2 process to carry out a full review of the issue including exploring different approaches such as that taken in water. However Ofgem should be ready to make adjustments to avoid making the problem insurmountable for ED3. Whether you call it "catch-up depreciation" (as NPG suggest) or simply a fudge factor, something needs to be done. The easiest factor to change is the capitalisation rate which anyway varies by company and across price controls, Indeed some of the companies in ED2 have proposed lower capitalisation rates because they have more assets with shorter lives – rather than because they have a higher proportion of opex – suggesting it is already seen as a broader lever. To allow capitalisation rates to vary year on year (on a pre-agreed basis) would not seem a huge step.

7.4 Articulate what is meant by inter-generational equity

In trying to work out what a sensible bill profile would like Ofgem might usefully try to articulate what "inter-generational equity" means in practice.

The idea seems to have developed that an asset life of 45 years is somehow "fairer" as it means the costs are shared over the economic life of the asset. However as this paper has hopefully highlighted the idea is only fairer in concept and ignores the practical problems in moving from one regime to another. A better test of fairness would be whether the customer is paying for a share of the total assets that is broadly consistent over time and reflects a sustainable level of capital maintenance expenditure.

Clearly the picture is more complicated if investment is anticipated to rise over time (or indeed to fall in the case of gas) and arguments can also be made about the moral duty owed by this generation that is continuing to emit carbon (a "polluter pays" perspective).

The issues around inter-generational equity are complex but a Viewpoint I wrote for Sustainability First building on a paper prepared for them by Frontier Economics starts to explore the issues. In particular it challenged the idea that future consumers would necessarily be better off but also highlighted the need to think about the wider co-benefits from investment.

7.5 Use annual capitalisation rates to balance competing pressures in ED2

As a final reflection one cannot ignore the near-term issues of the fallout from Covid and the current energy crisis, with the costs of supplier failures recovered through network charges. This will create even more pressure on Ofgem to focus on the short term bill impacts in ED2. Moving to a model of annually adjusted capitalisation rates (pre-agreed in advance) would allow a revenue (and hence bill) profile to be set which takes account of both these short-term pressures - which are hopefully limited to the next couple of years - and the need to address the "depreciation holiday" issue which has been the focus of this paper.

7.6 Carry out a full review for RIIO3

It will clearly need more work to establish the right approach to asset lives in the longer term, looking at the merits of the water model and other options. The transitional arrangements introduced in ED1 were an attempt to buy time and Ofgem needs to perform the same trick again this time. The key is that this time they must then do a proper review.

In the CMA appeal on the RIIO GD2 decisions there was considerable debate around stranding risk on the gas distribution networks. Ofgem's view was that the right answer was accelerated depreciation rather than an adjustment to equity returns. That makes superficial sense but the lesson from ED is that moving from one asset life to another can have unintended consequences and the focus needs to be on the outcomes sought not on the technical parameters. With GD3 due to kick off shortly this wider thinking on asset lives cannot be ignored.

8 Conclusion

While the idea of moving to a 45 year asset life may sound superficially sensible, the impact of moving from one asset life to another, in the way Ofgem proposes, creates perverse effects with an initial drop in the network component of bills followed by a very significant ramp up in the long term. This cuts across principles of inter-generational equity.

In thinking about this question there is a need for a focus on the outcomes we want rather than the technical parameters. The outcome should be defined in terms of what a lay person would see as a fair profile of energy bills which is not what Ofgem's proposals currently deliver.

Taking this forward requires transparency about what those long-term bill impacts are which has been absent from the consultations to date. The impacts need to be presented out to 2060 not just for ED2. The debate then needs to move away from being a technical debate about what are positioned as financial parameters discussed deep in the annexes of regulatory documents to focus on the outcome we want to see. Then finally Ofgem needs to work out how best to deliver that outcome. Inevitably, given where we are in the ED2 process, this is likely to involve some kind of "fudge factor". A move to a capitalisation rate that can vary year on year would seem the easiest change to make and one that could also accommodate the new pressures resulting from the energy crisis. But Ofgem does then need to commit to a full review ahead of RIIO3.

Ensuring that how we fund the energy transition is fair across generations is vital. It's not easy and almost certainly requires a change in the way regulatory allowances have been calculated in energy, with water offering an alternative model. This thinking needs to start now.