



Response to Ofgem's Call for Input: *Impact of high inflation on the network price control operation*

NORTHERN POWERGRID'S KEY POINTS

- Real cost of debt allowances and inflation indexation are cornerstones of the regulatory regime that has effectively drawn significant investment, very efficiently, into the sector.
 - The long-standing policy has delivered strong outcomes for customers. The commitment to inflation indexation has supported huge investment in networks, whilst allowing Ofgem to steadily drive down the overall cost of capital for more than a decade.
 - Effective long run policies should not be abandoned in a reaction to one-off events.
- Ofgem has failed to explain why there is any problem with its long-standing policy on inflation protection and specifically in relation to its approach to setting the cost of debt.
 - The "Leverage Effect" Ofgem has identified is a normal feature of capital markets. It merely reflects the shift in allocation of real returns between debt investors and equity investors, not from customers to equity investors. This effect has been present for decades and has not been seen as a problem, particularly in periods when equity investors lost as a result.
 - While we broadly agree with Ofgem's approach to quantitative assessment, and that the impact on customer bills is both small and highly sensitive to underlying assumptions, it is not clear that Ofgem has properly considered the origins of this effect.
- Any retrospective action would damage investor confidence, to customers' detriment.
 - Ofgem's proposal for a 'true up' at the end of RIIO-2 is retrospection by another name: it would change key aspects of a settled price control in order to confiscate value.
 - Ofgem's pursuit of this opportunistic course of action can only increase the cost of capital and diminish investor appetite to invest. The longer the uncertainty persists, the greater the damage – and the higher the long-term cost to customers.
- The current ring-fencing obligations give Ofgem everything it needs to ensure companies take long-term financial resilience into account when making any dividend.
 - But there is room for Ofgem to make clearer their expectations in relation to those requirements, including the need for companies to report transparently how they have met those obligations.
- Any forward-looking changes, which we don't think are required, should be considered as part of Ofgem's 'normal' price control review work, where it is obliged to consider the best way to set the cost of capital, incentivise investment and ensure financeability.
 - Any of the prospective changes Ofgem is currently proposing would fundamentally alter key aspects of the price control and have potentially wide-reaching implications.
 - Any changes made to future price controls must be robustly tested and consulted upon by Ofgem in the context of financeability of the whole price control package.
- Now is the time to boost the credibility of the UK framework, not undermine it.
 - Ofgem's handling of the issue thus far has *already* negatively impacted investor confidence, so it is important that Ofgem sends a clear signal that the investment commitment remains intact.
 - In confirming it will not take retrospective action now, Ofgem should *also confirm it will not be a consideration going forward*. This is necessary to repair the damage to investor confidence and not deter necessary investments between now and the next review.

Contents

1.	Summary.....	3
2.	Responses to Ofgem’s consultation questions.....	11

1. Summary

Ofgem has failed to explain why it would conclude there is any problem with the long-standing policy around inflation and its approach to setting the allowed cost of debt

1. The current arrangements have underpinned investors' understanding of the risks associated with network investments over time. The existing regulatory structure of indexing RAV to a headline measure of inflation was put in place when the UK regulatory framework for energy networks was created and has now been in place for more than 30 years.
2. Around this regulatory structure, network owners then choose to put in place the financial structure that is optimal given their approach to financing their business, including determining their overall exposure to inflation risk. By issuing more index-linked debt, an owner can more closely match their financing costs with the inflation hedge offered by RAV indexation. By issuing more fixed coupon debt, an owner creates an inverse exposure to inflation – and therefore they take a considered risk. Beyond those fundamental positions, the owner's position relative to inflation can also be modified using derivatives (e.g. inflation swaps). Viewed in this way, the financing structure of the company is simply a way of allocating the headline reasonable real return between equity and debt investors, consistent with the overall inflation exposure of each investor in the company.
3. If a network owner were to issue only index-linked debt, then the overall split of allowed returns between equity and debt would be essentially invariant to inflation. If a network owner issues index-linked and fixed coupon debt in line with the sector average (and hence with the notional company), then the split of the overall reasonable return between debt and equity will likely match closely that found in Ofgem's notional company. If a network owner chooses to issue more fixed coupon debt, then the split of the overall reasonable return between debt and equity investors will vary more with inflation. But again, this is simply an allocation question, decided by capital market entities entering into financing contracts.
4. Hitherto, Ofgem could not have been clearer that, subject to adhering to licence conditions, the decision on how to finance a network was a matter for the investor and its management team. Ofgem has long held that the regulatory framework involves RAV indexation with a real WACC (weighted average cost of capital), and that networks were free to adopt their own financing positions. Again, this is a long-standing regulatory position, and it is one that companies have factored into their approach to financing their businesses.

Real cost of debt allowances and inflation indexation are cornerstones of the regulatory regime

5. Ofgem has correctly identified that outturn inflation necessarily varies from the forward-looking assumption it makes about long-run inflation when it calibrates the cost of debt component of the weighted average cost of capital (the "WACC"). And that this means that "where CPIH is higher

(or lower) than a long run assumption (typically 2%), real equity returns typically rise (or fall) as a result". For reasons that are not obvious, Ofgem calls this the "Leverage Effect".

6. In characterising the issue in this way, Ofgem has failed to point out to stakeholders that an outcome that varies from the assumptions made when a price control is set is inherent in ex ante regulation. Neither does Ofgem highlight that ex ante regulation has driven significant improvements in service and reductions in costs (including financing costs) since privatisation, and that this variance is only one of a multitude of parameters that turn out to be different than the assumption that Ofgem made when it set the price control.
7. Ofgem's analysis suggests that from the start of RII0-1 for each network price control the inflation "Leverage Effect" results in circa £1.5bn of additional RAV growth, this equates to circa £2.30 average domestic customer bill impact annually.
 - a. Ofgem itself notes that the analysis is based on a notional company basis. Actual company structures vary from this assumption and therefore the actual effect will vary.
8. While we broadly agree with Ofgem's approach to quantitative assessment, and that the impact on customer bills is both small and highly sensitive to underlying assumptions, it is not clear that Ofgem has properly considered the origins of this effect.
9. The unhelpful and misleadingly titled "Leverage Effect" Ofgem claims to have identified is simply an inherent feature of capital markets. It merely reflects a shift in allocation of real returns between debt investors and equity investors. It is not a shift from customers to any investor, debt or equity. This effect has been present in the arrangements for decades and has not been seen as problematic, particularly when equity investors were on the 'wrong side' of the allocation.
10. Ofgem has not set out that, whilst the "Leveraging Effect" causes equity returns to rise (or fall), as explained above, this is as a result of a transfer between the equity investor the fixed debt holders, not a transfer between customers and the equity investor. This is simply an allocation question, decided by capital market entities entering into financing contracts. Put another way, from the perspective of the customer, the amount they pay to fund returns to capital remains stable relative to inflation (i.e., the real WACC does not change).
11. Any quantification of the so called "Leverage Effect" is highly sensitive to several assumptions. Ofgem acknowledges that it's estimate is only indicative, the length of the evaluation period and the forecast trend in inflation are just two of the modelling assumptions which impact the value of the issue. With inflation forecasts continuing to be divergent, the future remains uncertain. Ofgem has also failed to recognise other parts of the price control where revenues have been lower than were assumed at the outset.
 - a. Regardless of the underlying assumptions used, the customer bill impact is relatively small and lies between £1.50-£5.10 per annum depending on the inflation forecast used. The range in Ofgem's own quantification of materiality range proves this.
12. Ofgem must reflect on the strong outcomes that the existing arrangements have played an important role in fostering. Clarity around inflation indexation has supported huge investment in

networks, while keeping the cost of capital low for customers. Effective long run policies should not be abandoned in response to one off events.

13. Given the importance of investment in the networks in the coming years in the context of net zero and energy security and resilience, Ofgem should be focused on ensuring that any changes to the price control are additive to the current arrangements which have underpinned investors' understanding of risks associated with network investments over the past three decades. Regulators must provide evidence to ensure any change in arrangements are in the best interest of consumers. We have not seen any such evidence – and so far, Ofgem's handling of this subject has had the opposite, damaging effect.
14. Put simply, now is the time to boost the credibility of the UK framework – anything that undermines it will be damage investor confidence just when we need it more than ever to drive investment.
15. For all these reasons, any policy change would be highly disturbing for investor confidence and would, as a consequence, be harmful for customers and the sector.

Any retrospective action would truly undermine investor confidence and harm customers

16. It can be called something innocuous like a true up, but Ofgem should be clear that a true-up introduced after a price control has been settled is retrospection by another name. Ofgem's proposal for a true up at the end of RIIO-2 would, if adopted, involve making after-the-fact changes to key aspects of long settled price controls with the effect of confiscating value. The longer that Ofgem even considers, let alone pursues, this opportunistic course, it will increase the cost of capital and markedly diminish investor appetite to invest, to the detriment of customers.
17. Ofgem should recognise that its handling of the issue thus far has already had a negative impact on investor confidence – so it is important Ofgem reassures investors now. There has been significant doubt in investors' minds for a year already, therefore it is important that Ofgem gives a clear and decisive signal that the investment commitment remains intact. The tone and approach of the CFI has helped investors to see that Ofgem does appreciate the important of investor confidence and regulatory stability, but there is more to do to repair the damage that has been done.
18. If Ofgem were to make changes now to the existing price controls, even on a forward-looking basis, this would contradict the companies' legitimately-held expectations about the risks they were bearing at the time they made long-lasting decisions about their debt structure. All investors would then wish to review, and perhaps modify, their financial structure to return to their preferred overall exposure on inflation. Depending on how it was enacted, it could disincentivise actual (as opposed to notional) companies from adopting what otherwise would be optimal financing structures and would ultimately impose significant costs to consumers.
19. The hurdle to reopen the price control is very high and the vague scenario Ofgem has set out in the consultation does not meet it. This includes both retrospectively making any changes to historical outturn returns or reopening a price control prospectively that has already been

determined. This would undermine the legitimacy of the price control, would not protect customer interests, and would cause price instability and uncertainty.

20. Companies have already set out to deliver outcomes for customers based on the result of the price control processes (the Final Determinations), following signals set out upfront by Ofgem to guide investment decisions. Suddenly moving away from the agreed framework when investment decisions are already underway can only be detrimental.
21. Investors would also inevitably regard steps to change now how the regime treats inflation, at a point when inflation is high, as highly opportunistic. The so-called “Leverage Effect” has always existed but has not caused concern with Ofgem in the past. Inflation during the majority of RIIO-1 has been lower than expected and would have led to any equity holders invested in companies with an inverse inflation exposure achieving lower outturn returns as a consequence. At no point did Ofgem seek to redress this – and neither should they have. Throughout RIIO-1 the position that each network chose to take in respect of inflation has been treated as a matter for the company.
22. Ofgem’s policy option “out or underperformance true up” considers retrospectively reopening price controls that have already occurred (in our case, RIIO-ED1) and reopening price controls that have already been settled in this respect (in our case, RIIO-ED2) in order to bring about a materially different outcome. It is important that Ofgem understands that both of these policy actions would cause great harm to investor confidence.
23. Moreover, until these options are completely taken off the table, and Ofgem gives investors a clear and decisive signal that the ‘agreed’ investment commitment remains intact, investor confidence will not even be at the level it was before Ofgem’s CFI. Bearing in mind, this is at a time where Ofgem should be stimulating investment in the UK. International investors are watching the energy regulators’ decisions closely and the UK regulated regime must be an attractive place to invest the significant increase in capital that is required as we strive for Net Zero. It is not controversial to point out that long term views of risk and return are higher in capital markets than they have been for more than 15 years. It is also a matter of fact that there are some significant investment incentives in place in other parts of the world that are not a feature of the UK regulated sector. Competition for capital allocation has increased, so now is not the time to undermine one of the UK’s key features.
24. Since privatisation, the regulatory regime has managed to keep bills low for customers whilst simultaneously delivering significant service level improvement. This is possible, in part, due to regulatory stability and predictability providing long-term investor confidence through a reduction in the perception of risk, therefore lowering the rate of return which flows through to customer bills.
25. Any retrospective action would be very damaging to investor confidence and would cost customers through an increased cost of capital. Ofgem, the Competition and Markets Authority (and its predecessor, the Competition Commission) and other sector regulators have all

acknowledged the importance of avoiding retrospective action and that any such action is not in line with normal regulatory practice.

26. A major and sudden change now will undermine confidence in regulatory stability and predictability and will drive cost increases for customers far beyond the impact it would have on the cost of capital. The damage to investor confidence will adversely affect service levels, investment, innovation, and efficiency in the short, medium and long term. If Ofgem signals, through retrospective action in this matter, that price controls may be re-opened if returns are different to ex ante expectations it will significantly impact shareholders' willingness to invest in such mechanisms.
27. Retrospective regulation sends signals to investors that none of the price control as 'agreed' stands, and all elements of the regulatory framework could be subjected to the same treatment in the future. As we have already seen a negative impact on investor confidence, it is important Ofgem reassures investors now.
28. Suggesting that Ofgem might have an expectation of voluntary contributions is akin to retrospective action and would have the same detrimental impact on investor confidence and customer interests.
29. Additionally, the question of whether or not to amend the methodology for setting the cost of capital in the future is conflated with a decision to claw-back allowances by retrospectively imposing a lower real cost of debt than that set out in the price control. These policy questions are inherently and importantly distinct and should be treated as such.

Ofgem's current arrangements and the obligations governing networks' dividend policy and reporting require a licensee to look further ahead than 12 months. These arrangements are already effective in ensuring sound stewardship

30. The distribution of dividends to shareholders is a key part of the price control framework and a fundamental component of investor expectations. Whilst we aren't convinced that dividend policy and Ofgem's so called "Leverage Effect" have a direct relationship, to the extent they are linked, they go to financial resilience. As Ofgem has included it in its consultation, we set out our views on dividend policy reporting and transparency below.
31. Investors have a legitimate expectation that dividends can be paid to an equity holder provided the licensee remains financially resilient. The regulatory regime has been appropriately set up in such a way to make that possible. This is particularly important in a world where investors are expected to raise new capital to deliver a substantial step-up in investment.
32. Ofgem, stakeholders, customers and investors must all be confident that dividends are only distributed in appropriate circumstances. These are primarily set out in the Companies Act and they apply to all companies. But to the extent network companies require additional restrictions, Ofgem has already thought about dividend policy carefully and developed a sensible combination of additional general and specific obligations.

33. Each DNO's licence contains 'ring fence' conditions which ensure that the licensee has adequate financial and operational resources to run its distribution business, protecting customers in the long term. The directors of the licensee must not declare or recommend a dividend unless the certificate required by SLC30.9 has been submitted to Ofgem which, essentially, certifies that the ring fence conditions in the licence are met. There are also other restrictions that ensure the licensees remain financially resilient.
34. The ring fence measures regarding the payment of dividends require the licensee to look further ahead than 12 months. The obligations are two separate, yet overlapping, controls which give a sensible answer where Ofgem has firm restrictions in place but also puts licensees in a position where they are able to fully comply. Directors of the licensee must:
- Evaluate any proposed dividend payment and certify that the making of that payment itself, or when it is taken with other *reasonably foreseeable circumstances*, will not cause the licensee to be in material breach of the specified licence conditions; and
 - Certify that the licensee's directors have a reasonable expectation that the licensee will have sufficient financial resources and financial facilities and operational resources respectively to enable the licensee to carry on the distribution business for a *period of 12 months* from the date of the relevant certificate.
35. In the context of the obligations on licensees, and therefore on the directors of the licensee who sign-off annually the certificate required by SLC30.9, it is hard to understand how anyone could construe obligation to look ahead as being limited to only 12 months.
36. In practice, when the board is considering a dividend payment, under the licence obligations, they would, and should, look out as far as reasonably possible. The same timeframe will not apply to all factors that have to be considered, so each component will have different time horizons depending on the attributes of that component and how far out it is possible to project. But in the context of price control regulated businesses with multi-year price controls, long-lived assets, long-term financing instruments and investment horizons, compliance with the obligations will, in practice, involve longer-term projections when certifying that a licensee is compliant with the requirements of SLC 30.9.
37. Furthermore, Ofgem's reporting requirements are exhaustive. The Regulatory Financial Performance Reporting (RFPR) requires "*licensees to provide an explanation of dividend policies and dividends declared and paid, and how these take account of long-term financial sustainability, including delivery for customers and other stakeholder obligations*". We recognise that not all companies may have interpreted dividend certificate requirements and RFPR requirements in the same way. Therefore, we encourage Ofgem to clarify its expectation of how the current dividend obligations should be met. This includes the expectation that directors must necessarily look further ahead than 12 months when signing the certificate required by SLC30.9.
38. With that clarification, we believe that the existing arrangements would be highly effective in ensuring that all stakeholders have all the tools and information that they need. We believe that the introduction of any new, unnecessary changes to policies will harm consumers since they would inevitably and needlessly increase the cost of equity finance.

If Ofgem considers any forward-looking changes to arrangements - which we don't think are required - they should be considered through the Future System and Network Regulation (FSNR) and/or the Sector Specific Methodology Consultation processes

39. The future price controls must operate as appropriately calibrated price control packages, and therefore any changes should be made to future price control design as a whole. The current price control framework was developed following extensive consideration and consultation. A fundamental part of the price control is that it is set up to be internally consistent, and therefore it is essential that any changes are looked at as part of the whole.
40. Given the effectiveness of existing arrangements around inflation and Ofgem's approach to allowing for the cost of debt, there is much to lose if ill-considered changes are made.
41. Ofgem's CFI shows it could consider a range of methodology changes, presenting four examples of what the future price control design could look like. Due to the early stage that we are at in Ofgem's process, none of the options provide enough detail for us to be able to properly appraise the advantages and disadvantages.
42. Any of the prospective changes proposed by Ofgem would fundamentally alter key aspects of the price control and have potentially wide-reaching implications. It is also unclear how these policy options would interact with the rest of the price control. Due to the complexity of the price control, we would need to understand how each of the options would be designed, calibrated and implemented in the context of the price control as a whole. With each design decision comes a danger that unintended consequences, which could produce adverse effects for customers, are created.
43. Ofgem need to take into consideration that the cost of any transition would need to be funded. We agree with Ofgem that managing the pace of implementation is a core principle however the CFI solely details timeframe considerations and ignores the additional costs of any transition. Ofgem needs to be completely convinced that any changes are appropriate in light of those costs that would flow through to customers. A full impact assessment is required. This would take time and effort from Ofgem and stakeholders, and if it is to be done then it should be done alongside the wider development of the next round of price controls.
44. We also agree with Ofgem that financial resilience is a core principle, and our analysis shows that the increased investment requirements on licensees going forward are already stretching. The RIIO-ED2 package was borderline against Ofgem's own financeability tests and Ofgem's Final Determination failed to properly stress-test realistic 'high scenarios' for decarbonisation.
45. Once the increased investment for Net Zero is taken into account, and is overlaid on what we believe to be unduly long asset lives, the result will be significant and consistent growth in Regulatory Asset Values (RAVs). Lower-cost legacy debt is set to mature and be replaced by what is likely to be more expensive debt, all of which will increase customer bills. Taking all of this together, we are concerned that Ofgem will face a material challenge at RIIO-ED3 and beyond to make the sector financeable. We maintain our view that Ofgem must keep the 45-year

depreciation policy under review and revisit the evidence again as part of RII0-ED3 so that the issue has been properly considered and addressed.

46. Given the importance of investment in the networks in the coming years in the context of net zero and energy security and resilience, Ofgem should be focused on ensuring that any changes to the price control must be additive to the current arrangements which have underpinned investors' understanding of the risks associated with network investments over the past three decades. The issues that arise with all options presented are fundamental to price control design and interconnected with multiple parts of the price control. Hence a proper programme of analysis and engagement is needed. Further work is required to establish whether any changes could be made for future price control mechanisms that would improve on the current arrangements.

Ofgem must give investors a clear signal that the investment commitment remains intact

47. Ofgem should be mindful that investor confidence, like any reputation, takes a long time to build and a short time to lose. Ofgem's handling of the issue thus far has already had a negative impact on investor sentiment. Even if Ofgem reaches the right conclusion that no policy action is required, the doubt that has been put in investors' minds won't simply disappear.
48. Whenever unexpected and worrying signals come from a policy maker or regulator, it has an impact that outlives the issue itself. In this case, there are some clear steps that will go a long way to restoring confidence and allow Ofgem to continue to properly consider any changes in the context of the future price control review framework.
- a. In confirming it will not take retrospective action now, Ofgem should also confirm it will not be a consideration going forward. This is the only way to restore investor confidence and not deter necessary investments between now and the next review.
 - b. Ofgem should clarify its expectation of how the current dividend obligations should be met. We think it would be sensible for Ofgem to make it clear that the availability of resources certificate is already looking further out than 12 months and to provide additional guidance for reporting purposes.
 - c. Ofgem must ensure that any changes proposed to future controls would be additive to the current arrangements.
 - d. Any changes made to future price controls must be robustly tested by Ofgem and stakeholder fully consulted.

2. Responses to Ofgem's consultation questions

Question 1: Have we characterised the issue accurately?

49. No. Ofgem has correctly identified that outturn inflation necessarily varies from the forward-looking assumption it makes about long-run inflation when it calibrates the cost of debt component of the weighted average cost of capital (the "WACC") and that this means that "where CPIH is higher (or lower) than a long run assumption (typically 2%), real equity returns typically rise (or fall) as a result". For reasons that are not obvious, Ofgem calls this the "Leverage Effect". This characterisation risks creating the impression that any "issue" arises as a result of companies applying leverage to their capital structures, which is not the case.
50. In characterising the issue in this way, Ofgem has failed to point out to stakeholders that an outcome that varies from the assumptions made when a price control is set is inherent in ex ante regulation. Neither does Ofgem highlight that ex ante regulation has driven significant improvements in service and reductions in costs (including financing costs) since privatisation, and that this variance is only one of a multitude of parameters that turn out to be different than the assumption that Ofgem made when it set the price control.
51. The fact that the inflation trend has deviated from the long run assumption should not be a surprise to Ofgem. It is consistent with the policy intent that networks face inflation risks with the cost of debt index. In RIIO-GD1/T1 Ofgem stated:
- a. *"The approach used to calculate the cost of debt index implicitly assumes that all network debt is index-linked. In reality, only a small proportion of the networks' debt is index linked and the networks are exposed to inflation risk on the rest of their debt profile."*¹
52. Ofgem has not set out that, whilst the Leverage Effect causes equity returns to rise (or fall), as explained above, this is as a result of a transfer between the equity investor the fixed debt holders, not a transfer between customers and the equity investor. This is simply an allocation question, decided by capital market entities entering into financing contracts. Put another way, from the perspective of the customer, the amount they pay to fund returns to capital remains stable relative to inflation (i.e., the real WACC does not change), which was Ofgem's intention at the outset.
- a. Ofgem has previously acknowledged this:
 - i) "investors in the regulatory asset value (RAV), taking both debt and equity investors together, are fully protected from inflation risk."²
 - ii) "If the market infers a positive inflation risk premium for conventional debt, then the market should also infer a negative inflation risk premium for the equity."³

¹ Ofgem, RIIO-T1/GD1 Strategy Decision, March 2011, paragraph 3.55

² RIIO-ED1: Final determinations for the slow track electricity distribution companies – Overview, 28 November 2014, para 5.18

³ RIIO-ED1: Draft determinations for the slow track electricity distribution companies Financial Issues, 30 July 2014, para 2.55

- b. This concept is further explained in Frontier's report⁴.
53. The unhelpful and misleadingly titled "Leverage Effect" Ofgem claims to have identified is simply an inherent feature of capital markets. It merely reflects a shift in allocation of real returns between debt investors and equity investors. It is not a shift from customers to any investor, debt or equity. This effect has been present in the arrangements for decades and has not been seen as problematic, particularly when equity investors were on the 'wrong side' of the allocation.

Question 2: Have we adopted an appropriate approach to the quantitative assessment? Responses to the question should consider the relevant factors listed on page 4, the accompanying financial model and model user notes.

54. Ofgem's analysis suggests that from the start of RIIO-1 for each network price control the inflation "Leverage Effect" results in circa £1.5bn of additional RAV growth, this equates to circa £2.30 average domestic customer bill impact annually.
- a. Ofgem itself notes that the analysis is based on a notional company basis. Actual company structures vary from this assumption and therefore the actual effect will vary.
55. While we broadly agree with Ofgem's approach to quantitative assessment, and that the impact on customer bills is both small and highly sensitive to underlying assumptions, it is not clear that Ofgem has properly considered the origins of this effect.
56. Any quantification of the so called "Leverage Effect" is highly sensitive to several assumptions. Ofgem acknowledges that its estimate is only indicative; the length of the evaluation period and the forecast trend in inflation are just two of the modelling assumptions which impact the value of the issue. With inflation forecasts continuing to be divergent, the future remains uncertain. Ofgem has also failed to recognise other parts of the price control where revenues have been lower than were assumed at the outset.
- a. Regardless of the underlying assumptions used, the customer bill impact is relatively small and lies between £1.50-£5.10 per annum depending on the inflation forecast used.
57. We have appreciated the opportunity Ofgem provided for the industry to work with it on its approach to quantifying the issue; however, there remain some issues within Ofgem's calculations. Frontier's report sets out the issues identified⁵.

Question 3: What are stakeholders' views on the policy options outlined and the associated benefits and risks associated with each option? Are there areas where the policy options outlined could be optimised? Please see the policy option section on page 7.

58. Ofgem outlines five high level policy options. Below we summarise our view on each before detailing our reasoning.

⁴ Frontier Economics, Comment on Ofgem's Call For Input on the effect of high inflation, September 2023, section 3.1.1

⁵ Frontier Economics, Comment on Ofgem's Call For Input on the effect of high inflation, September 2023, Annex B

- a. **No policy action:** This is the option Ofgem should take. It's hard to see why Ofgem would conclude there is any problem with the long-standing policy.
 - i) This protects customers' interests and ensures prices are fair and efficient as customer bills remain stable relative to inflation. It maintains regulatory stability and predictability that is required to boost investor confidence when we need investment more than ever in the UK, and there will be no detriment to financial resilience.
 - ii) We encourage Ofgem to conclude that the other policy options do not create sufficient benefits to outweigh their potential risks and costs to customer interests.
- b. **Distribution policy reporting and transparency:** Ofgem's current arrangements and the obligations governing networks' dividend reporting requirements are effective and require a licensee to look further ahead than 12 months.
 - i) Existing arrangements are effective and adding unnecessary restrictions will harm customers by deterring equity investment. Each DNO's licence contains 'ring fence' conditions which ensure that the licensee has adequate financial and operational resources to run its distribution business, protecting customers in the long term.
 - ii) We encourage Ofgem to clarify its expectation of how the current dividend obligations should be met. This includes the requirement that directors look further ahead than 12 months when signing the certificate required by SLC30.9.
- c. **Changes to future price control design:** If Ofgem is to take any action, which we do not think is required, it should be considered through the FSNR and/or the Sector Specific Methodology Consultation processes.
 - i) None of the options provide enough detail for us to be able to properly appraise the advantages and disadvantages. It is also unclear how these policy options would interact with the rest of the price control.
 - ii) The issues that arise with all options presented are fundamental to price control design and interconnected with multiple parts of the price control. Hence a proper programme of analysis and engagement is needed.
- d. **Out or underperformance true up:** Any retrospective action would be very damaging to investor confidence and would cost customers through an increased cost of capital.
 - i) Referring to the option as a true up does not make it any less an example of retrospection. Ofgem's proposal for a true up at the end of RIIO-2 would, if adopted, involve making retrospective changes to key aspects of long settled price controls with the intent to confiscate value.
 - ii) If Ofgem pursued this opportunistic course, it would increase the cost of capital, and markedly diminish investor appetite to invest, to the detriment of customers.
 - iii) Ofgem should rule out any retrospective action now and confirm it will not be a consideration going forward. This is the only way to rebuild investor confidence and not deter necessary investments between now and the next review.
- e. **Voluntary submission by licensees:** The policy has worked as designed, there is no need for any voluntary submission.
 - i) Suggesting that Ofgem might have an expectation of voluntary contributions is akin to retrospective action and would have the same detrimental impact on investor confidence and customer interests.

Ofgem has failed to explain why it would conclude there is any problem with the long-standing policy around inflation and its approach to setting the allowed cost of debt

Ofgem policy option 1: No policy action

59. The current arrangements have underpinned investors' understanding of the risks associated with network investments over the last three decades.
60. Around this regulatory structure, network owners then choose to put in place the financial structure that is optimal given their approach to financing their business, including determining their overall appetite for exposure to inflation risk. By issuing more index-linked debt, an owner can more closely match their financing costs with the inflation hedge offered by RAV indexation. By issuing more fixed coupon debt, an owner creates an inverse exposure to inflation – and therefore they take a considered risk. Beyond those fundamental positions, the owner's position relative to inflation can also be modified using derivatives (e.g. inflation swaps). Viewed in this way, the financing structure of the company is simply a way of allocating the headline reasonable real return between equity and debt investors, consistent with the overall inflation exposure of each investor in the company.
61. If a network owner were to issue only index-linked debt, then the overall split of allowed returns between equity and debt would be essentially invariant to inflation. If a network owner issues index-linked and fixed coupon debt in line with the sector average (and hence with the notional company), then the split of the overall reasonable return between debt and equity will likely match closely that found in Ofgem's notional company. If a network owner chooses to issue more fixed coupon debt, then the split of the overall reasonable return between debt and equity investors will vary more with inflation. But again, this is simply an allocation question, decided by capital market entities entering into financing contracts.
62. Hitherto, Ofgem could not have been clearer that, subject to adhering to the relevant licence conditions, the decision on how to finance a network was a matter for the investor and its management team. Ofgem has long held that the regulatory framework involves RAV indexation with a real WACC (weighted average cost of capital), and that networks were free to adopt their own financing positions. Again, this is a long-standing regulatory position, and it is one that companies have factored into their approach to financing their business.
 - a. In the RIIO-2 Strategy Decision, Ofgem stated: “[W]e have long-held the position that network company financing decisions are for network companies and their shareholders and that they then bear the risks of these decisions.”⁶
63. If Ofgem were to make changes now to the existing price controls, even on a forward-looking basis, this would contradict the companies' legitimately-held expectations about the risks they were bearing at the time they made long-lasting decisions about their debt structure. All investors would then wish to review, and perhaps modify, their financial structure to return to their preferred overall exposure on inflation. Depending on how it was enacted, it could disincentivise

⁶ Ofgem, RIIO-2 Strategy Decision – Finance, 24 May 2019, paragraph 2.24

actual (as opposed to notional) companies from adopting what otherwise would be optimal financing structures and would ultimately impose significant costs to consumers.

64. The hurdle to reopen the price control is very high and the vague scenario Ofgem has set out in the consultation does not meet it. This includes both retrospectively making any changes to historical outturn returns or reopening prospectively a price control that has already been determined. This would undermine the legitimacy of this (and any subsequent) price control, would not protect customer interests, and would cause price instability and uncertainty.
65. Companies have already set out to deliver outcomes for customers based on the result of the price control processes (the Final Determinations), following signals set out upfront by Ofgem to guide investment decisions. Suddenly changing one of the fundamentals of the agreed framework when investment decisions are already underway can only be detrimental to customers.
66. Given the profile of inflation, investors would inevitably regard any changes taken now on the way the regime treats inflation as highly opportunistic. The so-called “Leverage Effect” has always existed but has not been a concern to Ofgem in the past. For example, inflation during the majority of RIIO-1 was lower than expected and would have caused any equity holders invested in companies with an inverse inflation exposure to achieve lower returns. At no point did Ofgem seek to address this – and neither should they have. Throughout RIIO-1 the position that each network chose to take in respect of inflation was treated as a matter for the company.
67. Ofgem must reflect on the strong outcomes that the existing arrangements have played an important role in fostering. Clarity around inflation indexation has supported huge investment in networks, while keeping the cost of capital low for customers. Effective long run policies should not be abandoned in response to one off events.
68. Any changes to the price control must be additive to the current arrangements which have underpinned investors’ understanding of the risks associated with network investments over the past three decades. Regulators must provide evidence to ensure any change in arrangements are in the best interest of customers. We have not seen any such evidence – and so far, Ofgem’s handling of this subject has had the opposite effect, and it has been damaging.
69. Put simply, now is the time to boost the credibility of the UK framework – anything that undermines it will be damage investor confidence when it is needed more than ever to drive investment in the sector.
70. For all these reasons, any policy change would be highly damaging to investor confidence and would, as a consequence, be harmful for customers and the sector.

Ofgem’s current arrangements and the obligations governing networks’ dividend reporting require a licensee to look further ahead than 12 months. These arrangements are already effective in ensuring sound stewardship

Ofgem policy option 2: Distribution policy reporting and transparency

71. The distribution of dividends to shareholders is a key part of the price control framework and a fundamental component of investor expectations. Whilst we are not convinced that dividend policy and Ofgem's so called "Leverage Effect" have a direct relationship, the extent to which they are linked is in the context of financial resilience. As Ofgem has included it in its consultation, we set out our view of dividend policy reporting and transparency below.
72. Investors have a legitimate expectation that dividends can be paid to an equity holder provided the licensees remain financially resilient. The regulatory regime has been appropriately set up in such a way to make that possible. This is particularly important in a world where investors are expected to raise new capital to deliver a substantial step-up in investment.
73. Ofgem, stakeholders, customers and investors must all be confident that dividends are only distributed in appropriate circumstances. These are primarily set out in the Companies Act and they apply to all companies. But to the extent network companies require additional restrictions, Ofgem has already thought about dividend policy carefully and developed a sensible combination of additional general and specific obligations.
74. Each DNO's licence contains 'ring fence' conditions which ensure that the licensee has adequate financial and operational resources to run its distribution business, protecting customers in the long term. The directors of the licensee must not declare or recommend a dividend unless the certificate required by SLC30.9 has been submitted to Ofgem which, essentially, certifies that the ring fence conditions in the licence are met. There are also other restrictions that ensure the licensees remain financially resilient.
75. The ring fence measures regarding the payment of dividends require the licensee to look further ahead than 12 months. The obligations are two separate yet overlapping controls which give a sensible answer where Ofgem has firm restrictions in place but also put licensees in a position where they are able to fully comply. Directors of the licensee must:
- a. Evaluate any proposed dividend payment and certify that the making of that payment itself, or when it is taken with other *reasonably foreseeable circumstances*, will not cause the licensee to be in material breach of the specified licence conditions; and
 - b. Certify that the licensee's directors have a reasonable expectation that the licensee will have sufficient financial resources and financial facilities and operational resources respectively to enable the licensee to carry on the distribution business for a *period of 12 months* from the date of the relevant certificate.
76. In the context of the obligations on licensees, and therefore on the directors of the licensee who sign-off annually the certificate required by SLC30.9, it is hard to understand how anyone could construe obligation to look ahead as being limited to only 12 months.
77. In practice, when the board is considering a dividend payment, under the licence obligations, they would, and should, look out as far as reasonably possible. The same timeframe will not apply to all factors that have to be considered, so each component will have different time horizons depending on the attributes of that component and how far out is possible to project. But in the context of price control regulated businesses with multi-year price controls, long-lived assets, long-term financing instruments and investment horizons, compliance with the obligations will, in

practice, involve longer-term projections when certifying that a licensee is compliant with the requirements of SLC 30.9.

78. Furthermore, Ofgem's reporting requirements are exhaustive. The Regulatory Financial Performance Reporting (RFPR) requires *"licensees to provide an explanation of dividend policies and dividends declared and paid, and how these take account of long-term financial sustainability, including delivery for customers and other stakeholder obligations"*. We recognise that not all companies may have interpreted dividend certificate requirements and RFPR requirements in the same way. Therefore, we encourage Ofgem to clarify its expectation of how the current dividend obligations should be met. This includes the expectation that directors must necessarily look further ahead than 12 months when signing the certificate required by SLC30.9.
79. With that clarification, we believe that the existing arrangements would be highly effective in ensuring that all stakeholders have all the tools and information that they need. We believe that the introduction of any new, unnecessary changes to policies will harm consumers since they would inevitably and needlessly increase the cost of equity finance.

If Ofgem considers any forward-looking changes to arrangements - which we don't think are required - they should be considered through the Future System and Network Regulation (FSNR) and/or the Sector Specific Methodology Consultation processes

Ofgem policy option 3: Changes to future price control design

80. The future price controls must operate as an appropriately calibrated price control package, and therefore any changes should be made to future price control design as a whole. The current price control framework was developed following extensive consideration and consultation. A fundamental part of the price control is that it is set up to be internally consistent, and therefore it is essential that any changes are looked at as part of the whole.
81. Given the effectiveness of existing arrangements around inflation and Ofgem's approach to allowing for the cost of debt, there is much to lose if ill-considered changes are made.
82. Ofgem's CFI shows it could consider a range of methodology changes, presenting four examples of what the future price control design could look like. Due to the early stage that we are at in Ofgem's process, none of the options provide enough detail for us to be able to properly appraise the advantages and disadvantages.
 - a. Frontier's report concludes that: "We understand that Ofgem is still at an early stage in its thinking. If Ofgem wishes to consider changes at the next price control, a lot more work is needed to flesh out these options. Careful analysis must be undertaken to fully understand the potential ramifications of each, across multiple dimensions, in order to understand whether any of these changes are likely to lead to better outcomes for consumers and/or may alter the extent to which investors are willing to deploy capital in GB energy networks. Ofgem will need to provide sufficient opportunity for stakeholders to undertake their own analysis. Since changes made in the areas discussed above may make further consequential changes to

the arrangements necessary, we consider that any potential changes made here should be analysed alongside other changes that may be made, e.g. following the recent FSNR process.”⁷

83. Any of the prospective changes proposed by Ofgem would fundamentally alter key aspects of the price control and have potentially wide-reaching implications. It is also unclear how these policy options would interact with the rest of the price control. Due to the complexity of the price control, we would need to understand how each of the options would be designed, calibrated and implemented in the context of the price control as a whole. With each design decision comes a danger that unintended consequences, which could produce adverse effects for customers, are created.
84. We have set out some considerations for any policy change.
- a. Time should be taken to properly assess the full impact of any policy change for customers.
 - b. Many of these proposals would de facto mean that the RAV is no longer fully indexed to outturn inflation, this would represent a major and sudden change to investors risk exposure.
 - c. Moving away from anchoring the current regime on a notional company basis to an actual company basis, either entirely or in part, would be a huge shift away from long-standing regulatory policy. Ofgem could not have been clearer that, subject to adhering to licence conditions, the decision on how to finance a network was a matter for the investor and its management team.
85. Any changes to the price control must be additive to the current arrangements which have underpinned investors’ understanding of the risks associated with network investments over the past three decades. The issues that arise with all options presented are fundamental to price control design and interconnected with multiple parts of the price control. Hence a proper programme of analysis and engagement is needed. Further work is required to establish whether any changes could be made for future price control mechanisms that would improve on the current arrangements.

Any retrospective action would be very damaging to investors and harm customers

Ofgem policy option 4: Out or underperformance true up

86. Referring to it as a true up may sound innocuous, but it is clear that it is retrospection by another name. Ofgem’s proposal for a “true up” at the end of RIIO-2 would involve making after-the-fact changes to key aspects of long settled price controls with the effect of confiscating value. The longer that Ofgem even considers, let alone pursues, this opportunistic course, the more it will increase the cost of capital and markedly diminish investor appetite to invest, to the detriment of customers.
87. Ofgem’s policy option “out or underperformance true up” considers retrospectively reopening price controls that have already occurred (in our case, RIIO-ED1) and reopening price controls that have already been settled in this respect (in our case, RIIO-ED2) in order to bring about a materially

⁷ Frontier Economics, Comment on Ofgem’s Call For Input on the effect of high inflation, September 2023, section 3.3, para 82

different outcome. It is important that Ofgem understands that both of these policy actions would cause great harm to investor confidence.

88. Moreover, until these options are completely taken off the table, and Ofgem gives investors a clear and decisive signal that the 'agreed' investment commitment remains intact, investor confidence will not even be at the level it was before Ofgem's CFI. Bearing in mind, this is at a time where Ofgem should be stimulating investment in the UK. International investors are watching the energy regulators decisions closely and the UK regulated regime must be an attractive place to invest the significant increase in capital that is required as we strive for Net Zero . It is not controversial to point out that long term views of risk and return are higher in capital markets than they have been for more than 15 years. It is also a matter of fact that there are some significant investment incentives in place in other parts of the world that are not a feature of the UK regulated sector. Competition for capital allocation has increased, so now is not the time to undermine one of the UK's key features.
89. Since privatisation, the regulatory regime has managed to keep bills low for customers whilst simultaneously delivering significant service level improvement. This is possible, in part, due to regulatory stability and predictability providing long-term investor confidence through a reduction in the perception of risk, therefore lowering the rate of return which flows through to customer bills.
90. Any retrospective action would be very damaging to investor confidence and would cost customers through an increased cost of capital. Ofgem, the Competition and Markets Authority (and its predecessor, the Competition Commission) and other sector regulators have all acknowledged the importance of avoiding retrospective action and that any such action is not in line with normal regulatory practice.
 - a. When considering the Phoenix Natural Gas Limited (PNGL) appeal regarding a retrospective change to an ongoing price control, the Competition Commission (CC) took the view that the proposed retrospective changes were not in line with normal regulatory practice:
 - i) *"In line with normal regulatory practice, our view is that any revision of previous regulatory determinations should be: well reasoned, properly signalled, subject to fair and effective consultation, clear and understood, and, normally, forward-looking."*⁸
 - b. Ofgem has previously acknowledged the importance of avoiding retrospective action. For example:
 - i) *"No retrospective action: We understand the importance of maintaining regulatory certainty and therefore are keen to make clear that RPI-X@20 will be focussed upon the framework for future regulation of energy networks."*⁹
 - ii) *"Changes to the key financial parameters (eg cost of capital) or to clawback outperformance are out of scope and we consider that any such changes could be harmful to consumers' long-term interests"*¹⁰

⁸ Competition Commission, redetermination of PNG price control, 29 November 2012, para 32

⁹ Ofgem, Regulating energy networks for the future: RPI-X@20 Principles, Process and Issues, 27 February 2009, para 2.8

¹⁰ Ofgem, Mid-period review decision, February 2017, page 5

- c. Many analysts and rating agencies commented on Ofgem's CFI when published. The overwhelming consensus being the unlikelihood of retrospective action due to the damage it would do to the regulatory framework. For example:
- i) *"We believe that it is unlikely for Ofgem to implement Option 4 The process will require a lengthy consultation and implementation period and carry significant legal risk. Ofgem's language is fairly soft and the scale of the benefit to consumers from option 4 is uncertain. It also creates significant costs for consumers by undermining the stability and predictability of the regulatory framework if investors perceive elevated regulatory risk."*¹¹
 - ii) *"We believe the most radical option, for example by clawing back retrospective outperformance in RIIO-2, was included largely for completeness. Such a change would undermine investor confidence in the predictability and stability of the regulatory regime when significant investment is required, especially by the electricity networks, to facilitate decarbonisation objectives."*¹²
91. It is not clear if the policy options considered in Ofgem's CFI would be applied to the actual company structure or the notional company. It is worth noting that it would be a fundamental shift by Ofgem to take actual company structure into consideration. By taking into consideration licensees' actual out or underperformance, Ofgem would ultimately increase financing costs and that cost would flow through to customer bills. That long-term increase to bills would be many times larger than any benefit to customers of clawback of short-term outperformance.
92. We agree with Ofgem that "Regulatory stability underpins the ability to minimise perceptions of risk and the cost of capital for the consumer. It is also key to investor confidence and the investability associated with the sectors we regulate over the long term."¹³ Going back and reopening the now complete RIIO-1 price control, and/or the RIIO-2 price control years that have already happened, and (for Electricity Distribution) a price control that was just determined, does not provide regulatory stability.
93. A major and sudden change now will undermine confidence in regulatory stability and predictability and will drive cost increases for customers far beyond the impact it would have on the cost of capital. The damage to investor confidence will adversely affect service levels, investment, innovation, and efficiency in the short, medium and long term. If Ofgem signals, through retrospective action in this matter, that price controls may be re-opened if returns are different to ex ante expectations it will significantly impact shareholders' willingness to invest in such mechanisms.
94. Retrospective regulation sends signals to investors that none of the price control as 'agreed' can be assumed to stand, and all elements of the regulatory framework could be subjected to the same treatment in the future. As we have already seen a negative impact on investor confidence, it is important Ofgem reassures investors now.

¹¹ Bernstein, UK Utilities: Our thoughts on Ofgem's call for input on inflation adjustments on debt, 2 August 2023

¹² Moody's, Ofgem outlines possible changes following high inflation, 3 August 2023, page 4

¹³ Ofgem, Call For Input - Impact of high inflation on the network price control operation, August 2023, page 6

95. Additionally, the question of whether or not to amend the methodology for setting the cost of capital in the future is conflated with a decision to claw-back allowances by retrospectively imposing a lower real cost of debt than that set out in the price control. These policy questions are inherently and importantly distinct and should be treated as such.
96. For all of the reasons described above, Ofgem should rule out any retrospective action. In confirming it will not take retrospective action now, Ofgem should also confirm it will not be a consideration going forward. This is the only way to rebuild investor confidence and not deter necessary investments between now and the next review.

Question 4: Should any other policy options be considered?

97. No – The future network regulation consultation and RIIO-3 price controls give Ofgem the opportunity to consider the most appropriate methodology for setting the cost of debt. Real cost of debt allowances and inflation indexation are fundamental components of the regulatory framework, and the current methodology works very well. The current price control framework was developed following extensive consideration and consultation and any changes to the fundamentals should benefit from the same process.

Question 5: Are the principles proposed for policy formulation complete and appropriate?

98. Generally, the proposed principles seem sensible.
99. Ofgem needs to take into consideration that the cost of any transition would need to be funded. We agree with Ofgem that managing the pace of implementation is a core principle, however the CFI details timeframe considerations and ignores the additional costs of any transition. Ofgem needs to be completely convinced that any changes are appropriate in light of those costs that would flow through to customers. A full impact assessment would be required. This would take time and effort from Ofgem and stakeholders, and if it is to be done then it should be done alongside the wider development of the next round of price controls.
100. We also agree with Ofgem that financial resilience is a core principle, and our analysis shows that the increased investment requirements on licensees going forward are already stretching. The RIIO-ED2 package was borderline against Ofgem's own financeability tests and Ofgem's Final Determination failed to properly stress-test realistic 'high scenarios' for decarbonisation.
101. Once the increased investment for Net Zero is taken into account and is overlaid on what we believe to be unduly long asset lives, the result will be significant and consistent growth in Regulatory Asset Values (RAVs). Lower-cost legacy debt is set to mature and be replaced by what is likely to be more expensive debt, all of which will increase customer bills. Taking all of this together, we are concerned that Ofgem will face a material challenge at RIIO-ED3 and beyond to make the sector financeable. We maintain our view that Ofgem must keep the 45-year depreciation policy under review and to revisit the evidence again as part of RIIO-ED3 so that the issue has been properly considered.

102. It is worth noting that policy symmetry is only possible prospectively, it is inherently impossible retrospectively. A decision maker going back and making changes after the fact, knowing the consequences, is necessarily uneven.

Question 6: Do the proposed evaluation criteria comprehensively consider the consumer interest in respect of this issue? Are there modifications or additional criteria that stakeholders would suggest?

103. The proposed evaluation criteria seem sensible. But they are sufficiently high-level that they do not help evaluate the policy consideration per se. So, they only comprehensively consider the customer interest if they are applied properly.

Question 7: Is there any further information or are there other factors which should be considered?

104. Ofgem should recognise that its handling of the issue thus far has already had a negative impact on investor confidence – so it is important Ofgem acts to reassure investors now. There has been significant doubt in investors' minds for a year already, therefore it is important that Ofgem gives a clear and decisive signal that the investment commitment remains intact. The tone and approach of the CFI has helped investors to see that Ofgem does appreciate the importance of investor confidence and regulatory stability, but there is more to do to repair the damage that has been done.

105. Even if Ofgem reaches the right conclusion that no policy action is required, the doubt that has been put in investors' minds won't simply disappear.

106. Whenever unexpected and worrying signals come from a policy maker or regulator, it has an impact that outlives the issue itself. In this case, there are some clear steps that will go some a long way to restoring confidence and allow Ofgem to continue to properly consider any changes in the context of the future price control review framework.

- a. In confirming it will not take retrospective action now, Ofgem should also confirm it will not be a consideration going forward. This is the only way to restore investor confidence and not deter necessary investments between now and the next review.
- b. Ofgem should clarify its expectation of how the current dividend obligations should be met. We think it would be sensible for Ofgem to make it clear that the availability of resources certificate is already looking further out than 12 months and to provide additional guidance for reporting purposes.
- c. Ofgem must ensure that any changes proposed to future controls would be additive to the current arrangements.
- d. Any changes made to future price controls must be robustly tested by Ofgem and stakeholder fully consulted.

This response is supplemented by a report by Frontier Economics: "Comment on Ofgem's Call For Input on the effect of high inflation".

COMMENT ON OFGEM'S CALL FOR INPUT ON THE EFFECT OF HIGH INFLATION

A report prepared for the Energy Networks
Association

25 SEPTEMBER 2023

Contents

Executive summary	3
1 Introduction	5
2 Ofgem's option to "true up" for over/under performance arising from the leverage effect	8
2.1 Ofgem's proposal is retrospective	8
2.2 Retrospective regulation will have highly damaging effects for consumers	10
2.3 Ofgem and the CMA have in the past recognised the material downsides of retrospection, and sought to avoid them	13
2.4 Conclusions on Ofgem's Option 4	15
3 Ofgem's possible changes to future price control design	17
3.1 The existing regulatory arrangements	18
3.1.1 Key components of the existing arrangements	18
3.1.2 Track record of the existing arrangements	20
3.2 Ofgem's set of potential price control design changes	23
3.3 Consequences of our observations for Ofgem's future process	26
Annex A Case studies on the negative effects of retrospective regulation	28
A.1 Phoenix Natural Gas Competition Commission (CC) 2012	28
A.2 RIIO-1 Mid Period Review	30
Annex B Observations on Ofgem's estimation of quantum	35
B.1 Overview of Ofgem's modelling approach	35
B.2 Quantitative assessment should incorporate a sufficiently long period	36
B.3 Ofgem has not taken account of basis risk between CPI and CPIH	37
B.4 The quantum estimated on the notional financing structure is not informative regarding the actual gains of any network	39
B.5 Concluding comments on Ofgem's quantitative assessment	39

Executive summary

- 1 On the 1st August 2023¹ Ofgem issued a Call For Input (CFI) on the impact of high inflation on the operation of network price controls. This paper highlighted a so-called “leverage effect” originating from its policy of indexing Regulated Asset Value (RAV) to inflation, and its approach to determining allowances for debt costs, in the presence of fixed rate debt and unanticipated high inflation.
- 2 We note that the leverage effect is not a transfer of value between customers and companies, but rather a value transfer between the equity investors and nominal debt investors as a result of their respective inflation exposure positions. In the presence of fixed coupon debt, equity investors gain at the expense of the debt investor when inflation is high, but the benefit flows in the opposite direction when inflation is low. Had the companies fully inflation-linked their debt, there would be no leverage effect. The leverage effect is therefore symmetric, and companies have been exposed to it for decades without this issue attracting comment.
- 3 Ofgem’s analysis indicates that since the start of RIIO-1 to the end of 2022/23, the leverage effect has resulted in a benefit to regulated energy networks of approximately £1.5bn, although Ofgem acknowledges that this estimate is only indicative, is sensitive to the selected period of analysis, and that it is based on the notional company and will not reflect the position of any actual company.
- 4 Ofgem is now seeking input on whether it is appropriate to make changes to its arrangements, or whether it should retain the existing arrangements. The CFI sets out Ofgem’s initial thoughts on the set of interventions that could be made, such as making changes to future price control design, a proposal to “true up” for the leverage effect up to the end of RIIO-2, and possible changes to financial reporting arrangements.
- 5 On behalf of the ENA, Frontier has assessed the above policy options, in particular the potential impact of the proposed true up at the end of RIIO-2, and the key challenges that Ofgem must be aware of if it is to implement any changes to future price control design.
- 6 In respect of the proposed “true up”, it is important to be crystal clear regarding what such a policy would entail. This true up would involve the retrospective reopening of already settled price controls after the event, in order to materially change the outcome of those price control to the detriment of investors.

¹ Ofgem (2023), Call For Input – Impact of high inflation on the network price control operation.
<https://www.ofgem.gov.uk/publications/call-input-impact-high-inflation-network-price-control-operation>

- 7 Our assessment of this mooted retrospective adjustment is absolutely clear-cut – it would be unambiguously detrimental for consumers if a retrospective adjustment is made to already settled price controls. Retrospective regulation of this kind would fatally undermine investor confidence in the regulatory regime, including having a corrosive effect on the wider commercial framework. This loss of confidence would manifest as a higher financing cost, as well as the curtailment of future investment in the utility sectors, leading to adverse consumer outcomes more widely.
- 8 In respect of Ofgem's mooted changes to future price control design, it is not possible at this stage to provide a definitive analysis of whether any have the potential to bring benefits versus the existing arrangements. At present there is insufficient detail on how these proposals might be designed and implemented. However, having reviewed the nature of Ofgem's proposals, it is immediately clear that any of these possible changes would modify foundational aspects of the current regulatory arrangements (e.g. most would result in the RAV no longer being fully index linked). Given the fundamental nature of these potential changes, their complexity, and the extent to which they are interconnected with multiple other facets of the price control, much more analysis is needed to allow a full assessment of their potential merits.
- 9 Importantly, it is not clear to us that any of the proposed options is unambiguously better than the status quo. Given the role that the existing arrangements have played in supporting investor confidence and large scale investment in the sector, there is much to lose if possible changes are not fully appraised and handled with appropriate care and rigour.
- 10 It is crucial, therefore, that Ofgem approaches any potential changes to future price control with utmost care, including fully engaging stakeholders on the detailed design of such changes, conducting a comprehensive impact assessment, and consulting widely to provide sufficient lead time and cost allowance (where applicable) for companies to make necessary transitions.

1 Introduction

- 11 Frontier Economics Ltd has been commissioned by the Energy Networks Association (ENA) to provide an independent report on Ofgem's Call For Input paper (CFI) on the impact of high inflation on the operation of network price controls, published on the 1st August 2023.²
- 12 In its CFI Ofgem describes a "leverage effect". This effect originates from the operation of Regulated Asset Value (RAV) indexation and Ofgem's approach to determining allowances for debt costs, in the presence of fixed rate debt and unanticipated inflation. The result is that during periods where inflation is higher than the long run level expected at the time of the price control, effective returns to the equity investor are higher than the baseline level set by Ofgem. The effect is symmetric, i.e. during periods where inflation turns out to be lower than expected, returns to equity investors will be lower than Ofgem's baseline.
- 13 Exposures of this kind to variation around price control expectations are present across multiple aspects of the RIIO framework and almost all other monopoly regulation frameworks. The energy networks have been exposed to this leverage effect for decades, and for the majority of RIIO-1 experienced lower effective returns to equity holders as a result of lower than expected outturn inflation. However, following a period where inflation has been high, Ofgem is now exploring whether change is appropriate.
- 14 In its CFI, Ofgem presents an initial analysis of the size of this effect. Ofgem's analysis indicates that since the start of RIIO-1 to the end of 2022/23, the leverage effect has resulted in a benefit to regulated energy networks of approx. £1.5bn. Due to the operation of the existing regulatory arrangements any benefit/disbenefit arises in network company RAVs, and hence the effect on revenues and bills will arise over a 45 year period. Ofgem estimates that the leverage effect to the end of FY23 will increase annual end customer bills by circa £2.30.
- 15 Ofgem further sets out that the estimated quantum of RAV growth is sensitive to the period of time analysed. Based on different inflation forecasts currently available, Ofgem's modelling suggests that by the end of RIIO-2, the leverage effect could result in additional RAV growth between £1.2bn (based on the current OBR forecasts from March) and approx. £3.4bn (based on May HMT consensus inflation forecasts), creating a range of possible bill impacts over this period of

² Ofgem (2023), Call For Input – Impact of high inflation on the network price control operation.
<https://www.ofgem.gov.uk/publications/call-input-impact-high-inflation-network-price-control-operation>

between £1.50 and £5.10.³ These estimates can be expected to change over time depending on the evolution of inflation.

- 16 Ofgem's CFI sets out initial thoughts on the set of interventions that could be made. They are:
- (a) No policy action in relation to the leverage effect (i.e. retain the existing arrangements);
 - (b) Making changes to dividend distribution policy reporting and transparency;
 - (c) Changes to future price control design in respect of the treatment of inflation indexation and/or the basis on which debt costs are allowed (four sub options are presented), that Ofgem considers may have the potential to reduce or remove the leverage effect;
 - (d) Retrospectively introducing a true up at the end of RIIO-2 to adjust for over/under growth in RAV that has arisen from the leverage effect; and
 - (e) Voluntary submissions by licensees to share any benefits.
- 17 Ofgem's CFI also sets out how Ofgem considers it should go about formulating any future policy, informed by its objectives and duties, alongside a proposed set of criteria it might use to evaluate policy options.
- 18 We understand that the ENA intends to submit a separate full response to Ofgem's CFI. In this report we have therefore been asked to focus our attention on a subset of Ofgem's proposed policy responses. Given this, the remainder of this paper is structured as follows:
- (a) In **Section 2** we assess the merits of applying a true up at the end of RIIO-2 (i.e. Ofgem Option 4, listed as (d) above). We set out how this would involve retrospectively reopening already settled price controls, so as to change key aspects of the price control to the detriment of investors. We describe how this would be wholly inconsistent with accepted principles for good regulation and would be certain to materially harm investor confidence and thereby cause material long run detriment to consumers.
 - (b) In **Section 3** we provide our views on the issues arising from the potential changes to future price controls mooted by Ofgem (i.e. Ofgem Option 3, listed (c) in the paragraph above). We set out how any/all of these changes would fundamentally alter key aspects of the price control, and how as a consequence careful analysis will be needed in order to assess whether any option offers benefits when compared to the existing arrangements.

³ CFI page 5. We note that while these impacts are described as changes in RAV, the values quotes are the sum of annual RAV effects over the relevant years after accounting for inflation and the time value of money.

- 19 Supporting Annexes of this report contain further detail on cases studies cited in Section 2 (Annex A) and comment on certain aspects of Ofgem's modelling (Annex B).

2 Ofgem's option to "true up" for over/under performance arising from the leverage effect

20 The fourth option on which Ofgem seeks input is described as follows:⁴

***"Out or underperformance true up** – We could consider applying an adjustment (e.g. to RAV) at the end of the RIIO-2 price controls to adjust for licensees' actual out or underperformance over a defined evaluation period. The extent of the adjustment could range from a partial to full adjustment. This policy would seek to directly reduce outperformance earned by licensees over the period of elevated inflation. This adjustment would be sized in relation to the out or underperformance element only and would not seek to remove the indexation necessary to sustain real returns in respect of inflation."*

21 In this Section we discuss the following:

- (a) Ofgem's proposal is unambiguously a retrospective intervention (Section 2.1).
- (b) Retrospective regulation is expected to have damaging effects for consumers (Section 2.2).
- (c) Regulatory precedent from both the CMA and Ofgem demonstrates a strong desire in the past to avoid retrospective intervention (Section 2.3).
- (d) Section 2.4 summarises our conclusions.

2.1 Ofgem's proposal is retrospective

22 Ofgem describes its proposal as a "true up" but it is important to be clear about precisely what is being proposed here. Ofgem's proposal would have the effect of retrospectively reopening price controls which have already been settled. It would change – after the fact – fundamental aspects of how those price controls were agreed to operate, in order to bring about a materially different outcome.

23 A retrospective regulatory change can be defined as any adjustment that changes previously determined regulatory arrangements to impose new rules or requirements on actions already taken. As we explain further below, such changes – in particular when they arise unexpectedly and have the effect of confiscating value – by their nature undermine investor and management confidence in the predictability and stability of the regulatory regime. Where decisions of this kind are taken, a range of important and potentially highly material consumer harms will then result.

⁴

CFI page 9.

- 24 It is of course understood that regulatory arrangements will not necessarily remain as they are indefinitely. Regulators must be provided with the capacity to change their arrangements when this makes sense, in order to take account of new evidence and changed circumstances, to ensure that their arrangements continue to be relevant and effective.
- 25 However, to avoid being retrospective in nature, such changes must be well signalled in advance, thoroughly consulted on, and must only apply going forwards. This means the process through which change is made must adhere to well established regulatory principles – for example, the following key principles in respect of regulatory predictability were set out by the Department of Business, Innovation & Skills (BIS) in 2011:⁵
- *“the framework for economic regulation should provide a stable and objective environment enabling all those affected to anticipate the context for future decisions and to make long term investment decisions with confidence.*
 - *the framework of economic regulation should not unreasonably unravel past decisions, and should allow efficient and necessary investments to receive a reasonable return, subject to the normal risks inherent in markets.”*
- 26 These principles are also echoed by the National Infrastructure Commission (NIC). NIC considers that regulatory models need to work better for the public, and particular for the consumers, noting that *“long-term investors, who bring significant capital and subsequent benefit to the UK market, such as pension funds, value stability and predictability. Investors should receive a fair return on their investments, and be insulated from political cycles by predictable, stable regulation. To ensure the benefits of predictable regulation, it is important that forward looking regulation should be not changed retrospectively.”*⁶
- 27 Ofgem's calculations of the possible quantum of the leveraging effect incorporates the remaining years of RIIO-2. We note that an intervention even in respect of these future years would still be unambiguously retrospective in nature because it has been insufficiently signalled.⁷ In particular:

⁵ Department for Business Innovation & Skills (2011), Principles for Economics Regulation, Page 5.

⁶ National Infrastructure Commission (2019), Strategic Investment and Public Confidence, page 14.

⁷ Regulators may opt to manage future uncertainty through the use of targeted uncertainty mechanisms, designed to allow them to update past decisions to reflect information revealed during the price control. However, as confirmed by the CMA in its recent RIIO-2 appeals, regulators are not able to reserve for themselves an undue level of discretion in respect of how such mechanisms may be operated. Instead they should provide sufficient information to licence holders, to allow them to understand sufficiently, clearly and fully what future actions may be taken under each mechanism. This decision will support investor confidence in

- (a) In respect of RIIO-GD2, ET2 and GT2, Ofgem did not send any signal that it might contemplate changes to the way it treated inflation at any stage of the price control process. Any changes to inflation arrangements for these price controls could only therefore be interpreted as retrospective in nature.
- (b) In respect of RIIO-ED2, Ofgem signalled a potential concern regarding inflation and its intention to consult further at the Draft Determinations stage. However, no proper consultation was issued within the confines of the ED2 process. ED2 was concluded without Ofgem articulating clearly the precise nature of its concern, and without Ofgem identifying any potential steps that it might take to address its concern. Ofgem might consider that this was sufficient to provide licence holders some form of notice that a change may come. However, the absence of any meaningful description of what form that change might take currently makes it impossible for companies to have acted in an informed manner to preserve their interests in the light of some unknown future change. Therefore, we consider that if the proposed retrospective true up was applied to RIIO-ED2, this would be just as retrospective as if it was applied to other network price controls.

28 Reopening the remainder of a “deal” during the period within which all parties had understood that deal would apply, as previously determined at the RIIO-2 price control processes, would cause great harm to investor confidence. Companies will have set a course for the price control premised on one set of rules, only to have another set imposed part way through – upending both companies’ long-term operational and financial strategies. The CFI itself does not constitute sufficient signalling.

2.2 Retrospective regulation will have highly damaging effects for consumers

29 Achieving efficient investment in and operation of utility infrastructure is critical to the economic wellbeing of the UK. This has always been true in respect of energy networks, but with the importance of delivering net zero now well understood, such an outcome now takes on even greater importance.

30 Hitherto, the model of private ownership of networks coupled with independent arm’s length regulation has delivered excellent results across numerous relevant dimensions (e.g. securing large scale investment over decades, along with rapid improvements in efficiency and improved service delivery). This success has been underpinned by the stability and predictability of the regulatory framework which secures two key benefits:

arrangements by appropriately limiting a regulators ability to act in an unsignalled manner, and can clearly be viewed as supportive of our view that retrospective decisions are harmful to regulatory predictability and confidence.

- (a) it maintains the confidence of investors, reducing their perception of risk and lowering the required rate of return; and
- (b) it has the capacity to stimulate significant improvements in dynamic efficiency (both cost and quality), by providing confidence that when material investments (either monetary or in terms of time/resource input) are made, then the rewards of those will be shared with customers in line with established and well understood regulatory arrangements. When this confidence is eroded, the business case for investments that drive innovation is materially undermined.

- 31 The effect of these benefits on consumer outcomes cannot be overstated, in terms of lowering bills now, and in the future, while also securing improvements in service delivery.
- 32 The corollary of this is that it is widely accepted that retrospective regulation – of the kind inherent in Ofgem's "true up" proposal – would undermine the stability and predictability of regulation in a manner which is deeply harmful to investor confidence and, as a result, ultimately harmful to the interests of consumers.
- 33 One common interpretation of regulatory arrangements is that they crystallise a risk sharing arrangement, making it clear how possible future states of the world will affect company profitability. Where a specific instrument is in place, this signal is explicit – if a company is able to beat a target, it will earn a reward that can be calculated in advance. In the case of the leverage effect these rules are indeed explicit, with the process through which RAV is indexed to inflation, and the method through which cost of debt allowances set, all comprehensively documented in consultation/decision documents, the Price Control Financial Handbook/Model etc. But these signals can also be implicit, allowing investors and management teams to draw legitimate expectations around how certain eventualities might be treated based on the set of wider rules that that are in place, even if this rule set is not completely documented in, for example, licence conditions. By giving companies exposure to risks they can control (to at least some degree), an incentive is created for the company to manage those risks well. Often this requires the commitment of serious resources (e.g. capital, senior management time) and often it requires companies to take costly and risky decisions (e.g. taking on disruptive reorganisation with uncertain outcomes including potential downsides). Before doing so, companies need to make tough commercial decisions that will depend on their confidence in the regulatory arrangements.
- 34 When a regulator decides to change its regulatory rules *after* the event, it has the potential to fatally undermine confidence in the entire framework. Suppose the regulator decides, *ex post*, that the reward from some investment is just "too large", and that it must be capped. Both of the foundations of the current model are now at risk:

- (a) As an investor, you will now know that there is a risk your returns will be censored going forward if they are deemed “too high”. This will inevitably increase the perception and reality of regulatory and political risk, and will increase the cost of capital to the detriment of consumers.
- (b) It will also weaken the confidence of investors in the wider commercial framework. Going forward, the company must now factor into all of its future decisions the risk that if some improvement they make turns out to be “too good”, then the rewards to that may also be confiscated, whether in part or in full. Management teams will now “risk adjust” their business cases and this will inevitably limit their appetite for such investment and limit the speed with which innovations are identified, pursued and rolled out, again to the detriment of consumers.

35 None of this is new or controversial – it is an example of the well-known “Hold Up” problem in economics, premised on the difficulty of writing complete contracts, leading to well researched problems of under investment and service quality diminution. Of course, as explained above, regulatory frameworks can and do quite rightly develop over time – but it is critical that such development avoids adding undue uncertainty to the business environment.

36 Again, it is well understood that regulatory confidence and predictability provides a way through the “Hold Up” problem, which leads to better outcomes for all participants. It is also well understood that such confidence grows slowly, but can be lost very suddenly in the face of retrospective decisions. This is particularly true when retrospection affects highly material parts of the price control framework, which would unambiguously be the case here.

37 It is clear that Ofgem is keenly aware of the risks and costs that would result from adopting retrospective regulation, given the commentary it added to its description of this option:⁸

“While this option may create some benefits for consumers by removing any temporary “excess” RAV growth (the precise scale of which is currently uncertain due to the aforementioned factors set out on pages 3-4), it could also create significant costs for consumers by undermining the stability and predictability of the regulatory framework if investors perceive elevated regulatory risk, leading in turn to a potentially sustained increase in the cost of capital borne by consumers. This is particularly pertinent in the context of the elevated investment requirements in the near term to facilitate the transition to Net Zero; with relatively small changes to the cost of capital able to outweigh any benefits associated with this option.”

⁸ CFI page 9.

- 38 While Ofgem's commentary will have provided some comfort to investors that this option is being considered appropriately and in the round, we consider that the fact that this option is even on the table at this stage will, in and of itself, still be disturbing to investors, as flagged in recent Moody's commentary on Ofgem's CFI:

*"We believe the most radical option, for example by clawing back retrospective outperformance in RIIO-2, was included largely for completeness. Such a change would undermine investor confidence in the predictability and stability of the regulatory regime when significant investment is required, especially by the electricity networks, to facilitate decarbonisation objectives."*⁹

2.3 Ofgem and the CMA have in the past recognised the material downsides of retrospection, and sought to avoid them

- 39 The principles of good regulation we have set out above are, in our view, widely recognised and respected and not controversial. Below we set out two examples (with further detail provided in an annex) where the principle of no retrospection has been adhered to:

- (a) the case of Phoenix Natural Gas (PNG), where retrospective action by the Utility Regulator (UR) was quashed following a successful appeal to the CMA; and,
- (b) Ofgem's limited mid period review during RIIO-1, where Ofgem took care to avoid straying into retrospection.

Phoenix Natural Gas Competition Commission 2012

- 40 The issue of retrospection was explored thoroughly by the CC as part of its redetermination of PNG price control in 2012.
- 41 As part of its price control, the UR had determined that it would make retrospective changes to PNG's Total Regulatory Value, TRV (i.e. its RAB), to lower the return of and return on capital that PNG would be allowed to recover going forward. This involved proposals to change the way in which historic outperformance and capex deferral were treated within TRV, despite those treatments having been established as part of a coherent package at the preceding price control on the basis of a lengthy consultation, a well-considered appraisal of the overall compensation that would flow to PNG and the overall balance of risk and the good incentives for efficiency and investment that the package would create.

⁹

Moody's (2023) Ofgem outlines possible changes following high inflation, page 4.

- 42 The CC found that the UR's retrospective deductions from TRV should not be applied as they acted against the public interest, despite the TRV reduction being likely to lead to material short run bill reductions for consumers. In reaching this judgement, the CC set out the reasons why retrospective regulation would give rise to harm, noting in particular that the UR's proposed retrospective actions would "*create a perception of regulatory instability*"¹⁰ thereby deterring and/or increasing the cost of funding the sector. The CC considered that in addition to directly increasing costs to consumers, these negative effects could harm the appetite of investors to fund needed future network expansion.
- 43 Ultimately the CC concluded that the harm arising from retrospective action would be sufficiently great to more than offset any potential benefit to consumers. We provide more detail on the CC's decision in Annex A.

RIIO-1 Mid-Period Review

- 44 The design and execution of the Mid Period Review (MPR) at RIIO-1 provides an example of Ofgem having been aware of the dangers of retrospection in the past, and consciously choosing not to act in such a manner.
- 45 At RIIO-1 Ofgem decided to set the duration of its price controls to be 8 years, whereas almost all energy network price controls before that had a duration of 5 years. While Ofgem noted there are a number of benefits to operating a longer price control (e.g. networks will be able to carry out longer term planning), Ofgem was also cognisant that a long period without review brought with it some new risks e.g. that circumstances might change more substantially over a longer period, and that this might render aspects of the price control no longer fit for purpose.
- 46 In order to address this concern, Ofgem decided to put in place an MPR, to allow it to revisit some aspects of its decision. However, Ofgem was clear from the outset that the scope of the MPR should not, de facto, slip towards a full re-examination of all aspects of the price control in order to avoid the "*risk that it could undermine the purpose of setting a longer control period*".¹¹
- 47 Consequently, Ofgem committed to a limited MPR, and also noted the need for a clear set of rules to be created to guide its operation. In summary, the MPR rules clearly states that the MPR will only cover new outputs Ofgem introduced at RIIO-1, and that Ofgem would not make retrospective adjustments as part of the MPR process. In particular, with regards to the RIIO-GD1/T1 MPR, Ofgem specifically noted that it would avoid retrospective adjustments and limit the MPR because

¹⁰ Competition Commission (2012) Phoenix Natural Gas Limited price determination. Paragraph 31
https://assets.publishing.service.gov.uk/media/551948b8e5274a142b000186/phoenix_natural_gas_limited_price_determination.pdf.

¹¹ Ofgem (2010) Consultation on strategy for the next transmission price control - RIIO-T1 Overview paper, paragraph 6.14.

failing to do so could “*potentially undermine the regulatory stability associated with an eight year price control and make companies less likely to commit to long term strategies that benefit consumers...[and] increase the cost of finance from investors as they could perceive this as creating additional regulatory risk.*”¹²

48 The principles set out by Ofgem for the RII0-1 MPR are not new. Ofgem has had a long-standing commitment to avoiding retrospective action since the RPI-X controls. For example, Ofgem was explicit about its commitments to “*not making retrospective adjustments to revenue*”¹³ in the RPI-X control. Ofgem also stated that it understood the “*importance of maintaining regulatory certainty*”¹⁴ during the RPI-X@20 review, which would serve as the basis for subsequent network price controls.¹⁵

2.4 Conclusions on Ofgem's Option 4

49 It follows from the discussion above that there is a clear rationale, both in theory and precedent, for Ofgem to rule out any retrospective action. Retrospective action would send a powerful signal to investors that *any* apparently agreed elements of the regulatory framework should be seen as conditional on Ofgem's ad hoc judgement and discretion. Investors and management teams will inevitably assume that the same logic *could* apply anywhere within the framework, and all future decisions will be taken on that risk adjusted basis.

50 This is particularly true in the present case since the indexed RAV plus real return construct has been a cornerstone of UK regulation from the very beginning, underpinning investor confidence in the regime. Ofgem itself in the CFI articulated the risks and potential harm to consumers – and we agree fully with the risks as described by Ofgem.

51 The fact that Ofgem has not ruled out retrospective change could already have created some disturbance to investor confidence. Any harm that may result from this can best be mitigated by Ofgem now signalling that:

- it is fully alive to the importance of stability and predictability in regulation;
- it will not stray into retrospection in its consideration of how to address the leverage effect; and
- it will adhere to well established regulatory best practice when framing, consulting on and implementing its proposals.

¹² Ofgem (2015) Consultation on a potential RII0-T1 and GD1 mid-period review, paragraphs 1.23 – 1.25. More details are set out in Annex A.

¹³ Ofgem (2010) Handbook for implementing the RII0 model, paragraph 10.3.

¹⁴ Ofgem (2009) Regulating energy networks for the future: RPI-X@20 Principles, Process and Issue, page 12.

¹⁵ Ofgem (2010) Handbook for implementing the RII0 model, paragraph 5.6.

- 52 We therefore consider that in the interests of consumers and investors, this option should be removed from the suite of policy options under consideration as soon as possible. To avoid these harms and maintain confidence in its arrangements, Ofgem must now reassure investors that any changes it makes to its regulatory arrangements will be made only prospectively, and not retrospectively.

3 Ofgem's possible changes to future price control design

53 In its CFI Ofgem outlines under its third potential policy response a range of potential changes that it could make to elements of its price control arrangements when it sets the next round of network price controls, which could “*reduce or remove the out/underperformance effect or enhance the calibration of the control*”.¹⁶

54 Ofgem's CFI notes the following set of potential changes, observing that other options are available.¹⁷

- (a) “*Creating a CoD allowance for fixed rate debt and deflating this by forecast inflation and including an end of period true up to outturn*”;
- (b) “*Providing a nominal allowance for fixed rate debt*”;
- (c) “*Deflating the CoD by another long-run assumption*”; and
- (d) “*Implementation of a Return Adjustment Mechanism (“RAM”) type threshold for inflation to cap or share outperformance and underperformance*”

55 In this section, we comment on the set of changes that Ofgem has put forward here. But it is worth noting at the outset that since the options set out in the CFI are described at only a high level,¹⁸ understandably given the complexity of the topic and stage Ofgem is at in its process, it is not possible at this stage to undertake a thorough and complete analysis of their relative merits versus the existing arrangements. In order to do so, it would be necessary for Ofgem to articulate much more fully exactly how it would design, calibrate and implement these changes in order for their effect to be understood. For most if not all of these options, granular choices on design and calibration will determine the effect of each option on the leverage effect and the price control, and hence on companies and consumers. It would be necessary to think through carefully how these changes may impact all aspects of the price control, to understand whether there would be further consequential effects that may need further change, in order to determine the overall effect of these changes. We have tried to illustrate these points in our comments below.

56 Before turning to discussion of the potential changes, it is helpful first to set out how the existing arrangements operate, and their effects, including their wider effects beyond just the leverage effect. We agree with Ofgem that the pros/cons of

¹⁶ CFI page 8.

¹⁷ Ibid.

¹⁸ We note that the extent of the detail set out in the CFI is limited to what is reproduced in paragraph 54 above.

any changes being considered must be assessed relative to the merits of retaining the existing arrangements.

3.1 The existing regulatory arrangements

3.1.1 Key components of the existing arrangements

- 57 In August 2022 Frontier was commissioned by the ENA to provide a paper on the leverage effect.¹⁹ That paper set out a brief description of the existing arrangements which for convenience we reproduce here, with only minor changes to reflect process updates.
- 58 Under the existing RIIO arrangements, Ofgem changes the value of past investments (i.e. RAV) by outturn inflation each year (Ofgem uses CPI-H for RIIO-2, previously it used RPI). This means that those past investments are worth the same in real terms, regardless of what happens to inflation. Consistent with this, the allowed rate of return is specified in real terms. Using a real (as opposed to nominal) WACC means investors are only compensated for inflation once, through the indexation of RAV to CPI-H.
- 59 Indexing the RAV to outturn inflation has been a fundamental component of the regulatory model since privatisation – not just for energy networks, but across regulated infrastructure sectors generally. This approach has been a key underpinning of investors' understanding of the risks associated with investing in network assets, and business decisions will have been taken over decades in reliance on this long standing indexation treatment.
- 60 To set an allowed real cost of debt, Ofgem starts by calculating a nominal benchmark debt cost allowance based on an iBoxx index. This is converted into a real debt cost allowance using a contemporaneous CPI expectation – for example in RIIO-ED2 Ofgem uses the year-5 OBR CPI forecast.²⁰ In RIIO-GD1/T1 Ofgem explained that:²¹

“The approach used to calculate the cost of debt index implicitly assumes that all network debt is index-linked. In reality, only a small proportion of the networks' debt is index linked and the networks are exposed to inflation risk on the rest of their debt profile.”

¹⁹ Frontier Economics (2022) Inverse Inflation Exposure – Response to ED2 Draft Determination. Section 2.

²⁰ The OBR does not produce a CPIH forecast. For the purpose of operationalising the cost of debt mechanism, Ofgem assumes that CPI is a sufficient proxy for CPI-H, as set out in its discussion of inflation issues in the RIIO-2 FD. See for example Ofgem (2022) RIIO-2 Final Determinations – Finance Annex (REVISED), paragraphs 1.6 – 1.8.

²¹ Ofgem (2011) Decision on strategy for the next transmission and gas distribution price controls - RIIO-T1 and GD1 Financial issues, paragraph 3.55.

- 61 In short, by using a real WACC and indexing RAV to inflation, Ofgem has hitherto implicitly assumed that companies in theory could issue entirely index-linked debt, for which the principal of the debt and hence interest payments will vary with inflation. The same effect may also be achieved by taking on derivatives or other financial instruments which have the effect (in financial terms) of converting fixed-coupon debt to index-linked debt.
- 62 In a system with RAV indexation, companies with debt portfolios comprised solely of index-linked debt (or derivatives which achieve that effect) would be fully hedged against outturn inflation risk on their debt costs, although in reality it may be challenging for companies to perfectly hedge due to practical limitations in the capital market.
- 63 In addition, companies with network assets can choose, if they wish, to issue fixed coupon nominal debt. The principal and interest paid on this nominal debt are fixed at issuance and do not change with inflation over the life time of the instrument (unlike index-linked debt). If a network issues fixed coupon nominal debt it therefore takes on a “net inverse inflation exposure” – i.e. if outturn inflation in a given year is higher (lower) than long-term inflation expectations, any company that has issued fixed coupon nominal debt will receive a higher (lower) level of RAV indexation than is needed to match the profile of debt costs arising from its debt book in that year. Compared to issuing index-linked debt, where equity holders and debt holders are separately shielded from inflation risk, taking on nominal debt exposes both debt and equity holders to opposite sides of an inverse inflation risk. The inflation exposure of the equity investor is the leverage effect as described above in this paper, and by Ofgem in its CFI. The debt investor that purchases fixed coupon debt issued by the company takes on the other side of the exposure of the equity investor, i.e. the purchaser of a fixed rate debt product experiences a lower real return when inflation is high and a higher real return when inflation is low. So when inflation is different than expected, there is no real terms impact on consumers, but there is a value transfer between the debt holders and the equity holders. We do not see any leverage here in the traditional sense of the word, although we have adopted Ofgem’s terminology of “leverage effect” to avoid unnecessary confusion.
- 64 In expectation, there is no reason to believe that the long-run inflation assumption used in setting the cost of debt will systematically over/under-forecast inflation over time, since the Bank of England has the mandate to keep inflation (as measured using CPI) stable and at the target rate of 2%. We therefore see no reason to believe that the potential existence of a leverage effect will lead to companies expecting to receive more or less than Ofgem’s intended level of allowed return over time, regardless of the make-up of debt portfolios as between fixed and index-

linked debt.²² Further, the effect of lower or higher outturn inflation in any given year will only flow through into cashflows (and hence customer bill levels) over a long time horizon i.e. accruing in the RAV before being released through depreciation of and return on RAV. We note that Ofgem has in its CFI published bill impact estimates, and consider this a very helpful way of placing the consequences of the leverage effect in context.

- 65 As Ofgem's statement from GD1/T1 (referenced above in paragraph 60) makes clear, the extent of the leverage effect borne by any individual company depends on its proportion of fixed to indexed linked debt (including derivatives) i.e. its chosen financial risk management strategy. While the leverage effect can give rise to a transfer of value between the equity holders and the nominal debt holders (as a result of the financing arrangement that they enter into) when inflation is different from expectation, the primary effect of inflation on all costs exists regardless of how the company is financed and how customers pay for that cost.
- 66 The leverage effect should therefore not be considered a value transfer between the company and the customer. There is nothing inherent in the system that creates this exposure, i.e. it is not arising as a result of any flaw in the underlying policy of indexation – it arises on a company-specific level and is a discretionary choice for each company when deciding how to finance its business. Hitherto (and as we explain further below) Ofgem has been clear that choices around how to finance were a matter for the company, subject to ensuring adherence to standard licence conditions.
- 67 For RIIO-ED2, Ofgem assumed that the notional company holds 25% index-linked debt and 75% nominal debt. For the other RIIO-2 price controls (GD/GT/ET) Ofgem assumed 30% index-linked debt. Given the presence of fixed rate debt in the assumed notional company debt portfolio, the leverage effect will be present for the notional company, but it will not reflect the position of any actual company (except by coincidence).

3.1.2 Track record of the existing arrangements

- 68 The existing arrangements outlined above are foundational aspects of the existing price control arrangements that have endured in broadly this form since vesting. This stable regulatory regime has helped to keep the cost of capital low, and brought forward a large quantum of investment over time to address the need for network renewal, expansion and enhancement. Confidence in the regime has also allowed network companies to invest resources in seeking efficiencies and

²² We note that on page 1 of Ofgem's CFI, Ofgem states that it has a key policy objective of keeping stable "*real equity returns stable relative to inflation*." Ofgem then notes that "*where inflation deviates from long run assumption, real equity returns can vary in a manner inconsistent with the policy intent*." We are not aware of Ofgem having set out such a policy intent hitherto, and observe that there is no mention of this policy intention on the page that Ofgem cites in the CFI, from the RIIO-ED2 FD (see CFI footnote 7).

innovations.²³ Given this set of outcomes, we consider that the existing arrangements have served the sector well over decades to the benefit of both investors and consumers.

69 In particular the existing arrangements give rise to two highly attractive properties for investors:

- (a) The value of a network's past investments are protected against inflation, through RAV indexation. Moreover the existing arrangements make this outcome certain, not conditional in any way and not subject to regulatory discretion.
- (b) Since Ofgem has hitherto focused solely on the notional company, licensees have hitherto been free to finance their assets as they wish and in so doing have been able to choose whether to take on a negative inflation exposure (through issuing fixed rate debt) or hedge this risk away (through issuing index linked debt and/or taking on other instruments). Companies will have developed their investment plans and approach to financing their business cognisant of this, over a long period of time and typically using instruments with long tenors, in anticipation that these long-standing arrangements would endure. It was also understood that companies were responsible for their decisions (and exposed to the consequences of them), and must at all times adhere to the strict terms found in their Standard Licence Conditions (e.g. regarding ensuring the availability of necessary financial resources).

70 The leverage effect has always existed, but it has hitherto not given rise to any concern at Ofgem or elsewhere. Over the majority of the last two decades, inflation has been generally low and outturn never far from expectation (noting the volatility that can be observed during the GFC period). One needs to look back to May 1992 to find the last time that the annual observed CPIH exceeded 5%. In periods where outturn inflation was lower than expected, the notional equity investor will have experienced underperformance versus baseline allowances.

71 Ofgem states in the CFI that a similar symmetrical shock below the long run assumption may have compelled Ofgem to intervene, to protect consumers from the potential consequences of systemic underperformance of licensees and consequent instability in the sector. It is not clear what hypothetical intervention Ofgem refers to here.

- (a) It may be that Ofgem means that, in an extremely low inflation environment, where low RAV indexation leads to financeability difficulties, Ofgem would employ cash lock up to ensure all businesses run normally to protect consumers. If so, then we are unclear how Ofgem considers the possibility of

²³ See for example, Jamasb T., & Pollitt, M. (2007), Incentive regulation of electricity distribution networks: Lessons of experience from Britain. *Energy Policy*, 35(12), 6163-6187;

removing upside from the leverage effect to be symmetric from the perspective of shareholders. On the contrary, under this kind of intervention it seems that equity investors are materially exposed to the downside of the leverage effect, and symmetry requires them to benefit from the upside

- (b) If Ofgem means that if a similarly large loss due to leverage effect were to materialise Ofgem would put in measures to compensate for the lack of inflation log up on the RAV (e.g. to index RAV over a period by a number higher than actual outturn inflation to protect shareholders), then there is little evidence that this would have indeed happened. Ofgem's own modelling of the historic leverage effect shows that the cumulative loss due to past leverage effects on the T/GD sectors throughout RIIO-1 was similar in size to the current gain,²⁴ yet no intervention was contemplated by Ofgem during T1/GD1 when the inflation experience had been against equity.

72 We do not consider that this point, as Ofgem has framed it, has merit.

73 The current inflation environment is of course relatively volatile, more so than during other periods since the Bank of England acquired its independence. Despite this current volatility however, the leverage effect as estimated by Ofgem remains relatively small, in terms of its overall effect on bills. The Bank of England has expressed its commitment to returning CPI inflation to levels consistent with the target set by Government, i.e. 2%, and at the time of writing has increased base rates 14 times since December 2021, from a record low of 0.1% to 5.25%. Care needs to be taken therefore to ensure that effective and proven long run arrangements are not changed in response to one off events.

74 We consider that any potential change to the existing regulatory arrangements that could be made should be carefully weighed against the merits of the current options given:

- (a) the benefits that the existing, simple and transparent arrangements have secured over a long period of operation;
- (b) the still relatively small scale of the leverage effect when this is placed in context, e.g. in terms of bill impact and the scale of future needed investment; and
- (c) the unusual nature of the recent episode of high inflation and the events that triggered it.

²⁴ According to Ofgem's modelling, the total cumulative loss in RIIO-1 for the T/GD sectors (2013/14 – 2020/21) was -£1.4bn. The cumulative gain for the historic RIIO-2 years was £1.8bn. We observe that the gains and losses over the historical RIIO years are in the same order of magnitude.

3.2 Ofgem's set of potential price control design changes

- 75 As described above, Ofgem has set out in its CFI a non-exhaustive list of potential changes to price control design, each of which may modify the leverage effect in some way. Ofgem notes that while making a future change to arrangements would not address the past impact of the leverage effect, it would address the consequences of this effect in future, and would “*have a lower impact on the perception of regulatory stability and cascading impact on the cost of capital borne by the consumer*”.²⁵ We agree that Ofgem should avoid retrospective action for the reasons provided in Section 2.
- 76 As also already noted, the options set out in the CFI are described at only a high level, which is understandable given the complexity of the topic and the stage we are at in respect of Ofgem's process. However, as a result it is not at this stage possible to undertake a thorough and complete analysis of their relative merits versus the existing arrangements, since granular choices on design and calibration will be key to determining the effect of each option on the price control, and hence companies and consumers.
- 77 To provide an example of why detailed and definitive comment is not possible, we consider the fourth design change included in Ofgem's list, i.e. introducing a RAM to cap/share out/under performance. We consider RAMs because such a mechanism was recently introduced to the RIIO framework, to place limits on operational over/under performance, and the sector therefore has recent experience of considering the detailed design questions that emerge with such a mechanism. We note however that one could prepare a similar list of relevant questions for all of the other sub-options suggested by Ofgem under its policy Option 3. In respect of a RAM, the list of detailed design questions that would need to be considered includes the following.
- (a) Would this involve expanding the existing RAM, introduced at RIIO-2, to cover not just operational out/under performance but also the leverage effect? Or would this be a second RAM introduced separately with the sole purpose of sharing any effect arising from unanticipated inflation?
 - (b) Would the RAM be applied to the actual company structure, or would it apply to the notional company (and if so, how)?
 - (c) How wide would the bands of the RAM be set?
 - (d) How would sharing rates be determined when some threshold was passed?
 - (e) Would there be one set of thresholds created, or would there be multiple thresholds with progressively different sharing rates?²⁶

²⁵ CFI page 9

²⁶ The operational RAMs in RIIO-2 have different sharing factors depending on the level of outperformance.

- (f) Would the mechanism be calibrated to be symmetric in expectation, and how might Ofgem calibrate such a mechanism?
- (g) Would any adjustment triggered by the RAM be applied annually with an end-of-period true up, or only at the end of the price control?
- (h) Would any adjustment triggered by the RAM be made to RAV or to revenues?

78 Without answers to these questions, detailed and rigorous analysis of the effect of this change is not possible, for example in respect of how a RAM might affect the evolution of customer bills, RAV, revenues (and hence cashflow) within period, revenue/cashflow volatility, the areas where companies are free to take financing decisions, and the potential spread of equity returns over time and what may cause those to change. Again, we note that a similar set of questions would need to be developed for each of the other sub-options, and the effect of those options may differ markedly depending on the answers.

79 It is however possible to provide high level observations on the options in Ofgem's CFI and their likely consequences. What is clear is that almost all of these proposed interventions, however they are designed, will lead to profound changes in the operation of the GB energy network regulatory regime, and could fundamentally alter many of the features and consequences of the existing arrangements that have underpinned the confidence of debt and equity investors hitherto.

80 Adopting some of these changes could come with significant challenges and far-reaching implications for how the price controls are run. The potential consequences/implications of the proposed options include:

- (a) Fundamentally altering price control mechanics and the basis on which the cost of capital is set:
 - (i) Under most of these proposals, RAVs will, in effect, no longer be fully indexed to inflation, and hence the value of past investments would no longer be fully inflation protected. Under some of these proposals tranches of RAV may not be inflation indexed at all. This in and of itself would be a major change to the existing regime and one that may change the appetite of investors to deploy capital in the sector. This would inevitably change investors' and consumers' exposure to inflation risk.
 - (ii) Under some of these options, the WACC may no longer be set in real terms, but parts of it may be nominal. This again represents a major change to the regime that investors will have reviewed when they entered the sector and the basis on which they have made investments over time.
 - (iii) Some of these options will cause the allowed rate of return to be set at different levels across companies, not because of some

underlying difference in the nature of the company, but as a result of the financing choices that have been taken, contrary to the existing principle that there is one cost of capital).

- (iv) Under some of these options, it seems likely that the regime would switch from one that is anchored to a notional company, to one that operates entirely (or at least to a greater extent) on an actual company basis. Again, this would represent a major change in approach, and one that would reverse a long standing Ofgem position (i.e. that networks are free to choose their own financial structure).
- (b) Risks of unintended or detrimental consequences;
 - (i) Some of these proposals have the potential to induce significant further revenue volatility relative to the status quo, through for example the need to adjust and true up revenues, and this effect would need to be studied to understand if this was acceptable to consumers and whether it resulted in a construct that might harm financial metrics.
 - (ii) Some of these proposals may cause Ratings Agencies to change their approach to appraising companies and/or the wider sector, with knock on consequences for the actual cost of debt.²⁷
 - (iii) Some proposals will have important consequences for the speed of money. Some seem certain to materially accelerate cash flow and could have the effect of markedly increasing bills in the short run.
- (c) Creating practical complexities and additional regulatory burden in implementation;
 - (i) Some of the options require setting a WACC allowance that has a nominal component to it. This may also create additional complexity in the price control regime, e.g. regarding how to determine headline WACC when moving costs/revenues from one time period to another in an NPV neutral manner.
 - (ii) Certain of these options seem to require Ofgem to split the RAV into further tranches, treated differently according to how they are financed. This is of course the case at present to some extent, in respect of the notional company being regarded as being funded in part by debt and in part by equity. But some of these proposals

²⁷

We observe that such an outcome has already occurred in respect of utility infrastructure in Northern Ireland, following the introduction of an inflation true up for the allowed cost of debt as part of the GD23, a mechanism that appears consistent with Ofgem's sub-option 3(i). In respect of this change in arrangements by UR, Moody's commented "PNG's credit quality is constrained by a deterioration in the stability and predictability of the regulatory regime. Significant changes to the framework were introduced without consultation late in the process relative to the 2023-28 regulatory period (known as GD23), including a novel inflation adjustment)." See Moody's (2023) Phoenix Natural Gas Limited, Update to credit analysis following final determination.

go beyond such labelling into potentially requiring full RAV segmentation, with different segments being indexed differently, creating a new level of complexity.

- (d) It is not entirely clear whether any option can truly eliminate the leverage effect.
 - (i) Ofgem has assessed the leverage effect at the notional gearing level with an assumed proportion of nominal debt (broadly based on current sector average), and presumably most of the options presented here would be calibrated in line with those assumptions.
 - (ii) However, if companies prefer to maintain some level of leverage effect as a part of their financing choices, they can still choose to increase the proportion of their actual nominal debt relative to this assumption and be subject to the leverage effect.
 - (iii) If many companies choose to deviate from the current assumptions, then the industry average actual proportion of nominal debt would change, which Ofgem could reflect at the next price control, thereby a dynamic where Ofgem is constantly chasing a moving target but never eliminates the leverage effect entirely.

81 In setting out the list of potential consequences above, the intention is not to signal that the changes contemplated by Ofgem under its Option 3 are too complex to be modelled or impossible to implement. That is not the case. But it is important to signal just how fundamental some of these changes would be to the regulatory construct, even if at first glance they may appear to be seemingly innocuous technocratic changes. The implications of some of these changes may be very large, and in our view it is not possible to judge whether stakeholders would find certain of these changes beneficial or harmful, or whether there would be a consensus among stakeholders. It is therefore essential that stakeholders are fully consulted on the detail of any changes proposed to the design of future price controls.

3.3 Consequences of our observations for Ofgem's future process

82 We understand that Ofgem is still at an early stage in its thinking. If Ofgem wishes to consider changes at the next price control, a lot more work is needed to flesh out these options. Careful analysis must be undertaken to fully understand the potential ramifications of each, across multiple dimensions, in order to understand whether any of these changes are likely to lead to better outcomes for consumers and/or may alter the extent to which investors are willing to deploy capital in GB energy networks. Ofgem will need to provide sufficient opportunity for stakeholders to undertake their own analysis. Since changes made in the areas discussed above may make further consequential changes to the arrangements necessary, we consider that any potential changes made here should be analysed

alongside other changes that may be made, e.g. following the recent FSNR process.

- 83 There would be substantial risks to Ofgem rushing to take a decision without having completed an appropriate depth of analysis, and for this reason we recommend that, should Ofgem decide that some adaptation may be needed, it should take this forward as part of a wider and more thorough package of work, i.e. as part of its work on Sector Specific Methodology Consultation.
- 84 As already noted, any potential changes should be assessed against the existing arrangements, given that these arrangements have underpinned good outcomes over a number of decades hitherto.

Annex A Case studies on the negative effects of retrospective regulation

A.1 Phoenix Natural Gas Competition Commission (CC) 2012

- 85 The issue of retrospection was explored thoroughly by the CC as part of its redetermination of PNG's price control in 2012.
- 86 As part of its price control, UR had determined that it would make retrospective changes to PNG's TRV (i.e. its RAV), to lower the return of and return on capital that PNG would be allowed to recover going forward. This involved proposals to change the way in which historical outperformance and capex deferral were treated within TRV, despite those treatments having been established as part of a coherent package at the preceding price control on the basis of lengthy consultation, a well-considered appraisal of the overall compensation that would flow to PNG, the overall balance of risk and the good incentives for efficiency and investment that the package would create.
- 87 The CC concluded that the long standing arrangements for PNG in respect of outperformance and deferred capex²⁸ did not operate against the public interest, and consequently ruled that the UR's retrospective deductions from TRV should not be applied. We note that the CC reached this judgement despite the TRV reduction being likely to lead to material short run benefits to consumers. The CC reported that UR's proposals would have led to an approx. 20% reduction in TRV²⁹, and that this would have given rise to an approx. £16 reduction in annual gas customer bills³⁰.
- 88 In reaching this judgement, the CC noted that two considerations were important:³¹
- *“whether these actions would create a perception of regulatory instability and whether this would have a significant effect in deterring future*

²⁸ We note that there were some components of PNG's deferred capex that the CC did consider it reasonable to deduct, since the sums related to projects that had been deferred originally in expectation that they would be delivered at some point in the future, but that in the intervening decade the needs case for these had become highly uncertain, i.e. it was not clear that these investments would ever be needed. Since it is general regulatory practice to true up RAV to reflect actual sums spent, the CC considered it appropriate to remove from TRV the element of capex deferral that related to those longer deferred projects that were now not needed. The CMA further noted that PNG could apply for funding afresh if it later transpired that these investments were needed. See CC (2012) Phoenix Natural Gas Limited Price Determination, paragraph 6-21 onwards

²⁹ https://assets.publishing.service.gov.uk/media/551948b8e5274a142b000186/phoenix_natural_gas_limited_price_determination.pdf. Paragraph 2.72..

³⁰ Ibid. Paragraph 2.70.

³¹ Ibid. Paragraph 31.

investment and/or increase the cost of future funding of existing and additional investment in gas distribution and other regulated sectors in Northern Ireland; and

- *what the effect on future network expansion might be.”*

89 While the CC recognised the challenge in measuring any such harm, it ultimately concluded that the harm to investor confidence from retrospective adjustment would be sufficiently material to more than offset any benefit to consumers that may arise from the retrospective confiscation of RAV.

90 In reaching this view, the CC gathered a range of evidence from stakeholders, but it is clear that the views of Ratings Agents proved particularly influential. For example, the CC quoted directly from Fitch published analysis:

- *“Fitch understands that the retrospective clawing back of value for the benefit of customers is inconsistent with PNG’s existing license dated 26 June 2009 and represents an unexpected change in Ureg’s communicated regulatory approach. The regulator’s move to propose a retrospective TRV adjustment relating to outperformance dating from the years 1996-2006 is not considered by the agency to be good regulatory practice.”³²*
- *“As the agency considers transparency and predictability of the regulatory regime to be a key rating driver for gas distribution networks, the outcome of the draft proposals could have further implications for how Fitch views the regulatory framework for gas distribution in Northern Ireland.”³³*
- *“Given the retrospective TRV adjustment that includes a clawback of £59.6m of operating and capital expenditure outperformance, which is inconsistent with PNG’s existing licence, Fitch could change its view on predictability and supportiveness of the regulatory regime in Northern Ireland and revise the applicable ratio guidelines for PNG’s ‘BBB’ IDR.”³⁴*

91 The CC further set out similar views expressed by Moody’s:

- *“Moody’s believes, that major changes to either the form of the price control or to one of its key components (e.g., the TRV) should be well communicated and explained with sufficient time for consultation among relevant stakeholders. This increases both the transparency and predictability of the regulatory framework. If UR’s position is that it always intended to make an adjustment to TRV, it is surprising that that was not communicated well in advance of the Initial Consultation Paper publication in August 2011. Given that the proposed amendments were introduced at such a late stage, Moody’s believes that UR’s actions fall somewhat short*

³² Ibid. Paragraph 8.39.

³³ Ibid. Paragraph 8.41.

³⁴ Ibid. Paragraph 8.44.

*of transparent and predictable regulation. It could be argued, therefore, that UR's chosen approach has negatively impacted the perception of regulatory risk for PNG."*³⁵

92 It is also worth noting that DETI – the relevant department responsible for energy policy in NI – provided a submission to the CC. While this submission was not directly critical of UR's actions, it did emphasise the importance of ensuring that the business environment in NI was attractive to support the efficient expansion of the gas network in NI.

- *"In this context, DETI's submission highlighted that 'the development and maintenance of an overarching business environment which is attractive to investors, both indigenous and international, and across all sectors, is crucial—especially in the current economic climate'."*³⁶
- *"DETI recognized that given the scale of investments made by existing, and future, investors in the energy market, an important element was the delivery of a stable regulatory environment, consistent with good practice elsewhere in the UK. This sent appropriate signals not only to the players in the energy domain, but also to investors in the wider economy."*³⁷

93 There are clear parallels here to the current case, where there is a need to attract a large quantum of capital into the energy network sector in order to support Net Zero policies.

94 In documenting its findings, the CC also provided summary advice to regulators on how they should contemplate making changes to regulatory arrangements.

*"In line with normal regulatory practice, our view is that any revision of previous regulatory determinations should be: well reasoned, properly signalled, subject to fair and effective consultation, clear and understood, and, normally, forward-looking."*³⁸

A.2 RIIO-1 Mid Period Review

95 The design and execution of the Mid Period Review (MPR) at RIIO-1 provides an example of Ofgem having been aware of the dangers of retrospection in the past, and consciously choosing not to act in such a manner.

96 At RIIO-1 Ofgem decided to set the duration of its price controls to be 8 years, whereas almost all energy network price controls before that had a duration of 5

³⁵ Ibid. Paragraph 8.49.

³⁶ Ibid. Paragraph 8.68.

³⁷ Ibid. Paragraph 8.69.

³⁸ Ibid. Paragraph 32.

years. While Ofgem noted that it hoped this would lead to more longer term planning, and greater efficiency savings and innovation, it noted that such a long period without a review also brought with it some new risks, e.g. that circumstances might change more substantially over a longer period, and that this might render aspects of the price control no longer fit for purpose.

97 In order to address this concern, Ofgem decided to put in place an MPR, to allow it to revisit some aspects of its decision. However, Ofgem was clear from the outset that the scope of the MPR should not, de facto, slip towards a full re-examination of all aspects of the price control in order to avoid the “*risk that it could undermine the purpose of setting a longer control period*”.³⁹ Consequently, Ofgem committed to a limited MPR, and also noted the need for a clear set of rules to be created to guide its operation.

- *We intend that the following rules should apply:*
 - *the review will only be used to adjust output measures or introduce or amend incentives linked to new or modified outputs where changes in circumstance meet the tightly defined scope of the mid-period review*
 - *if changes to outputs are necessary, we will not alter key price control parameters (for example incentive mechanisms and the allowed return) other than as required to accommodate the change to outputs*
 - ***we will not make retrospective adjustments at the mid-period review***
 - *we will look to apply the latest information available to set the level of incremental revenue*
 - *we will consult with stakeholders before making any changes.*⁴⁰
[emphasis added]

98 Ofgem subsequently stuck to these rules when it consulted on whether and how to implement the MPR during the respective price controls.

99 For RIIO-GD1/T1, Ofgem consulted on the MPR in November 2015⁴¹ and reached its decision in May 2016.⁴² In its consultation Ofgem reiterated that retrospective adjustments would not be considered:

³⁹ Consultation on strategy for the next transmission price control - RIIO-T1 Overview paper, Ofgem, December 2010. Paragraph 6.14.

⁴⁰ Decision on strategy for the next transmission price control - RIIO-T1, Ofgem, March 2011. Paragraph 6.22.

⁴¹ <https://www.ofgem.gov.uk/publications/consultation-potential-riio-t1-and-gd1-mid-period-review>

⁴² <https://www.ofgem.gov.uk/publications/decision-mid-period-review-riio-t1-and-gd1>

*"We made it clear that we would not use an MPR as an opportunity to re-open the price controls. We committed to not alter incentive mechanisms, other than as required to accommodate changes to outputs. We also ruled out making retrospective adjustments as part of the MPR, for example, to 'clawback' gains made from delivering the outputs set at the price control at lower cost than expected."*⁴³

"Changes to the key financial parameters (eg cost of capital) or to clawback outperformance are out of scope and we consider that any such changes could be harmful to consumers' long-term interests.

If we initiate an MPR for RIIO-T1 or GD1 and make changes to outputs, we are committed to not making retrospective adjustments, eg allowances related to previous years of the price control. We will also not make any changes to the cost of capital or change the totex (total expenditure) sharing factor.

*As stated above, we think such issues are out of scope as they could potentially undermine the regulatory stability associated with an eight year price control and make companies less likely to commit to long term strategies that benefit consumers. Such changes could also increase the cost of finance from investors as they could perceive this as creating additional regulatory risk. We are therefore conscious of the need to balance the reduction of costs to consumers in the short term with the introduction of regulatory risk and uncertainty, which could ultimately lead to higher costs for consumers. When deciding which, if any, issues to take forward, we will be mindful of the potential risks and downsides of any changes being considered."*⁴⁴

- 100 In response to its consultation, Ofgem noted that some stakeholders had suggested the scope of the MPR should be widened in order to *"consider output and funding requirements more generally in response to company forecasts of strong financial performance and also consider value for money to customers."* – noting in particular *"the role outputs are playing in delivering financial windfall for networks."*⁴⁵ However Ofgem ruled this out, stating *"Changing the framework by changing the scope of the MPR would damage confidence in the regulatory regime. Increasing regulatory risk in this way would lead to higher financing costs and costs to consumers. Given the significant sums invested in our energy networks, a small increase in the cost of capital would have a significant impact on*

⁴³ GD1/T1 MPR consultation, Executive Summary page 4.

⁴⁴ GD1/T1 MPR consultation, paras 1.23 – 1.25.

⁴⁵ GD1/T1 MPR Decision, Appendix 5.

consumers. *We think this impact would outweigh any short-term gains to consumers by clawing back money from areas beyond our proposed scope.*"⁴⁶

- 101 While the above suggestions appeared to relate primarily to outperformance arising from output incentives, we note that Ofgem did not consider reopening its allowed cost of capital, despite having already decided to lower markedly allowed returns for electricity distribution networks at RIIO-ED1. At RIIO-ED1, following the publication of a pivotal review of allowed returns for UK infrastructure by the CMA as part of its redetermination of NIE's price control, Ofgem had decided to provide an allow cost of equity of 6% at 65% gearing. In contrast, at RIIO-T1 Ofgem had allowed NGET a cost of equity of 7% at 60% gearing. Notwithstanding potential differences in risk profile, it was clear that had Ofgem redetermined allowed returns at the Mid Period Review, it would have found a markedly lower number to be appropriate. However, it chose to maintain its FD commitment not to do so, despite the potential reduction in customer bills that would have resulted.
- 102 For RIIO-ED1, Ofgem consulted on the MPR in December 2017⁴⁷ and published its Decision in April 2018.⁴⁸ Ofgem framed this review in the context of returns that had been earned by the networks to-date in ED1⁴⁹ and expressly consulted on the possibility of a *"significant extension of scope"* of the MPR beyond what had been envisaged at the time of the FD, in order to *"capture financial and incentive performance and design"*.⁵⁰ In effect, this would have amounted to a retrospective amendment of the ED1 FD, which Ofgem noted was linked to *"a recent focus on what constitutes an acceptable level of financial return for network companies."* Ofgem noted the allowed cost of equity was on the table as being potentially subject to review⁵¹ and noted the possibility of *"making changes to incentives or to the DNOs' baseline allowances, or by amending key price control parameters."*⁵²
- 103 In its decision Ofgem noted that *"We have rejected an approach that would have provided for a wider extension of the scope of the MPR (Option 3). This is because we are concerned that this could undermine regulatory confidence and weaken incentives on DNOs to perform efficiently. This could result in increased costs, offsetting any short-term benefits, which would ultimately be borne by*

⁴⁶ GD1/T1 MPR Decision, page 4. See also paras 2.5 – 2.7.

⁴⁷ https://www.ofgem.gov.uk/sites/default/files/docs/2017/11/ed_mpr_consultation.pdf

⁴⁸ <https://www.ofgem.gov.uk/publications/decision-mid-period-review-riio-ed1>

⁴⁹ See Consultation paras 1.8 – 1.22. See also Decision paras 1.7 – 1.17.

⁵⁰ See Consultation Chapter 3.

⁵¹ Consultation para 3.4

⁵² Consultation page 26

consumers.”⁵³ Ofgem was also clear that “...we said clearly that the MPR would narrowly focus on changes to output requirements. It would not be used as an opportunity to re-open the price control more widely or change any of the key financial parameters (such as the cost of capital).”⁵⁴

⁵³ Mid-period review decision, Ofgem, February 2017. Page 5. See also paragraph 2.4: “We support retaining the scope of the MPR as defined. We believe that the potential costs of extending the scope to re-open the price control at this stage could offset any short-term benefits to consumers, primarily through reduced regulatory confidence and a weakening of incentives. A stable regulatory framework will allow us to maximise savings for consumers at the next round of controls under RII0-2. Deviating from the clearly signalled scope of the MPR could undermine this stability, weaken confidence and increase costs for consumers.”

⁵⁴ Mid-period review decision, Ofgem, February 2017. Paragraph 1.4.

Annex B Observations on Ofgem's estimation of quantum

- 104 In respect of its general approach to estimating the leverage effect, we consider that Ofgem's method is broadly reasonable. However, it is important to caveat any empirical estimate of the effect, and we note that Ofgem itself was careful to do so in its CFI.
- 105 Ofgem states it took into account the following factors when arriving at its estimate of the "leverage effect"
- (a) The "counterfactual" and forecast levels of inflation;
 - (b) The length of the evaluation period;
 - (c) Consideration of notional and actual capital structure assumptions with respect to gearing and ILD levels;
 - (d) Treatment of inflation basis risk between the Retail Price Index ("RPI"), Consumer Prices Index ("CPI") and CPIH indices; and,
 - (e) The discount rate used to present outputs in net present value terms.
- 106 Ofgem acknowledges that there is a degree of judgement associated with the factors listed above which can have a material impact on the quantum. In particular, Ofgem discusses the "*length of the evaluation period*" and sensitivity of the estimated quantum to the counterfactual and forecast levels of inflation' assumed. We agree that these are important concerns, and we discuss these in the sections that follow.

B.1 Overview of Ofgem's modelling approach

- 107 Ofgem's model is based on modelling the outturn nominal RAV based on actual and forecast outturn inflation, and comparing this against a counterfactual RAV set by relying on the long-run inflation expectations used to set the allowed cost of debt.
- 108 First, Ofgem models the value of **outturn RAV** due to RAV indexation. This means that over a period of multiple years, the RAV value increases by the compounded effect of annual inflation. For example, if inflation has been 2%, followed by 3%, the RAV increases by $(1.02 \times 1.03) - 1 = 5.06\%$ over two years. We note that Ofgem's model relies on forecasts of outturn inflation for future years, which are inherently uncertain.
- 109 Then, Ofgem models what the RAV would have been (**counterfactual RAV**) had Ofgem's long-run expectation of inflation actually come to pass. In doing so, Ofgem has ensured that RAV additions made over time are treated appropriately. As such, the counterfactual RAV in any year is the previous year's RAV times the long-run inflation expectation, plus RAV additions uplifted with outturn inflation.

- 110 Ofgem's model reports the leverage effect on an annual basis. As both the outturn and counterfactual RAV are growing at the compounded rate of inflation (outturn vs long-run expected inflation, respectively), Ofgem isolates the marginal annual impact by taking the difference between the outturn and counterfactual RAV less the same difference in the previous year, to avoid double counting of the leverage effect in any given year.
- 111 As we discussed in Section 3.1.1 above, the leverage effect is driven by only the portion of the RAV which is funded by fixed rate nominal debt. As a final step in estimating the leverage effect, Ofgem isolates the portion of the annual impact pertaining to the portion of RAV funded by nominal debt only; for example, for the T and GD sector, this portion is, on average, 48% in RIIO-1. This is derived through the notional financing assumptions which assume that across T/GD companies, the notional gearing is 62% on average, and of this, 22% comprises of index-linked debt.
- 112 The annual leverage effect estimated by Ofgem is in nominal terms. In order to consistently express the leverage effect over a number of years, Ofgem converts these nominal impacts to real terms using its inflation series and the allowed WACC in RIIO-1 and RIIO-2.⁵⁵

B.2 Quantitative assessment should incorporate a sufficiently long period

- 113 As discussed above, Ofgem's model allows it to estimate the net leverage effect in consistent prices across a number of years, and to discount those back to a common point in time. With respect to the timeframe over which the quantum is estimated, Ofgem contemplates a variety of different time periods in its CFI. The quantum of the leverage effect naturally differs with the timeframe.
- 114 Any timeframe will only provide a 'snapshot' of the leverage effect, and it is moot which provides the most appropriate and balanced view. Outturn inflation has been high relative to expectations in recent years but the opposite has been true in the past e.g. in the majority of the RIIO-1 period. The analysis period needs to adequately consider periods of high and low outturn inflation, relative to forecast, in order to provide an adequately balanced view of gains and losses due to the leverage effect. For example, the option to base policy on only RIIO-2 would not

⁵⁵ In order to present leverage effect in a consistent price base (in 2023 terms), Ofgem takes a number of steps. First, Ofgem takes the real allowed WACC for RIIO-1 and RIIO-2. This is a weighted average figure for T/GD. Then, Ofgem uplifts this real WACC by outturn inflation, to ensure the annual stream of nominal RAV impacts is discounted with a nominal discount rate as required. Third, Ofgem derives a discount factor by taking the nominal WACC plus 1, with the entire series rebased to 2023 (i.e. 2023 – 1). Using these discount factors, Ofgem is able to express the aggregate leverage effect consistently in 2023 prices, while also accounting for the time value of money.

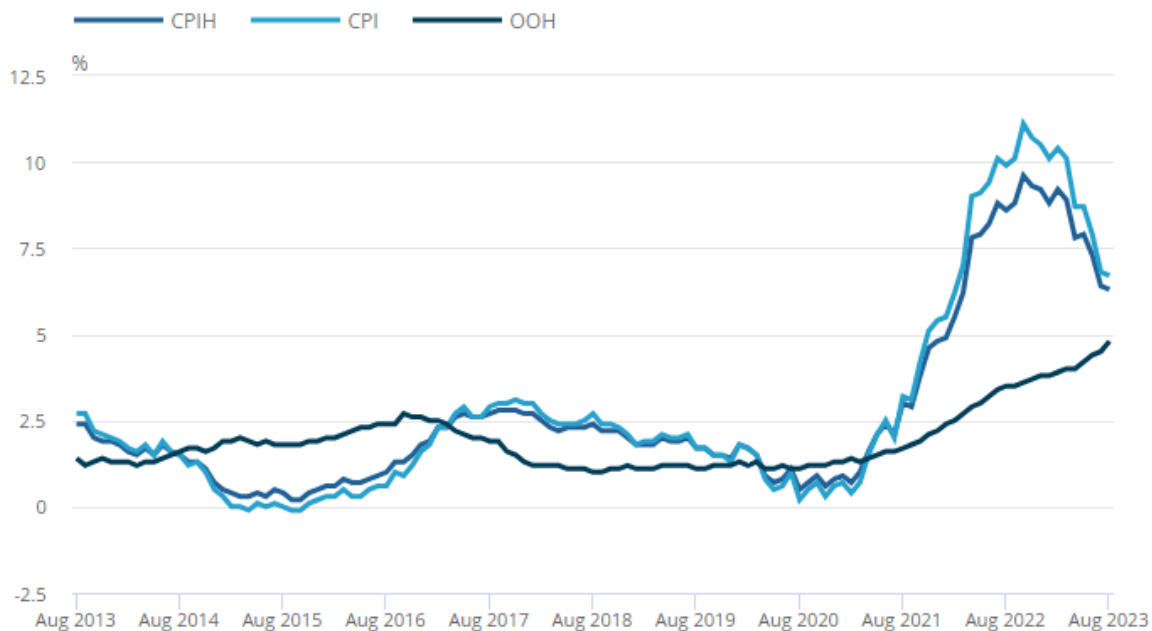
be appropriate as it would not adequately reflect the balance of experience with the leverage effect over time.

B.3 Ofgem has not taken account of basis risk between CPI and CPIH

- 115 We consider Ofgem's list of factors for the quantitative assessment to be relatively complete, but we note that Ofgem did not account for basis risk between CPI and CPIH in its quantification of the leverage effect (although we note this was listed as one of the factors considered).⁵⁶
- 116 The regulatory convention hitherto has been to assume that CPI and CPI-H are sufficiently close equivalents to be used interchangeably without giving rise to any concern. While this may have been a fair assumption in the past (and may be overall in the long run), recently, there has been a more material gap between the two series which has widened, especially from the period following September 2021. This is shown in the figure below. The average gap between CPI and CPI-H prior to September 2021 was 0.1%, and this widened to an average of 1% in the following period up to August 2023.

⁵⁶ CFI page 4, fourth bullet at the top of the page.

Figure 1 CPIH, OOH component and CPI annual inflation rates for the last 10 years, UK, August 2013 to August 2023



Source: ONS, <http://www.ons.gov.uk/economy/inflationandpriceindices/bulletins/consumerpriceinflation/july2023>

- 117 Ofgem has acknowledged that networks face CPI and CPI-H basis risk. In paragraph 2.24 of the Final Determinations for the RIIO-ET2, GT2 and GD2, Ofgem states that it “*considers that networks may want to raise CPI or CPIH debt for the first time in RIIO-2, due to the change in RAV inflation to CPIH. This market is relatively nascent, so we consider it reasonable to provide an additional allowance for new CPI/CPIH debt*”. On this basis, Ofgem provides a 5bps allowance on the cost of new debt as an RPI to CPI issuance/basis mitigation allowance.⁵⁷
- 118 Ofgem has rightly identified that there is a basis risk between RPI and CPI-H. While Ofgem has provided an allowance to cover this risk (the 5 bps cited above), the CPI-H market for financial instruments is nascent, meaning it can be difficult, if not impossible, to manage exposure to this risk. Since the premise of Ofgem’s CFI is to explore the effects of the unusual inflation environment on network price controls, and the un-hedgeable gap between CPI and CPI-H is part of that unusual inflation environment, the exclusion of this exposure from Ofgem’s analysis feels

⁵⁷ Ofgem (2021) RIIO-2 Final Determinations – Finance Annex (REVISED), 2.24 – 2.27

inappropriate. If this basis risk was included in Ofgem's modelling, it would have led to a lower overall quantum of estimated benefit.

B.4 The quantum estimated on the notional financing structure is not informative regarding the actual gains of any network

119 We note that Ofgem's estimates of the leverage effect have been estimated based on notional gearing and notional assumptions of the proportion of index-linked debt. As such, Ofgem's estimates are only accurate to the extent networks align their financing structures to the notional assumptions. For example, if networks have financed themselves with a larger proportion of index-linked debt than assumed under the notional structure, Ofgem's would have over-estimated the leverage effect.

B.5 Concluding comments on Ofgem's quantitative assessment

120 Overall, we consider that Ofgem has conducted a reasonable, indicative high-level modelling exercise. However, this exercise is inevitably imperfect for the reasons we set out above. As such, any policy that is considered should be appraised cognisant of the inherent limitations of this empirical exercise.



Frontier Economics Ltd is a member of the Frontier Economics network, which consists of two separate companies based in Europe (Frontier Economics Ltd) and Australia (Frontier Economics Pty Ltd). Both companies are independently owned, and legal commitments entered into by one company do not impose any obligations on the other company in the network. All views expressed in this document are the views of Frontier Economics Ltd.