

Playback on what we have heard

Evolving the regulatory framework to ensure the least cost and secure net zero transition



Carole Hook
Head of Future Frameworks,
Gas Transmission

We previously **published our thoughts** around 8 key areas that need to be considered ahead of the forthcoming regulatory framework, and we invited your feedback on these.

In support of this, we also held an **industry-wide webinar** (with 62 attendees including regulators, direct industry, supply chain and networks from around the world), and this was followed by 1:2:1 conversations where requested.

In addition, we have conducted **consumer research** on what matters most to the public to understand their top-of-the-mind concerns about energy and gas.

Thank you for your feedback. This document is a **playback on what** we have heard and presents an overview of headline themes from a range of stakeholders and consumers. We want to continue dialogue on the topic of evolving the regulatory framework as we progress into planning for the next regulatory period.

This playback is sectioned as below:

Section			Slide
01	What we have heard	Section 1 covers each of the 8 key areas that were identified in our publication. Themes are identified from quotes and feedback.	
02	Additional consumer research	Section 2 headlines key messages from our consumer research.	13
03	Action points	on 3 illustrates actions that we are ressing for each of the 8 key areas.	16
04	Next steps and get in touch	Section 4 invites further dialogue.	18

Each key area includes a relative stakeholder rating from feedback, plus the view of consumers

01What we have heard

	Stakehol	der rating	Consumers
The voice of consumers and our stakeholders must be clear	7 th	Medium	Very high
2. The shifting energy landscape means incentivisation must evolve	3rd	High	Medium
3. Progress must be made whilst protecting consumers against the risk of uncertainty	8 th	Medium	Very high
We need to fairly allocate costs and risks across generations and beneficiaries	4 th	High	Very high
5. We need to align and plan around a whole energy system	1 st	Very high	Medium
6. There are benefits in aligning the regulatory framework for natural gas and hydrogen	2 nd	High	Medium
7. The approach to economic assessment needs to be refined to allow for no regrets decisions in the interest of consumers		High	High
8. Simplifying the framework will enhance transparency of performance and speed-up delivery	6 th	Medium	Medium

Very high

Consumers



What we discussed in this section

- Critical to ensure we understand and respond to **consumers**' needs
- **Engagement** is driving change
- Independent User Group continues to hold us to account
- The remit of the Consumer
 Challenge Group must be clear

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We asked:

1. How do we ensure clarity of the voice of consumers and stakeholders in the next regulatory period?

What we have heard:

Good progress in RIIO-2

- "...can recognise the step change made. Should be applauded for the domestic engagement we now do..." (Consumer rep)
- Stakeholder groups have worked well for RIIO2... clear and is unlikely to have changed ... reliability of the system at reasonable cost...." (Trade Association)
- "We have championed the enhanced engagement model and fully support its further development." (Network Company)

Early engagement for the next price control (driven by changing energy landscape)

- ➤ "[For] the energy transition much more is required early in the process... there is a need to look at energy system as a whole and the different needs that are met by energy sources..." (Trade Association)
- "...clarity on how stakeholders' views ... reflected in decision making with appropriate explanations is needed at the outset... so that stakeholders can judge if it is worthwhile committing limited resources to engaging.. [and] ... understand how the views of stakeholders are weighted... ." (Trade Association)
- "[We are] keen to engage members on the next business planning cycle ..."
 (Trade Association)

Clear price control engagement framework and how decisions are made

- "... agree clear minimum requirements for engagement ... so that companies can engage early in order to inform business plan development and ... opportunities for collaboration." (Network Company)
- "... [clarity on] the remit for both the independent user groups and a potential CCG in assessing business plans." (Network Company)

2. The shifting energy landscape means incentivisation must evolve

Stakeholder rating Consumers

3rd High Medium



What we discussed in this section

- Using incentives to drive optimal value for consumers has proven to be effective
- Today's energy challenges could require us to act differently or faster
- We need to reflect on the role we play in supporting fairness and affordability

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We asked:

- 2. How should net zero ambition be reflected in our incentives framework?
- 3. What incentives should be included to ensure optimal decisions for current and future consumers?
- 4. What common elements should be included in assessing consumer value?
- 5. What should our role be with regards to supporting fairness and affordability, particularly for vulnerable consumers?

What we have heard:

Current frameworks have worked well

- "The current incentive framework has worked reasonably well ... and so should be maintained as the system changes for net zero delivery. Tighter targets, such as reducing direct emissions,... related to reputational (rather than financial) incentives." (Trade Association)
- "[Albeit some] ...bad examples of poor incentives [proposed]..." (Shipper/Supplier)

Our focus on affordability should be optimising efficiency of our activities

- "The most important aspect of consumer value is delivering a low cost reliable service, which is a core activity." (Trade Association)
- ➤ "NGG is remote from domestic end consumers, ... value to these groups is best delivered by running at low cost reliable system." (Trade Association)
- ➤ "The most efficient BP [Business Plan] and operation remains primary action on affordability" (Trade Association)

Future frameworks need to evolve and be targeted

- "There is the role the transmission system could play in delivery of net zero through transporting hydrogen ... policy decisions will be needed for rollout...[that] will inform future incentive frameworks... [that are] uncertain at the time of developing business plans...more clarity would be helpful." (Trade Association)
- > "[There is an] enduring role for incentives as part of the framework need to be appropriately calibrated and targeted in the right areas" (Shipper/Supplier)
- "Both transmission and distribution businesses should adopt similar [and aligned] targets." (Trade Association)

3. Progress must be made whilst protecting consumers against the risk of uncertainty





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What we discussed in this section

- Energy landscape has highlighted the need to be **resilient to uncertainty**
- Role for natural gas during the transition provides optionality
- Mechanisms must be deployed carefully and in a targeted way
- Economic and investment option tools can help identify optimal timing of investment decisions when faced with uncertainty

We asked:

6. What other tools could be used to support decision making against uncertainty?

National Grid / Gas Transmission

What we have heard:

Energy market faces increasing uncertainty

- "There is considerable uncertainty in terms of the development of the energy system. This includes global markets, technology development and consumer attitudes." (Trade Association)
- > "Considerable uncertainty in the macro-economic outlook." (Trade Association)
- "The pathway to net zero by 2050 is uncertain and there are many possible scenarios." (Trade Association)
- ➤ "Current events demonstrate that biggest risk to consumers is a lack of diversity in supplies of energy and insufficient development of infrastructure." (Trade Association)

Appropriate tools are needed to support decision making (ensuring investment decisions are not delayed)

- "The use of Real Options Analysis would seem to be sensible, utilising information as it becomes available.... to identify least regrets investments at the earliest opportunity. Cost benefit analysis may also be utilised to assess alternative approaches or the risk of timing delays. In all scenarios it will be vital to maintain the service to existing customers whilst the current gas network transitions to hydrogen or is potentially decommissioned." (Trade Association)
- "Future affordability and sharing of Net Zero costs with future generations can be factored into best value optimisation tools (using suitable discounting methods)."
 (Trade Association)
- "Using other evaluation techniques such as real options is an area that should be examined more closely. Net zero requires progress on infrastructure to be accelerated. Infrastructure availability is beneficial ultimately to consumers and promotes more rapid change." (Trade Association)

4. We need to fairly allocate costs and risks across generations and beneficiaries

Stakeholder rating Consumers

4th High Very high



What we discussed in this section

- Support ongoing investments across time horizons
- Frameworks can provide solutions to how costs can be **fairly balanced** between current and future consumers

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We asked:

- 7. How should charging reflect short-term economic uncertainty (for instance general inflation, interest rates, wholesale energy prices)?
- a. Is short-term stability in bills preferred?
- b. Is it better to track to the actual position as far as possible to reduce future uncertainty?
- 8. How should historic and future investment costs in the natural gas network be managed in the transition to net zero?

What we have heard:

Macro-economic concerns

"The economy has now moved out of a low inflation period and the macro economic outlook is uncertain. This suggests there needs to be scope for the price control regime to be flexible enough to respond within price control periods (suggesting option b)." (Trade Association)

Supporting future investments and balance across generations

- ➤ "An important issue will be how the costs of the developing hydrogen network will be recovered from customers alongside the ongoing and potentially decommissioning costs of the natural gas network. It maybe that the most equitable approach is to recover the costs from both networks from all customers." (Trade Association)
- ➤ "It is generally preferred for short term volatility in charges to be mitigated by averaging over longer periods to enable charges to be better reflected in tariffs to customers." (Trade Association)
- ➤ "Consideration needs to be given on **signalling future charges**, whilst ensuring the market receives the information in a timely manner." (Trade Association)
- ➤ "Repurposing of network to decarbonised gas will extend the life of assets... [and] has a value to current users. We would expect a balance to be struck between current and future users of gas networks in terms of cost allocation. This may require, for example, particular users covering the incremental cost of conversion." (Trade Association)

Value from big decisions

"Need to shift focus from fractions of pence and think about the bigger picture."
(Trade Association)

Consumers

Verv Medium



What we discussed in this section

- Early identification of **common** planning assumptions which capture plausible futures
- Develop consistent approaches to deal with uncertainties
- Identify the right level of investment across the whole energy system that offers value for money, security and delivers net zero

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We asked:

- 9. Do common planning assumptions help improve certainty for security, net zero and affordability for consumers?
- 10. What role does low carbon gas play in the future energy transition?

What we have heard:

Early approach to whole energy system

- > "We very much agree that a whole energy system approach is needed to ensure the gas and electricity networks are developed to deliver a shared vision." (Trade Association)
- > "Greater opportunity for whole system thinking." (Shipper/Supplier)
- > "FSO will deliver too late ... something needed ahead of this" (Consumer rep)
- > "Need to understand when FSO will come into play and its role in planning will it be too late [for next price control]?" (Trade Association)
- > "Common planning assumptions are required early on in the process.. to reflect government objectives for net zero and the extent of ambition ...set out in the Hydrogen strategy." (Trade Association)

Early alignment of collective decisions

- > "Common scenario came too late last time and recognises the need for this work and early" (Trade Association)
- > "The need for common planning assumptions has been raised in a number of other forums recently" (Trade Association)

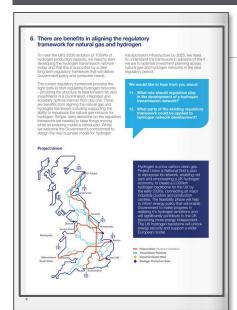
Low carbon gas has a role in the energy transition

- > "Focus on electricity just doesn't work / Needs to be broader than just electricity" (Consumer rep)
- > "It is clear that low carbon gases have a role to play in the energy transition." (Trade Association)
- > "It is important that gas transmission fits into a wider energy security and planning strategies" (Anon - webinar comment)
- > "Low carbon gas is essential to provide a resilient and value for money energy system It also allows the best use to be made of existing gas networks and expertise... initially in heavy industry." (Trade Association)

6. There are benefits in aligning the regulatory framework for natural gas and hydrogen

Stakeholder rating Consumers

2nd High Medium



What we discussed in this section

- Need to start developing the hydrogen transmission network today
- Long-term regulatory framework that will deliver Government policy and consumer needs
- Simple and **early decisions** are needed while an enduring model is introduced

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We asked:

- 11. What role should regulation play in the development of a hydrogen transmission network?
- 12. What parts of the existing regulatory framework could be applied to hydrogen network development?

What we have heard:

Opportunity to lead and do more

- > "GB has **opportunity to lead** Europe in this, but we are losing this" (Consumer rep)
- > "Disappointing not supporting more for Hydrogen" (Consumer rep)

Regulation has an important role to play

- "Regulation has an import role to play in the development of a hydrogen transmission network.... The regulatory framework will need to evolve in parallel with the complexity of the pipeline system." (Trade Association)
- "Regulation should encourage hydrogen transmission network with a priority given to heavy emitters. These should be a priority to maximise the decarbonisation potential of hydrogen. As wider networks develop, the Hydrogen system will likely have elements of significant market power which would indicate a system of ex-ante regulation and an economic licence regime as for today's gas network." (Trade Association)
- "[There are] parallels with methane framework mechanics for hydrogen if they are essentially doing the same thing" (Shipper/Supplier)
- "Most of the current framework could be applied to hydrogen. However it is important to set up a regulatory framework that fast track hydrogen deployment in priority for high emitters. A more flexible regime in the early phases of hydrogen development would make sense in the early stages of the industry as it develops." (Trade Association)

Early direction needed

- ➤ "It would create an excessive regulatory burden to replicate the current natural gas framework for initial hydrogen pipelines. Rather **clarity on the direction** of travel of the arrangement is desirable at the outset with this evolving over time. For example, exemptions could be used in the early stages." (Trade Association)
- ➤ It is appropriate for NGG to carry out some preparatory work, to manage future timelines, given the long lead-times for pipeline construction. (Trade Association)

7. The approach to economic assessment needs to be refined to allow for no regrets decisions in the interest of consumers





What we discussed in this section

- Regulatory framework has driven down costs to consumers
- Evolution of economic needs case is required to take account of full range of societal risk and benefits
- Holistic approach will ensure a secure transition and the lowest cost to consumers

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We asked:

13. How should societal risks be included in the economic assessment?

What we have heard:

Care needed on transition planning

- "...a way needs to be found through the uncertainty currently faced with respect to net zero pathways and the investment required to support these. Least regrets options being pursued initially. In all scenarios the transition will need to be carefully manged to ensure security of supply for all customers. In the case of gas fired generation, security of electricity supply will depend on this, so within day flexibility needs to be considered alongside network capability." (Trade Association)
- "As the energy system evolves there will need to be greater emphasis on resilience and contingency as the maintenance of a diverse range of energy sources and providers." (Trade Association)
- ➤ "More attention is now needed on the **role of gas storage**, **and energy storage more widely** to avoid such extreme step changes. The current review of retail markets needs
 to be a relevant consideration for [the next regulatory] period." (Trade Association)

More inclusive approach to planning

- ➤ "Adaptive planning used in water has not been looked at in Gas." (Consumer Rep)
- "Societal risks should clearly be included to ensure medium- to long term risks are considered and Net Zero is achieved at the lowest cost" (Consultant)
- "Wider societal questions around the use of natural gas and its role in transition also need to be managed carefully. Establishing ambitious targets on emissions and methane, in particular, will help maintain support for the sector, alongside decarbonisation objectives." (Trade Association)

8. Simplifying the framework will enhance transparency of performance and speed-up delivery

Stakeholder rating Consumers

6th Medium Medium



What we discussed in this section

- Trust in performance comes from **transparency** of process, mechanisms and deliverables
- Move towards **greater simplicity** in both our business plan and in our performance

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We asked:

- 14. What aspects of the framework would you like to see simplified?
- 15. What enhancements would you like to see to aid your understanding of our performance?

What we have heard:

Review of complex regimes and scope

- ➤ "The regulatory regime has become **more complicated** but much of this is probably unavoidable." (Trade Association)
- ➤ "Some **concerns exist** over the scope for increasing amount of capital expenditure to go through reopeners and uncertainty mechanisms." (Trade Association)
- "Report on emissions in a more granular sense, and methane in particular." (Trade Association)

And finally...what we have heard:

16. Do you have any other key areas or observations that you think we need to consider?

"[We] agree with NGGT's assessment of the main questions and the eight key areas identified.

Natural gas will indeed be the backbone of UK energy system even though the quantities of gas being used will fall.

Similarly, the existing gas system provide a **low-cost route for energy transmission** where we expect hydrogen and biomethane to be important parts of the net zero future.

Ongoing investment in gas networks is certainly in the interests of many UK energy consumers, both business and households, both in terms of cost of delivery and system resilience." (Trade Association)

02 Additional consumer research

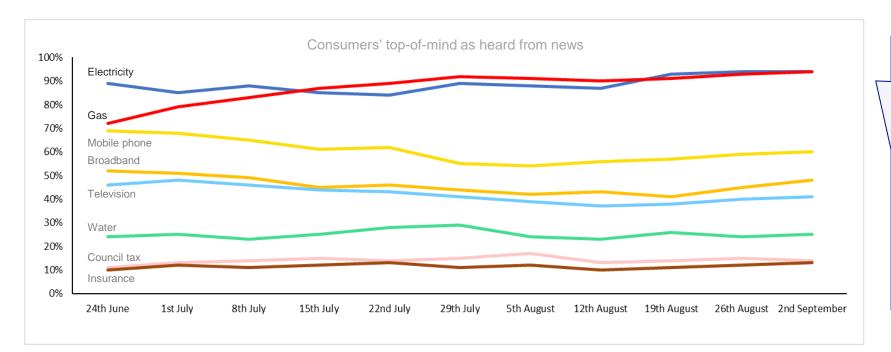
Additional consumer research

Source: 1,020 survey respondents per week.

Which of the following business sectors have you heard about in the news in the past week? Please select all that apply.

We commissioned our own independent consumer research (from more than 1,000 respondents per week) to help us to understand key issues from the views of consumers.

While consumer interactions and understanding of the sector and regulatory processes will be lower, understanding consumers' perceptions provide valuable insights into how they perceive the industry.

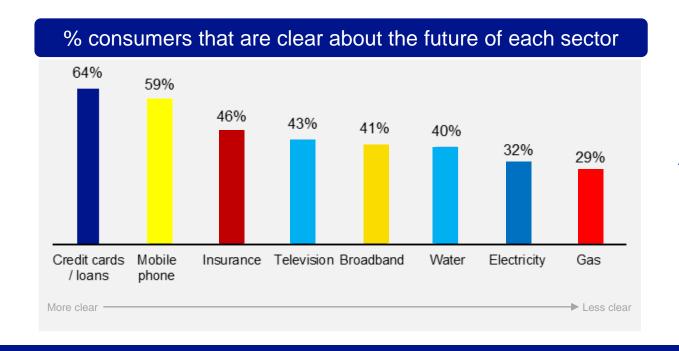


Over the past two months, there has been a sustained level of public consciousness around the energy industry (in particular gas). Gas and electricity are **top-of-mind** for consumers compared to other sectors.

Additional consumer research

Source: 1,020 respondents per week.

How clear or not are you about the future for each of the following household bills?



In addition to the sector ranking #1 as a top-of-mind for consumers, clarity remains low about the future of the energy sector and household bills.

This suggests:

- 1) We have to explain the decisions we are making more clearly and expect wider public scrutiny; and
- 2) The regulatory framework should produce a **greater understanding of the future energy system** as a whole, and in doing so will create confidence and clarity to consumers.

03
Action points

Action points

The 8 areas identified are the right ones to be thinking about and it is important that we recognise them all. We list here examples of what we are doing next, and support the overall theme that **more needs to be done, at pace and early**.

Stakeholder rating		Consumers		Initial thoughts on what we could do next - inviting views:
7 th	Medium	Very high	The voice of consumers and our stakeholders must be clear	Clarity from outset. Develop stakeholder contract with stakeholders and Ofgem. Investigate actionable insights, utilisation of appropriate consumer engagement techniques, enhanced engagement application.
3rd	High	Medium	2. The shifting energy landscape means incentivisation must evolve	Explore development of incentives framework and propositions for the next regulatory period to optimise future energy security, affordability and path to net zero.
8 th	Medium	Very high	3. Progress must be made whilst protecting consumers against the risk of uncertainty	Progress work on adaptive planning and where tools should be applied: Real Options Analysis (ROA) and Cost Benefit Analysis (CBA) to understand future investment decisions.
4 th	High	Very high	4. We need to fairly allocate costs and risks across generations and beneficiaries	Include as a key part of focused consumer research to explore appropriate application of regulatory tools for cost allocation. Explore allocation of network costs across a range of hydrogen and methane consumers.
1 st	Very high	Medium	5. We need to align and plan around a whole energy system	Continue to develop solutions around coordination of strategic alignment and planning at national and local levels. Close regulatory engagement needed.
2 nd	High	Medium	6. There are benefits in aligning the regulatory framework for natural gas and hydrogen	Progress with next phase of work on developing options for a hydrogen regulatory framework. Early identification of approach to building business plan for next regulatory period in absence of hydrogen business model.
5 th	High	High	7. The approach to economic assessment needs to be refined to allow for no regrets decisions in the interest of consumers	Explore appropriate application of ROA tool (as above); consider how broader societal risk can be articulated in needs case and decision making.
6 th	Medium	Medium	8. Simplifying the framework will enhance transparency of performance and speed-up delivery	Ongoing work with the independent User Group to ensure transparency of performance reporting.

04
Next steps
and get in touch

Next steps and get in touch

Thank you for your feedback to date.

As you can see, the topic of 'evolving the regulatory framework to ensure the least cost and secure net zero transition' has stimulated a lot of great thoughts.

This playback illustrates the size of the challenge facing the sector and the business planning needed - it is one we are determined to meet.

This is just the start of an important conversation.

We want to continue this dialogue with you to understand how the right regulatory framework can help deliver great business plans across the whole energy industry.

Please feel free to get in touch if you would like to discuss anything within this playback.



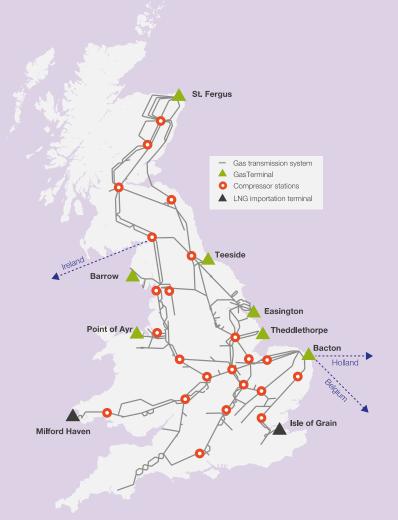
Carole Hook
Head of Future Frameworks, Gas Transmission
carole.hook@nationalgrid.com

Gas Transmission

Gas Transmission owns, manages, and operates the national transmission system in Great Britain, making gas available when and where it's needed. We ensure that our network is safe, reliable and available, and that it delivers value for our consumers and stakeholders, while minimising impact on the environment.

In March 2022, National Grid confirmed it has entered into an agreement for a consortium led by Macquarie together with the British Columbia Investment Management Corporation to acquire a 60% equity stake in Gas Transmission and Metering. The consortium also has an option to acquire the remaining 40% stake in 2023.

Our gas transmission network



In numbers:

7,660km of high pressure pipeline

600 above-ground installations

24 compressor sites

Natural gas delivers three times as much energy as electricity; it keeps

80%

of the UK's 28 million homes homes warm and comfortable, generates electricity and fuels industrial and manufacturing processes.

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