

By e-mail to: FutureNetworkRegulation@ofgem.gov.uk

Consultation: Future Systems and Network Regulation
Ofgem
10 South Colonnade
Canary Wharf
London
E14 4PU

19th May 2023

Ofgem Consultation: Future Systems and Network Regulation – Capgemini Invent response

Dear Ofgem

Capgemini Invent welcomes the opportunity to share our views on Ofgem's Consultation on the future systems and networks regulation from 2026.

Capgemini Invent is the consulting, innovation, and digital business of Capgemini. We are Europe's largest supplier of systems and technology services to the Energy and Utilities Sector. HFS Research have placed us second globally in their list of business and technology service providers to utilities. Every year we publish the World Energy Markets Observatory (WEMO)¹, the 24th Edition of this was published in October 2022. The report consists of 600 pages of detailed analysis and insights on the world energy trends.

Our response to the consultation draws heavily on our insights and energy market expertise gained in our work across UK market functions in both gas and electricity. Our experience covers a wide range of services relevant to the consultation, including support to numerous energy network clients in business and technology transformations, leading regulatory submissions across both gas and electricity, and contributing to price controls regulatory reform. We also provide wider services that cover net zero consumer strategy, development of new market services, smart metering implementation, consolidation, harmonisation and digitalisation of retail market codes and wholesale markets.

We are also supporting network modernisation programmes and numerous network innovation projects, which requires broad industry engagement and a keen understanding of where and why progress is blocked.

In 2022 we established the Energy Markets 2030+ working group, which involved collaborating with senior cross-industry representatives over a 10-month period to define the future energy system. This has produced a compelling vision for the future that is based on a broad consensus of how the energy system should work. This puts us in the unique position of having worked with industry to curate a whole system view spanning the value chain across multiple vectors.

Whilst we are supportive of this review, we believe the scope should be expanded across other bodies to ensure alignment in intention and strategy. This is particularly relevant for the Department for Energy Security and Net Zero (DESNZ) as, at the time of writing, it is not clear how this review is aligned with their work. We welcome any clarity Ofgem can provide on this point.

The key themes outlined in the executive summary (see Appendix 1) and our question response are based on a 'system of systems' approach. This approach considers the full flow of energy, money, data, and agreements through the energy system to ensure recommendations provide the holistic benefits for consumers and industry.

In addition to our consultation response, we would like to draw your attention to the following key points:

- **A review of the network regulatory framework must be driven by whole system planning.** Complete end-to-end mapping of the system will enable the identification of waste and pain points, allowing the development of an optimised energy system of the future.
- **The regulatory framework must promote a shift towards a consumer-focused energy system.** Regulatory reform will need to drive behavioural and operational changes at all levels within the network, whilst maintaining stability during the energy transition. Design decisions must be sensitive to the human impact of decision-making and resource allocation, requiring a deep end-consumer, customer, and community focus. Continuing to embed consumer outcomes in regulatory performance metrics and incentives will ensure the framework is answerable to these outcomes. However there needs to be a clear

¹ [Capgemini \(2022\), World Energy Markets Observatory Report 2022](#)

methodology and processes in place to ensure metrics are accurately quantified, adequately monitored and recognise where benefits are realised elsewhere in the value chain.

- **The energy transition will fundamentally change how consumers engage with the energy system.** It is critical that network regulation changes put the consumer first and is designed to meet future system requirements, whilst remaining adaptable to new developments.
- **Increasing the pace of network upgrades and connection speeds is the priority.** Network reform is the pace setter of the energy transition, as such Ofgem should consider introducing a mechanism that focuses on the delivery of network upgrades on a proactive basis. We need an approach based on the understanding that electrification is key in the UK's net zero carbon targets and that networks and proactive grid upgrades are critical in achieving these targets. Failure to address the slow rate of network reform observed to date will result in significant downstream consumer costs, whilst investment now will lead to longer term efficiencies and cross-sector cost reduction in the future.
- **Increased roles for the Future System Operator (FSO).** We have observed that based on the archetypes proposed, the FSO would potentially be taking on additional roles (alongside that in the RSP). If this is to be the case, careful consideration should be taken by Ofgem as to how the FSO can be enabled to successfully carry out these new roles effectively.
- **The current regulatory framework is too complex and unable to adequately respond to external changes.** The governance framework needs to be simple and agile with shorter and more frequent review cycles, with standardised submissions that enable consolidation and benchmarking, and the addition of qualitative metrics that promote businesses to develop new solutions for positive consumer outcomes. This will ensure we keep up with innovation trends and respond quickly and flexibly to the demands of the market, whilst keeping the consumer at the heart of the industry. Regulatory consolidation and simplification, as observed for the Retail Energy Code (REC), might be a necessary approach.
- **Digitalisation and data sharing across the network must be transparent, open, and standardised.** The current siloes in which the industry operates must be removed to ensure that data is shared and made accessible to all appropriate actors, such that whole system efficiencies can be realised. The regulator is key to driving this through its governance framework, fostering industry standards, best practices and providing central coordination.

We hope you find these insights and suggestions helpful and if you would like to discuss any areas of our response, please do not hesitate to contact Jason Salmon², John Brignell³, Michael Taylor⁴ and/or Katka Nguyenova⁵.

Yours sincerely,

James Lally
Vice President, Energy and Utilities
james.lally@capgemini.com

List of enclosures:

Appendix 1 – Executive Summary

Appendix 2 – Response to Consultation: Future Systems and Network Regulation

² Jason.Salmon@capgemini.com

³ John.Brignell@capgemini.com

⁴ Michael.Taylor@capgemini.com

⁵ Katka.Nguyenova@capgemini.com

Appendix 1 – Executive Summary

Capgemini Invent believes that the current network price control arrangements are not appropriate for the future energy system, as such we welcome Ofgem's future systems and network regulation review and the opportunity to provide our views. The energy transition will fundamentally change our energy system and network reform will be critical in supporting future operations, whilst ensuring that the transition is delivered safely, quickly, with minimal consumer impact. As such, we must look to implement a model which addresses today's challenges, whilst being suitably agile and adaptable for the future.

In addition to our consultation response in Appendix 2, we have outlined five core themes in this executive summary alongside a review of the proposed archetypes:

- Whole System Approach
- Consumer Focus
- Agile Governance
- A Bigger Network and Faster Connections
- Digitalisation and Open Data
- Proposed Archetype Review

Whole system thinking

The current demands of the future energy system will be wholly different to those in 2010, when the current regulatory framework was designed and implemented and will need to consider all forms of energy across the whole economy. As such, we do not believe that adapting the current model would be appropriate and see this as an opportunity to introduce a framework that supports both the transitional and end-state whole energy system requirements.

The future energy system will require increased coordination, rapid network expansion and reinforcement, digitalisation, innovative solutions to engineering and consumer challenges. To ensure future regulatory frameworks effectively support this future model, current reviews need to go beyond traditional vectors and boundaries and consider new aspects, such as transport, heating, and industrial strategy.

It must be recognised that the energy system is fundamentally linked, and the full flow of energy, money, data, and agreements must be taken into consideration to all reviews, to ensure the review outputs meet the intended purpose and do not incur transitional 'debt' and result in future reworking.

Market participants also need transparency on Ofgem's view on fundamental questions, such as the central scenario for 2050 and how whole system trade-offs and synergies will be managed and measured.

Consumer focus

The end-consumer must be at the heart of the future network regulatory framework. As such, it will require a fundamental shift in how we view network challenges and measure success. Costs to consumers must be carefully considered across the whole energy system, to ensure that the full costs are understood. For example, increased consumer network costs now may lead to an overall reduction of consumer costs in other sectors and in the wider energy transition.

Continuing to embed consumer outcomes in performance metrics and incentives will ensure the framework is answerable to these outcomes and support targeted investment. This should be coupled with a clear methodology and processes that ensure performance is accurately quantified and monitored. We believe the following points will be key in achieving this outcome:

- Continually monitor how consumer benefits are being delivered, ensuring there is a golden thread from consumer outcomes, network company strategies, initiatives and ultimately metrics; and
- Clear definition of the consumer engagement interfaces. Consumer behaviour change and adoption of new technologies is critical to the energy transition. There needs to be more clarity on who will take on consumer engagement, what role network companies will play (if any) and how this will be incentivised.

Ofgem will also need to support network companies to manage the tension between focusing on customer vs consumer needs through its regulatory framework.

Agile governance

The current regulatory regime with its long regulatory period, five-yearly review cycle and requirement for high granularity of reports and forecasts is driving over-reliance on existing technologies, ways of working and market arrangements. This translates into delivery based on past decisions, rather than adapting to meet evolving market challenges and new developments.

We are in support of a simplified, agile framework, with frequent review cycles and standardised submissions that enable consolidation and benchmarking. This should be underpinned by qualitative metrics that promote

businesses to develop innovative solutions. Performance metrics/KPIs of network build should be regularly reviewed against forecasts and clearly reported both regionally and nationally.

The future network regulatory framework needs to recognise that implementation targets may need to be iterative, simple, and agile to respond rapidly to evolving external factors. There needs to be a delineation between plan design and plan implementation, with recognised reassessment check points built into the plan, to ensure outputs remain optimal.

A Bigger Network and Faster Connections

Electrification has been identified as a critical part of the UK meeting its net zero carbon targets. To support this, the UK must deliver a bigger, digital electricity network in a very short timeframe. Unfortunately, physical infrastructure development has been disappointingly slow at all levels in the electricity network.

In our opinion, electricity network upgrades should be made on a proactive basis, with coordinated, whole system planning, such as that initiated by National Grid Electricity System Operator (ESO) in collaboration with BEIS. Adopting this approach results in a low risk of asset redundancy and will likely increase connection speed.

Adopting a more agile regulatory framework, underpinned by shorter review cycles may also support quicker decision making and allow for timely investments. This prevents reactive responses to customer requests, especially when long lead times result in slow roll out of physical network upgrades add significant risk to transition failure.

The upgrading of the electricity network is an investment that needs to be addressed in both the immediate and long-term regulatory arrangements. We acknowledge that the intention of the modular framework archetypes is to incentivise speed (in combination with safety and resilience) and efficiency (through intelligent automation) by applying differing regulatory principles to 'build' and 'operating' costs. However, we believe the approach may be too complex to have the intended effect.

We view the development of a bigger, smarter electricity network as a no regrets investment and a critical part of increasing connection speed and unlocking the net zero transition in other sectors, such as transportation and domestic heat. Failure to address this issue introduces significant risk to the UK net zero targets and will result in an increased consumer cost burden throughout the energy transition. Ofgem's network regulatory framework must support electricity network development as a priority.

Furthermore, there is still significant uncertainty on the future role of gas. There is a need for a clear roadmap for both domestic and industrial heating, as well as decision on other factors, such as the role of hydrogen, to allow for effective gas infrastructure planning.

Digitalisation and open data

The future system will likely include millions of automated actors interacting and fulfilling various roles to support system balancing. This will require a wholly digitised system capable of moving vast amounts of data in near real-time. It is essential that future regulatory framework focuses digital development, as well as physical.

A resilient, flexible energy system must be supported by a free flow of standardised open data to enable automation and coordination of interoperable assets. Future data will need to be supported by a sophisticated network of sensing and control infrastructure at all levels across the electricity system. Therefore, the regulatory framework must encourage the roll out of data capture assets and the adoption of a consistent, open approach to data sharing.

As the volume of smart digital assets are connected to the energy network, the importance of data quality will take on a greater emphasis. Unfortunately, today's energy system is plagued with data quality issues, resulting in complications in operational processes and dilution of decision effectiveness from policy makers and the regulator. Implementation of a smart digital grid is a pre-requisite for the future energy system and should be progressed urgently. The regulatory framework needs to reflect this urgency.

In many cases, system architecture needs to be modernised with modularity and integration capabilities at its core without compromising on safety. We encourage a stronger focus in the digitalisation strategies and action plans on whole-scale systems reviews, proactive digital portfolio management and clear strategies for how digital talent gaps will be closed.

The regulator is key to driving digitalisation and open data through embedding governance frameworks and standards and it needs to lead the way for a coordinated approach to sharing and collaboration. Whilst it is a positive step that each network company has published a digital strategy action plan, including data sharing objectives, it is our view that they are not going far enough. Network companies are at different stages of maturity in terms of their data capabilities; some companies are already beginning to make limited data sets available, whilst others are still in the planning phase. Due to this it is becoming apparent that different approaches and solutions to solve the same problem are being developed in isolation and inconsistently. Without coordinated direction provided centrally, data sharing will continue to remain a fundamental problem to gaining a whole system view.

Proposed archetypes review

In view of our five core themes above, and highlighting that data sharing and collaboration would be critical to all three, we follow with a brief review of the proposed archetypes:

- **Archetype 1** – We agree that having a central planning mechanism will be a key part in ensuring an efficient, optimised network and for providing clarity to market participants and investors. Furthermore, utilising competitive tendering for plan delivery will allow for cost efficiencies and promote innovative solutions. However, we believe that this model may introduce a ‘race to the bottom’ whereby work is allocated based on un-realistic, lowest cost tenders, which result in slow, ineffective, unreliable and/or unsafe delivery. Work should be awarded at fair market value, where effort and profits reflect the level of risk taken in delivery.
- **Archetype 2** – As mentioned above, we do not believe the current model is suitable for the future energy state. However, utilising Archetype 2 model for the next price control period as a stepping-stone to more transformation change may be a suitable option to manage transitional impacts.
- **Archetype 3** – This would allow network companies a level of freedom to innovate and make improvements in a manner suited to them, which could introduce significant consumer benefits. Incentivisation would need to be monitored carefully though to ensure innovation does not come at an increased cost to consumers. An example could be to incentivise the impact / outcome of the innovation where the impact outweighs the cost of effort by a certain margin. Without strong incentives / penalties costs have the potential to increase.

Summary

The definition of the future network regulatory framework will not only be a critical aspect of the UK energy transition and net zero, but it will play an important role in progressing a green industrial revolution – enabling the development of emergent sectors like Energy Tech and the hydrogen economy that can support UK PLC’s drive to international competitiveness and economic sustainability.

It is essential that the review is undertaken in full recognition of the challenges the framework must address for both the transition and future operations. The future energy scenario will be fundamentally different to today’s model, as such the future framework must be bespoke to the energy market of the future and not attempt to appease vested interests in the current model and compensate on its regulatory effectiveness.

Appendix 2: Response to Open Letter: Future Systems and Network Regulation

Question 1: What should the role of the 'consumer voice' be and through what institutions and processes should it be channelled?

Consumer interests must be at the heart of future network regulatory arrangement. As such, the focus of the regulatory design should be on consumer outcomes, with clearly defined metrics and incentives to track performance.

The voice of the consumer will be paramount in ensuring the future energy networks meet consumer requirements. We believe that well established, consumer interfaces, such as those with local governing organisations, should be leveraged to simplify consumer engagement and maximise outputs. This will need to be supported by robust open data principles.

Without the voice of the consumer there is a real risk that any investments / network enhancements will not deliver the right outcome and lead to delays, regret spend and an unsuitable network. Whilst we recognise that Ofgem strives to maximise consumer benefits in its review, it has been unclear which consumer needs and wants are being met and how regional variations will be accounted for. It is therefore advisable that future network regulation has consumer outcomes built into the performance and incentivisation framework more strongly. Centrally developed plans, as they trickle into regional outputs should be traceable to consumer objectives and appropriately tracked, with performance against these reflected in rewards and penalties.

It is our view that a whole network end-to-end user journey mapping exercise needs to take place to clearly identify existing pain points and areas of inefficiency and waste. This will enable any changes to the regulatory model to be made in the right areas that deliver the most value to improve overall consumer experience. If this isn't completed there is a risk that any changes to future regulation may not effectively address the fundamental issues with the transition to reach net zero targets, nor consider the issues currently faced by consumers.

Question 2: How detailed could an independent, cross vector view become to determine future plans for periods beyond RII0-2 and support effective use of the 'Plan and Deliver' model?

We believe this will depend on the role of the Future System Operator, its role in Regional System Planning and what responsibilities will remain with the Distribution Network/System Operators and Gas Distribution Networks. More analysis is required on the benefits of introducing competition in the *Procure & Build* phase to understand for which types of Reinforcement or New build projects competition drives the desired outcomes, such as cost efficiency, and in which cases they do not.

Question 3: Under what circumstances would competition, or other procurement models such as open book contracting, have benefits over ex ante incentives as a cost control mechanism?

An approach such as the one outlined in Archetype 1 would help facilitate innovation, coordination, and cost reductions by utilising a central, direct procurement process that could enable cost savings through more effective benchmarking and scale where similar / identical work is required across multiple regions. Utilising specialist delivery partners across the network would lead to lower implementation costs through repeatable processes and economies of scale.

There is the potential to link incentives and penalties to savings in time and cost against the approved tender price and delivery plan. This approach requires strong, effective governance to be in place to discourage delivery partners under bidding on delivery price or making unrealistic assumptions which would undermine the intention of moving to this model.

Whilst competition would enable lower costs, increased innovation and coordination (as mentioned above) it is important that the principle of lowest cost does not unduly impact the decision-making process. We do not believe that lowest estimated cost of delivery should be a guiding principle for any aspect of the energy transition, as it can undermine system robustness and consumer protection. Whichever procurement model is used in future regulatory periods, it needs to enable network companies to receive fair market value for their efforts and profits should reflect the level of risk taken to deliver its objectives.

We recognise there may be some scenarios in which competition may not be necessary to achieve the required outcomes, eg. speed of connection, and as such we would support a direct procurement approach such as that included in the ASTI framework.

Another aspect that is key to the successful operation of this approach is data sharing and collaboration across all parties. The approach set out above and in all three archetypes (especially Archetype 1) relies heavily on a whole system view which can only be achieved through collaborative working. As referenced in the executive summary, the regulator will need to play a crucial role in facilitating collaboration. This can be achieved through establishing an effective data governance framework which maintains an effective, robust incentive / enforcement regime and allows the continued sharing of accurate, high-quality data in timely manner.

If network companies continue to develop data sharing approaches in isolation, without central coordination, it will be extremely difficult to develop a whole system view which the archetypes are predicated on. Recent successful examples of centrally coordinated data sharing initiatives can be drawn from the financial services and rail sectors.

Question 4: What is your view on the options identified for simplification of incentive regulation? What would be the benefits and costs by comparison to the approaches used in RIIO-2?

Moving to an ex post methodology for large scale capital investments could lead to unintended consequences such as short-term thinking to address long term needs or reduced innovation. The nature of ex post models requires spend to take place in advance of the funding / returns being guaranteed which is less attractive to potential investors due to risk of disallowed costs. This leads to the potential for a bias to investing in the least risky option which in the short term will deliver benefits and returns (eg. over 1/2 years) but may not deliver the best outcomes or value in the long-term and could lead to additional spend further down the line to address the same problem. Ultimately this will drive up costs for the consumer. The ex post approach can also lead to lower price certainty for end users with multiple iterations of costs within the price control needing to be factored into energy prices making it challenging for suppliers set their own prices.

The funding model of the Smart DCC is currently operated on an ex post basis and has experienced the challenges highlighted here with energy suppliers calling for a review of this model.

In addition to this, the current funding model for network businesses does not encourage whole system collaboration. At present it incentivises and rewards individual performance against individual targets and often leads to divergent approaches to the same problem, with different levels of service and availability. Whilst this may work on a local level, within region, a truly whole system incentive and reward mechanism needs to be established to encourage the right behaviours across the network. If this is not addressed on a fundamental level, it will be a struggle to achieve a truly whole system view. As highlighted earlier in our response, digitalisation and data sharing are fundamental to this approach being successful.

Furthermore, we do not believe that adapting the current regulatory model would produce the transformative change necessary to meet our shared net zero goals.

Question 5: What are the network activities where there would be benefits for a move to an ex post monitoring regime, and what would be the associated costs?

The move towards an ex post monitoring regime has the potential to yield numerous benefits across the day-to-day system operations as they would allow for more flexibility in performance review, especially in cases where unforeseen circumstances drive significant variation in costs. In addition, it could be an appropriate mechanism for non-standard network build activities, allowing for cross-benchmarking and performance comparisons.

Implementing an ex post monitoring regime, which disallows costs incurred outside reasonable forecast thresholds, could also be a potentially powerful mechanism to ensure network companies conduct their routine business-as-usual (BAU) activities in an efficient manner by rewarding companies for exceeding targets. However, it would require a shorter review period of perhaps one or two years. A key factor to this approach working however would be to the need clearly set out the requirements for meeting the price control objectives at the start of the period to provide certainty that costs would be awarded should they be met.

We recognise the current long-term horizon views provide certainty however, they limit flexibility, encourage over-reliance on established technologies, processes and planning based on immediate priorities. A shorter, lighter touch review period for this type of activity would enable network companies to get on with these functions whilst providing confidence to system users that activities are being monitored effectively.

There is strong likelihood that the regime would require increased effort in the form of the additional administrative and reporting activities. Ex post monitoring requires robust data collection and analytical people, processes, and systems, this will add to the complexity of its implementation. Furthermore, this introduces the risk of creating an overly convoluted set-up which could result in the duplication of functions, oversight in governance operations and ultimately to a less efficient process.

The set-up could mean that a two-phased pricing approach would need to be implemented when factored against ex ante for large investment. This may pose a challenge for system users when it comes to setting prices. Careful consideration needs to be given as to how it would be implemented to avoid any unintended consequences, or additional costs/administrative burdens on network companies.

Question 6: What are the benefits and costs of this approach for Electricity Transmission by comparison to an evolution of the approach in RIIO-2, and what are the implementation barriers?

The benefits of this approach would be to support the initiation of larger capital projects, by driving long-term planning and in the process, providing some level of predictability and security around the associated costs. Longer periods of regulatory certainty provide a more attractive proposition for investors who will need to see clear plans and forecast returns to secure the necessary funding.

Being able to create that long-term view and reviewing the requirements on an ongoing, iterative, agile basis, it will also give the opportunity for effective competition (where competition is appropriate to deliver consumer benefit, noting the ASTI framework for Transmission Operators) throughout the life of project which could lead to lower costs for consumers. Additionally, with industry engagement in the planning phase, network development can be aligned to consumer outcomes and other system requirements. An iterative review cycle provides greater flexibility to adapt these plans and allow for adjustments to requirements and forecasts as more information becomes available over time.

The costs for this approach would predominately be towards building/developing the new capabilities required to compete for reinforcement and new-build work. It is difficult to determine at this stage, what the magnitude of this cost would be without finalising the specific requirements or needs of the workforce. Uncertainty in work volumes can also result in a workforce which is surplus to requirements and will result in idle employees that become very costly overtime. Therefore, the scope of the workforce and the new capabilities should initially be confirmed to ensure that this scenario is avoided. There is the potential for increased regulatory burden to monitor plans and prevent inefficient or misaligned investment.

The presence of a strong governance framework will be pivotal in ensuring that the approach is appropriately monitored and managed. However, this could create a potential barrier for some organisations, due to the additional administrative burden/governance activities and obligations.

Question 7: What is the potential for Electricity Distribution planning and commissioning to move to an alternative model by the end of RIIO-2, and what might be the benefits and costs of doing so?

In our view, the only scenario in which it would be feasible to continue to use the RIIO framework would be as an adjusted version for the next price control period, to be used as a 'stepping-stone' to a new model. The benefit of this approach is that it will enable companies to adapt to the adjusted mechanisms without having to fundamentally change their business and operating models. We have outlined several considerations for utilising an adjusted model for the next price control period however, we favour a more transformative approach, as we believe this is necessary to enact the level of change required for net zero.

Prior to the next price control period, we believe that a full system end-to-end user map should be created to identify known pain points / areas of waste, whilst factoring in areas of constraint defined by Holistic Network Design and further recommendations from whole system planning. For example, mapping out the full ecosystem and activities across different timeframes required to enable a customer connection is a necessary foundation for the ability to optimise for time (speed of delivery), or cost whilst ensuring levels of safety and security. This will inform where and how adjustments to the RIIO framework should be made. Prioritisation

should be given to those areas that enable faster approvals / investments and making connecting to the network easier.

With a full system user map, the alternative model can be positioned to unlock broader stakeholder engagement from across the energy system and involve them earlier in the process. While this will support more efficient and targeted improvements, it can also highlight the emerging needs of the network and opportunities for innovation.

Consideration should be given as to how any adjustments to the RIIO framework will allow a more agile, flexible approach to investment which facilitates the integration of assets with designs and cost modelling going through more regular iterations prior to approval. This would allow for easier integration of emerging technologies and participants which could further reduce costs to consumers. Whilst the benefits of this approach are clear, the governance mechanism needs to be carefully considered to ensure unintended consequences do not materialise, such as disproportionately increased administration costs.

There will be some transitional effort in moving to a new model, and while this paves the way for uncertainty, the benefits and opportunities presented by the new model will mitigate these costs.

Question 8: What is your view on the most effective approach to regulation of Gas Distribution and Transmission beyond RIIO-2? What would be the benefits and costs of moving to a simpler approach to regulation of the ongoing costs of operating and maintaining the network?

The proposed model for gas (transmission and distribution) follows a similar approach to electricity transmission with distinct activities of replacement and business-as-usual, decommissioning, and new build. A simpler regulatory framework, aligned to the system will allow for greater flexibility and adaptability. Furthermore, it will accommodate changing market conditions, technological advancements, and evolving customer needs and will provide a more agile approach to addressing future challenges and opportunities.

Our view is that an ex post approach would not work for large scale capital investments. The uncertainty of return inherent to this approach would discourage investors, stifle innovation and does not reward calculated risks. The level of certainty offered through longer term price control periods, similar to those now, would encourage investment but as described earlier in our response, this approach could benefit from a more agile review periods within the price control. This would allow for updates to forecasts as more information became available over the life of a project.

An ex post approach could be utilised for more BAU activities such as operation and maintenance if requirements for meeting the price control objectives were set out clearly at the start of the period to provide certainty that costs would be awarded should they be met. As mentioned earlier in the response, this would also need to be coupled with shorter price control periods and additional incentives if targets / KPIs are exceeded. For example, if operating costs out turned below forecast.

In addition to this we believe that the future regulatory approach needs to incentivise the acceleration of the transition away from reliance on gas usage on a national level. For example, at the residential level this could be the replacement of gas-powered heating. On a larger scale, we support Ofgem continuing to consider how the cost of gas could be de-coupled from the price of electricity.

Question 9: Should there be a shorter-term price control in gas distribution and/or gas transmission, and how could this work in practice?

Due to the variety of projects and associated funding arrangements, there is potentially a need to introduce some alternative, shortened cycle processes. This would be most appropriate for projects which have a higher level of uncertainty and therefore require more consistent monitoring and review.

However, shortened cycles for control would only be applied to the activities that carry the uncertainty to ensure that the additional effort expended is justified. For example, if there are many uncertainties around the investment activities for a project, clear expectations of overarching outcomes need to be agreed, and these could be reviewed on a shorter cycle up to every two years, whilst more predictable activities relating to maintenance and operation will remain on a longer cycle up to every five years. In any case, there should be meaningful stakeholder engagement throughout the cycle to ensure outcomes are kept on track and challenges are addressed, so that ongoing assurance and certainty can be provided as near to real-time as possible.

Monitoring of investment and activities that carry higher levels of uncertainty can utilise a mechanism which allows relevant stakeholders to review and provide feedback. However, there is a risk that this could turn into a lengthy process and therefore it would need to be ensured that reviews and feedback are both sufficient and delivered in a timely manner. This would require effective monitoring mechanisms to track stakeholders as well as performance against agreed-upon outcomes during the shorter review cycle.

Another approach would be to introduce a rolling process, whereby every two years the model is updated to look six years ahead. This model may be more appropriate for maintaining long-term certainty, whilst provisioning additional flexibility to respond to shifting external factors.

Question 10: Would there need to be any changes to maintain a stable and consistent financial framework if we were to make greater use of different regulatory archetypes, and if so, what would those changes need to be?

Implementation of the different archetypes (i.e., 1, 2 or 3) will need to be accompanied with appropriate alignment with existing steps/processes. Review of the capital costs would need to be altered to ensure it aligns with the investment decision stage. If different archetypes are used, each of them will bring their own risks and returns, therefore the regulator will need to evaluate the risks associated with each archetype to understand if adjustments to the capital costs are needed. The archetypes may also vary the timing and recovery of investment costs which will need to be understood in the framework so it can be aligned to the price control review periods.

Implementation of long-term fixed rate of return, set for 5 years but accompanied with a more agile approach for investment/approval, would also be at odds with the overall economic change. This could ultimately lead to a lack of investment which will be to the detriment for implementing future change. The framework will need to provide sufficient clarity and stability to support investor confidence. Through clear communication of the rules and mechanisms associated with each archetype and providing clear plans and predictability should galvanise the risk and return expectations for investors.

Overall, it is important that a transparent, sensible, and sustainable rate of return is maintained when looking to introduce changes to the overall financial framework. Open data and analysis relating to the financial performance of networks under each archetype will support the provision of regular updates and assessments to stakeholders.

Ofgem will also need to enhance its monitoring and reporting mechanisms to ensure transparency and accountability, putting consumers, open data, and collaboration at the heart of the framework.

Question 11: Do you have any views on our proposed analytical approach?

With regards to the proposed analytical approach, utilising RIIO-2 as the counterfactual could provide an insight on the effectiveness of any changes which are introduced, as well as evaluate the comparative costs and benefits of alternative regulatory frameworks. This analysis would need to consider aspects such as 'cost of slow delivery' under RIIO in relation to any new proposed changes. However, it is difficult to fully appreciate the benefits and disbenefits of RIIO-2, given it has only been in effect for two years and the full impacts of the changes from RIIO-1 are difficult to ascertain given the unprecedented events of Covid-19 and the war in Ukraine.

Ofgem's consumer interest framework for assessing key decisions ensures that the impacts on direct, indirect, and uncertain benefits and costs are considered. This also provides a sound understanding of the future network regulation impacts on consumers, network companies, and the whole energy system. Through considering both quantitative and qualitative aspects of network company behaviour together with consumer outcomes is essential and will enable regulatory changes to be assessed from this joint perspective.