



Making a positive difference
for energy consumers

To interested parties

Email:
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Open Letter on the next network price control review process

Ofgem,¹ as the energy regulator, plays a key role in developing the regulatory framework to ensure that the energy network companies which transport electricity² and gas³ act in the interests of gas and electricity consumers.

We set price controls for these networks because they are privately owned natural monopolies; they are usually the only service provider in a geographic location.

Since 2013, we have used a framework to set the price control across each gas and electricity network called RIIO (Revenue = Incentives + Innovation + Outputs). Most recently, the RIIO-2 price controls for electricity and gas transmission and gas distribution companies commenced on 1st April 2021 and will run until March 2026.⁴ The next price control for electricity distribution companies (RIIO-ED2) is currently being finalised and will cover the five-year period from April 2023 to March 2028.⁵

The development of the framework for network regulation takes some time, and therefore we are now starting the next review of how we control transmission and gas distribution prices.

In light of the scale and range of factors affecting the future development of our gas and electricity networks, we are taking steps to consider the most appropriate regulatory framework for the challenges and opportunities that lie ahead. This letter seeks feedback on these, whether there is a strong case for reform to the current approach, and the potential benefits and costs of any changes.

Specifically, we seek views on the following key questions:

1. Do you have any views on the strategic issues we will face in the development of the next price control review process?
2. Do you have any views on the case for change we have outlined?
3. Do you have views on whether the changes to the electricity or gas sectors mean we should consider alternatives to the approach taken in the RIIO-2 price control?

¹ References to the "Authority", "Ofgem", "we" and "our" are used interchangeably in this document to refer to GEMA, the Gas and Electricity Markets Authority.

² There are fourteen electricity distribution network operators (DNOs) operating, managed by six companies and three onshore electricity transmission network operators (TOs) operating in GB.

³ National Grid Gas has recently agreed to sell a majority stake in its gas transmission and metering activity to a consortium. There are also eight Gas Distribution Networks operating in GB, managed by four companies.

⁴ [RIIO-2 Final Determinations for Transmission and Gas Distribution network companies and the Electricity System Operator | Ofgem](#)

⁵ [RIIO-ED2 Draft Determinations | Ofgem](#)

4. Are there any broad frameworks or options that you think we should consider, including variants and alternatives to those we set out?

Subject to consideration of the responses we receive, we intend to issue a consultation on the development of the framework in early 2023. For the transmission and gas distribution sectors we will also set out the process we expect industry, and us, to follow to complete the next price controls so that they can come into effect by 1 April 2026.

1. Strategic issues in the energy system

The energy system will change a great deal in the coming decades, as a result of the continuing and substantial shifts of energy supply and demand, and the new opportunities afforded by data and digitalisation. They will be the result of policy effort to meet legislated carbon targets including Net Zero and the renewed urgency of security of supply; new governance arrangements; and technological advances which provide new opportunities and reduce costs. That change is likely to involve transformations of great complexity, many of which will require assessment of system-wide trade-offs. Moreover, the timing and sequencing of these changes is not yet clear.

A low cost and successful transition will require whole-system optimisation across sectors and in time: as energy sources for transport, industry and heating change; the expected growth in power that comes from non-dispatchable sources,⁶ and as digitalisation offers new opportunities. The degree, location and phasing of many of these changes will depend on technology and policy – both hard to forecast a long time ahead. **The increasing pace of transformational change; the need for whole-system optimisation; and the importance of managing uncertainties are key features of the transition ahead of us.**

Key changes and challenges include:

- New sources of power will be developed in new locations, and there will be increased demand for electricity as transport, and at least some heating, are electrified.
 - The recently accelerated increase in offshore wind capacity and new nuclear will require additions to electricity transmission networks (and already we are making room for some of these investments within the existing price control framework). Further new additions are expected beyond this.⁷
 - Distribution networks will need to manage both increases in demand from electrification of transport including electric vehicles, but also likely increasing amounts of renewable energy generation. The extent of the requirements due to the electrification of heating depend on the technologies adopted, including the potential role of hydrogen, as well as any improvements in energy efficiency of buildings.
- As new zero carbon power comes online, the volume of natural gas used in power generation is likely to continue to fall. Decarbonisation of industry and heating may also see this demand further decreasing. However, the speed of decline in natural gas use is uncertain (especially in the short term). Also uncertain is the degree to which hydrogen might substitute in the existing gas network, or in new networks is yet unknown, as well as the pace and geographical sequencing of this change.
- How and where energy storage is used on the system, including the role of electric vehicles and the extent and location of long-term storage infrastructure will impact electricity networks, as well as gas networks.

⁶ Non-dispatchable sources provide electrical energy but cannot be turned on or off in order to meet fluctuating energy demands. They are often highly intermittent (e.g. wind and solar), which means that they are not continuously available due to factors that cannot be controlled.

⁷ See our recommendations for a Centralised Strategic Network Planning model: [Consultation on the initial findings of our Electricity Transmission Network Planning Review \(ofgem.gov.uk\)](#).

- The operation of the electricity system needs to transform to one powered predominantly by non-dispatchable sources. Flexibility on the demand side of energy systems is likely to grow both because the incentives to do so are likely to sharpen and because the business models and digital control technologies that enable it are becoming more widely available.

In addition, we note the following issues which are likely to affect the development of the energy system:

- The government has committed to setting up an independent Future System Operator (FSO),⁸ which will play an increasingly significant role in shaping the operation of the gas and electricity networks and further driving competition in the design and delivery of new network capacity more quickly.
- The geopolitics of natural resources and supply chains has re-emerged as a key source of uncertainty, and it should not be discounted in domains other than gas over the next 15 years.

Question:

1. Do you have any views on the strategic issues we must consider in the development of the next price control review process?

2. The case for change

Network regulation must ensure network companies deliver the value for money services that consumers want and need - at the right time and cost - by developing networks that support the delivery of whole-system objectives and a low cost transition to a low carbon future.

The RIIO framework has been successful in delivering service improvements, has delivered investment at a scale needed by consumers, and encouraged companies to innovate and deliver efficiency improvements. However, it may not be the most appropriate model for the energy system we need to build.

The long periods of the price controls together with powerful incentive structures means that substantial aspects of operations, maintenance and new investment are fixed upfront. This can deliver regulatory certainty, low cost of capital and a great deal of delegation of detail from regulator to each network company.

This periodic review model works well in relatively forecastable environments in which the actions of one regulated company have few knock-on effects for other companies in the sector. However, as the need for whole system transformation and optimisation and uncertainty grow, the model strains. The need for system optimisation means that decisions of actors need to account for the decisions of others; and uncertainty means that there can be a need for substantial changes of plan.

The central question for this review is whether it continues to be practical and proportionate to follow periodic processes across the full remit of company activity when wider system challenges indicate a growing proportion of investment activity that requires decisions to be made in a faster and more coordinated manner?

These factors were reflected in the development and setting of the RIIO-2 price control, including through the decision to introduce mechanisms which allowed the funding to flex to a range of potential Net Zero pathways over the price control period. Moving forward, the design of a future regulatory model will need to consider how to tailor its features and further improve the speed and flexibility in adapting to potential future changes. Examples of

⁸ Proposals for a Future System Operator role - GOV.UK (www.gov.uk)

features of RIIO-2 that may benefit from adaptation to the strategic issues discussed above include:

- the **process** associated with the RIIO framework, which is currently resource intensive for all parties. Given the information advantage that companies have over us, the overall balance of risks favours the networks. This will have an opportunity cost in terms of the time and effort involved, which may detract from other objectives described above which may, at least in some sectors, deliver greater benefits to consumers.
- potential changes to the **structure and form** of the price control. The RIIO framework is designed to achieve the most appropriate balance of better outcomes at lowest cost for each of the sectors. This sector focus may increasingly act against achieving whole-system outcomes and strategic goals across the energy system as a whole. This may have consequences for the most effective structure and form of the most appropriate price control and incentives in future and implies that the design of the price control may vary across sectors.
- the periodic review process requires decisions to be taken before the necessary information is fully available. Previously, this has led to judgements on the allocation of risk which have predominantly turned out in favour of the network companies. The expected increase in uncertainty about efficient future investment decisions and costs suggests a reduced focus on strong ex-ante incentives and may change the **balance of risk** in the price control, with a greater focus on incentives for efficient delivery.
- the creation of the FSO potentially changes the **scope** of network regulation. In other words, what activity is delivered through the FSO (e.g. planning the network development and tendering out new, separable assets), and what work activity is regulated through the monopoly controls. It may be that the opportunity costs in some sectors (such as transmission) exceed the benefits from the periodic review approach.
- The gas and electricity sectors also face potentially **different types of uncertainties** and different priorities for spending, which may mean a different form of regulation is needed for different sectors. It may also be that different activities within sectors may be regulated by predominantly different forms of regulatory approach, depending for example, on the ability to take whole-system considerations, the role of other actors (including the FSO) and ability to introduce competition as an alternative to regulation, where appropriate.

As part of the development of the framework we will balance our statutory duties relating to protecting the interests of existing and future consumers when considering the merits of any proposed solution and responses received to the questions we have posed.

Question:

2. Do you have any views on the case for change we have outlined?

3. Possible high-level options for the development of an updated framework

We have described why the context of future price controls may be very different to that which was faced by Ofgem when designing the current approach to monopoly regulation (RIIO-2).

The question facing us in assessing the right form of regulatory framework for the future is not likely to be as simple as just whether to keep or move away from RIIO. The RIIO price control framework is a broad approach to regulation that has in its scope many aspects of network companies' operations. It encompasses certain features that can be expected to be common to any approach to future network regulation, including providing appropriate

returns on assets in place (the Regulatory Asset Base) and setting performance targets in the interests of customers. However, the periodic reviews that determine the RIIO regulatory framework also include extensive cost efficiency, business planning, and investment appraisal requirements, some of which may be carried out by others in order to deliver whole-system optimisation. The broader context described above may also result in more of these decisions being better suited to targeted decision making in the future, rather than a periodic review.

We are considering whether to move away from the use of periodic reviews for some or all of the network companies' activities. There are a number of different variants of the future regulatory framework. Options include:⁹

- (1) Continued use of periodic reviews, with RIIO being adapted where appropriate to address the strategic issues above, such as by including incentives around whole-system optimisation.
- (2) An alternative ex-ante incentive regime, where the control is set in advance, but is based on a simpler target to improve operating efficiency, for example based on a longer-term productivity incentive that is reviewed only as and when necessary, which would reduce the complexity of the process of setting price controls.¹⁰
- (3) A model involving greater user/stakeholder participation to determine investment need or other elements of the price control (e.g. negotiated settlements with customer representatives or with a central planning body such as the FSO). This approach would reduce the scope of Ofgem's direct involvement in setting price controls.¹¹
- (4) An ex-post regime, where allowances are set based on a pre-determined rate of return, subject to effective operational delivery. This would represent a material shift in the structure and form of the price control, with incentives primarily focussed on the achievement of delivering whole-system objectives.

We will consider and welcome views on whether options (2)-(4) could bring benefits by reducing the need for strategic investments and enhancements to be considered as part of a periodic review. This would reflect that the artificial construct of a price control period will not replicate the broader investment cycle and is not aligned with the timing of the actual procurement process of material investments.

These alternative regulatory approaches could allow more flexibility for Ofgem and network companies to re-orientate the focus of regulation towards forward-looking considerations, including enhancement projects and whole-system optimisation.¹² This might also allow some aspects of the current RIIO framework to be detached from the periodic review in order that performance can be actively monitored and built into the ongoing design of the programmes.

As part of the development of the framework we will be considering the extent to which these benefits could be offset by higher costs to consumers. There could be costs if these alternative regulatory approaches were less effective in delivering cost efficiency, and if changes to the regime were introduced in a way that was perceived to increase regulatory risk, and therefore the cost of capital for network companies. We welcome views on whether these alternatives could be implemented without introducing such additional costs, for some or all of the sectors.

⁹ These models are not necessarily mutually exclusive - some regimes might involve price controls alongside elements of ex post regulation or combined with competitive processes in specific areas.

¹⁰ At the start of the process Ofgem would set an acceptable rate of return range and minimum standards for activities. An incentive mechanism that compares companies to the other network companies/industry average productivity would then be used to impose reward/penalty for productivity movements. For other activities such as strategic investments, allowances could be based on a combination of ex post monitoring and targeted reviews.

¹¹ Under such a model performance standards, risk-sharing and incentive mechanisms would be set ex-ante through a negotiation (with scope set by Ofgem) between each network company and a representative body.

¹² For example, uncertainty mechanisms might not be used, and instead the approach to uncertainty would be to have a review of material investments as and when needed.

We will need to consider whether the regulatory framework should focus on the gas and electricity networks separately or whether there is a case for aligning incentives across the sectors. A one-size-fits-all model may no longer be appropriate to meet the distinct sectoral challenges.¹³ A combination of regulatory approaches may be best suited for different activities.

The options being explored apply only to the regulation of activities/costs of incumbent network monopolies.¹⁴ However, as the system evolves and we expect this to result in greater use of flexibility and third-party assets alongside those of the regulated networks, there will be increased focus on the way in which networks are designed and managed to achieve whole-system objectives.

Questions:

3. Do you have views on whether the changes to the electricity or gas sectors mean that there is a case to consider alternatives to the approach taken in the RIIO-2 price control?

4. Are there any broad frameworks or options that you think we should consider, including variants and alternatives to those we set out?

4. Views welcome and next steps

This open letter marks the start of the process for the price control review framework. Following publication of this letter, we will publish a consultation in early 2023 to allow stakeholders to express their views formally. After consideration of these responses, we then intend to set out our key decisions on the overarching framework, ahead of defining our approach in more detail.

As we move through the consultation process towards detailed regulatory design, we will ensure that we will take account of lessons learnt from previous price controls including RIIO-2, as well as understanding how the gas and electricity system challenges and new opportunities may affect each sector. We are keen to engage with a wide range of industry and interested parties during this price control review, to draw on experience and expertise. This includes network companies, end-consumers, suppliers, generators, system operators, government, regulators, representatives of relevant organisations and other bodies, as well as investors.

To start this process and help us shape the considerations for the upcoming consultation, we have set out specific questions regarding the price control framework in this letter. We would welcome written comments on these questions, or any other issues you believe we should address in the framework review, by Monday, 31st October. Please email responses to FutureNetworkRegulation@Ofgem.gov.uk.

Unless clearly marked as confidential, we will publish responses on our website shortly after the response deadline.

Yours faithfully,

Akshay Kaul
Interim Director of Infrastructure and Security of Supply

¹³ Gas networks, for example, face equally credible scenarios of (i) steady demand or (ii) declining demand driven by the pace of transition to alternative low carbon energy sources in both domestic and industrial settings.

¹⁴ The following are outside the scope of work: offshore transmission, interconnectors (cap & floor), independent DNOs and GDNs, hydrogen, heat networks, generation and storage assets including those eligible for RAB-based support models (e.g. nuclear).