

Stakeholder Feedback document 2016

Future Energy Scenarios



JANUARY 2016

Introduction

Welcome to the Future Energy Scenarios (FES) Stakeholder Feedback document for 2016.

This publication is part of our annual scenario development process. It summarises how we have engaged with you, what you have told us since the release of FES 2015 and our initial thoughts on the new suite of scenarios for 2016. The FES Stakeholder Feedback document is the latest of our suite of 'Future of Energy' documents which also includes: Electricity Ten Year Statement (ETYS), Gas Ten Year Statement (GTYS), System Operability Framework (SOF), Winter Outlook Report (WOR) and Summer Outlook Report (SOR).

I am excited to be leading the team that develops the FES. Once again we have had some really fantastic engagement with our stakeholders, which has delivered real intelligence and insight for us to use as we build FES 2016. There are so many uncertainties regarding the future of energy for GB; it is your views, knowledge and insight which drive the scenarios, allowing us to better understand these uncertainties. I would like to take this opportunity to thank you for giving us your time and energy in this engagement.

You had a lot of good things to say about FES 2015. We continue to seek improvements in our engagement to ensure we maintain good relationships with current stakeholders and target new stakeholders to enhance the richness of the scenarios. We plan to do even more of this as we move forward in 2016.

I hope you find this publication useful and look forward to sharing the outcome of our 2016 work later this year.



Marcus Stewart, Energy Policy and Supply Manager



What does this document represent?

National Grid's Electricity Transmission licence standard condition (C11) requires the submission of our proposed future energy scenarios to Ofgem by the end of January each year. This document represents our submission. It summarises our stakeholder engagement, how this engagement has been, and will be, taken into account in the development of this year's FES, and our initial thoughts on the new suite of scenarios for 2016.



These images are from the FES 2015 conference.



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Executive Summary

Consistency is critical

Overwhelmingly our stakeholders told us that they want to see consistency year on year in the FES. This has reaffirmed our approach to FES 2015 and there will not be any big changes to our scenarios this year. We have ensured consistency is central to our deliberations as we begin to develop this year's scenarios. We will be maintaining the "look and feel" of the document and make changes only where clearly justifiable.

2020 Renewable Energy Directive target

Gone Green will not be forced to meet the 2020 Renewable Energy Directive target of 15 percent of UK energy consumption coming from renewable sources. This reflects that although significant progress has been made towards the target, with 2020 only four years away it is very challenging to meet. Further analysis will be undertaken through the FES 2016 cycle and we will identify what needs to happen to reach the 15 percent target.

We have enhanced our stakeholder engagement activities

We have broadened our engagement activities and increased the number of stakeholders that we engaged with.

We introduced a series of webinars this year, made our workshops more interactive, held an extensive programme of focused bilateral sessions and enhanced our online presence. In doing so we increased the number of organisations we engaged with from 233 to 362.

Introducing a new structured approach

During our FES 2015 consultation 45 percent of our stakeholders told us they want us to be clearer on how the FES assumptions and inputs are created and used. For 2016 we are introducing a more structured approach to grouping our inputs and assumptions. This will ensure consistency across our analysis as well as allowing stakeholders to better understand how our scenarios are developed.

More of our insight

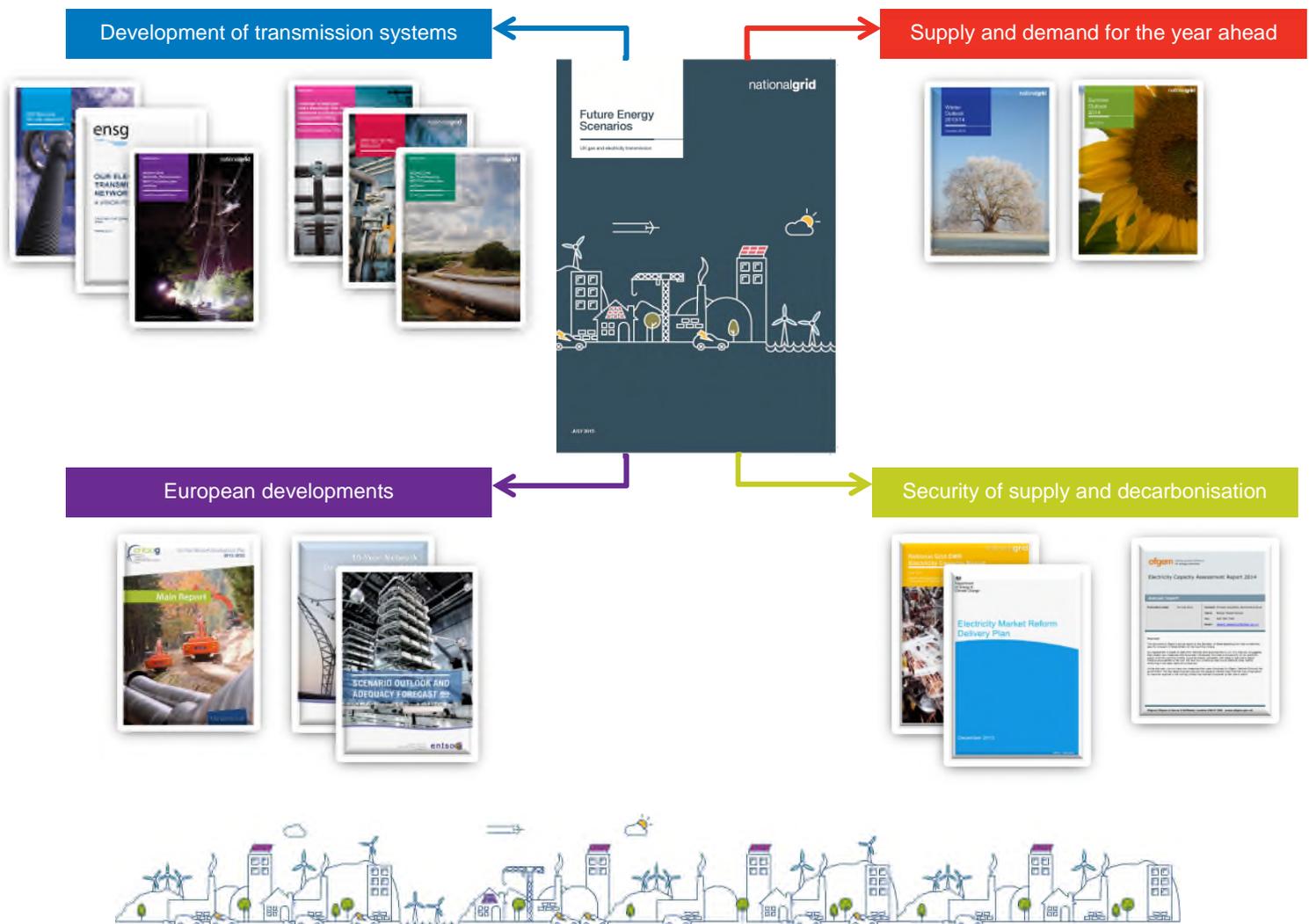
Our stakeholders told us that they want to hear more of our insight within the FES. For 2016, we will develop and improve our signposting to contain more insight and statements about what developments would be required to realise the different scenarios. We will also include '**Spotlights**' to allow us to explore key topics in more detail and consider developments which are not yet at a maturity to be included as an input into our analysis.



Why we create the Future Energy Scenarios

We continue to be in a period of great uncertainty over the future of energy for GB. The economic, technological and consumer landscapes are changing at an unprecedented rate. Against this backdrop it is impossible to forecast a single pathway for our energy future over the long term. By providing a range of credible futures, we can be confident that the reality will be captured somewhere within that range.

At National Grid we use our scenarios as a reference point for a range of modelling activities. They are used for network analysis that enables us to identify potential gas and electricity network investment requirements in the future, as highlighted in the Gas Ten Year Statement and Electricity Ten Year Statement. They are also used in the Electricity Capacity Report which informs Government decisions under the Electricity Market Reform (EMR) programme. DECC's Electricity Capacity Report and our own Winter and Summer Outlook reports are informed by the FES and they feed into the pan-European work of network development planning undertaken through the European Network of Transmission System Operators for Electricity and Gas (ENTSO-E and ENTSOG).



2.1 How do our stakeholders use the FES?

Planning

Information source for market analysis

Benchmarking

Horizon scanning using case studies

Reference document

Provides an overall market view

Compare models and analysis

Future pathways for technology innovations

As we strive to deliver value to all of our stakeholders, it is important that we understand how our stakeholders use the FES. We explored this question across our engagement activities this year. Our stakeholders told us that they use the FES in a variety of ways. Over ten percent of our stakeholders told us that they use it as a reference document throughout the year, whilst 15 percent use it as a benchmarking tool.

*“Sustainability First makes use of the FES scenarios as a **key reference document**, for example, to underpin the modelling for our GB Electricity Demand project. We have a cross-sector interest, but are particularly interested in household load projections. We would find more robust analysis helpful on some aspects of future household load and its innate flexibility, for example, uptake of household electric heat, including new generation storage heaters. Also, likely uptake rates and impact of LED lighting on peak load are very important.”*

Judith Ward, Sustainability First



The role of stakeholders

Our stakeholders are impacted by National Grid and GB's energy future. It is therefore essential that they have the opportunity to understand and debate the scenarios in detail. We are only able to produce a set of credible future energy scenarios through the involvement of our stakeholders from across the energy sector and beyond. This engagement shapes our thinking, allowing us to use the insight gained to drive the evolution of the FES.

Over the last few years we have significantly increased the involvement of our stakeholders in the development of FES. We interact with a diverse range of stakeholders and continue to seek improvements in our engagement year on year.

Through focused enhancements to our stakeholder engagement activities we consulted with 362 organisations this year, up 129 since last year.

3.1 Who we engage with

Energy Industry	160
Customers	56
Small Businesses (incl. individuals)	30
Educational Interest	21
Investors	20
Supply Chain	17
Non-Government Organisations	15
Innovators	14
Political	13
Media	8
Communities and their representatives	3
Consumer Groups	3
Regulators	2

We continue to maintain our relationships with those from the energy industry, whilst also increasing our stakeholder base.

We met with more Supply Chain stakeholders from the **interconnector** industry to improve our data for FES 2016.



3.2 How we engage



Each year we run an engagement process where we consult with our stakeholders, analyse feedback and then create and launch the next round of scenarios. We are always looking to improve our engagement and enhance the accessibility of FES.

We run a whole suite of engagement activities to allow our stakeholders to get involved in a way that suits them. As well as the FES launch event and our extensive programme of bilateral engagement, this year we enhanced our engagement activities by:

- Introducing webinars.
- Creating a dedicated FES website and increasing our online presence.
- Tailoring the content of our workshops and making them more interactive.
- Publishing the 'FES in 5' to complement the full FES document.



Launch event

201 stakeholder organisations

- We trialled a panel approach to hear the voice of various experts.
- We held a bigger exposition to allow more engagement with our team.
- We were oversubscribed so this year we have chosen a larger venue.

When asked “how valuable was the conference to you”, our average score was 7.8/10 (up from 7.4 in 2014).

“It is a good opportunity to get an overview from specialists on where they think the ‘envelope’ of possibilities is for energy development and transmission.”

“I would like to see more interaction with the audience in the auditorium e.g. Q&A”

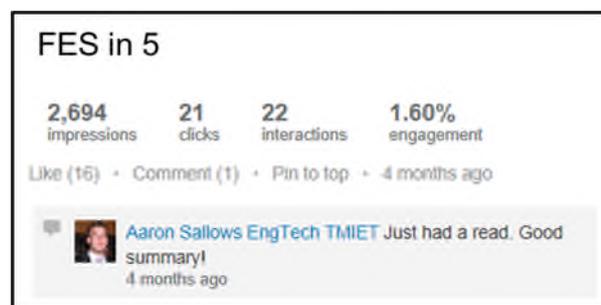
Publications

- ‘FES in 5’ was a new publication introduced in 2015 aimed at stakeholders who use the key messages from our analysis.
- This year we will be printing more copies of our FES document as our stakeholders have told us they find a hard copy useful.

“I find the A5 [FES] book really useful as a reference document instead of having to look online”

“The printed output [is] fantastic”

This is a screen shot of our ‘FES in 5’ post on LinkedIn which includes the engagement statistics:



Workshops

116 stakeholder organisations

- We expanded our locations, holding them in Edinburgh, Nantwich, Warwick and London as well as holding a dedicated 2050 workshop.
- We tailored the content of our workshops to the subjects stakeholders told us they wanted to discuss.
- We made them more interactive, providing the opportunity to visit six focused stations exploring the structure and content of the FES.
- This year we will look to hold workshops in Cardiff and Brussels based on feedback.

When asked “how valuable was the event to you”, our average score was 7.4/10. This is our benchmark and we will aim for a higher score for FES 2016.

“It was useful to go round the six different ‘stations’ to have a chance to feedback on those areas of the scenario formulation. The round table discussions were also very useful.”

“Very interesting range of people and opinions. Interesting to understand how National Grid operates. Really enjoyed talking ‘energy modelling’ with people who understood these things!”

Webinars

118 stakeholder organisations

- We trialled a series of webinars to explore if our stakeholders would find this a useful way to engage with us. We hosted three webinars covering topics of electricity supply, gas supply and electricity demand.
- We were clear on the specific webinar focus to allow the audience to be tailored. This allowed us to share information and gather input into specific FES topics (e.g. air conditioning).
- We asked the webinar attendees to provide us feedback online. We have gathered qualitative data both on FES specific topics and on how the webinars were run, which we will take into account for FES 2016.

Feedback helpful for our next round of webinars: *“I recommend USB microphones - happy to share best practice in what we have trialled for our webinars.”*

“[It was] useful to stop and hear commentary and questions.”



Bilateral sessions

73 stakeholder organisations to date

- We have held meetings with 73 stakeholder organisations and we have 44 more bilaterals planned before the FES 2016 launch.
- Bilaterals give us the opportunity to explore the specific detail needed to input into our FES analysis.

"We have found the 1-2-1 engagement meetings very useful and would like to set up more"

"Happy with the timing of the bilaterals...it is good to talk to National Grid during the analysis period and also after the launch"

Online presence

- We launched a dedicated FES website, with over 5,500 visits.
- There have been over 2,300 visits to the FES document download page.
- We have increased our use of social media. Using blog posts we shared three case studies which received 744 reads so far.
- We launched five online surveys asking our stakeholders for feedback on our events and our publications.
- We have over 1,300 subscribers to our FES emails.

"I've found the Future Energy Scenarios to be a very useful overview to the way energy is generated, transmitted, distributed, balanced and consumed today. By describing technical details in non-technical language, it enables the interested observer to engage with the big challenges and decisions being made to respond to the energy trilemma. I have shared the succinct 'FES in 5 minutes' widely with colleagues who want an insight into these challenges and the opportunities that may arise."

Daire Casey, West Sussex County Council



Stakeholder feedback and what it means for FES 2016

The feedback we receive from our stakeholders drives the development of our FES. In considering this feedback we explore each comment and consider it against the themes we are hearing from across our stakeholder engagement. There may be outliers that go against the majority of what our stakeholders are saying or feedback that cannot be allocated to the framework by which we develop our scenarios. In this section we will explore the feedback and demonstrate what it means for FES 2016. We split the feedback into two categories: structural and content specific.

4.1 Structural feedback and what it means for FES 2016

You said....

For FES 2016 we will....

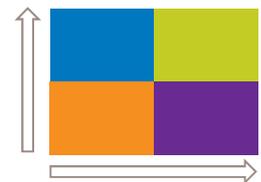
You want consistency between iterations of the FES.

We will maintain consistency with FES 2015. We will maintain the look and feel of the FES and throughout development we will keep the desire for consistency in mind, making changes where demonstrably required.

"It's important to have consistency and track how the scenarios have changed overtime."

You like the security of supply rules and the use of four scenarios in a 2X2 matrix.

We will continue using the security of supply rules and the four scenarios in a 2X2 matrix with the same axes titles.



The Levy Control Framework (LCF) should not be a fixed rule as it can change and is short term.

We will make the LCF an assumption.

"Isn't the LCF just an input?"



You like how we used the PESTE structure to give an overview of the four scenarios, but found our secondary assumptions unclear.

We will use a more structured approach to FES development (the Scenario Framework) and PEST* structure to group and display our assumptions.

"You should tie up the connection between assumptions and PESTE."

You want us to be clearer on our use of terminology ('power', 'energy', 'electricity').

We will ensure clarity and consistency in our definitions.

"Which power? Electricity or gas, the word power is confusing."

You would like to hear more of our insight in the FES.

We will develop our signposting to contain more insight and statements about what developments would be required for key elements within a scenario to be realised. We will also include '**Spotlights**' to allow us to explore and offer our insight on key topics.

"[It is] interesting to know more about National Grid's own thoughts on questions."

You like the names 'Gone Green' and 'Slow Progression', but you would like 'Consumer Power' and 'No Progression' changed.

We balanced this up against the desire for consistency and will not change any of the scenario names for FES 2016. Instead we will include greater narrative to support the names.

"If the principle of the scenario fundamentally changes then change the name. If changes to the scenarios are evolutions then don't change the name."

75% of stakeholders want to **keep the names** 'Gone Green' and 57% want to keep 'Slow Progression';

59% of stakeholders said to **change** 'Consumer Power'; and 66% to change 'No Progression'.

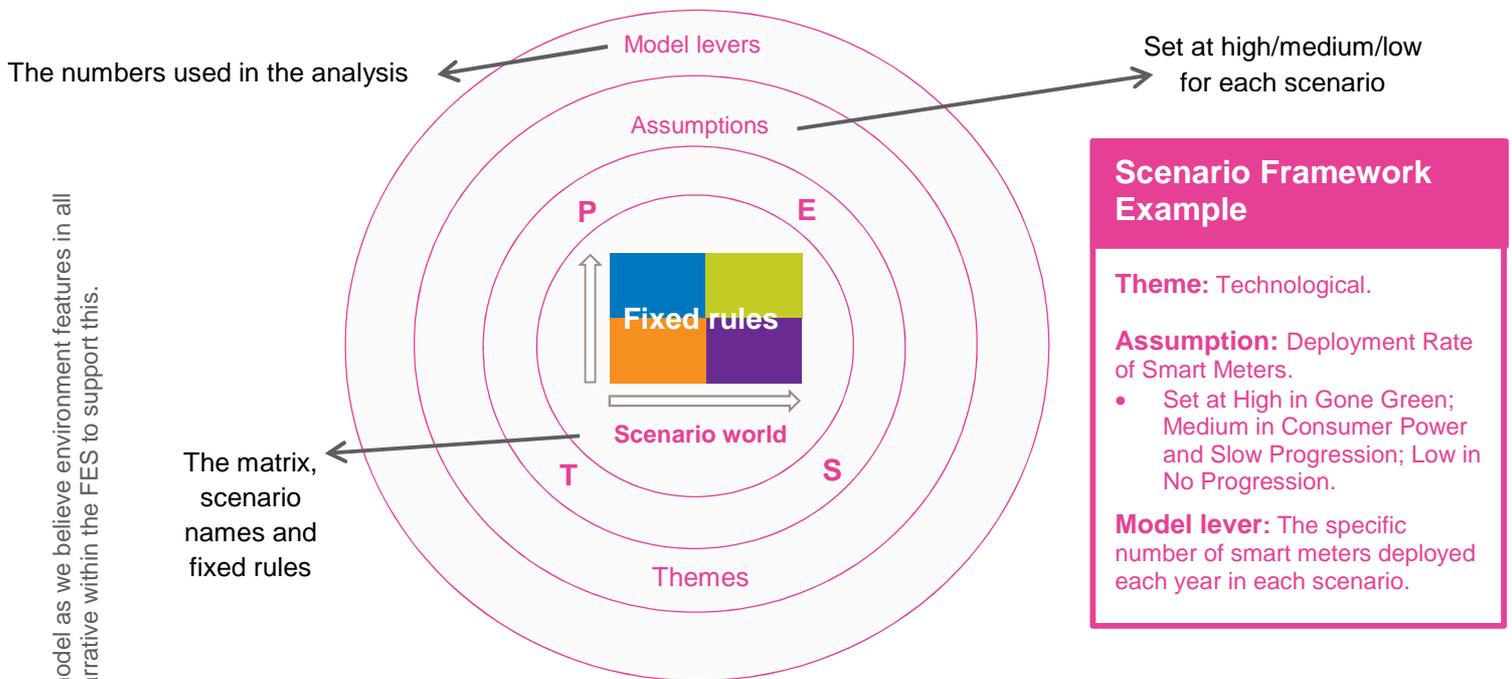
*This year we are using the shortened PEST model as we believe environmental factors feature in all the other elements of PEST.



4.2 The Scenario Framework

The Scenario Framework introduces a more structured approach, providing a single reference document to group all the inputs and assumptions that we use to build our scenarios.

We believe this approach will ensure consistency across all of our analysis. It allows us to identify and group all the inputs into understandable and clear themes. Stakeholder feedback is central to the discussion of each element of the framework. We hope that as well as driving more consistency in our approach it will meet our stakeholders' desire to understand better how we develop our scenarios.



Central to the Scenario Framework is the scenario world. This effectively captures the core elements which are fixed in each of our scenarios: the matrix, scenario names and fixed rules.

The next layer introduces the scenario themes: Political, Economic, Social and Technological (PEST*). The themes were chosen as our stakeholders told us that they like and understand the use of PEST.

Sitting beneath each theme are all the assumptions which feed into the scenarios. Each assumption will be set at High, Medium or Low for each of the four scenarios.

The final layer of the framework is the specific model levers which are input into the analysis in line with the level set for each assumption.

*This year we are using the shortened PEST model as we believe environment features in all the other elements of PEST. We will include narrative within the FES to support this.



4.3 Content specific feedback and what it means for FES 2016

In this section we explore the key themes emerging from our stakeholder engagement with regards to the content of our scenarios and what this means for FES 2016. Obviously our stakeholders provide a whole wealth of detailed information that is used in our scenarios; this section reflects a summary of this.

You said....

For FES 2016 we will....

Interconnectors

Consumer Power should have more interconnection.

We have developed a new capacity model for the analysis of interconnectors. Using this we have validated what our stakeholders have told us and for FES 2016 Consumer Power will have more interconnection.

Last year we said we were going to improve our interconnector methodology, have we done this? For example, we don't take into account what is happening across the EU in terms of interconnection flows.

For FES 2016 we have implemented a more robust method and introduced a generic timeline for interconnector development so we can understand the minimum time it takes to connect.

We have commissioned Baringa to undertake European modelling work to deliver FES 2016 annuals and peaks which considers flows across Europe. We are currently out to tender for the enduring European model which will be used from FES 2017 onwards.

"This year we have consulted with 25% more stakeholders including those from the supply chain, political, regulatory and customer groups. As a result of this we will be changing a number of our modelling inputs, including building rate (offshore cable jointing changed from 2 days to 5 days, offshore cable laying rate changed from 10km/day to 5km/day) and inputs associated with assumed build type."



Dave Wagstaff, Balancing Analyst



Electricity Supply

It would be really useful to understand how load factors will change over the study period.

We will consider how we might be able to show load factors within our scenarios and aim to include this in FES 2016.

We should be more aggressive in how deployment of new technologies is reflected, e.g. marine.

We base our technology projections after engaging with a variety of stakeholders and include those technologies which demonstrate clear evidence of deployment. Within FES 2016 we will include a number of **'Spotlights'** for technologies where there is currently insufficient data to include as a direct input to our analysis.

We should take into consideration the increasing influence of small-scale generation on the electricity supply mix. We should consider a fully decentralised scenario.

FES 2015 saw Consumer Power reach 40 percent small-scale decentralised generation by 2035, doubling from today's level. The Government has signed multiple large-scale generation contracts going 15-35 years out; as such none of our scenarios will be fully decentralised. We are working on improvements in our understanding of the volume and type of small-scale generation and the interactions with large-scale generation. We aim to include more on this in FES 2016.

"We will be using the results of our webinar in order to validate our 2016 analysis. Stakeholders mostly agreed with our projected range for onshore and offshore wind. Most stakeholders felt that our solar projections don't reflect current market conditions so we will revisit our solar assumptions. Most stakeholders felt coal would close earlier than in our 2015 scenarios – we will also revisit our plant closure profile."



Janet Coley, Electricity Supply Analyst



Electricity demand

There is greater potential for demand side response (DSR) to be reflected in the FES.

For FES 2016 we will look to improve the process for creating scenarios for Triad avoidance, which form a major part of our Industrial and Commercial Demand Side Response (DSR) scenarios. We are working closely with National Grid's 'Power Responsive' campaign around engagement with the demand side industry, allowing us to increase the range of stakeholders we see in this area.

You told us that our residential demand scenarios were too high. Some of you said that we had not properly taken into account pending EU energy efficiency legislation which will have a measurable effect on future demand.

We will gather more data on EU energy efficiency legislation and reflect it in the scenarios which feature greater energy efficiency. For the less energy efficient scenarios, we continue to believe it is credible for residential demand to increase if conditions change, if a new technology is adopted or if technology is used to enhance quality of life rather than save energy.

For residential air conditioning, over 40% of those who attended the webinar felt our projections were too high in Consumer Power, whereas for the other scenarios the feeling was our projections were about right.

We will revise our projections for residential air conditioning in Consumer Power.

How about using different population and housing growth scenarios?

We use a single forecast for population and housing growth across our scenarios. This allows easy comparison between the scenarios and the impact of scenario components to be highlighted more effectively e.g. energy efficiency, technology adoption, heating demand.

All smart meters should be in by the end of 2020.

In our Gone Green scenario the rollout programme is completed in 2020. We believe it is prudent that our other scenarios model futures where differing rollout scenarios are experienced.



Gas demand

The Natural Gas Vehicle (NGV) market is heading towards pure gas vehicles rather than hybrids.

For FES 2016, we will review our NGV analysis to focus on pure gas vehicles.

You would like to see more depth to our district heat analysis.

We have a district heat model, created in collaboration with Buro Happold, that explores opportunities for district heat giving a richer picture of deployment in the UK. For FES 2016, we will advance this project to allow an extra layer of depth to be included in our analysis.

You believe that the 20 percent reduction of gas demand per house identified in Gone Green and Slow Progression through a Home Energy Management System (HEMS) is too ambitious.

We will review the gas demand reduction associated with a HEMS for FES 2016. We will continue to gather more data on new technologies to enhance the inputs to our analysis.

You are surprised that low carbon heating uptake is not more prevalent in Slow Progression; you would expect it to be closer to Consumer Power.

We will re-evaluate the assumptions in our heating technology model.

“Our stakeholders told us they wanted to see more detail in our district heating analysis in the FES. This year we started an innovation project working with Buro Happold to investigate suitable locations for district heating in Great Britain. Having this information will give us a better view on gas and electricity demand in our scenarios. Recently we shared our findings with the Energy Networks Association's Gas Futures group to get their thoughts.”



Iain Shepherd, Energy Demand Analyst



Gas supply

Locally produced shale gas should be greener in terms of overall lifecycle carbon emissions than liquefying gas in the Middle East, shipping it several thousand miles to the UK and re-gasifying it.

We do not reflect lifecycle carbon emissions as an input to our analysis as current carbon accounting does not include emissions incurred from activities outside the UK. For FES 2016, we will look to explore this further in a '**Spotlight**'.

It is unrealistic to say that no infrastructure will close; by 2035 some of the facilities will be quite old.

We acknowledge this can be seen as a limitation in our analysis, however we do not assume a facility will close when the owner of the facility has not made such a decision public. However, for FES 2016 we will consider whether an objective means of reducing capacity, possibly based on age of facility, can be developed.

We should consider alternative sources of gas supply such as bio-synthetic natural gas (SNG) or hydrogen from electricity to gas schemes.

We will investigate this further in a '**Spotlight**' for FES 2016. We already consider biomethane, principally from anaerobic digestion, but have not so far considered bio-SNG, gas from waste or hydrogen from electricity to gas schemes. These are all potential sources that are more likely to connect to the distribution networks than the transmission network and we are in dialogue with the gas distribution networks to understand the maturity of these technologies.

The balance between LNG and continental gas is 'unknowable' and we should not demonstrate any sort of split as this would imply an unwarranted level of confidence.

Market intelligence at the moment, both from our stakeholders and commercial sources, is that LNG availability is likely to be high for at least the next 5 years. There may be some scope for increasing the LNG minimum level slightly and reducing, but not removing, the 'generic import' category. We will continue to engage with our stakeholders on this and review for FES 2016.



“Engaging with stakeholders allows us to check our modelling against other industry players, experts in their field, and confirm that our assumptions are reasonable. Stakeholders have given us useful pointers to new sources of information. We believe that by engaging with stakeholders we produce gas flow scenarios that are more credible than would otherwise be the case.”



Simon Durk, Gas Supply Manager

2050

We should include further analysis on aviation and shipping as they will dominate emissions in 2050.

For FES 2016 we will enhance our 2050 analysis regarding shipping and aviation emissions.

There should be more than one scenario meeting the 2050 carbon target.

Whilst Gone Green is the only scenario to meet the carbon target, for FES 2016 we will share sensitivities that demonstrate there are other ways of meeting them.

Electricity storage

We should include electricity storage in the scenarios – Gone Green and Consumer Power provide the best environments for electricity storage to prosper.

We have engaged with developers and the value proposition has improved for storage, therefore, we will include electricity storage penetration in the FES 2016 analysis – focusing growth in Gone Green and Consumer Power. This will cover transmission, distribution and behind the meter electricity storage.



Overview of FES 2016

In line with our stakeholders' feedback, as far as possible we are seeking to ensure consistency between FES 2015 and FES 2016. The high level overview of FES 2016 highlights in green where amendments have been made from last year. This reflects feedback from our stakeholders and seeks to clarify the content of each scenario.



5.1 What are the key changes in the FES 2016 overview matrix?



We have increased the economic growth rate in Gone Green and Consumer Power in line with intelligence we have gathered. This was also validated by feedback from our stakeholders.



We have highlighted the approach and drivers of innovation across the scenarios.



There is lower policy intervention in the scenarios which have less focus on green ambition.



We have explicitly identified the level of expected European harmonisation across the scenarios as our stakeholders felt this was an important aspect.



Gone Green will continue to meet the 2050 carbon reduction target. However, it will not be forced to meet the 2020 Renewable Energy Directive target of 15 percent of UK energy coming from renewable sources. This reflects that although significant progress has been made towards the target, with 2020 only four years away it is very challenging to meet. This is consistent with feedback from our stakeholders which questioned the credibility of Gone Green meeting this target and is reflected in the summary of the Gone Green scenario. Further analysis will be undertaken through the FES 2016 cycle and we will identify what needs to happen to reach the 15 percent target.

Comments from stakeholders at the autumn workshops:

"A high growth economic case is needed."

"It's important to have consistency and track how the scenarios have changed over time."

"Scenarios are too GB focused and not international."



Future Improvements

We continually strive to improve our stakeholder engagement activities and enhance the richness of our scenarios. Over the coming year we plan to:

Introduce a more targeted approach to stakeholder engagement

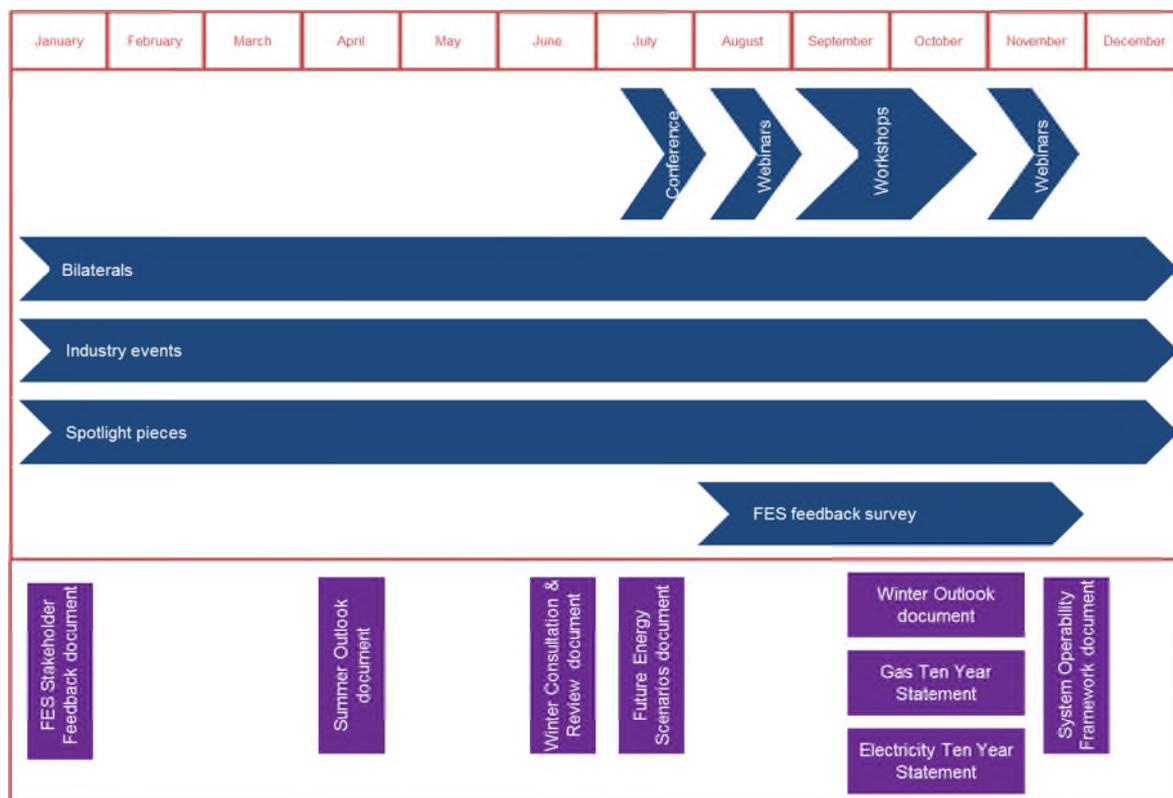
- Target specific conferences/events to share FES.
- Engage with key trade bodies/associations/interest groups and local authorities.
- Enhance our European engagement.

Maintain great relationships with our current stakeholders

- Improve our engagement methods by understanding the value each type delivers to our stakeholders.
- Do more to share our work throughout the year, using social media, webinars and focus groups.

Continue to explore other ways to engage.

6.1 Planned 2016 Engagement



Types of organisations we engaged with in this year's consultation

Stakeholder Group	No. of organisations consulted	National Grid's corporate stakeholder groups
Communities and their representatives	3	Impacted local communities Local authorities/ parish councils Local campaign groups Local impacted residents
Consumers	3	Consumer groups
Customers	56	Connections customers Directly connected demand Distribution Network Operators Energy suppliers Generators Interconnectors Shippers Terminal operators
Educational interest	21	Academics Schools and Universities Students
Energy Industry	160	Balancing service providers Consultants European networks European TSO associations Industry bodies Offshore gas companies Offshore transmission owners Operating margin providers Scottish transmission companies Small generators Small renewables
Innovators	14	Environmentalists Manufacturers Technologists
Investors	20	Shareholders
Media	8	Discussion forums Newspapers and Magazines Radio Social media Television
Non-Government Organisations	15	Environmental groups Interested groups



Types of organisations we engaged with in this year's consultation

Stakeholder Group	No. of organisations consulted	National Grid's corporate stakeholder groups
Political	13	Devolved administrations European administration Members of European Parliament Members of Parliament UK government UK government bodies
Regulators	2	European regulatory bodies UK regulatory bodies
Small Businesses	30	Individuals Local community businesses
Supply Chain	17	Partners Suppliers

"In the last two years or so, we have used the FES documents as the starting point for our analyses of the long term GB power market. We have found that the four scenarios provide a good range of potential demand and generation/energy mix with their supporting stories to reinforce our message to client that the outlook is extremely uncertain and that they should adopt a sufficiently flexible strategy or other risk mitigation measures. We have tended to focus most on the implications for generation capacity of various scales and types, as well as DSR and storage, however we have also used the FES views on heat for examining district heat and System Marginal Price (SMP) options. Our clients seem to be reassured that the projections in FES have been developed through a broad stakeholder consultation process and therefore are grounded, rather than being too academic."

Guy Doyle, Mott MacDonald



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