

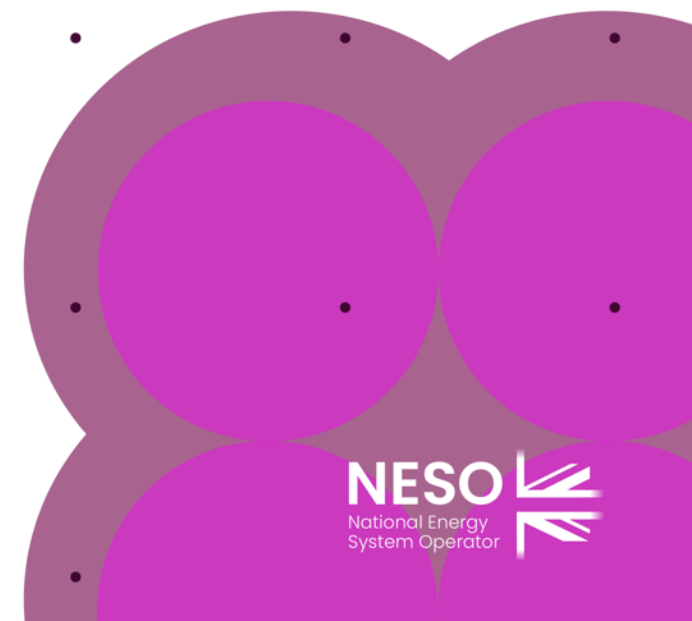
Public

Summary of stakeholder engagement

Future Energy Scenarios 2025:
NESO Pathways to Net Zero

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Introduction

Introduction

This document provides a detailed summary of our stakeholder engagement since July 2024 and how we will consider feedback from our stakeholders for Future Energy Scenarios (FES) 2025.

It forms part of a wider suite of preliminary FES 2025 documents. For a comprehensive overview of FES 2025, please refer to our methodology document: [Future Energy Scenarios: Pathways to Net Zero 2025 Methodology](#).

The National Energy System Operator (NESO) works with stakeholders across the industry, nationally and at a regional level, to deliver electricity decarbonisation and whole system planning. The work outlined in this document relates only to stakeholder engagement undertaken as part of our FES research and analysis.

We plan to publish our FES 2025 analysis in the summer and will welcome our stakeholder community to our *Future Energy Scenarios 2025: Pathways to Net Zero* launch events.

Thank you to those who have provided evidence, research and insight, helping us to shape FES 2025.

Introduction: our approach

Our FES 2025 engagement cycle started in July 2024 and continues through to late spring 2025. Each cycle starts with a review of existing stakeholders, seeking out new views from other organisations to ensure we reach a wide range of stakeholders across the industry.

We use a range of methods, including online meetings and consultations, in-person workshops, email and NESO social media platforms. We gather feedback using both targeted and open-ended questions, to encourage discussion and boost debate.

Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul
← FES 2024 feedback →											
		← Bilateral meetings →									
		← Online consultation →									
	Demand in-person event		Table Topic Talks event								
		← Challenge and Review →									
											Publication

Our engagement



Our engagement

FES is referenced by a wide range of energy industry participants and stakeholders. To ensure we maximise the breadth of stakeholder views, we continually engage with a wide range of stakeholder categories for FES.

The following two pages outline the key engagement events we have hosted for FES 2025, ranging from multi-stakeholder engagement sessions, to strategic bilateral meetings.

In addition to the key activities detailed, the team continually attend industry events such as conferences, webinars and workshops. We also maintain regular communication with stakeholders and interested parties via the NESO newsletter, website and social media platforms.

Please note the engagement listed is FES-specific, and forms only a small part of community engagement we do at an organisational level.



Future Energy Scenarios: ESO Pathways to Net Zero 2024 launch event

Our engagement: key events



The FES 2024 launch saw over 5k stakeholders attend or watch our launch event, either in-person, online or on catch-up. We hosted an in-person event at the IET, Savoy Place in London, followed by four webinars taking a closer look at each of the chapters from the main FES document.



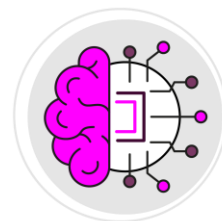
The FES 2025 Online consultation: Help Shape the NESO Pathways to Net Zero took place throughout October and November, promoted via NESO virtual platforms. This online engagement provides new and existing stakeholders the opportunity to contribute to the future of energy.



Our FES 2025 Topic Table Talks Day took place at the end of November in London. This in-person event attracted nearly 80 stakeholders representing a wide range of energy industry organisations. We also held a smaller demand only focussed event during September, welcoming 30 delegates.



FES 2025 bilateral meetings began in August 2024 and will continue until early spring. These one-to-one online meetings with key organisations form an important element of the engagement cycle and production of FES.



We have hosted 3 Network Forum meetings during the autumn with more to be held into spring. So far, these have been held to discuss initial results from our demand analysis.

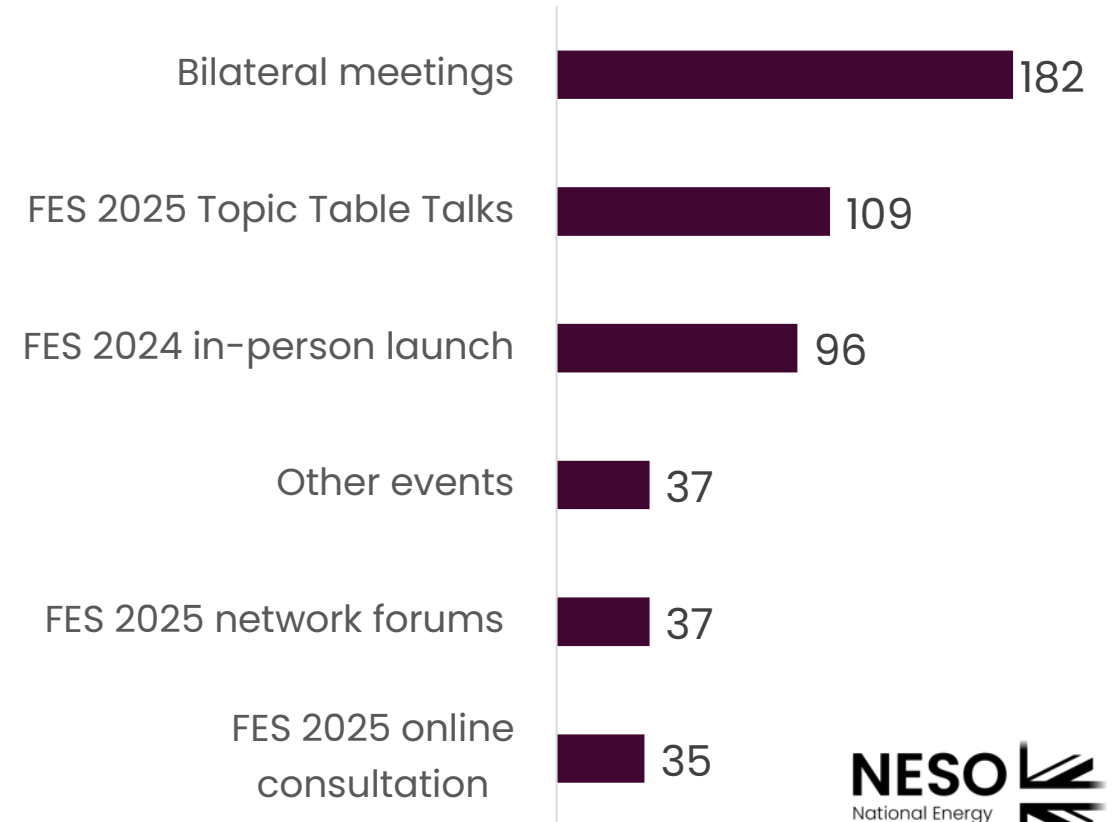
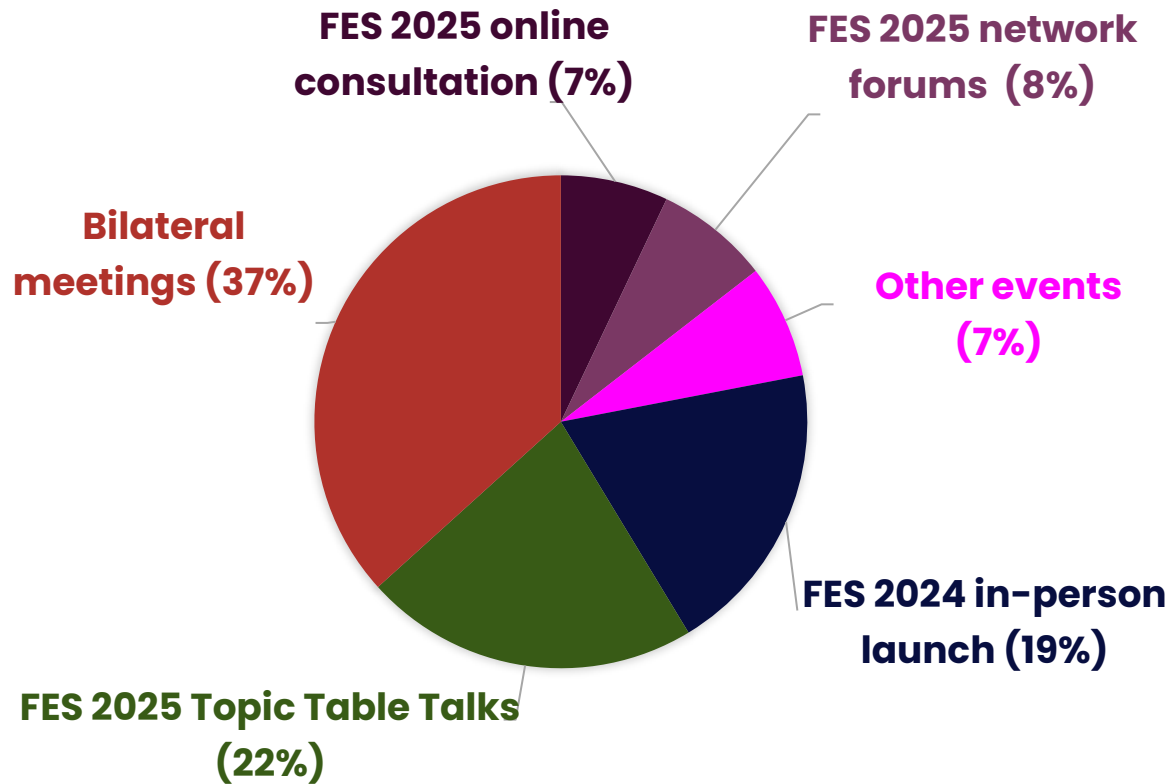
Our engagement: key events comparison

Engagement event:	2022 for FES 2023	2023 for FES 2024	2024 for FES 2025
FES launch event (in-person and webinars)	1,365 stakeholders	2,203 stakeholders	2,609 stakeholders
FES launch stream and catch-up	1,984 stakeholders	3,188 stakeholders	3,059 stakeholders
Online consultation	61 stakeholders	35 stakeholders	35
Topic Table Talks	63 stakeholders	81 stakeholders	109 stakeholders
All other engagement	76 organisations	110 organisations	84 organisations

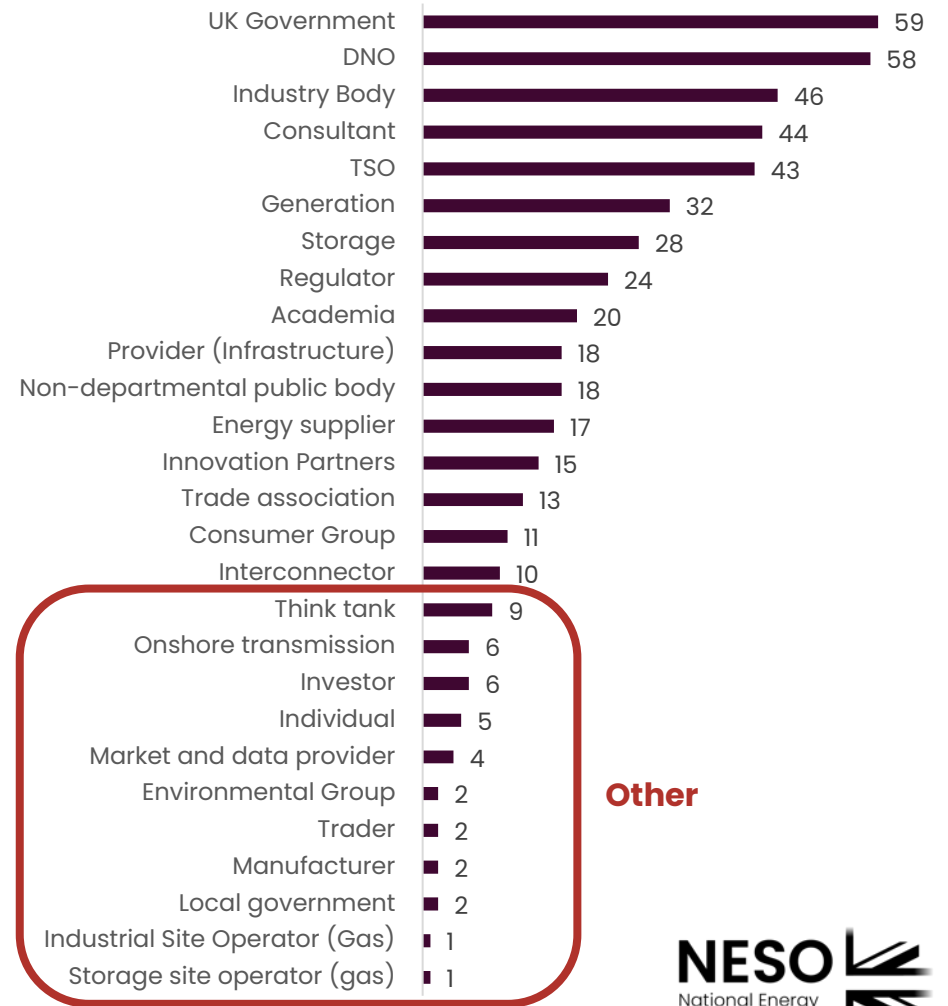
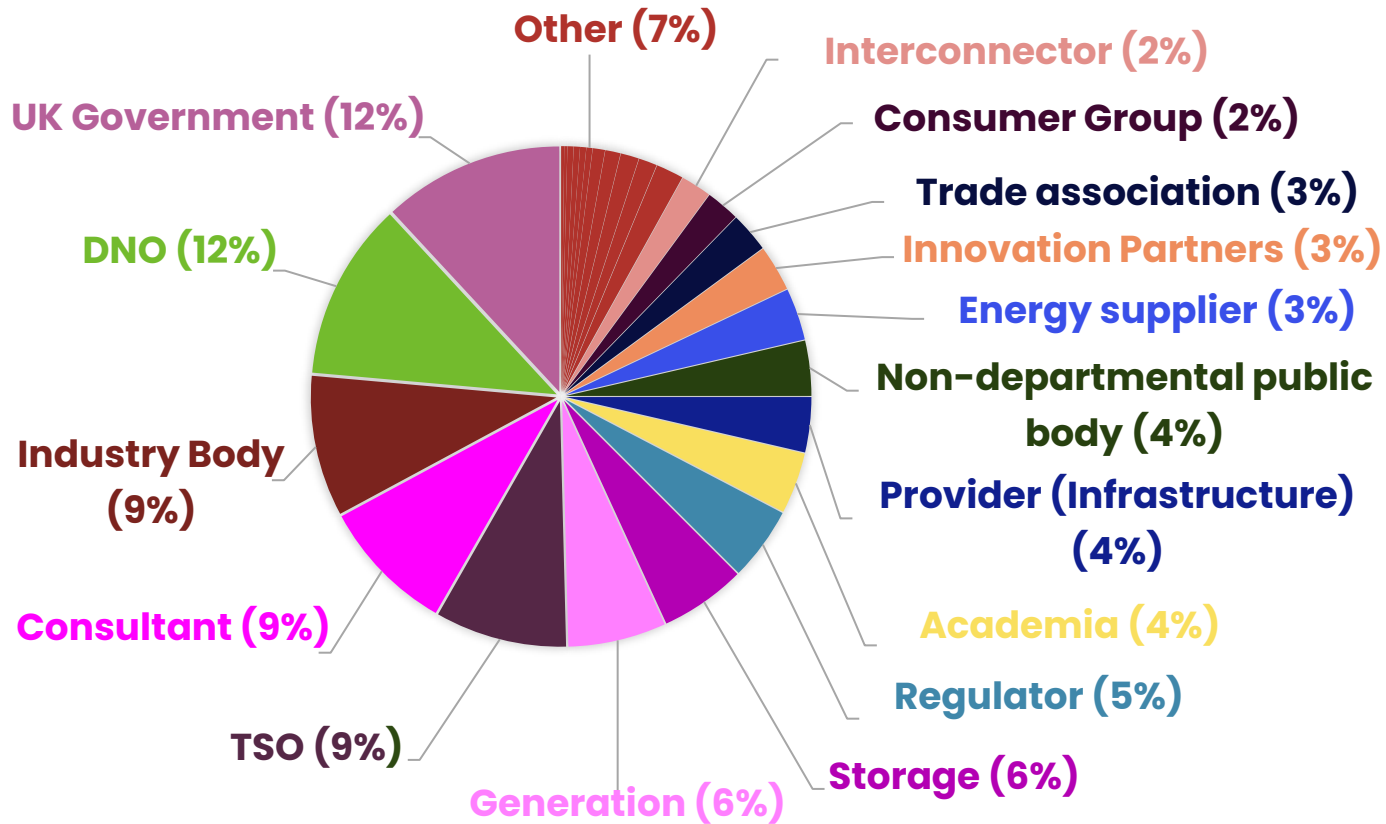
For FES 2025, we have engaged with 2,609 stakeholders across all of our events (including the 2024 live launch), representing a total of 802 organisations.

Our engagement: per activity

The events listed below are the main focal points of our engagement for FES 2025. We have also hosted three network forum meetings, attended other industry conferences and workshops, and welcomed over 3,000 from our stakeholder community to our online FES 2024 launch events.



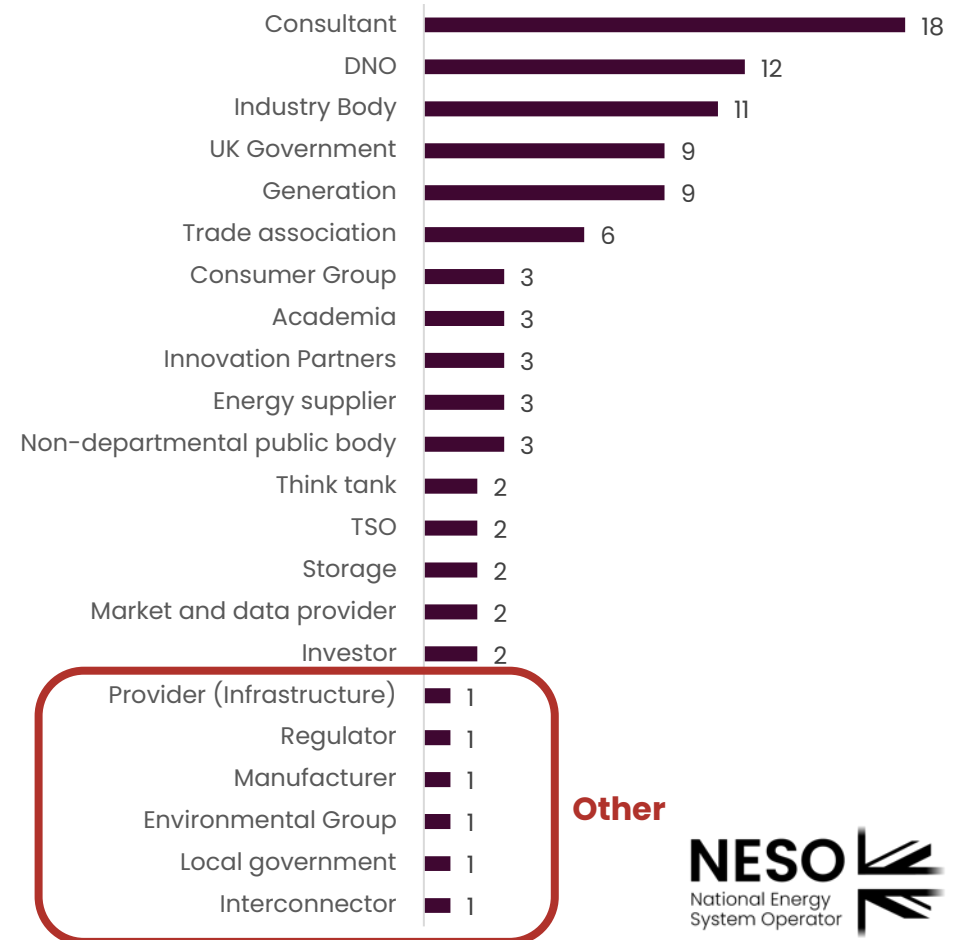
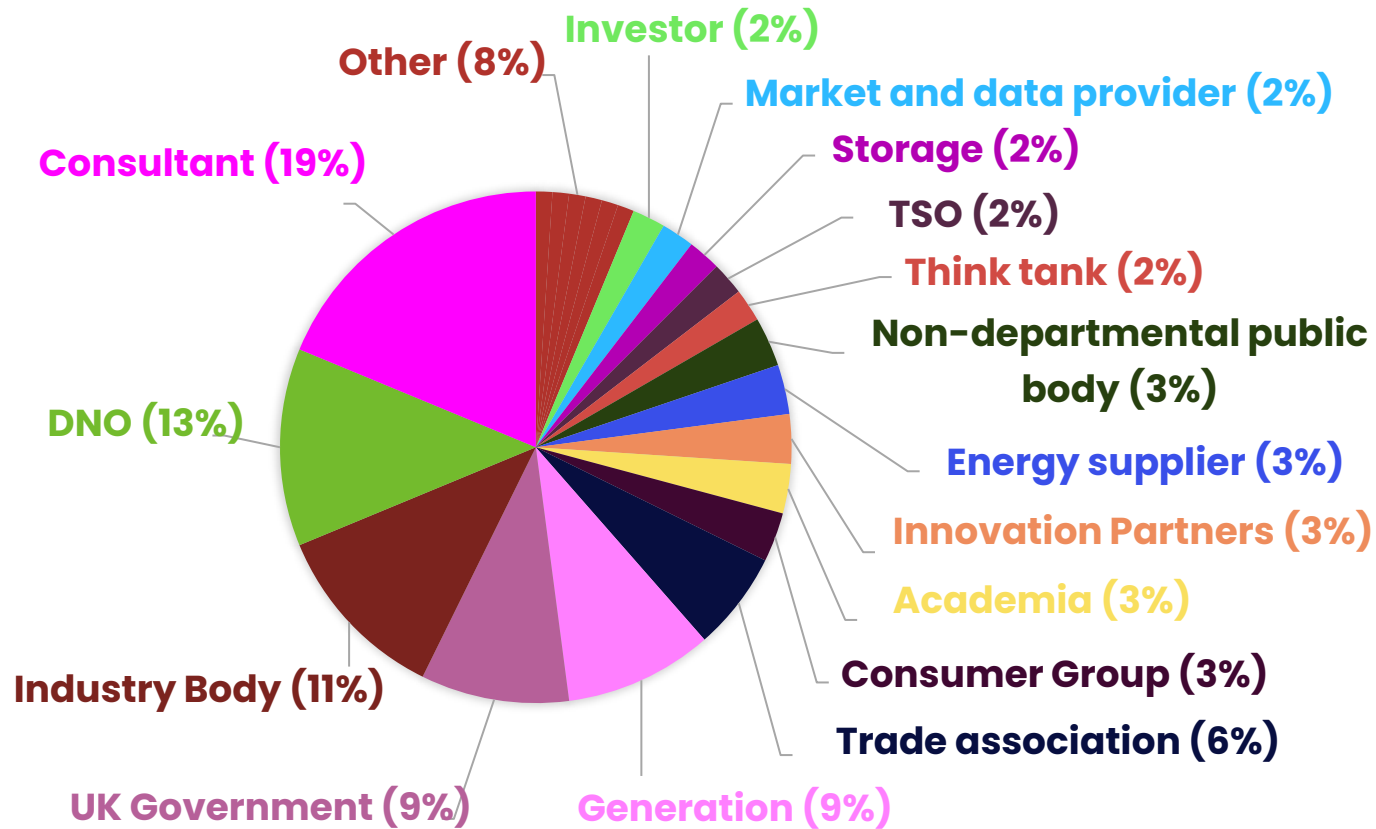
Our engagement: per stakeholder type



Please note we have re-aligned the stakeholder categories to ensure consistency with our centralised NESO customer and stakeholder database.

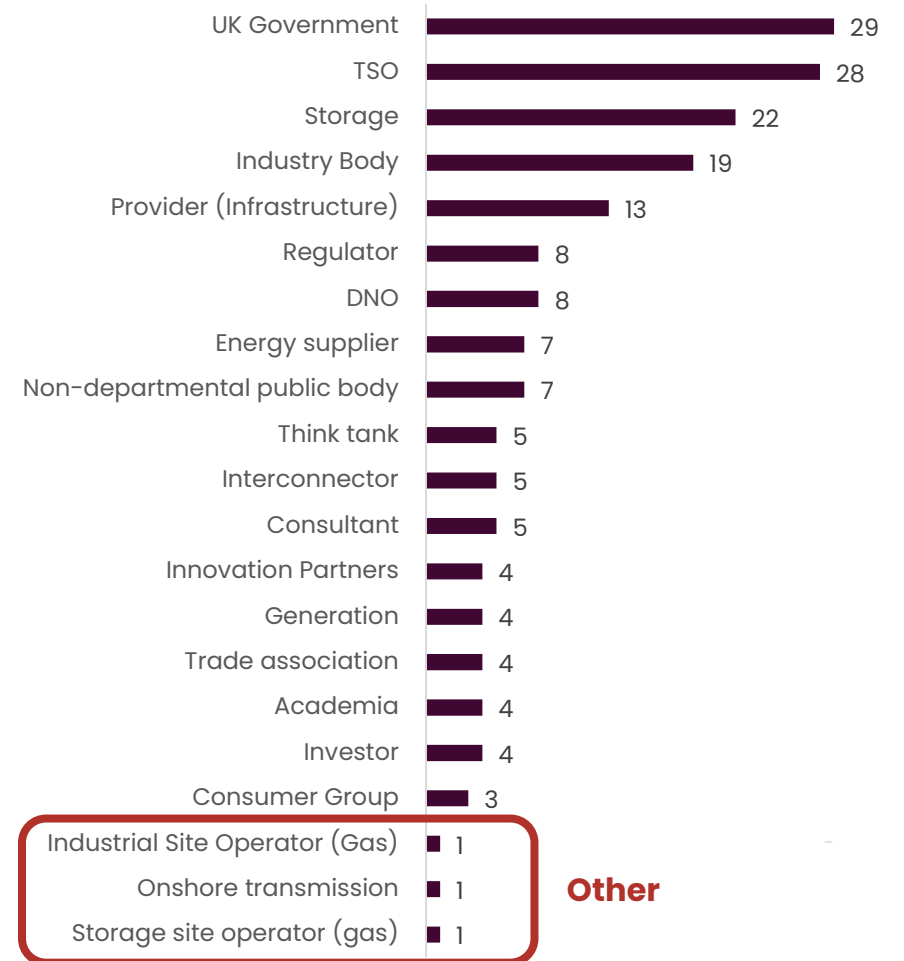
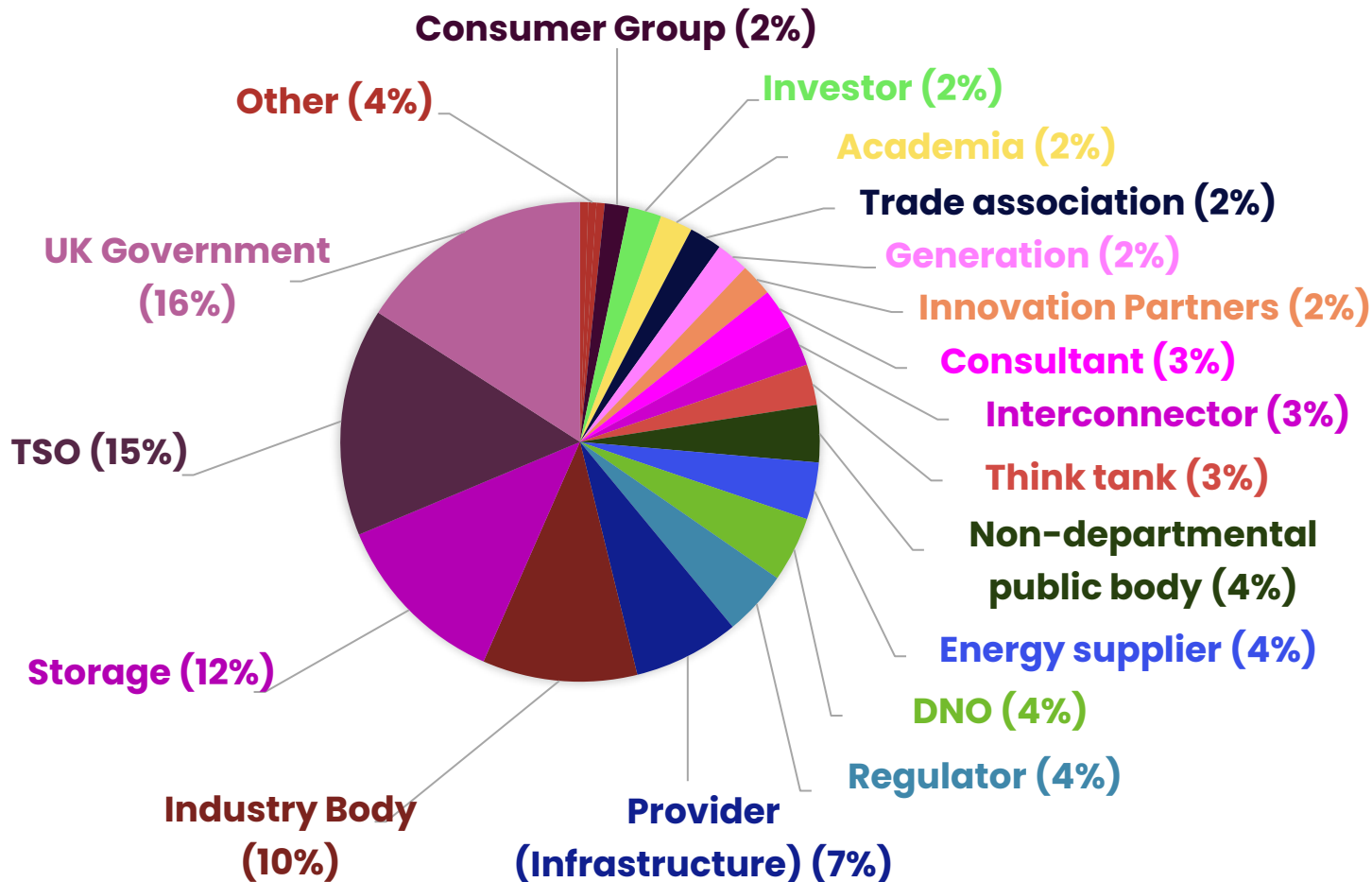
Our engagement: FES 2024 launch event

Our FES 2024 in-person event took place at IET, Savoy Place in London. We shared the key messages from 2024 together with a panel event, welcoming questions from the 96 stakeholders that attended. We live-streamed the event and made it available on catch-up, with c.2,125 views to date.



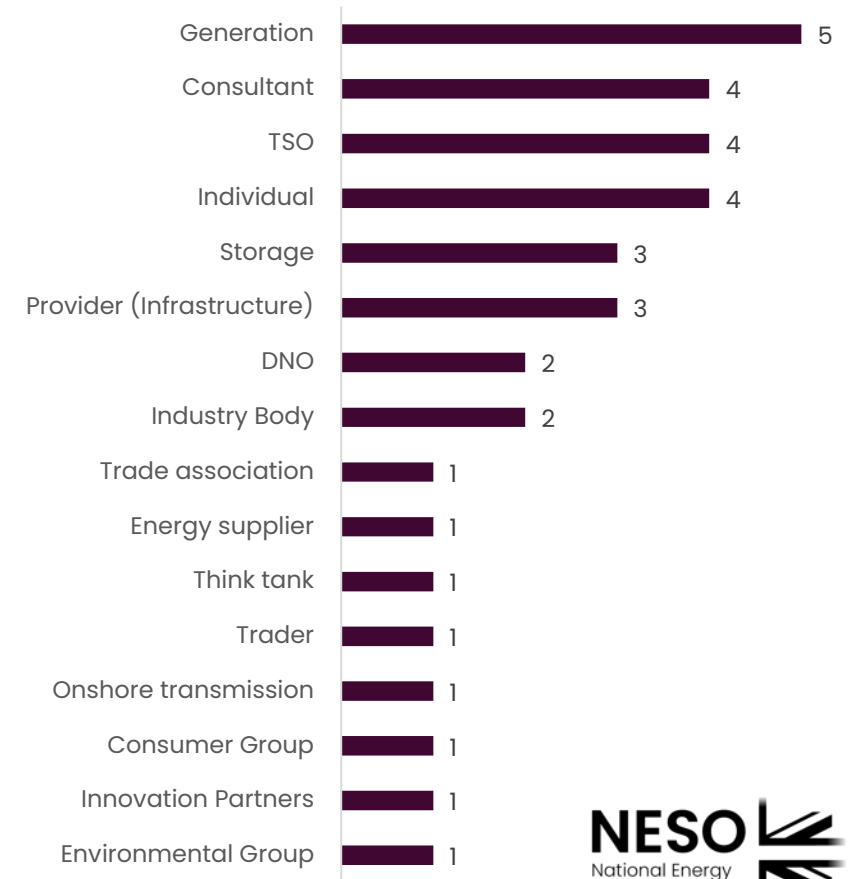
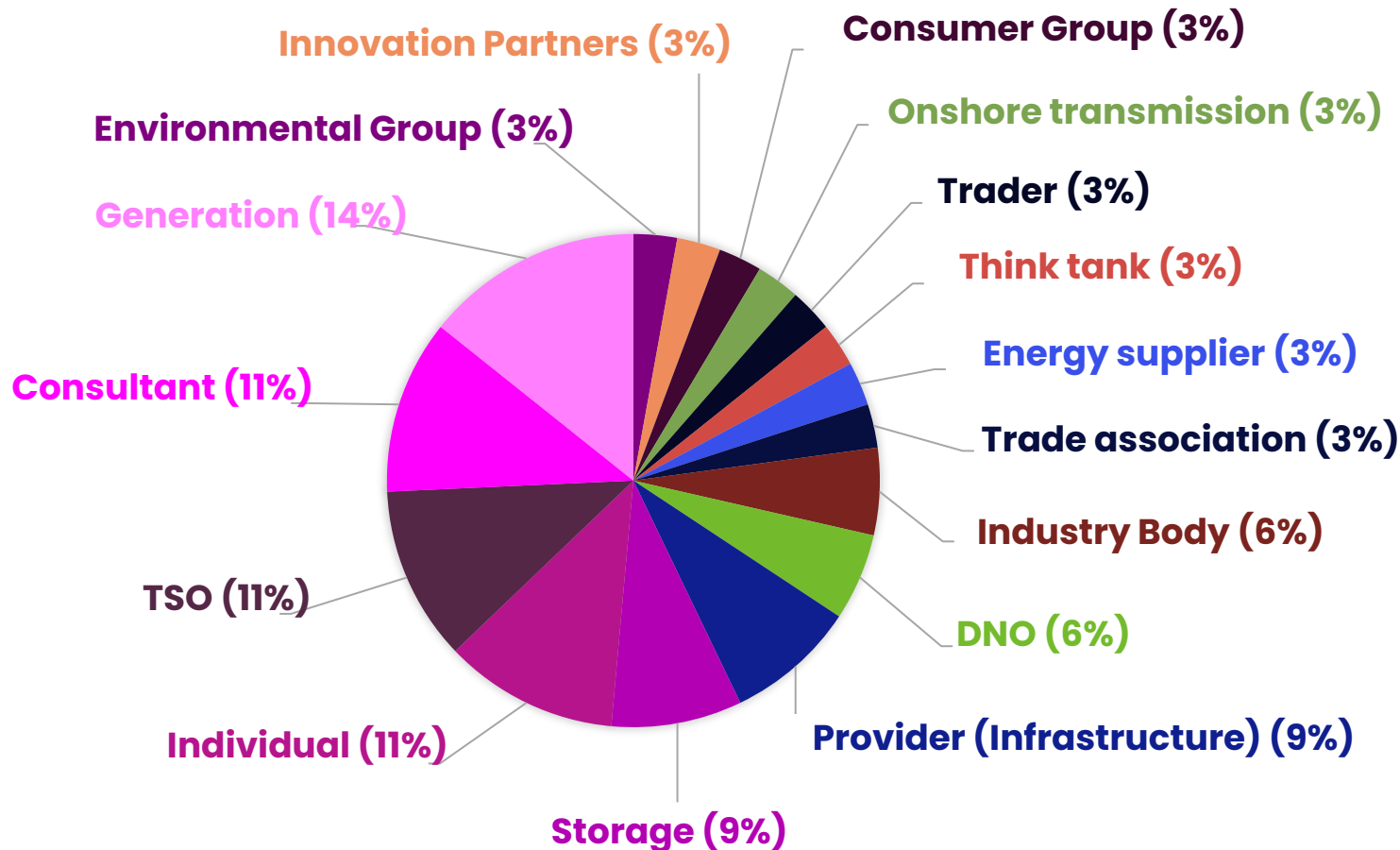
Our engagement: bilateral meetings

Our bilateral engagement takes place with key FES stakeholders, from August 2024, continuing into spring 2025. We meet with a wide range of the energy industry and other sectors to gain specific insight into technologies, vectors and usage. We have a further c.16 meetings planned in addition to those captured so far.



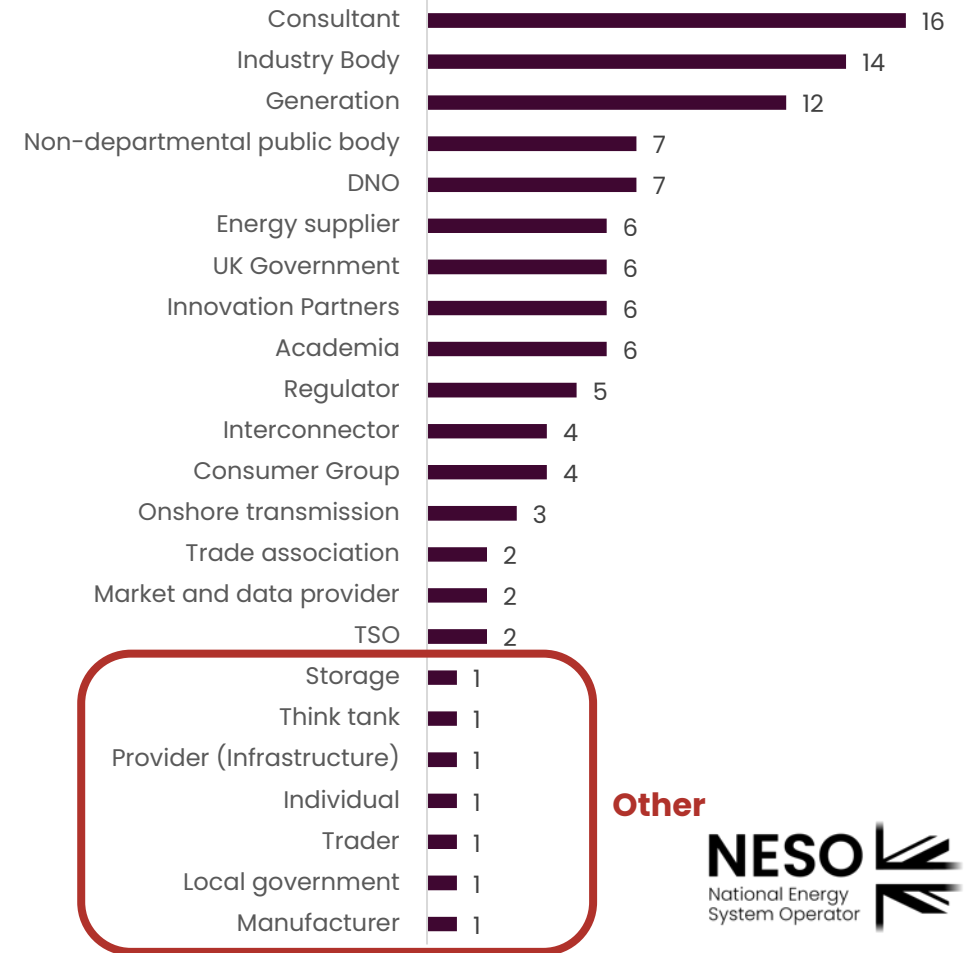
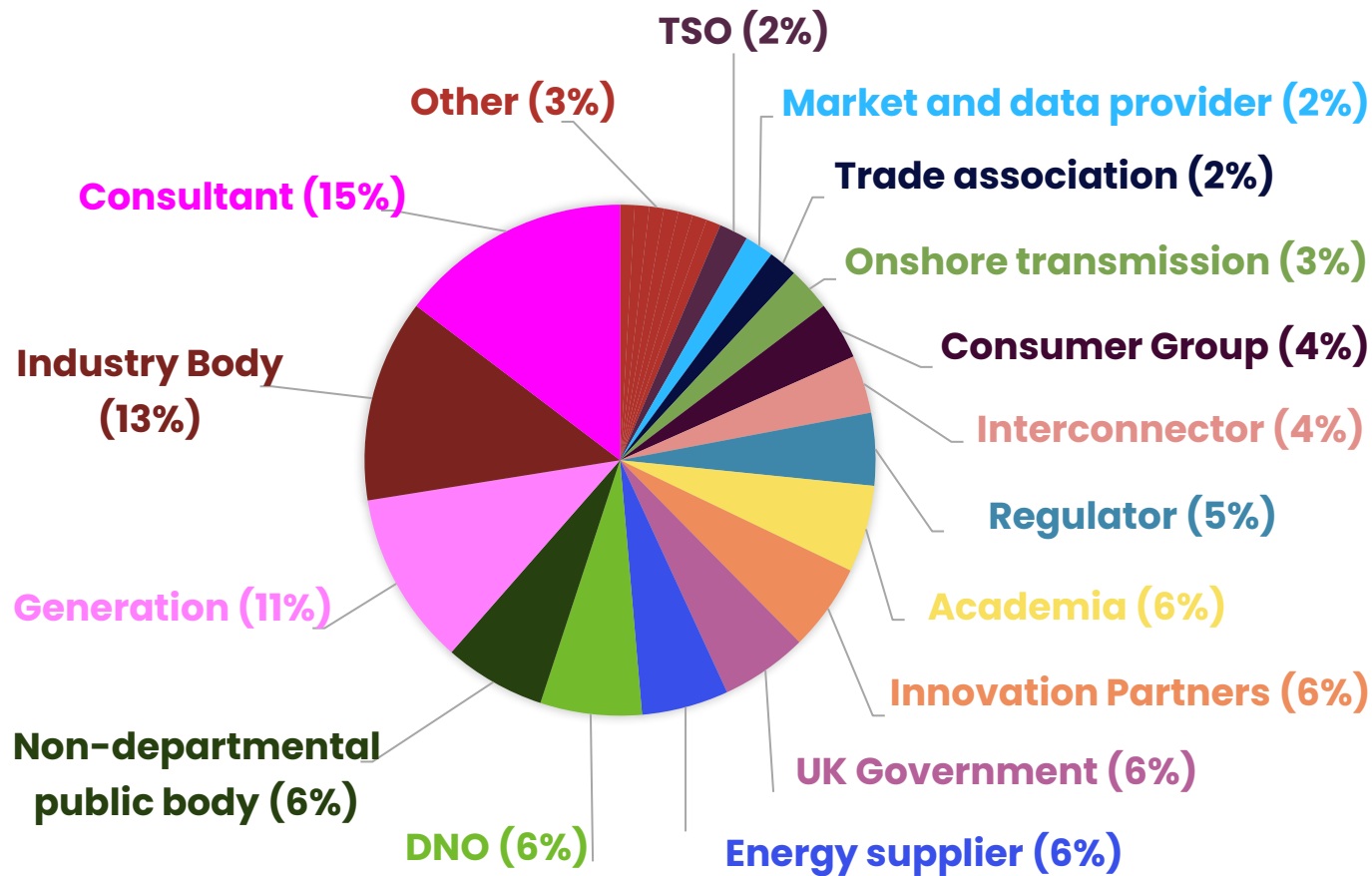
Our engagement: online consultation

The FES 2025 Online consultation - *Help Shape the NESO Pathways to Net Zero* – took place during the autumn and provided new and existing stakeholders the opportunity to contribute to the future of energy. We received over 30 responses.



Our engagement: Topic Table Talks

We hosted two FES 2025 Topic Table Talk Days. The first focussing on energy demand took place during September, attended by c30 stakeholders with a larger event taking place during November for other areas of our analysis.



Stakeholder communication: satisfaction scores

Our aim is to continuously improve and exceed the expectations of our stakeholders and measure levels of satisfaction at every opportunity. This includes satisfaction cards at in-person events, as well as online surveys throughout the year. The scores in the table are out of 10.

We receive queries via email from stakeholders throughout the year on a wide range of subjects; our busiest time is July when we publish the FES report.

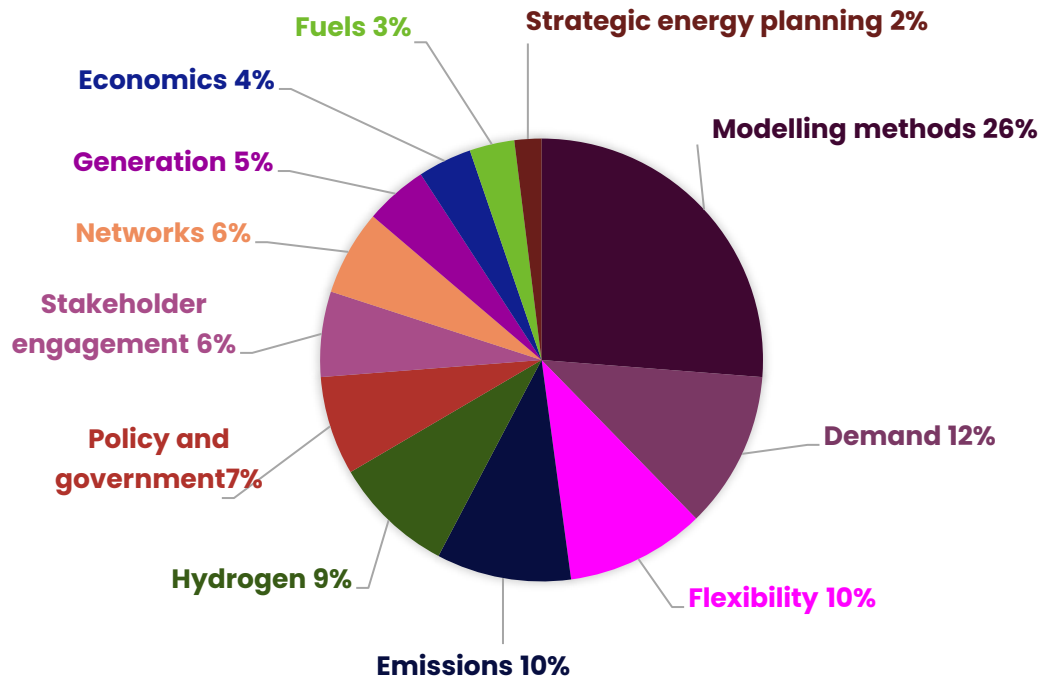
Event name	FES cycle 2025	FES cycle 2024	FES cycle 2023
Bilateral engagement	9.00	8.82	8.68
FES launch	8.44	8.32	8.23
Topic Table Talks	8.29	8.37	8.72

Please note the activities listed above are July 2024 to date.

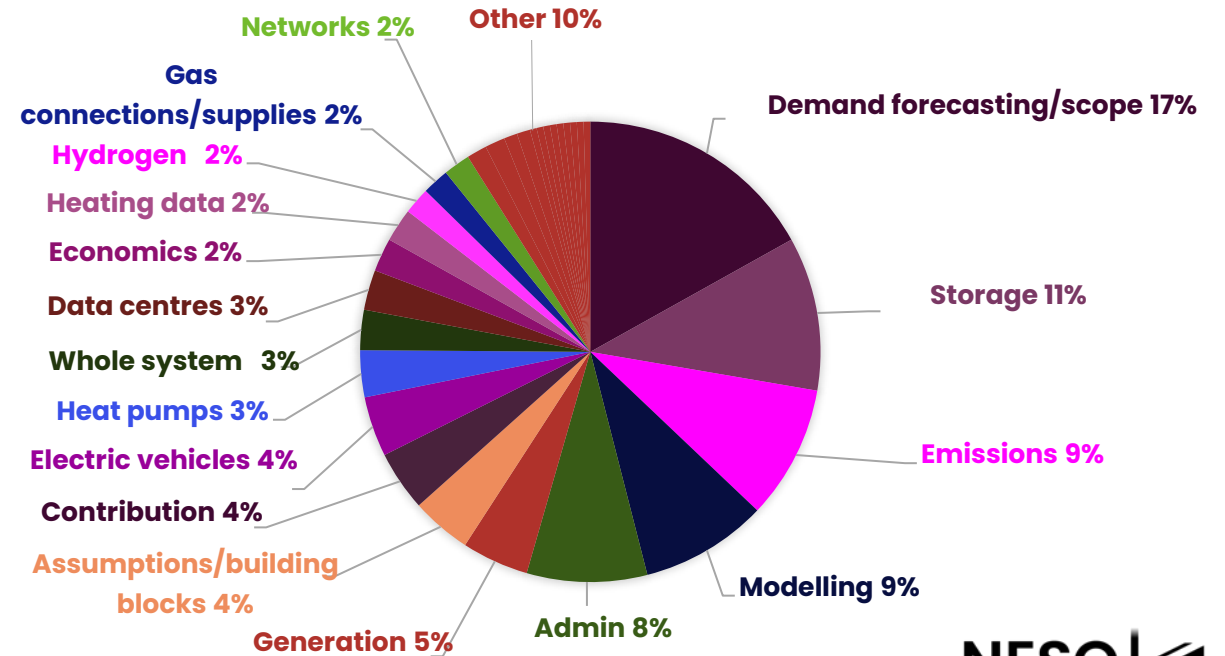
Stakeholder communication: query themes

Through our engagement events and via our email account we receive many queries from stakeholders on a range of subjects. We have summarised here the main themes of questions we have received. We received a total of 540 questions from stakeholders at our launch webinars and FES email account.

FES 2024 launch webinar questions



FES questions (emailed)



Stakeholder communication: website

FES website views	37,262
ESO/NESO Data Portal views	2,403
Total FES document downloads	13,077
<i>FES: ESO Pathways to Net Zero 2024</i> downloads	4,726
<i>FES: Pathways at a Glance</i> downloads	2,975
<i>FES 2024 Data workbook</i> downloads	2,602*
<i>FES Pathway Assumptions 2024</i> downloads	522
<i>FES: Energy Background Document</i> downloads	367

Please note data is from July 2024 to date.

**This figure includes 43 downloads by UK networks from a two-way SharePoint site.*

Public

Summary of views from stakeholders



Summary of views from interested parties: engagement and communication

Summary of stakeholder feedback

Many stakeholders requested access to more quantitative information at the launch event, deep dives into our analysis as well as visibility of both costs and economic data.

A high proportion of stakeholders provided suggestions for future Topic Table Talks event included better facilitation during the discussions, more opportunities for informal discussion and opportunities for broader networking. Additionally, some would like to be provided with more context and background during the event.

Suggestions from several stakeholders for both events included access to a confidential pre-read, more audience interaction (polls or mobile voting) and more opportunities for Q&A.

How we're addressing this feedback

We aim to act on the feedback for our launch of FES 2025. We will consider hosting longer deep-dive sessions to enable more time for Q&A and will explore the options available to us to increase the level of audience interaction. We will ensure that our pre-event communication clearly outlines the level of detail shared during the events to manage expectations.

The Topic Table Talks feedback will be considered for our future in-person engagement planning and delivery. For instance, we will ensure that delegates are rotated during the day to encourage broader conversations and will aim to provide more background, context and extensive information about FES and the day in the pre-read material. We will ensure that our team are fully equipped to enable all stakeholders to have their say and be heard. We will also look at the options available to increase the level of audience interaction.

We are working across NESO to consider the changes needed to our stakeholder engagement process as we move to a three-yearly FES cycle.

Summary of views from interested parties: FES methodology and framework

Summary of stakeholder feedback

The pathway framework for FES 2024 received very positive feedback with the consideration of fuel switching and demand side flexibility. Some stakeholders wanted to see the pathways aligned with those in the Clean Power 2030 advice to Government, incorporating a supply side angle. Other suggestions included speed of transition, electrification alongside hydrogen, hydrogen alongside gas CCS dispatchable power and whole system thinking.

Some stakeholders also suggested considering behavioural, technology uncertainty and policy changes, exploring constraints around the scale of roll-out of different technologies. It was suggested that at least one of the net zero pathways does not rely too heavily on highly optimistic assumptions about new technologies. Some wanted to see pathways built from the bottom up and based on observable, tangible data (particularly in relation to consumer behaviours and sentiment) so that all pathways are informed by indicators from what we see today.

It was also suggested that the economic modelling (introduced in FES 2024) should be developed further, placing a greater focus on system cost optimisation that reflects the spectrum of technology cost uncertainties. We intend to include additional economic analysis and insight from our pathways and will provide additional details of the scope prior to publication.

How we're addressing this feedback

Based on stakeholder engagement the narrative/framework designed for FES Pathways 2024 has been well received. We are bringing in a supply-side narrative to the framework for FES 2025 based on positive feedback from our Clean Power 2030 advice. We aim to provide additional commentary on economics.

Summary of views from interested parties: modelling and data

Summary of stakeholder feedback

Many stakeholders wanted to see more extensive regional and higher resolution temporal data. Stakeholders also suggested enhanced economic optimisation and more techno-economic modelling, as well as integration of the impact of extreme events in models. They also suggested improving model transparency through more detailed assumptions and an interactive dashboard.

Many stakeholders wish for additional modelling and data on the comparative costs of our pathways.

How we're addressing this feedback

We will aim to make our interactive dashboard and details of economic optimisation more discoverable. We will also enhance our assumptions details and include this in our Assumptions document within the FES 2025 suite of documents.

Alongside other NESO roles such as the Strategic Spatial Energy Plan and Regional Energy System Planning, we will continue to develop our models to include higher resolution data and will incorporate an appropriate level of economic modelling and impact of extreme events for future FES publications. Contractual arrangements around third-party data may limit the granularity of what we share.

We aim to provide additional data on system costs.

Summary of views from interested parties: energy demand from transport

Summary of stakeholder feedback

Stakeholders expressed confidence in the 2030 internal combustion engine (ICE) ban returning, which would impact hybrids. There was a wide range of views on this: some felt that sales may exceed the zero emission vehicles (ZEV) mandate, with others feeling this would be a challenging target to meet.

Stakeholders also expressed a preference for battery HGVs over hydrogen. The Counterfactual in FES 2024 had a high HGV battery uptake; stakeholders suggested keeping more ICE HGVs in FES 2025.

Stakeholders suggested that smart charging would be easy to implement for commercial vehicles. Some also expressed uncertainty around V2G, feeling that there would be a greater chance of implementing V2H (vehicle-to-home). Some suggested that V2G may be easier to implement in commercial vehicles.

Some stakeholders suggested that car mileage could decline as uptake of electric bicycles and scooters increase.

How we're addressing this feedback

We will reintroduce the 2030 ICE ban in our modelling and will increase the speed of EV adoption required to meet emissions targets. Additionally, we will consider smart charging and V2G into our commercial vehicles modelling.

Summary of views from interested parties: energy demand from heat

Summary of stakeholder feedback

All stakeholders felt that reaching the 600,000 heat pump target would be unlikely due to current barriers. Most suggested that FES 2024 projections of coefficient of performance (COP) were too optimistic and there is mixed messaging on hybrid heat pumps.

Most stakeholders felt that hydrogen is seen as expensive for homes and would more likely only be available near industrial clusters.

The majority of stakeholders advised that district heat networks would be most suitable for dense urban areas, particularly in commercial buildings. However, there would be challenges over the retrofitting of these.

Most stakeholders also expressed a lack of enthusiasm for energy efficiency measures due to rising costs. They advised that this would be less essential for heat pump adoption.

There were positive indicators from stakeholders for participation in heat flexibility, with most saying that pre-heating homes before peak times is likely to be the main method for heat flex.

Summary of views from interested parties: energy demand from heat (continued)

How we're addressing this feedback

We will update the model with the latest heat pump sales data and reduce the COP projections. Additionally, we will update the ground source heat pump assumptions but will not add natural gas hybrids to the modelling. We will consider a range of options for hydrogen heating as well as considering our ranges for heat network uptake, including commercial buildings. Despite the feedback on energy efficiency measures, we have to maintain high deployment of the measures to meet emissions targets in the pathways.

We have determined a method to represent the pre-heating of homes; only thermal storage was modelled for heat flexibility in previous years.

Our pathways must meet emissions targets which requires action across all areas.

Summary of views from interested parties: energy demand from industrial applications

Summary of stakeholder feedback

A number of stakeholders felt that the general outlook for UK industry is a slightly pessimistic one and that industry is aiming to maintain UK industrial demand levels, increasing imports and, with it, any associated increase in global emissions. For example, some stakeholders referenced examples of closures of industry in the UK in recent years and increases in imports, including imported fuels, closure of refining, importing of fertilisers, closures of tile manufacturing, and importing of bricks.

Some thought that a Carbon Border Adjustment Mechanism (CBAM) will be limited to specific products.

Views from stakeholders on decarbonisation plans for UK industry varied. Electrification, for instance, was frequently mentioned by some as a key decarbonisation option for industry but others felt that barriers to connection could lead to the loss of industry, particularly for multi-national corporations.

Stakeholders representing some industries discussed the difficulties they faced in decarbonising when they needed to remain located near raw materials, such as crops or clay. These locations may be challenging for grid connections, hydrogen access or CCS access.

Some stakeholders felt that hydrogen development is slowed down by challenges attracting investment. Supply, storage, transmission and demand of hydrogen and CO₂ need to be developed simultaneously. They suggested that hydrogen production requires better investment certainty and resilience to justify infrastructure costs and advance the hydrogen market.

Summary of views from interested parties: energy demand from industrial applications (continued)

How we're addressing this feedback

We source our economic forecasts from Oxford Economics and assume that the CBAM and global carbon pricing agreements are reached in our pathways.

As our pathways must meet emissions reduction targets, there is limited scope to take onboard stakeholder feedback regarding slower timelines for hydrogen, CCS and electricity network connections. Meeting carbon budget targets is challenging, with electricity more expensive than gas and hydrogen developing slower than original targets. Our FES pathways show the pace that needs to happen to reduce emissions.

Stakeholder feedback will be considered in the 10-year forecast.

Summary of views from interested parties: energy demand from the commercial sector

Summary of stakeholder feedback

Most stakeholders felt that energy efficiency progress is slower than expected due to issues with business cases and rented properties. However, efficiency improvements where implemented, have exceeded forecasts, particularly in lighting and building structures. Supermarkets are actively pursuing these gains. Some stakeholders additionally fed back that grid capacity issues are hindering deep electrification of gas loads.

The forecasted demand computer transfer rate is lower than expected from some stakeholders; some, such as those within the NHS, are actively moving data centre capacity to the cloud, but onsite computing demand remains higher than forecasted.

Some stakeholders have said the improvement rate for data centre site energy efficiency is too high. New facilities are already highly efficient, and existing sites face challenges due to downtime risks and sub-optimal rented buildings. Growth rates are generally correct, but ramp-up rates are too conservative. Stakeholders suggested a faster ramp-up rate and adopting a single high usage pathway for data centres.

Some felt that hydrogen uptake for catering is currently unattractive due to cost and practicality for some - restaurant chains, for example, require uniform kitchen designs, making hydrogen impractical. Some pointed out that some chains are already electrifying, but grid capacity issues remain a barrier. They feel that catering will convert at a slower rate due to the cost benefits of using gas.

How we're addressing this feedback

We will adopt all the points above into our modelling this year for the forecast and counterfactual, however, were limited to update the pathways where it affects emissions, as the pathways need to meet the carbon budgets and nationally determined contributions.

Summary of views from interested parties: energy demand from appliances

Summary of stakeholder feedback

Stakeholders expressed a strong interest in the potential of cooling demand in line with the impact of climate change. The consensus was that air conditioning growth is inevitable.

There was broad consensus from the majority of stakeholders that cooking would be electrified instead of fuel switching to hydrogen.

How we're addressing this feedback

We will review the air conditioning ownership rate and load assumptions, and research growth rates in other countries.

Our residential appliance analysis will be updated for FES 2025.

Summary of views from interested parties: electricity supply from wind

Summary of stakeholder feedback

The majority of stakeholders consulted on offshore wind noted that it is recognised for its economic benefits and job creation potential, and they felt that government support is crucial for driving investment projects.

These stakeholders also noted the challenges faced by the sector regarding connection issues and the need for robust grid infrastructure to handle weather dependent energy. They also raised concerns regarding the impact of the changing macro-economic climate, including high inflation and global competition for products.

All stakeholders consulted regarding wind generation felt that the lifting of the de facto ban on onshore wind in England and Wales would have a limited impact in the short term due to remaining local opposition and planning challenges.

How we're addressing this feedback

In line with stakeholder feedback regarding the economic benefits and continued policy support (for example the Contract for Difference process), we will still foresee offshore wind as providing a significant contribution to electricity generation in our net zero pathways. We will support this with evidence produced through our economic lowest cost capacity expansion model.

We will recognise some of the challenges and uncertainties in both connection timescales and location in our pathways.

We will explore through our pathways the range of different locations and capacities to reflect the impact of changes to Government policy regarding planning.

Summary of views from interested parties: electricity supply from nuclear energy

Summary of stakeholder feedback

Most stakeholders see nuclear energy's importance for ensuring energy security and meeting decarbonisation targets. A subset of stakeholders felt that small modular reactors (SMRs) could play a significant role in providing reliable and low-carbon energy, but this would be dependent on the technology leading to lower costs and greater flexibility.

All stakeholders pointed out the challenges in the sector, such as long lead times for building large nuclear power plants, public perception and planning issues. Some stakeholders felt that the 2050 24 GW nuclear level faces challenges with high costs and slow deployment. Stakeholders agreed on the need for clear government commitment and supportive policies to accelerate the deployment of nuclear technology.

The potential of nuclear energy for industrial heat applications and hydrogen production was also highlighted.

How we're addressing this feedback

We will plan to take forward details on deployment from nuclear developers and government bodies from stakeholder discussions for location, size and potential deployment dates into the transmission backgrounds.

We will also work with our hydrogen analysts to ensure that, where nuclear is utilised in conjunction with hydrogen or industrial heating production, the dates and locations of nuclear deployment are consistent with the hydrogen deployment and production, or the industrial heating requirement.

Summary of views from interested parties: electricity supply from energy storage

Summary of our stakeholder feedback

Many stakeholders noted current challenges in the sector and that policy support and strategic planning will be crucial in unlocking the full potential of energy storage. 5GW, stakeholders noted that there is need for a balanced approach to avoid over-reliance on unproven or non-commercialised long duration energy storage (LDES) technologies.

Currently, battery storage capacity stands at approximately 5GW, but all stakeholders felt that ongoing reforms are impacting its feasibility. They suggested that, to expedite delivery, planning permissions for storage assets should be accelerated.

The majority of stakeholders pointed to the limited number of contractors available for pumped hydro projects within a short timeframe, which could result in delays. Additionally, some noted that the expectations for Long Duration Energy Storage (LDES) delivery between now and 2030 could place a strain on the already limited supply chain.

How we're addressing this feedback

We plan to conduct a storage technology radar through stakeholder discussions and research. This will help us closely assess which storage technologies are commercially ready for delivery and identify their expected timelines if they are not yet ready. Additionally, we will evaluate supply chain uncertainties and various policies related to storage technologies to inform our storage growth and build-out rate.

Summary of views from interested parties: electricity supply from interconnectors

Summary of stakeholder feedback

All stakeholders noted that the sector faces regulatory and policy challenges associated with developing and maintaining interconnector infrastructure.

The majority of stakeholders also pointed out challenges and barriers to interconnector project delivery around obtaining connection agreements, supply chain challenges, securing manufacturing slots and the scheduling of cable-laying vessels.

The minority of stakeholders highlighted the increased risk profile faced by projects due to the upfront financial commitment required earlier than previously (before FID), and the lack of associated support mechanisms.

Some stakeholders expressed the need to explain the capacity divergences across different pathways.

How we're addressing this feedback

Through the range of net zero pathways, we will capture the uncertainty in project delivery in both total national capacity and in-service dates.

We plan to conduct an ongoing assessment of interconnector project delivery through further stakeholder and government engagement and desktop research. We also plan to expand the explanation of the interconnector forecast methodology in the modelling methods document.

Summary of views from interested parties: electricity supply from unabated gas

Summary of stakeholder feedback

The majority of stakeholders noted that unabated gas is expected to remain operational for security of supply reasons as pointed out in clean power 2030, with discussions on Power CCS or hydrogen infrastructure as a transition solution.

They pointed to the economic and technical challenges of transitioning to hydrogen and synthetic fuels. The need for dispatchable generation and maintaining gas plants for security of supply was also highlighted. Some felt that the high Capacity Market (CM) payments would be needed for unabated gas to stay operational under limited running conditions.

How we're addressing this feedback

We will aim to utilise our Clean Power 2030 analysis in the generation backgrounds, supported by additional information provided to us by stakeholders in bilateral meetings regarding gas to power.

Beyond 2030, we will utilise our Capacity Expansion Model for transmission to ensure that the pathways meet security of supply including the contribution from dispatchable gas generation. Our dispatch model will then assess how we can meet the carbon budgets with this generation mix.

Summary of views from interested parties: electricity supply from solar energy

Summary of stakeholder feedback

Solar energy was noted for its potential by the majority stakeholders, especially in rooftop applications, but they pointed out challenges such as planning constraints and the need for policy support to mandate solar installations in buildings. A small number of stakeholders felt that solar energy is significantly underestimated in our pathways, with a potential of over 50GW by 2030.

Stakeholders highlighted that government initiatives to promote green industries and investments in grid upgrades are crucial to solar deployment. Regulatory and planning barriers need to be addressed to achieve long-term goals.

How we're addressing this feedback

Our pathways will reflect a range of different deployment rates for solar generation recognising the challenge in achieving very high uptake rates. We will also examine a range of different sizes of individual projects and their connection point within the electricity networks.

Summary of views from interested parties: electricity supply from bio energy carbon capture and storage

Summary of stakeholder feedback

Bio energy carbon capture and storage (BECCS) was highlighted by a few stakeholders as critical for achieving net zero by offsetting emissions. However, they also felt that the sector faces challenges such as the need for policy and economic support for carbon capture.

How we're addressing this feedback

We plan to utilise our Clean Power 2030 analysis in the generation backgrounds, supported by additional information provided to us by stakeholders in bilateral meetings regarding biomass use for BECCS.

We will also respect the fuel limits within GB for sustainably source biomass that we have established from stakeholder feedback and research.

Summary of views from interested parties: whole energy system, emissions

Summary of stakeholder feedback

Opinion was divided on the technologies and approach to emission reductions. Some expressed a growing concern that the UK may not be able to meet its carbon reduction commitments. Furthermore, they felt that the use of emission reduction technologies, such as bioenergy with carbon capture and storage (BECCS) or direct air carbon capture and storage (DACCS), was a particularly divisive one. Some pointed to biomethane as being increasingly highlighted as an approach to decarbonising the UK's energy mix.

How we're addressing this feedback

We will continue to explore all potential routes for decarbonisation and emission reductions. An important part of this process is assessing the extent to which both public and commercial stakeholders accept these options. The adoption of any technologies will also need to consider realistic factors, including the recognised availability ranges of sustainable biofuels. Additionally, we will examine how existing energy sources, such as natural gas, may evolve as the UK strives to decarbonise, ensure energy security, and keep energy affordable.

Summary of views from interested parties: whole energy system, hydrogen and methane

Summary of stakeholder feedback

Stakeholders suggested that hydrogen will play a role in the evolution of the UK's energy system, but that questions remain over its application and scalability. Some also suggested that methane is still considered relevant in the near term, and the option for using its infrastructure for future use should remain an option.

Some stakeholders felt that the UK should promote increased trade of methane and hydrogen to enhance supply stability and provide economic benefit.

How we're addressing this feedback

As with electricity and gas, hydrogen will continue to have varying levels of market penetration across different pathways.

While we await a decision from the government on hydrogen for home heating, this uncertainty will be reflected in our pathways. Additionally, as in our FES 2024 analysis, our upcoming analysis will emphasise that any use of hydrogen will primarily focus on industrial applications. In the near term, methane will continue its role as both a primary supply source and an input for large-scale hydrogen production.

Continue the conversation

We will continue with our engagement, analysis and writing of FES until we publish in summer 2025.

We keep our [FES web pages](#) updated with our latest news and engagement events, but if you would like to hear from us directly please [subscribe to NESO's weekly newsletter](#).

As always, we welcome feedback throughout the year from our stakeholders. Please email FES@nationalenergyso.com to get in touch.

