Annex A6.07 – Frontier Golden Thread Assessment December 2019

As a part of the NGET Business Plan Submission

nationalgrid



ENGAGEMENT AND RESEARCH CONCLUSIONS ASSURANCE

A report prepared for NGET

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1 INTRODUCTION AND OVERARCHING CONCLUSIONS

1.1 Introduction

National Grid Electricity Transmission (NGET) has commissioned Frontier Economics to carry out an assurance of how its stakeholder engagement has been reflected in its July draft business plan. The aim of this work has been to identify whether the proposed actions in NGET's business plan are supported by the stakeholder evidence that NGET has carried out. We have also assessed how well the logic between stakeholder evidence and business plan actions has been documented, and identified any gaps or areas for improvement, either in the engagement logs or in the draft business plan. We note that there are limits to the extent we are able to validate all aspects of how NGET has developed its plan from stakeholder feedback, based on the limits of our own expertise. For example, where NGET has identified a set of technical engineering solutions to address a stakeholder need, we are unable to confirm whether the solutions are optimal from an engineering perspective.

In section 2 we set out more detail on our process, but at a high level we have undertaken the following steps for each chapter of the July draft business plan (covering chapters 7 to 13 of the plan, which are the stakeholder priority-based chapters):

- identify proposed actions in the draft business plan;
- review NGET's engagement logs (which are a summary of the stakeholder engagement carried out to date, and the conclusions from those engagements), and any other relevant evidence from ongoing research;
- provide a view on whether there appear to be any issues with the robustness of the evidence set out in the engagement logs or other materials;
- identify the key conclusions from the engagements, and whether these support the actions in the business plan;
- come to a view on whether the logic between the engagement conclusions and the business plan actions is clear and well documented;
- identify any material areas where stakeholders have expressed contradictory views, and give a view on whether the actions proposed are suitable and whether the decision-making process is clear; and
- identify any other gaps or areas for improvement that we think exist in mapping the engagement conclusions to the business plan actions.

1.2 Key conclusions

Our overarching conclusions are as follows. More detail can be found on specific conclusions for each chapter in the body of this report.

Stakeholder support for proposed actions.

Broadly we found that the stakeholder evidence supported the actions proposed in NGET's draft July business plan. There were a relatively small number of areas where we feel that the stakeholder evidence itself could be strengthened, but we did not find any material areas of discrepancy between stakeholder views and the proposals in the business plan.

There are some areas where we feel the documentation of the key messages received from stakeholder evidence, the link between the evidence and the actions, or the actions themselves, could be improved. These are set out below.

Documentation of evidence

- In our review we found cases where it was difficult to trace which evidence was feeding into each of the actions in the business plan. To improve the traceability from the actions back to the evidence, NGET could include a short upfront section or table in each engagement log, or in a separate document, setting out for each chapter:
 - each key conclusion from the stakeholder evidence (these should match the key conclusions set out in the business plan, so they can clearly be traced across);
 - □ which engagements these conclusions have been drawn from; and
 - which stakeholders those conclusions represent.

Logic between stakeholder evidence and actions

- As mentioned above, we found in most cases that the proposed actions were supported by the stakeholder evidence set out in the engagement logs. However, it wasn't always clear how NGET had decided on those specific actions, rather than other potential actions. In particular:
 - Sometimes the conclusions from the stakeholder engagement were fairly broad (e.g. "reliability is a priority"), but the actions were very specific (e.g. "we will collaborate with the ESO to reduce the outage impact on the network".) While the specific actions did address the stakeholder views, it could be made clearer how these specific actions were identified and decided on.
 - Some actions clearly help deliver stakeholder priorities in general, but it is not obvious whether they address specific details that come through in the stakeholder feedback. This could be clarified.
 - A small number of actions did not seem to directly address the stakeholder views. In these cases we feel that either the actions should either be adjusted to more directly address the views, or if NGET feels that it would not be feasible/suitable to address the views, this should be explained, either in the engagement log or the business plan, in order to better justify the action NGET has adopted.
 - More broadly, we feel it would be helpful to show recognition of feedback that NGET has heard but may disagree with, where such cases arise.

Suitability of proposed actions

- A small number of the proposed actions in the business plan are somewhat vague and at the end of T2 it may be difficult to assess whether they have been delivered or not (e.g. providing organisational leadership). In these cases we feel that it would be beneficial to make these actions more specific, setting out in more detail how they will be achieved, and ideally measurable targets if possible. Where there is a view that measurable targets may be difficult to develop, or may only be developed over time, this should be explained.
- Not all actions in the business plan need to be supported by stakeholders, and we feel NGET could add more clarity around these. In particular:
 - some actions are required of NGET, such as those that are mandated by legislation and/or its licence;
 - Other actions would be the most suitable course of action regardless of stakeholder views, for example they are unambiguously the most cost effective course of action. While stakeholder support for these actions is still very valuable, we feel that NGET could be clearer that the key driver of those actions is legislation/cost efficiency/etc; and
 - in some cases it isn't clear to what extent NGET's proposals are meeting obligations, and to what extent they are going beyond these obligations. For example on the environment topic, it isn't always clear how much of the proposed carbon emission reductions are required, and where NGET is going beyond requirements because it considers stakeholder evidence supports this.

1.3 Report structure

The remainder of this report is structured as follows. Section 2 provides more detail on our methodology for this assurance. Section 3 provides an overview of some overarching consumer evidence that NGET has gathered. Sections 4 to 10 provide the findings of our reviews of each business plan chapter and the associated engagement materials. Section 11 sets the conclusions of our work. The annexes contain detailed tables setting out more detail on our review of each chapter.

2 METHODOLOGY

NGET has asked us to provide assurance as to whether the actions proposed in its draft July business plan reflect the stakeholder views and evidence set out in its engagement logs. The scope of our review has therefore included:

- Iooking at the engagement logs, and any relevant stakeholder evidence that has become available since the log was finished, to identify whether the summary of stakeholder feedback presented in the business plan is consistent with the engagement log;
- then identifying whether the proposed actions reflect the conclusions from this evidence, i.e. the consistency between stakeholder messages and actions;
- determining whether there is a clear logic and audit trail between the engagement conclusions and the business plan actions, so that readers can understand clearly how NGET has decided on the proposed actions; and
- identifying whether we believe there are any issues with the robustness of the stakeholder evidence, based on the summaries provided in the engagement logs.

This assurance work has not included a review of the underlying materials for the various stakeholder engagement activities in order to confirm that the engagement log accurately reflects the underlying evidence. It has also not included an assurance of how NGET has drawn conclusions from the outcomes of the various stakeholder engagement activities. We have used the engagement logs as provided as the main inputs to our work, and have not reviewed the material feeding into those logs.

Our review has been undertaken in three main stages, as described below.

Step 1: Identify business plan actions that have been informed by stakeholder engagement

- We have reviewed NGET's 1 July draft Electricity Transmission business plan, and identified the key proposed actions for each chapter. These actions are set out in each business plan chapter in a table titled "our proposals for the T2 period".
- We have also identified the stakeholder views used to justify these actions, as described in the business plan.

Step 2: Review of supporting documentation

Next, we reviewed the documentation that NGET has produced based on its stakeholder engagement findings, and the process it has followed to translate these findings into business plan actions.

NGET provided us with the following documents to review:

- 1. A summary table of all the engagements relevant to each chapter;
- 2. Engagement logs for each chapter;
- 3. NGET's decision making principles; and

4. Golden thread posters.

In assessing these materials, we first reviewed the engagement logs to answer the following questions:

- What has been heard and what can National Grid conclude from it?
- Does the evidence appear to be robust?
- Are there any particularly diverse views? How have they been taken into account?

For each engagement log, we recorded our findings in the template shown below. These detailed tables can be found in the annexes to this report.

Figure 1 Assessment of evidence in engagement log

Document	[text]
What has been heard (key findings)?	[text]
Who has it been heard from (stakeholder types)?	[text]
What are the key types of engagement?	[text]
Are there particularly diverse views or consensus?	[text]
What can be concluded?	[text]
Do there appear to be any issues with the robustness of the evidence?	[text]
Which actions in the business plan is this evidence relevant to? (Include refs.)	[text]
Does this evidence broadly support the actions? Why?	[text]

Step 3: Assessment of whether the evidence in the engagement supports the actions identified in step 1

Next we reviewed each of the business plan actions, and for each action assessed whether this was supported by the evidence in the engagement logs. We considered the following questions:

- Does the engagement evidence support the proposed action in the business plan?
- Is there a clear logic and audit trail from these conclusions to the proposed actions in the Business Plan?
- Are there any other gaps in the engagement logs or business plan that need to be filled?

For each proposed action, we recorded our findings in the template shown below. These detailed tables can be found in the annexes to this report.

Business plan action:	[text]	
Supporting documents	[text]	
Does the evidence support the business plan action? Why/why not?	[text]	
Does the justification in the business plan match the conclusions from the engagement log?	[text]	
Is there a clear audit trail of how the decision has been made?	[text]	
Are there any gaps?	[text]	

Figure 2 Action-by-action assessment

Following this process, for each chapter we have provided a view on whether the stakeholder evidence broadly supports the proposed actions in the business plan, and whether the logic between the evidence and the actions is clearly recorded in NGET's documents. Our conclusions mainly fall into one of the following categories:

- the logic between how the supporting evidence has informed the business plan actions is clear and well justified;
- it is not clear how the business plan actions have been decided on, so a clearer audit trail is needed;
- the decision making process is clear, but it is not clear that the right decision has been taken given the underlying evidence (e.g. there may be a lack of consensus in the feedback). National Grid may need to reflect the lack of consensus / change the proposed actions / collect more evidence; or
- we may not be able to conclude on certain areas if they go beyond our expertise, but we will give a high-level view to the extent possible.

We have also highlighted in each section any areas we identified where NGET has had to make trade-offs in satisfying diverse or contradictory views from different stakeholders. In these cases we describe what the conflict of opinion was, how this has been translated into actions in the business plan, and whether we feel that NGET's proposed actions are reasonable in the context of the diverse opinions. We also highlight where we feel that there is not enough documentation around how NGET decided on the proposed action given the conflicting views.

For each chapter our key findings, and any gaps or areas for improvement, are set out in sections 3 to 10 of this report. The annexes to this report contain the detailed tables documenting our review, and setting out more detail on any gaps identified.

3 OVERARCHING CONSUMER EVIDENCE

While each of the following sections addresses chapter-specific stakeholder evidence, and the extent to which this supports the actions in the business plan, NGET has also recently commissioned some overarching consumer research to understand consumer views on its July draft plan, and also how consumers value different services. In particular:

- NERA and Explain have carried out a willingness to pay study for the GB transmission owners: National Grid Gas Transmission (NGGT), NGET, SP Transmission and Scottish Hydro Electricity Transmission;
- NGGT and NGET have also commissioned eftec and ICS to carry out research to test whether consumers agree with the proposals in their draft business plans ("acceptability testing"). NGET has now received initial findings from this research; and
- Explain has carried out consumer research for NGGT and NGET, using a "slider tool" to understand how consumers value various services.

These pieces of consumer research include specific findings that are relevant to various topic areas. We have endeavoured to cover those findings within our assessment of each topic area in the following sections. However by way of context, this short section sets out the high-level messages, which are relevant across the whole business plan, that we have gathered from this research. We also set out whether the evidence supports the overall business plan or not.

3.1 Willingness to pay study

NGET provided us with a WTP study, undertaken by NERA and Explain in 2019. This study included stated preference surveys: one each for domestic and nondomestic gas end users. The surveys used a mix of face-to-face and online methods.

The two electricity surveys mainly aimed to test the WTP for nine attributes related to the service provided by NGET:

- risk of power cuts;
- recovering from blackouts;
- undergrounding overhead lines (OHLs);
- improving visual amenity of OHLs;
- improving environment around transmission sites;
- investing in innovation projects to create future benefits for consumers;
- supporting local communities;
- investing to make sure the network is ready for electric vehicle charging; and
- investing to make sure the network is ready to connect renewable generation.

We found that the WTP study is generally relevant, robust and valid. It provides a very useful way of understanding the trade-offs consumers make between different priorities. However, given the general issues associated with WTP studies, including the fact that respondents are faced with complex choices, that they may

not have had experiences that allow them to value certain services, and lossaversion, the specific monetary values produced should be treated with some caution.

The key findings for NGET of the willingness to pay study are set out in the tables below. These clearly show that consumers are willing to pay material absolute amounts over and above their current bills each year for a range of service quality improvements and wider actions that NGET could take. Many, if not all, of these service improvements and wider actions are reflected in NGET's business plan.

For example, NGET is committing to lower its energy not supplied (ENS) figures, and this is supported by the willingness of consumers to pay for decreases in the hours of powercuts at a 1.5% probability. NGET is also making a variety of commitments around visual amenity, environmental improvements, innovation projects, and the other areas covered by the willingness to pay research. We feel this provides good support for the proposed actions currently in the draft business plan.

Attributes	WTP (£)
Risk of powercuts	
2 hours decrease in the hours of powercuts at a 1.5% probability	7.7
4 hours decrease in the hours of powercuts at a 1.5% probability	9.7
Every fewer day to recover from a blackout	3.5
Undergrounding Overhead Transmission Lines	
20 miles additional underground in National Parks etc.	6.8
20 miles additional underground in other areas	6.4
Improving visual amenity of Overhead Transmission Lines	
Additional visual impact work in National Parks etc.	4.1
Additional visual impact work in National Parks and other areas	4.8
Additional transmission site environment improved	
25 additional sites	8.9
45 additional sites	10.7
Investing in innovation projects	
Medium Scale Projects compared to Small Scale Projects	2.3
Large Scale Projects compared to Small Scale Projects	3.1
Supporting local communities	
Current level of community activities	8.2
Current level of community activities and additional funding to charities	8.4
Investing in EV Charging Infrastructure	
Invest before definite need	9.5
Investing in infrastructure to connect to renewable generation	
Invest before definite need	11.7

Figure 3 Recommended domestic electricity willingness to pay values (£/consumer/year)

Source: NERA, Explain, "Estimating Electricity and Gas Transmission Consumers' Willingness to Pay for Changes in Service during RIIO2", page v

Figure 4 Recommended non-domestic electricity willingness to pay values in percentage (% bill/consumer/year) and monetary terms (£/consumer/year)

Attributes		WTP (%) WTP (£)	
Risk of powercuts			
2 hours decrease in the hours of powercuts at a 1.5% probability	1.20%	43.30	
4 hours decrease in the hours of powercuts at a 1.5% probability	1.86%	66.95	
Days to recover from a blackout			
2 fewer days to recover form a blackout	0.67%	24.15	
Undergrounding Overhead Transmission Lines			
20 miles additional underground in National Parks etc.	1.25%	45.02	
20 miles additional underground in other areas	1.27%	45.90	
Improving visual amenity of Overhead Transmission Lines			
Additional visual impact work in National Parks etc.	0.76%	27.36	
Additional visual impact work in National Parks and other areas	0.94%	33.68	
Every additional transmission site environment improved	0.05%	1.68	
Investing in innovation projects			
Medium Scale Projects	0.29%	10.56	
Large Scale Projects	0.29%	10.56	
Supporting local communities			
Current level of community activities	0.53%	19.23	
Current level of community activities and additional funding to charities	0.53%	19.23	
Investing in EV Charging Infrastructure			
Invest before definite need	0.90%	32.38	
Investing in infrastructure to connect to renewable generation			
Invest before definite need	1.08%	38.89	

Source: NERA, Explain, "Estimating Electricity and Gas Transmission Consumers' Willingness to Pay for Changes in Service during RIIO2", page vii

3.2 Acceptability testing

The acceptability testing carried out by eftec and ICS involved presenting the key investment proposals in the Business Plan to consumers along with their individual bill impacts. Consumers were asked their views on the individual elements of the plans; and the overall plan and total bill impact. Focus group analysis informed the design of the survey, and the design of the survey was tested through face-to-face 'cognitive interviews'. While we haven't seen the underlying survey materials, we found that the research was generally relevant and representative. However, we note that as with any survey, it may be difficult for consumers to comment on aspects of service that they have not experienced (e.g. reduced reliability).

Initial findings from the acceptability testing show that 88% of respondents stated that the ET plan and bill impact (an additional $\pounds 0.98$ /household/year on a current $\pounds 25$ /household/year) was acceptable or very acceptable. This was based on a household survey of 1,862 respondents.

The findings reported strong support for NGET's plan. Only 7% of respondents felt that the plan and bill impact were not acceptable, and the main reasons stated were that investments should be made from the current bill amounts, objection to paying a higher bill, and energy companies making too much profit. None of these reasons appear to take issue with specific actions or investments proposed by NGET, so the actions proposed in the business plan appear to be reasonable and well supported by consumers.

When looking at individual investment areas, in most areas over 60% of consumers agreed with the proposed investment and felt that the bill impact of the investment was acceptable. However, a few areas had below 60% support for both the proposed investment and the impact on bills:

- maintaining condition of overhead lines, pylons, underground cables, and substations (58% support for investment and bill impact);
- installing new infrastructure for fast charging of electric vehicles (51% support for investment and bill impact); and
- supporting local communities (59% support for investment and bill impact).

However, there is still majority support for these proposed investments and their bill impact. Also a large majority of consumers support the overall plan and bill impact. From this we conclude that the balance of evidence suggests that the plan is well supported. Nevertheless, NGET may want to consider exploring in more detail why consumers feel that these investments or their bill impact is not suitable, and whether anything can be done to address this, in particular in the areas where there was weaker support.

3.3 Service valuation using slider tool

Explain's service valuation research used a bespoke interactive "slider" tool to test the views of household consumers on the following key areas of the business plan:

- reliability;
- innovation;
- moving to a greener economy;
- the environment;
- supporting communities; and
- visual impact of infrastructure.

The research used a combination of face-to-face and online interviewing, and covered 1,047 respondents on the electricity survey. We find that the slider tool is a helpful method to help consumers understand the trade-offs and communicate their priorities.

The research found that on average, respondents were willing to pay £1.44 more on their electricity bill to see their desired options implemented.

The research had a number of findings across various topics, and these are addressed where relevant in the following sections. However, overall we feel that NGET's plans are in line with the preferences emerging from this research. For example:

- The research found that the majority of customers wanted NGET to maintain currently levels of reliability (54%) or increase future reliability (33%). This is reflected in NGET's proposed actions around levels of energy not supplied and network risk.
- The majority of consumers (59%) wanted NGET to improve its standard reconnection time after a blackout. NGET is investing in improving its Black Start capabilities.

- 86% of consumers felt NGET should adopt medium-high, high or very high levels of protection for the network. NGET is proposing to invest in improving resilience to extreme weather, physical attack and cyber-attack.
- 61% of consumers felt NGET should be a 4 or 5 on a scale where 5 is "highly innovative". NGET has extensive plans around areas where it will undertake innovative projects in T2.
- There is support for NGET to undertake a variety of solutions to reduce greenhouse gas emissions (carbon neutral construction, green power, fleet vehicles, harmful gases, etc.) NGET is looking into most of these solutions as part of its Environmental Action Plan.

4 CHAPTER 7: WE WILL ENABLE THE ONGOING TRANSITION TO THE ENERGY SYSTEM OF THE FUTURE

4.1 Introduction

This priority is about how NGET help to advance the decarbonisation of electricity supply, transport and heat at the lowest cost to consumers.

As owner of the electricity transmission system in England and Wales, NGET helps to enable the decarbonisation of energy and maintain security of supply at a low cost for consumers by:

- reinforcing the electricity transmission network;
- using innovative technologies and non-network solutions;
- facilitating competition in networks;
- developing network solutions in a way that keeps options open at lowest cost;
- collaborating and optimising across organisational boundaries to enable whole system solutions;
- providing solutions that enable the decarbonisation of power, transport and heat; and
- developing mechanisms that ensure our plan is robust against future uncertainty.

In order to assess the extent to which the engagement evidence supports the actions in NGET's business plan we have reviewed the following documents:

- Engagement Log: Investment plans at the Transmission / Distribution interface;
- Engagement Log: Maximise existing capacity, whole system solutions, investment to facilitate the market, enable decarbonisation of transport manage uncertainty;
- Engagement Log: Future role of electricity transmission;
- "Whole Systems Annex A7/8.06";
- "National Grid Service Evaluation Research Results".

4.2 Key findings

The key actions set out by NGET in this chapter are:

- invest in network reinforcement that increases boundary capability to facilitate a changing energy market and keep costs down;
- invest in changes to protection and control required to maintain security of supply as renewable penetration increases;
- invest to facilitate closure of conventional generation and secure easements;
- develop network solutions and keep options open at the lowest cost;
- innovate using new technologies and operating approaches;

- innovate by facilitating non-network solutions;
- facilitate competition in networks, where in consumers' interest by highlighting projects and undertaking pre-construction work where required;
- optimise with customers by aggregating investment in harmonic filtering;
- optimise with the ESO through a new mechanism at the interface, provision of better information into NOA and installation of system monitoring;
- optimise with DNOs by identifying whole system opportunities, establishing an ongoing process and investing in five reactor units;
- develop a suitable anticipatory investment mechanism that allows solutions to unlock the rapid decarbonisation of the economy to be delivered;
- if required, deliver the proportion of the 54 strategic motorway services areas connections that we are best placed to deliver for consumers as part of the solution to range anxiety we have developed with stakeholders (DNOs will deliver the remainder).

Overall the engagement logs and evidence support the actions that are being taken. There are some clearly defined and strong priorities that emerge in the conclusions of the engagement log. These conclusions can be mapped to multiple actions and where this happens the link between the evidence and the proposed action is clear and intuitive.

However, the mapping between the structures of the various engagement logs and this chapter is complex. There are three different engagement logs that are relevant for the chapter and there are some cases where there is evidence referred to in the business plan, but this does not seem to be in the engagement log. In general this chapter could have greater clarity if there was some explicit cross referencing to the relevant engagement logs to provide clear evidence of support for actions.

Also, as with other chapters, some actions are driven by factors other than engagement and it may provide more clarity if the business plan chapter is more explicit about where certain actions are motivated by other factors (e.g. license obligation, existing liability, etc.).

Areas where we identified possible improvements are set out below and within the detailed assessment in the annex.

- General. One of the engagement logs supporting this chapter is still incomplete and whilst it provides a detailed set of initial conclusions it was not always clear on the detailed evidence supporting these initial conclusions. Once the engagement log is completed it should provide a better evidence base.
- General. Some actions clearly address stakeholder priorities but the business plan write up does not reference this. NGET may wish to consider clearly referencing for each action which stakeholder priorities are addressed. This would add greater clarity that stakeholder priorities are being addressed. However, we appreciate this may impact the readability of the business plan. This point applies in particular to the following actions.
 - Invest in changes to protection and control required to maintain security of supply as renewable penetration increases.
 - Optimise with customers by aggregating investment in harmonic filtering.

- Whole system actions. There are a number of whole system actions proposed. However, DNOs were clear that they preferred the ESO to lead the whole systems assessment. It would be good to have some explanation addressing this feedback. Currently it is not clear how or if this feedback was addressed.
- Optimise with the ESO. The engagement log and business plan are both clear that this is about offering services to the ESO which may enable it to save money. However, the write up in both the business plan and the engagement log may be able to offer additional clarity if there is documentation of the ESO having requested support in these areas. Although the actions deliver on a priority of lower costs for consumers the audit trail for the decision making is limited because it does not capture the ESO's requests.
- Anticipatory investment mechanism. The business plan references evidence that stakeholders are willing to pay for investments that may not be needed to support decarbonisation. However, this evidence doesn't seem to be in the engagement log and it is not clear what evidence is being referred to. It would be helpful if this evidence could be clearly referenced.

4.3 Trade-offs

NGET has had to make certain trade-offs on this topic in response to conflicting stakeholder views and other constraints. We set out below where trade-offs have had to be made, and our view on how NGET has decided on actions in these cases.

- Early investment or more certain investment to facilitate renewables.
 - □ There is potentially a trade-off between holding up renewable deployment and making investments that are ultimately not required.
 - NGET has decided to:
 - develop a suitable anticipatory investment mechanism that allows solutions to unlock the rapid decarbonisation of the economy to be delivered; and
 - if required, deliver the proportion of the 54 strategic motorway services areas connections that NGET is best placed to deliver for consumers as part of the solution to range anxiety it has developed with stakeholders (DNOs to deliver the remainder).
 - In support of these actions NGET states that "initial results from our early consumer engagement work indicates broad support for making investments early to enable decarbonisation, even if they later turn out not to be fully required". However, this is not reflected in the engagement logs and the evidence from the service evaluation research results suggests that there was an even split between people who would prefer NGET to wait until renewable projects are confirmed and those that would like NGET to invest as soon as the projects seem likely to happen. This could be clarified.
 - NGET only proposes conditional or enabling actions at this stage and will continue consumer engagement to develop the evidence base further. Therefore at this point the proposed action postpones making firm decisions

that would involve this trade off until there is firmer evidence from stakeholders.

- Investment in network assets vs non-build solutions.
 - NGET is required to meet a number of standards in areas like reliability. It is known that these outputs can be delivered through investment in network assets. Innovative and whole systems solutions may be able to deliver the same results with reduced network investment but some network investment may still be required to deliver the standards. Stakeholder feedback was clearly in favour of NGET adopting whole systems approaches and using non-build solutions.
 - NGET has set out in the business plan that it will adopt innovative and whole systems approaches in a number of areas. At the same time it will still invest in network assets:
 - five reactors;
 - uprating existing circuits;
 - network reconfigurations;
 - voltage control.
 - The trade-offs between additional network investment and alternative whole systems approaches has been informed by testing through the ESO's NOA¹ process.
 - Ultimately the decision is based on an assessment of the most economic and efficient way to deliver the outputs. We understand that these are set out in specific investment decision packs but we have not reviewed these packs. However this approach sounds sensible.

Network Operations Assessment

5 CHAPTER 8: WE WILL MAKE IT EASY FOR YOU TO CONNECT AND USE OUR NETWORK

5.1 Introduction

NGET has many customers who want to connect to and use its electricity transmission network. NGET provides them with network connections, services related to the connection, and ongoing services once they are connected. This topic is about making it easier for customers to connect to and use the network. This covers sub-topics including:

- Volume of connections
- The connect process for customers
 - Connection time
 - Customers service
- Management of outages that affect connected parties
- Stability and predictability of network charges.

In order to assess the extent to which the engagement evidence supports the actions in NGET's business plan we have reviewed the following documents:

- Engagement Log: Investment Plans at Transmission / Distribution Interface;
- Engagement Log: Connections and Customer Service;
- the golden thread posters, outlining the main takeaways from each chapter of the business plan;
- "Demand Investment Decision Pack A7/8.09",
- "Whole Systems Annex A7/8.06";
- "IT System Health Reporting Investment Decision Pack"
- "How we contract and deliver efficiently Annex A14.05"
- "National Grid Service Evaluation Research Results"

5.2 Key findings

In general the key actions set out by NGET can be grouped into three main categories.

- Connections: Actions that relate to the connections process for DNOs and demand customers
 - We will invest in our network to connect 17.3GW of new generation, storage and interconnector for customers under the common energy scenario
 - We will invest in our network to connect demand customers when they request connections by installing 18 super grid transformers (SGTs) under the common energy scenario
 - We will invest in our network to facilitate the connection of embedded generation customers or consider a whole system solution

- We will invest in our systems, people and products to provide a service that is more tailored to your individual needs
- We will work with the ESO and others to look at options on how customers can directly contract with us for our aspect of their connection
- **Outages**: Actions that relate to the management of network outages
 - We will make step changes to improve the system access experience for our customers so that they have more warning of network outages and changes to them
- Charges: Actions that relate to improving the stability of network charges
 - We will contribute to improve the stability and predictability of our charges

Overall the engagement logs and evidence generally support the actions that are being taken._NGET proposes a number of actions on connections. Some of these are required by license conditions, some are based on engagement feedback and some are required by license conditions but the specifics of delivery have been amended based on engagement feedback. These distinctions are not always clear and obvious within the chapter.

For some actions there is not a link back to engagement feedback. In some cases this may be appropriate (because the actions are driven by other factors such as explicit guidance from Ofgem or license obligations) but this could be further clarified in the chapter.

There appear to be two gaps.

- Whole systems approaches. From the engagement logs it is clear that DNOs were uncomfortable with NGET leading whole system discussions and would have preferred the ESO to lead these. It is not clear if this feedback was acted on or how this may be resolved.
- NGET and ESO contracting. The business plan references evidence from stakeholders that they would like to be able to contract separately with NGET and the ESO. However, this feedback is not reflected in the engagement logs.

The action proposed in relation to outages addresses the feedback received from stakeholders seeking a better outage customer journey and no gaps were identified.

The action proposed in relation to charges is relatively high level and seems to generally tie back to the engagement feedback collected. However, there is still a potential gap.

Cost reflectivity of charges. There appears to be a potential tension between the outcomes that the action will deliver. This arise in cases where an action to deliver on one stakeholder request may be detrimental to another stakeholder priority. In particular making charges more cost reflective may also make charges more volatile. Where this tension exists (or at least appears to exist) this does not seem to have been captured in the business plan. Therefore it is unclear what consideration has been given to this. This lack of consideration of the trade-off is the only gap identified in the proposed action on charging.

5.3 Trade-offs

NGET has had to make certain trade-offs on this topic in response to conflicting stakeholder views and other constraints. We set out below where trade-offs have had to be made, and our view on how NGET has decided on actions in these cases.

- Investment in network assets vs non-build solutions.
 - NGET is required to provide a network for users to connect to and use. It is known that these outputs can be delivered through investment in network assets. Innovative and whole systems solutions may be able to deliver the same results with reduced network investment but some network investment may still be required to deliver the standards. Stakeholder feedback was clearly in favour of NGET adopting whole systems approaches and using non-build solutions.
 - NGET has set out in the business plan that it will adopt innovative and whole systems approaches in a number of areas. At the same time it will still invest in network assets in the form of 18 super grid transformers (SGTs).
 - The trade-offs between additional network investment and alternative whole systems approaches have been agreed through collaborative working. Additional details on the decision making process are provided in the whole systems annex and in the Demand Investment Decision Pack. These documents show that a whole systems approach has been taken where possible. Investments have been discussed with DNOs and subject to challenge such that network build is limited to "sites that NGET and DNOs agree that there is no alternative solution and new transmission investment represents the most economic and efficient option for consumers in meeting the DNO's requirements and maintaining the security of the network".
- Cost reflectivity vs stability of charges.
 - Stakeholders have indicated that want NGET to improve the stability, predictability and transparency of their charges.
 - NGET has proposed to:
 - Improve how our charges reflect our costs;
 - Improved the stability of our changes; and
 - Improve the predictability and transparency of our charges.
 - There may be a trade-off between cost reflectivity and stability/predictability. Additional uncertainty mechanisms can make charges more cost reflective but also more volatile. Stability is clearly highlighted as the most important factor for stakeholders but the business plan does not address the issue of potential trade-offs.

6 CHAPTER 9: WE WILL PROVIDE A SAFE AND RELIABLE NETWORK

6.1 Introduction

This topic covers NGET's responsibility to provide a safe and reliable electricity transmission network. The electricity transmission network needs to be available to customers, when they need it, to provide secure power supplies for consumers. This role involves maintaining high safety standards to protect employees, contractors, stakeholders and the public. To achieve high levels of reliability, NGET needs to keep its assets in good condition. This means monitoring their condition, and intervening at the right time to maintain, refurbish or replace them.

In order to determine whether the actions set out in NGET's draft business plan are supported by the findings from stakeholder engagements, we have reviewed:

- the engagement log for this topic, which sets out the key engagements carried out to date and their findings;
- findings of willingness to pay research carried out by NERA and Explain;
- findings of acceptability testing carried out by eftec and ICS; and
- findings of service valuation research carried out by Explain (slider tool research).

6.2 Key findings

The key actions set out by NGET in this chapter are:

- Maintain our safety standards, aiming for zero harm to our employees, contractors, stakeholders and the public.
 - □ Injury frequency rate reduced from 0.12 towards zero.
- We are committed to whole system collaboration with the ESO and our directly connected customers to optimise the delivery of our work to reduce the outage impact on the network.
- Reduce the amount of Energy Not Supplied (ENS) over T1 targets:
 - □ No greater than 278MWh (per annum) of energy not supplied
 - □ 12% improvement over T1 target
- We will maintain our network risk position through condition monitoring, maintenance, repair, refurbishment and replacement of our assets. We will deliver this work at lowest cost (on average per unit) by embedding innovation. (This applies to lead assets)
- By the end of the T2 period, we commit to maintaining the same level of asset risk position as at the end of the T1 period. (This applies to non-lead assets)

Overall, we have found that the actions set out in the business plan are well supported by the evidence. Stakeholders clearly view reliability as a key priority, and do not want to see reliability levels deteriorate. In the service valuation research, 54% of consumers wanted NGET to maintain the same level of reliability,

and 33% wanted NGET to increase future reliability of the network. Only 9% of consumers wanted NGET to reduce costs, even if reliability would also be reduced. Consumers are also willing to pay significant amounts for reduced interruptions, based on the willingness to pay research.

There are certain areas however where we feel that NGET's decision making process could be documented more clearly, or where the business plan could be made clearer. These are set out below.

- Safety. One of the actions in the business plan is around maintaining safety standards, and reducing Injury Frequency Rate. NGET states that stakeholders have said that NGET should comply with all relevant safety legislation. It isn't clear whether this has come from NGET's stakeholder engagement (and it doesn't seem to appear in the engagement log), or if this is simply the requirement coming from HSE and other regulatory bodies. If the latter, it may be worth rephrasing this as "we are required by HSE and other regulators to comply with all relevant safety legislation", to clarify why this doesn't appear in the engagement log.
- Whole system collaboration. NGET states that it is committed to whole system collaboration to reduce the outage impact on the network. We feel that this action could be improved in two ways:
 - the action is slightly vague and not measurable. We would suggest making it more specific (e.g. how will collaboration be achieved, and how will this contribute to reducing outage impact), or at least describing a process through which a more concrete set of actions and commitments will be identified during T2. There is also merit in cross-referencing to other chapters where more detail on whole system collaboration is set out; and
 - support for this specific action in the engagement log seems somewhat limited. It may be worth cross-referencing to other chapters where there is more specific evidence, or, if this doesn't exist, making clear that stakeholders have not asked NGET to take this action specifically, but that this is one of the ways that NGET is seeking to deliver stakeholders' needs around reliability.
- Energy Not Supplied. One of NGET's main outputs, and an important financial incentive, is around reducing the amount of Energy Not Supplied. NGET also states that stakeholders have said that NGET should ensure decisions taken in the short-term do not limit future system opportunities, and that NGET should maintain levels of reliability at an affordable cost (table 9.6 of the business plan). However, these messages do not seem to match the action of *improving* levels of reliability, rather than simply maintaining the existing level. This should be clarified, for example, by explaining that stakeholders have said that reliability is a key priority and that consumers are willing to pay for improved reliability (based on the willingness to pay research). There could also be a brief explanation of how the new ENS targets have been derived.
- Network risk. NGET has proposed to maintain network risk and deliver this at lowest cost by embedding innovation.
 - It could be helpful to add more detail on the areas where embedding innovation is expected to reduce costs, or cross reference to other chapters where this is covered.

- It would also be useful to cross-refer to evidence around the importance of affordability, to explain why NGET is looking to maintain network risk at lowest cost.
- Asset risk. NGET has proposed to maintain asset risk position for non-lead assets. While stakeholder evidence does support maintaining current levels of reliability, it is not very clear from the engagement log whether stakeholders have specifically commented on how NGET should treat non-lead asset risk, or whether NGET's proposal is just a means of achieving the broader goal of maintaining reliability. This could be made clearer in the engagement log and business plan.

6.3 Trade-offs

NGET has had to make certain trade-offs in response to conflicting stakeholder views. We set out below the main trade-off made in this chapter, and our view on how NGET has decided on its actions in this case.

Reliability versus affordability. While the majority of stakeholders agree that reliability levels should not deteriorate, there are mixed views on whether reliability levels should be maintained or improved. NGET's proposed actions are to reduce the amount of Energy Not Supplied (ENS) over T2, but to hold the level of network risk and asset risk constant. We feel that NGET's reasoning on making these decisions could be set out more clearly in the business plan, and in particular why NGET did not decide to hold the level of ENS constant. We note that NGET's proposed investments on maintaining asset condition are supported by the majority (58%) of consumers surveyed in the acceptability testing, so there is support for the proposed actions. However, about a third of consumers surveyed do not agree with the bill impact of these investments, and the service valuation research found that 54% of consumers wanted NGET to maintain the same level of reliability, whereas 33% wanted reliability to be increased. Some further explanation of NGET's decisions could help to address this.

7 CHAPTER 10: WE WILL PROTECT THE NETWORK FROM EXTERNAL THREATS

7.1 Introduction

This topic is about how NGET protects the electricity transmission network from external threats such as cyber-attacks, physical attacks and extreme weather. It is also about how NGET responds to and recovers from incidents when they happen.

In order to determine whether NGET's actions in this area are supported by the findings from stakeholder engagements, we have reviewed:

- the engagement log for this topic, which sets out the key engagements carried out to date and their findings;
- willingness to pay research carried out by NERA and Explain; and
- acceptability testing research performed by eftec and ICS consulting.

7.2 Key findings

The key actions in the chapter relate to the following five areas of external threats:

- <u>Extreme Weather</u>: protect our sites from surface level flooding. Better understand how we protect from weather-related threats in the long term.
- <u>Physical Security</u>: continue to meet the PSUP (Physical Security Upgrade Programme) requirements at all designated sites.
- <u>Cyber Security</u>: enhance cyber security and capability as agreed with the NIS Competent Authority.
- <u>Optel (operational telecommunications)</u>: infrastructure to continue to deliver operational communication essential for the day to day operation of the system, supporting cyber and physical security management and support Black Start capabilities in a cyber resilient manner.
- <u>Black Start</u>: Enhance system and people capabilities to ensure an efficient and effective response in a Black Start scenario.

NGET considers that there is a growing need for the network to become resilient to external threats and there is stakeholder support for this. In particular, domestic and non-domestic consumers appear to be willing to pay a higher bill for improved network resilience. Consumers would be willing to increase their yearly bill by the following amounts for the following improvements that are partially or entirely related to network resilience. For domestic consumers:

- £7.70 for a 2 hour decrease in the hours of powercuts at a 1.5% probability;
- £9.70 for a 4 hour decrease in the hours of powercuts at a 1.5% probability;
- £3.58 for every fewer day to recover from a blackout;
- £6.87 for an additional 20 miles of transmission lines undergrounded in National Parks; and

 £6.46 for an additional 20 miles of transmission lines undergrounded in other areas.

For non-domestic consumers:

- £43.30 for a 2 hour decrease in the hours of powercuts at a 1.5% probability;
- £66.95 for a 4 hour decrease in the hours of powercuts at a 1.5% probability;
- £24.15 for two fewer days to recover from a blackout; and
- £45.02 for an additional 20 miles of transmission lines undergrounded in National Parks; and
- £45.90 for an additional 20 miles of transmission lines undergrounded in other areas.

Furthermore, the majority of consumers (60%) surveyed in the acceptability testing research agreed with NGET's proposals on "protecting the network from external hazards", and the associated impact on bills.

Finally, the service valuation research conducted by Explain found that 86% of consumers felt that NGET should adopt very high, high or medium high levels of protection for the network. Only 9% felt that NGET should adopt medium-low levels, low levels or that this shouldn't be a priority area.

We note that stakeholder engagement in this area is challenging given that security (in particular cyber or physical) plans often cannot be shared with stakeholders due to confidentiality. This is why the engagement is generally focused on setting the right security requirements, meaning setting thresholds and standards that would guarantee a certain level of security rather than setting out concrete tailored solutions to ensure NGET's security for scrutiny and appraisal.

Overall, the stakeholder engagement on this topic appears to be comprehensive and well-designed. NGET has clearly attempted to provide stakeholders with the necessary level of knowledge to express informed views.

The stakeholder evidence broadly supports NGET's proposed actions on this topic. Stakeholders feel that NGET's current work in this area should be maintained, if not intensified, in the future due to the increasing reliance of customers and consumers on the network.

We feel that there are some areas for improvement in the engagement log and the proposed actions. These are summarised below.

- On the action around extreme weather:
 - the business plan sets out the views provided by specialist stakeholders (that NGET should implement the standards set out in Flood Resilience Engineering Technical Report 138 by the end of RIIO-T2), but it is not clear in the proposed action whether NGET is committing to address this. This could be clarified.
 - The views of non-specialist stakeholders do not appear to be explicitly mentioned in the justification for this action. These stakeholders said that NGET's approach to extreme weather resilience needs to be flexible, forward-looking, and able to adapt to future challenges. We think that it could be clarified in the business plan whether NGET considers it has developed an approach that meets these criteria.

- The action could be made more specific, explaining in more detail how NGET will protect sites, what actions it will take to better understand how to protect from weather-related threats, and whether ETR138 will be implemented.
- On physical security, it could be made clearer in the business plan that the action around the Physical Security Upgrade Programme is a government-mandated requirement, and is not driven by the views of wider stakeholders.
- On cyber security, NGET could be clearer on whether it is meeting Government-mandated requirements, or going beyond these requirements. The action could also be made more specific, clarifying what types of actions it is taking on cyber security. If this is not possible due to confidentiality, this could be stated explicitly alongside the action.
- On operational telecommunications, there is limited supporting evidence because of the complexity of the topic and the limited scope for stakeholders to feed in. This could be made clearer in the business plan. NGET did engage with a specialist consultancy, other TOs and National Grid ESO, and it could be helpful to summarise the findings of these engagements.
- On Black Start, the action could be made more specific, providing some general information on what types of investments NGET is making to improve its response in a Black Start scenario. It could also possibly be added to the action that NGET is still working with BEIS and other energy sector participants to develop a new Black Start standard, with improved restoration times.

7.3 Trade-offs

NGET has had to make certain trade-offs in its plan in response to conflicting stakeholder views. However, in this chapter we are not aware of any significant trade-offs. The topics covered in this chapter tend to either be fairly technical and complex, thus limiting the amount of engagement that can be carried out with stakeholders, or the specificity of the views that stakeholders can provide, or there has tended to be consensus among stakeholders on the importance of the various resilience topics and the fact that NGET should work on improving resilience.

8 CHAPTER 11: WE WILL CARE FOR THE ENVIRONMENT AND COMMUNITIES

8.1 Introduction

This chapter reviews the steps NGET may take to improve the environment and better serve communities and societies. The environment section of this chapter covers the contribution to tackling climate change, reducing waste, improving the natural environment and improving the visual impact of our assets. The communities section covers how NGET supports local communities, wider society, acts as a responsible employer and promotes best value in our supply chain.

In order to determine whether NGET's actions in this area are supported by the findings from stakeholder engagements, we have reviewed:

- Environment engagement log;
- Visual Impact Provision (VIP) engagement log;
- Communities engagement log;
- willingness to pay research carried out by NERA and Explain;
- acceptability testing research performed by eftec and ICS consulting; and
- service valuation research carried out by Explain.

8.2 Key findings

The key actions set out by NGET in this chapter cover both the environment, and communities. The key actions for the environment include:

- Reducing controllable carbon emissions over the T2 period.
 - This includes specific actions to reduce carbon, such as reducing controllable GHG by 45%, reducing carbon emissions from insulating gases by 20% and reducing carbon emissions from operational transport by 65%.
- Reducing waste and ensuring a responsible use of assets.
 - This includes a variety of actions ranging from specific targets (e.g. we will recycle 60% of our operational and office waste) to generic actions (e.g. extending the life of equipment through refurbishment).
- Caring for the natural environment.
 - Increase the environmental value of non-operational land by 2% per annum against a Natural Capital/ Biodiversity baseline.
- Continuing with a stakeholder-led approach to the selection of projects for visual improvement, i.e. NGET's Visual Impact Provision (VIP) programme.
- Providing organisational leadership in driving environmental progress.

The key actions for communities include:

Supporting local communities.

- Assigning up to £7.5m (0.3%) of construction projects to focus on social mobility by aiming to employ 15% of the workforce from the local community and offer STEM engagement with every school in the area.
- Supporting wider society.
 - We commit to social mobility by identifying educational and employment opportunities as an extension to our business activities.
- Being a responsible employer.
 - Our workforce will be more representative of the communities we serve in all aspects of diversity.
- Promoting corporate social responsibility in the supply chain.
 - □ We will promote all our UK suppliers, Tier 1 and beyond, paying the real living wage and improving 5% of technical supply chain skills annually.

The actions in both the environment and communities sections generally correspond well to the conclusions of stakeholder engagement: all stakeholders want NGET to take action on climate change, which includes reducing carbon emissions and providing responsible use of assets. Consumers are also willing to pay a material amount for NGET to carry out more engagement in community activities. There is a wider mixture of views on visual impact and whilst the views on visual impact are mixed, stakeholders feel that NGET's approach to assessing visual impact is robust.

There are some areas where the link between stakeholder engagement and NGET's business plan actions could be made clearer. These are summarised below:

Environment actions.

- It is not always clear how the measurable actions set out in NGET's business plan correspond to the level of activity stakeholders want. For example, NGET's target for carbon reductions by 2050 is 45%, but there is no clear justification for this specific target from stakeholder feedback NGET has not set out why this target is not 40%, or 50%. This is a similar observation across many actions, mostly relating to carbon emissions reductions and the environment.
- Conversely, there are many actions proposed by NGET that are not measurable. For example, under the action of "providing organisational leadership in environmental progress" it's not clear what exactly NGET will do to complete this action. These actions would benefit from being made more specific, or where they cannot yet be made more specific the steps that will be taken during the T2 period to develop more concrete actions could be described.
- Community engagement actions. There are some conclusions from the stakeholder engagement (e.g. supporting wider society, and being a responsible employer) where it is not clear how NGET has landed on specific actions. For example, NGET could be clearer on what 'being a responsible employer' means. The business plan interprets the appropriate action as creating an inclusive environment in the workplace, but one could easily draw

other conclusions from the engagement. NGET might want to consider more focused engagement on these topics with particular stakeholders in order to further justify business plan actions.

8.3 Trade-offs

In this chapter, there tends to be broad agreement across stakeholder engagement on the types of actions that NGET should be taking. For example, stakeholders agree on what NGET's approach to carbon reduction should be, and are in agreement about their supply chain commitments. There are two areas where stakeholders have some disagreement, and NGET has had to make trade-offs in deciding on proposed actions. These areas are visual impact provisions and caring for local communities.

- Visual impact provision
 - The engagement found that some stakeholders feel that NGET should do anything it can to avoid negative visual impact on the environment, and are willing to pay for this (especially those who live in affected areas). However there is a need to balance this with other stakeholders that are impacted less by this issue and are not willing to pay for it.
 - NGET's current approach is working with its Stakeholder Advisory Group, which gathers the views of a variety of stakeholders to make an informed assessment of what NGET can do on a case-by-case basis. The action outlined in the business plan is to continue with the stakeholder-led approach to evaluating projects with visual impact.
 - The decision to continue with this stakeholder-led approach of assessing visual impact is widely supported by the majority of stakeholders. Despite there being conflicting views on the topic itself, stakeholders value being informed and given the opportunity to collaborate with NGET. It is also important for NGET to know that it is choosing the projects that provide most benefit, and have broad support for their delivery.
- Caring for local communities
 - The majority of evidence in the engagement logs suggests more could be done for local communities, and that minimising the impact of work on local communities is a high priority. However, there are some organisations (particularly organisations that have direct interests in new connection projects) that are more ambivalent about impacts on local communities.
 - NGET's proposed actions are to increase the proportion of businesses from local communities used on their projects, and increase STEM education in local schools. However, there is little in the way of specific actions that seek to minimise the impact of construction on local communities, other than "business as usual" engagement with communities.
 - Like many of the proposed actions in this chapter, the evidence from the engagement log broadly supports the direction of the actions, but it is not clear how NGET has decided on the specific actions. Therefore, it is not clear how the chosen actions are balanced between the two different views.

9 CHAPTER 12: WE WILL BE INNOVATIVE

9.1 Introduction

The chapter explains how NGET uses innovation initiatives and projects to deliver value to its customers, consumers and stakeholders. In particular, it describes a number of innovation initiatives that NGET is carrying out, or planning to carry out, and how these are aimed at delivering stakeholder priorities including reducing costs for consumers, and delivering safety and environmental benefits across the whole energy system in the future. Stakeholders' priorities, views and feedback on this topic were collected through various engagements carried out by NGET, as documented in the innovation engagement log.

To assess whether the actions proposed by NGET in the July draft business plan are in line with the findings emerging from stakeholder engagements, we reviewed the following evidence:

- the engagement log on innovation ("We will be innovative"), which sets out the stakeholder engagements aimed at discussing innovation initiative carried out by NGET;
- willingness to pay research carried out by NERA and Explain;
- the results of the acceptability testing research carried out by eftec and ICS; and
- innovation webinar summaries.

9.2 Key findings

In general, NGET's proposed actions on the topic of innovation can be grouped into three main categories:

- Delivering cleaner energy: this relates to reducing NGET's carbon footprint, providing whole system solutions through the Deeside Centre for Innovation and decarbonising the energy-associated industry.
- Delivering cheaper energy: this relates to introducing cost savings that benefit consumers. Examples are enhancing collaboration with the whole system through digitisation, allowing customers to be more responsive and agile² and supporting vulnerable consumers.
- Creating the future: this focuses on the involvement of third parties in the process of innovation. In particular, it consists of defining procedures for the implementation and rollout of innovation projects, increasing collaboration and transparency and leading research in the field of health and safety.

Overall, NGET's proposed actions are supported by the evidence. NGET is currently focusing on the three areas of innovation identified above: delivering cleaner energy, cheaper energy, and developing a system well-placed to face future challenges. Indeed, the engagement log reports that when stakeholders

² Providing them with the possibility to be on-/off- the grid at their discretion.

were asked about which topics innovation should focus on, they answered "clean, reliable energy system and lower energy bills".

Stakeholders appear to support NGET's innovation work, and would even support more work in this area. This is shown by the willingness to pay research, which found that both domestic and non-domestic customers would be willing to pay more on their bills to support more innovation projects related to the electricity transmission system. In addition, the majority of consumers (68%) who were surveyed in the acceptability testing research said they were happy to accept the bill increase announced in the business plan, resulting from NGET's proposed actions in this area.

While NGET has conducted extensive stakeholder engagement, and the proposed actions in this area are generally very detailed and specific, we feel that the chapter could be slightly improved in the following ways.

- On a number of action areas, NGET could provide more explanation of how it decided on the specific actions proposed in the business plan, given the general messages coming out of the stakeholder engagement. The relevant areas include:
 - reducing NGET's carbon footprint;
 - decarbonising associated industry;
 - digitisation; and
 - health and safety.
- The action around delivering a step change in health and safety could be made more specific, setting out what types of research NGET is planning to undertake in this area.

9.3 Trade-offs

NGET has had to make certain trade-offs in response to conflicting stakeholder views. We set out below the main trade-off made in this chapter, and our views on how NGET has decided on its action in this case.

• Where to innovate.

- The majority of stakeholders agree that NGET should be innovative, as demonstrated by the service valuation research (61% of consumers surveyed felt NGET should be a 4 or 5 on a scale where 5 is "highly innovative"). However, there are a range of views on where NGET should focus its innovation efforts. For example, in an innovation workshop held in July 2018, stakeholders voted for a number of focus areas including whole system, "dynamic and flexible", balance of risk, disruption, environment, and storage. In the service valuation testing a number of different innovation priorities also came out, including improving safety, finding new environmentally-friendly materials, allowing testing new technology offline, and digitisation.
- NGET appears to be proposing to carry out innovation activities in the majority of areas that stakeholders have expressed an interest in, and it doesn't appear that any important areas have been missed.

However, given this wide range of innovation areas set out in the plan, it would be helpful to provide some indication of where NGET's priorities are, and where it will focus its efforts, given limited resources. It would also be helpful to clarify how NGET decided on those priorities.

10 CHAPTER 13: WE WILL BE TRANSPARENT

10.1 Introduction

High levels of transparency are a key aspect of earning public trust, alongside having a positive impact on the environment, customers and communities. NGET's ambition is to be the most transparent energy company in Great Britain.

NGET aims to:

- demonstrate to stakeholders how what it delivers are in their interest;
- explain its financial and operational performance in a clear and open way; and
- be clear how it will ensure it delivers its outputs and commitments that improve society.

In order to determine whether these actions are supported by the findings from NGET's stakeholder engagements, we have reviewed the engagement log for this topic, which sets out the key engagements carried out to date and their findings.

Please note that for this chapter we have conducted only a high-level review, as agreed with NGET, because expenditure on this topic area is not very material in the context of the whole plan.

10.2 Key findings

NGET sets out four main proposed actions in this chapter:

- We will be clearer than ever on our reporting, reporting on what really matters to you in the way that you want it;
- We will involve you in the updating of our business plan;
- Retaining our Independent Stakeholder Group to hold us to account;
- We are all aligned and committed in delivering the right outputs for the T2 period;

It is clear from the engagement log that stakeholder priorities for this topic are increased transparency of performance and a more stakeholder-led business plan. This suggests that the first two and the last actions above are strongly supported by the evidence.

However, there are a few areas where we feel this chapter could be strengthened.

It is not clear how stakeholders evaluate the role of the Independent Stakeholder Group. The group is described in the business plan as an independent third party challenging NGET on the delivery of outputs and transparency of performance, while in the engagement log it does not appear to be mentioned by stakeholders. One improvement would therefore be to clarify how, from the stakeholder evidence, NGET decided on the action of retaining the Stakeholder Group.

- A second development point refers to the action "We are all aligned and committed in delivering the right outputs for the T2 period". Table 13.3 of the business plan reports that stakeholders want NGET to ensure that pay and reward is aligned to business plan outcomes, but this is not mentioned in the action. Therefore, if NGET does not plan to address the feedback, we think it should explain the reasons for this decision.
- Finally, we feel that the actions in this chapter are somewhat vague and could be made more specific. For example, when stating, "we will involve you in the updating of our business plan", it would be helpful to clarify how stakeholders will be involved and how often.

10.3 Trade-offs

NGET has had to make certain trade-offs in response to conflicting stakeholder views. However, our understanding is that stakeholder views on this topic have been fairly well aligned. While different types of stakeholders are interested in different types of transparency (e.g. other networks are interested in transparency of performance reporting so that the industry is publishing consistent return and profit figures, Ofgem is interested in more transparency in reporting around environmental performance, etc.), all stakeholders seem to agree that more transparency would be valued, and this is reflected in the actions proposed by NGET. However, we feel that again, NGET could make these actions more specific to be clearer on whether all stakeholder preferences are being taken into account. E.g. in the commitment on being clearer in reporting, what types of information will be reported more clearly?

11 CONCLUSIONS

Overall NGET has carried out an extensive programme of engagement with a variety of stakeholders, and it is clear that NGET has listened to and taken account of many of the views coming out of these engagements. In most cases, stakeholder views are addressed in the proposed actions set out in NGET's business plan. We did not find any cases where stakeholder evidence contradicted the proposed actions in a material way.

However, there are some areas of improvement that NGET could build into its October plan, mainly around clarity of how stakeholder views have informed proposed actions. In our review we sometimes found that it could be difficult to trace which evidence was feeding into each of the actions in the business plan. To improve the traceability of the actions back to the evidence, NGET could include a short upfront section in each engagement log, or in a separate document, setting out each key conclusion from the stakeholder evidence (matching the key conclusions in the business plan), which engagements these conclusions have been drawn from; and which stakeholders those conclusions represent.

We also feel more clarity could be added in the following cases:

- where actions are mainly driven by legal or regulatory obligations, rather than stakeholder views, this could be made clearer;
- where stakeholder feedback has been quite general, but then the proposed actions are very specific, it might be helpful to add some detail on how these specific actions have been decided upon; and
- where stakeholder feedback is specific but the actions are general, either the actions could be made more concrete and measurable, or NGET could explain why it feels that the specific stakeholder feedback cannot or should not be addressed.

More generally, in cases where proposed actions are quite general, we feel that NGET could add more detail on what it proposed to deliver and how.

Overall, we feel that NGET has demonstrated a good level of stakeholder input into its business plan, and the improvements suggested are mainly around communicating this in a clear and transparent way.

ANNEX A CHAPTER 7: ENABLE THE ONGOING TRANSITION

In the table below, we provide a high-level overview of the evidence summarised in the engagement log(s) for this topic area.

Figure 5 Overall assessment of evidence in engagement log (1	ot 3)
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Document	Investment plans at the Transmission / Distribution interface
What has been heard (key findings)?	 It was acknowledged that even in a highly-decentralised energy system, there will still be periods when DNOs rely on their transmission connection to meet local demand requirements. DNOs agreed with the overall assumptions made by NGET regarding the timing of EV and heating electrifications. NGET assumes that whilst these technologies are beginning to emerge now, the material impact on transmission level demand will not be seen until the late 2020's and therefore no significant transmission system reinforcements will be required during the RIIO-T2 period to meet any increased demand. DNOs expressed concerns regarding NGETs proposals for collaborative whole system assessments between network companies. DNOs indicated a preference for a fully ESO led process due to perceived potential conflicts of interest NGET will be reviewing NGET's non-load plans with DNOs to identify any opportunities to facilitate future growth through making co-ordinated asset replacement decisions. Several DNOs expressed concern that short-term decisions could result in a reduction in available transmission capacity. This could then restrict future customer growth
Who has it been heard from (stakeholder types)?	DNOs
What are the key types of engagement?	 BAU engagement. NGET has ongoing relationships and interaction with DNOs as part of BAU planning activities. NGET is also a member of the ENA Open Networks project. Specific Engagement NGET has undertaken a series of bilateral workshops with each individual DNO organisation. A two-phase approach was taken to allow initial plans and assumptions to be discussed and feedback obtained
Are there particularly diverse views or consensus?	From the documentation there appears to have been reasonable consensus amongst DNOs on the views.
What can be concluded?	 Overall, DNOs want NGET to: Work more collaboratively and in a coordinated manner with DNOs Consider a more whole system approach and non-build solution to rising fault levels Let the ESO lead the coordination of the whole systems work (due to possible conflict of interest)
Do there appear to be any issues with the robustness of the evidence?	No. NGET has engaged directly with the each of the DNOs and has gathered their views.
Which actions in the business plan is this	1. Innovate by facilitating non-network solutions

evidence relevant to? (Include refs.)	 Optimise with DNOs by identifying whole system opportunities, establishing ongoing process and investing in five reactor units
Does this evidence broadly support the actions? Why?	Yes, the DNOs have asked for more non-build solutions and more whole systems working. The actions in this chapter that are relevant to this engagement log are supported by the evidence.
	However, DNOs expressed a clear preference for whole system coordination to be led by the ESO rather than NGET, it is not clear how this has been addressed.

Figure 6	Overall assessment of evidence in engagement log (2 of 3)
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Document	Maximise existing capacity, whole system solutions, investment to facilitate the market, enable decarbonisation of transport manage uncertainty
What has been heard (key findings)?	The conclusions section below provides a summary of what has been heard.
Who has it been heard from (stakeholder types)?	Networks, new business models, Ofgem, technical expert consultants, the ESO, other TOs, Government, motorway services operators, automotive manufacturers small and large customers
	Note that not all stakeholders were engaged on all issues. Each issue was discussed with a specific set of stakeholders
What are the key types of engagement?	Bilateral meetings, workshops, conferences, blog posts and podcasts, industry round tables, bespoke sessions,
Are there particularly diverse views or consensus?	From the initial conclusions in the engagement log it seems as if there may be consensus. However, it is hard to be clear given that this engagement log is still partially incomplete.
What can be concluded?	NGET formed the initial conclusions below. Based on the content of the engagement log these conclusions seem reasonable. However, the formal conclusions section of the engagement log has not yet been completed and
	Innovation to maximise capacity on existing network
	 ESO concerns over the ability to operate some innovative technologies requir further engagement
	 The potential for flexibility is sometimes underestimated – especially for portfolios
	 There are technical challenges for both flexibility and network companies t overcome
	 Greater visibility of network issues and their characteristics is needed
	 Greater acceptance of the services that can be provided is needed
	 Considerable uncertainty over future opportunities and revenue streams
	Whole system solutions – Customer/TO
	Consumer benefits exist
	 We should continue to develop this opportunity with stakeholders
	Whole system solutions – ESO/TO
	 More flexibility in executing network outages would help reduce whole syster costs
	 Enhanced capability from existing assets when most needed, while maintainin adequate levels of reliability, would help reduce the whole system costs
	 Invest in voltage control equipment where required to meet the Security an Quality of Supply Criteria

 Invest in system monitoring equipment to allow the network to be operated securely in a world with reducing inertia, lower fault levels and more volatile power flows

Whole system solutions – DNO/TO (see also DNO engagement log)

- There is an ongoing need for transmission infrastructure at the distribution interface
- Agreed national level view of timing of electric vehicle growth and electrification of domestic heating
- National level scenarios not appropriate for identifying specific investment requirements at transmission / distribution interfaces – assumptions should be taken directly from DNO data submissions
- Rising fault levels could trigger transmission investment in RIIO-T2. Whole system assessment continues.
- Uncertainty on roles and responsibilities in whole system planning processes identified, particularly following the TO / ESO split. Preference for a fully ESOled process.
- Importance of aligning asset heath related investment decisions with future customer needs.

Invest to facilitate the market / manage uncertainty

- FES with additional regional insights are a suitable range for planning our business
- NGET approach to setting an England & Wales scenario is reasonable
- Mixed views, but majority support for setting a baseline allowance that is most likely to maintain revenues (as opposed to increase or decrease)

Enable the decarbonisation of transport

- Range anxiety is a challenge to the Government's ambitions to decarbonise transport
- Existing vehicle charging market structures at Motorway Services are complex and participants do not have enough certainty of affordable infrastructure or utilisation rates
- Solutions must be robust to future uncertainty
- A whole system approach is required

Do there appear to be any No. NGET has undertaken a range of engagement tailored to the relevant issues with the robustness stakeholders for each subject. In aggregate the engagement is material and there of the evidence? appears to have been multiple engagements with stakeholders on each issue. Which actions in the 1. Invest in changes to protection and control required to maintain security of business plan is this supply as renewable penetration increases evidence relevant to? 2. Develop network solutions and keep options open at the lowest cost (Include refs.) 3. Innovate using new technologies and operating approaches 4. Innovate by facilitating non-network solutions 5. Optimise with customers by aggregating investment in harmonic filtering 6. Optimise with the ESO through a new mechanism at the interface, provision of better information into NOA and installation of system monitoring 7. Optimise with DNOs by identifying whole system opportunities, establishing ongoing process and investing in five reactor units 8. Develop a suitable anticipatory investment mechanism that allows solutions to unlock the rapid decarbonisation of the economy to be delivered

	 If required, deliver the proportion of the 54 strategic motorway services areas connections that we are best placed to deliver for consumers as part of the solution to range anxiety we have developed with stakeholders (DNOs to deliver the remainder)
Does this evidence broadly support the actions? Why?	In general, the evidence does broadly support the relevant actions. The engagement log details a number of initial conclusions which closely align with the proposed actions. However, there is not always a lot of detail to support the initial conclusions and the engagement log is current incomplete with final conclusions yet to be completed.

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Document	Future role of electricity transmission
What has been heard (key findings)?	Stakeholders want us to be more active in the debate on the future of energy
	 Decarbonisation is the most common theme identified by our stakeholders when asked about their priorities for the next decade, followed by reliability and flexibility
	Majority of stakeholders are positive on the future need for transmission (49 out of 57 either agreed or strongly agreed on future need). Follow-up bilaterals with those who were unsure or disagreed showed that some required more time to digest/discuss supporting material, whilst one DNO and one Interest Group did not believe it was possible to draw any conclusions now
	 Majority of stakeholders consider whole system thinking to be essential,
	 Less certainty on the transmission network not being a blocker to rapid electric vehicle uptake (30 out of 51)
Who has it been heard from (stakeholder types)?	Academics, consumer bodies, regulatory, consumers, small/new customers, interest groups, large customers, network companies, supply change, Governmental
What are the key types of engagement?	Regional workshops, online survey, webinar, bespoke sessions and bilaterals
Are there particularly diverse views or consensus?	There seems to be broad consensus in most areas. However, there is a diversity of opinion around how important electricity transmission is for electric vehicle take up.
What can be concluded?	NGET formed the conclusions below. Based on the content of the engagement log these conclusions seem reasonable.
	On the need for electricity transmission in the future
	 Decentralisation and decarbonisation are the 2 trends most likely to impact the role of transmission in the longer term
	 Despite uncertainty, there is a need for electricity transmission in the long-term
	On stakeholder's energy priorities
	 Decarbonisation, reliability and flexibility are the top three priorities when grouped
	 Lower costs for consumers was also a theme throughout
Do there appear to be any issues with the robustness of the evidence?	There are no obvious issues with the robustness of the evidence. NGET has engaged extensively with a wide range of stakeholders. The messages are relatively consistent. There are some limitations with what has been drawn from certain engagements, but this is recognised and flagged for future improvements.

Figure 7 Overall assessment of evidence in engagement log (3 of 3)

Which actions in the business plan is this evidence relevant to? (Include refs.)	The evidence which shows lower costs for consumers being of importance to stakeholders is in some way relevant almost all of the business plan actions. The other evidence is particularly relevant to:
	 Invest in network reinforcement that increases boundary capability to facilitate a changing energy market and keep costs down
	 Invest in changes to protection and control required to maintain security of supply as renewable penetration increases
	3. Develop network solutions and keep options open at the lowest cost
	4. Optimise with customers by aggregating investment in harmonic filtering
	 Optimise with DNOs by identifying whole system opportunities, establishing an ongoing process and investing in five reactor units
	 Develop a suitable anticipatory investment mechanism that allows solutions to unlock the rapid decarbonisation of the economy to be delivered
	 If required, deliver the proportion of the 54 strategic motorway services areas connections that we are best placed to deliver for consumers as part of the solution to range anxiety we have developed with stakeholders (DNOs to deliver the remainder)
Does this evidence broadly	Yes. The engagement log provides clear evidence of 4 priorities:
support the actions? Why?	Decarbonisation
	Reliability
	Flexibility
	Low costs to consumers
	The majority of the relevant proposed actions clearly contribute to one or more of these priorities.
	The possible gap is that the business plan suggests that there is some evidence from stakeholders that there is support for making investments early to support decarbonisation. This specific point is important for some actions and there isn't evidence in this engagement log to support that point. In addition the evidence from the "National Grid Service Valuation Research" is inconclusive, with equal numbers of people prepared for investment early as prefer to wait for projects to be
	confirmed.

In the following tables, we assess whether each key proposed action in the business plan is supported by the engagement and research conclusions as set out in the engagement log(s). We also consider whether the logic between the engagement log conclusions and the business plan actions is clear and sound. Finally, we highlight any gaps to be filled, or any areas where we feel that the business plan actions may not reflect the findings set out in the engagement log(s).

Business plan action:	Invest in network reinforcement that increases boundary capability to facilitate a changing energy market and keep costs down
Supporting documents	Future role of electricity transmission engagement log, Investment plans at the Transmission / Distribution interface engagement log, "National Grid Service Evaluation Research Results"
Does the evidence support the business plan action? Why/why not?	 This action seems to primarily be driven by the SQSS licence condition. However, the investment does also contribute to allowing the connection of more renewables and ensuring the reliability of the network. There is evidence from the engagement logs and service evaluation research that stakeholders would like to see NGET deliver a reliable network that will allow more low carbon generation to connect. Therefore, together with the license condition the evidence does support the action on a qualitative basis. It is not clear that there is evidence to clearly judge
Does the justification in the business plan match the conclusions from the engagement log?	the quantitative decisions that have been made though. Yes, the justification is that stakeholders want NGET to provide a reliable network and facilitate additional renewable connections.
Is there a clear audit trail of how the decision has been made?	Yes. This action is primarily driven by the SQSS. It is also supported by stakeholder feedback.
Are there any gaps?	No. It is supported by some stakeholder views and is driven by regulation. Given the driving factors it is clear why the action has been proposed.

Figure 8 Action-by-action assessment

Figure 9 Action-by-action assessment

Business plan action:	Invest in changes to protection and control required to maintain security of supply as renewable penetration increases
Supporting documents	Future role of electricity transmission engagement log, , "National Grid Service Evaluation Research Results"
Does the evidence support the business plan action? Why/why not?	Yes. This investment is to maintain system reliability whilst enabling more decarbonisation. Both of these are key stakeholder priorities evidenced by the engagement log and service evaluation research.
Does the justification in the business plan match the conclusions from the engagement log?	Yes. The business plan references the need for this investment to manage the system with increasing renewables penetration. However, the business plan does not explain that maintaining reliability and enabling more decarbonisation are two key stakeholder priorities.
Is there a clear audit trail of how the decision has been made?	Yes. The business plan is clear that the need for this investment is to provide reliability with increasing renewables deployment. These are stakeholder priorities, although this is not mentioned in the business plan justification itself.
Are there any gaps?	No material ones. The business plan could reference the stakeholder priorities here, but it is probably clear enough without an explicit reference.

Business plan action:	Invest to facilitate closure of conventional generation and secure easements
Supporting documents	N/A This action does not seem to be driven by engagement feedback. Instead these actions seem to be driven by liabilities that NGET already has.
Does the evidence support the business plan action? Why/why not?	N/A This action does not seem to be driven by engagement feedback. Instead these actions seem to be driven by liabilities that NGET already has.
Does the justification in the business plan match the conclusions from the engagement log?	N/A This action does not seem to be driven by engagement feedback. Instead these actions seem to be driven by liabilities that NGET already has.
Is there a clear audit trail of how the decision has been made?	N/A This action does not seem to be driven by engagement feedback. Instead these actions seem to be driven by liabilities that NGET already has.
Are there any gaps?	N/A This action does not seem to be driven by engagement feedback. Instead these actions seem to be driven by liabilities that NGET already has.

Figure 10 Action-by-action assessment

Business plan action:	Develop network solutions and keep options open at the lowest cost
Supporting documents	"Future role of electricity transmission engagement log", "Maximise existing capacity, whole system solutions, investment to facilitate the market, enable decarbonisation of transport manage uncertainty engagement log", "National Grid Service Evaluation Research Results"
Does the evidence support the business plan action? Why/why not?	Generally minimising cost to consumers is a is a theme throughout some of the engagement feedback. Given there is uncertainty over future requirements, this specific action reduces costs to consumers and therefore is supported by the evidence.
Does the justification in the business plan match the conclusions from the engagement log?	Yes, the business plan says this action will reduce costs to consumers. This aligns with a key conclusion from the engagement logs
Is there a clear audit trail of how the decision has been made?	It is clear that the action is proposed to reduce consumer costs. It is not explicitly stated that this is a stakeholder priority. However, in this instance in can reasonably be expected to be a stakeholder priority so it may not require the explicit link.
Are there any gaps?	No.

Figure 11	Action-by-action	assessment
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Business plan action:	Innovate using new technologies and operating approaches
Supporting documents	"Future role of electricity transmission engagement log", "Maximise existing capacity, whole system solutions, investment to facilitate the market, enable decarbonisation of transport manage uncertainty engagement log"
Does the evidence support the business plan action? Why/why not?	There is evidence from the engagement logs that stakeholders want NGET to be innovative and provide value for money. Generally minimising cost to consumers is a is a theme throughout some of the engagement feedback. This specific action reduces costs to consumers and therefore is supported by the evidence.
Does the justification in the business plan match the conclusions from the engagement log?	Yes, the business plan says this action will reduce costs to consumers. This aligns with a key conclusion from the engagement logs
Is there a clear audit trail of how the decision has been made?	It is clear that the action is proposed to reduce consumer costs. It is not explicitly stated that this is a stakeholder priority. However, in this instance it can reasonably be expected to be a stakeholder priority so it may not require the explicit link.
Are there any gaps?	No.

Figure 12 Action-by-action assessment

Figure 13 Action-by-action assessment

Business plan action:	Innovate by facilitating non-network solutions	
Supporting documents	Investment plans at the Transmission / Distribution interface engagement log, Maximise existing capacity, whole system solutions, investment to facilitate the market, enable decarbonisation of transport manage uncertainty engagement log	
Does the evidence support the business plan action? Why/why not?	Yes. DNO's have asked NGET to take a more whole systems approach and to try to adopt more non-build solutions. At a high level this action aligns directly with this feedback. NGET also states in the business plan that it will engage further in this area.	
Does the justification in the business plan match the conclusions from the engagement log?	Yes. The business plan references engagement with DNOs up to this point. The action is limited in scope and notes that there will be further engagement in this area.	
Is there a clear audit trail of how the decision has been made?	Yes. the business plan clearly references the outcome of DNO engagement in justifying the action.	
Are there any gaps?	The proposed action is limited in scope so there are not any obvious gaps at this stage.	

Business plan action:	Facilitate competition in networks, where in consumers' interest by highlighting projects and undertaking pre-construction work where required
Supporting documents	N/A This is required by Ofgem
Does the evidence support the business plan action? Why/why not?	N/A This is required by Ofgem
Does the justification in the business plan match the conclusions from the engagement log?	N/A This is required by Ofgem
Is there a clear audit trail of how the decision has been made?	N/A This is required by Ofgem
Are there any gaps?	N/A This is required by Ofgem

Figure 14 Action-by-action assessment

Figure 15 Action-by-action assessment

Business plan action:	Optimise with customers by aggregating investment in harmonic filtering
Supporting documents	Future role of electricity transmission engagement log, Investment plans at the Transmission / Distribution interface engagement log, Maximise existing capacity, whole system solutions, investment to facilitate the market, enable decarbonisation of transport manage uncertainty engagement log, "National Grid Service Evaluation Research Results"
Does the evidence support the business plan action? Why/why not?	Yes. This action should enable greater renewable deployment at the lowest cost. Decarbonisation is one of the top three priorities for stakeholders and keeping costs to consumers down is also an important point for stakeholders. This is also an example of NGET taking a whole systems approach which has also been requested in feedback.
Does the justification in the business plan match the conclusions from the engagement log?	Yes, in part. The business plan explains this action has been generated based on stakeholder feedback that they need to take a more whole systems approach. NGET has engaged with stakeholder to identify opportunities such as this. However, the action also delivers on stakeholder priorities for decarbonisation and low costs and these are not explicitly referenced.
Is there a clear audit trail of how the decision has been made?	Yes. The There is a clear explanation that this action has been identified from working with stakeholder on a whole systems basis.
Are there any gaps?	The business plan could mention that this action delivers on stakeholder priorities.

Business plan action:	Optimise with the ESO through a new mechanism at the interface, provision of better information into NOA and installation of system monitoring	
Supporting documents	Future role of electricity transmission engagement log	
Does the evidence support the business plan action?	The delivery of the system monitoring is required by the TO – SO code.	
Why/why not?	Weakly yes.	
	The other aspects of this action are largely about providing support and options to the ESO. There is some evidence that the ESO has engaged and provided feedback in support of this action. However, the evidence in the engagement log is limited at this time.	
Does the justification in the business plan match the conclusions from the engagement log?	Yes. However, the conclusions in the engagement log are only initial conclusions at this time. It is not clear from the evidence to what extent the ESO requested this action.	
Is there a clear audit trail of how the decision has been made?	Yes. The engagement log and business plan are both clear that this is about offering services to the ESO which may enable it to save money. However, it may benefit from additional clarity in the engagement log that the ESO has requested this.	
Are there any gaps?	Yes. There could be more clarity in the engagement log (it is incomplete at this time) about the requests from the ESO with regards to this action.	

Figure 16 Action-by-action assessment

Figure 17 Action-by-action assessment

Business plan action:	Optimise with DNOs by identifying whole system opportunities, establishing an ongoing process and investing in five reactor units
Supporting documents	Future role of electricity transmission engagement log, Investment plans at the Transmission / Distribution interface engagement log. Whole Systems Annex, Maximise existing capacity, whole system solutions, investment to facilitate the market, enable decarbonisation of transport manage uncertainty engagement log
Does the evidence support the business plan action? Why/why not?	Yes. DNO's in particular have indicated that NGET should take more of a whole systems approach which this action represents. The action also supports reliability of the grid with increasing decarbonisation of electricity generation which both key stakeholder priorities.
Does the justification in the business plan match the conclusions from the engagement log?	Yes. The business plan references engagement with DNOs on whole system costs. The business plan also references the challenges of increasing decarbonisation and decentralisation. Reactive power control is an important contributor to system reliability.
Is there a clear audit trail of how the decision has been made?	Yes, qualitatively it is clear that NGET is responding to a need from stakeholders for it to take a more whole systems approach. The justification for why 5 reactors is in the Whole Systems Annex.
Are there any gaps?	No

Business plan action:	Develop a suitable anticipatory investment mechanism that allows solutions to unlock the rapid decarbonisation of the economy to be delivered
Supporting documents	Future role of electricity transmission engagement log, Maximise existing capacity, whole system solutions, investment to facilitate the market, enable decarbonisation of transport manage uncertainty engagement log, "National Grid Service Evaluation Research Results"
Does the evidence support the business plan action? Why/why not?	At this stage the business plan action is only described in very broad terms with a note that "we will provide further detail on our vision for the remaining 2 areas in the October iteration of our plan". Therefore, at this stage it is challenging to judge if the form that this action will take will be supported by the evidence.
	However, based on the engagement logs and service evaluation research results the evidence does not seem to strongly support the in-principle action of making speculative investments to support low carbon generation.
	In particular the evidence from the service evaluation research results suggests that there was an even split between people who would prefer NGET to wait until renewable projects are confirmed and those that would like NGET to invest as soon as the projects seem likely to happen. This mixed evidence therefore does not clearly support the proposed action.
Does the justification in the business plan match the conclusions from the engagement log?	No. The business plan states that "initial results from our early consumer engagement work indicates broad support for making investments early to enable decarbonisation, even if they later turn out not to be fully required". However, this specific point does not come across in the engagement logs.
Is there a clear audit trail of how the decision has been made?	No. there appears to be a step missing which would be the specific evidence in the engagement logs or elsewhere that is stated in the business plan.
Are there any gaps?	Yes, the link from the business plan description of engagement results and the content of the engagement logs or other evidence.

Figure 18 Action-by-action assessment

Business plan action:	If required, deliver the proportion of the 54 strategic motorway services areas connections that we are best placed to deliver for consumers as part of the solution to range anxiety we have developed with stakeholders (DNOs to deliver the remainder)	
Supporting documents	Future role of electricity transmission engagement log, Maximise existing capacity whole system solutions, investment to facilitate the market, enable decarbonisation of transport manage uncertainty engagement log, "National Grid Service Evaluation Research Results"	
Does the evidence support the business plan action? Why/why not?	At this stage the proposed action is conditional. And NGET plan to continue to work with stakeholder to build the evidence required. The evidence is strong enough to support this conditional type of action and the service evaluation research results showed a clear majority supported investment now to meet potential EV demand. However, there is not a clear consensus from the engagement undertaken so far that electricity transmission capacity is a limiting factor for EV take up.	
Does the justification in the business plan match the conclusions from the engagement log?	Yes. However, the engagement log notes that there is less certainty and consensus around this point.	
Is there a clear audit trail of how the decision has been made?		
Are there any gaps?	No, given that the action is conditional. However, NGET would need further evidence to take forwards the conditional action.	

Figure 19 Action-by-action assessment

ANNEX B CHAPTER 8: CONNECT AND USE

In the table below we provide a high-level overview of the evidence summarised in the engagement log(s) for this topic area.

Figure 20 Overall asses	ssment of evidence in engagement log (1 of 2)
Document	Engagement Log: Investment Plans at Transmission / Distribution Interface
What has been heard (key findings)?	 It was acknowledged that even in a highly-decentralised energy system, there will still be periods when DNOs rely on their transmission connection to meet local demand requirements. NGET's initial investment plan included costs for the re-build of certain GSPs due to rising fault levels. While DNOs agreed that fault levels are an increasing issue, the prevailing view was that all whole system options had not yet been exhausted and therefore the works should not form part of the NGET baseline plan. However, it was acknowledged that there is a strong possibility that investment driven by rising fault levels could ultimately be required during RIIO-T2. DNOs expressed concerns regarding NGETs proposals for collaborative whole system assessments between network companies. DNOs indicated a preference for a fully ESO led process due to perceived potential conflicts of interest. NGET will be reviewing its non-load plans with DNOs to identify any opportunities to facilitate future growth through making co-ordinated asset replacement decisions. Several DNOs expressed concern that short-term decisions could result in a reduction in available transmission capacity. This could then restrict future customer growth
Who has it been heard from (stakeholder types)?	DNOs
What are the key types of engagement?	 BAU engagement. NGET has ongoing relationships and interaction with DNOs as part of BAU planning activities. NGET is also a member of the ENA Open Networks project. Specific Engagement NGET has undertaken a series of bilateral workshops with each individual DNO organisation. A two-phase approach was taken to allow initial plans and assumptions to be discussed and feedback obtained
Are there particularly diverse views or consensus?	From the documentation there appears to have been reasonable consensus amongst DNOs on their views.
What can be concluded?	 Overall, DNOs want NGET to: Work more collaboratively and in a coordinated manner with DNOs Consider a more whole system approach and non-build solution to rising fault levels Let the ESO lead the coordination of the whole systems work (due to possible conflict of interest)

Figure 20	Overall assessment o	f evidence ir	n engagement	log (1 of 2)
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Do there appear to be any issues with the robustness of the evidence?	No. NGET has engaged directly with the each of the DNOs and has gathered their views.	
Which actions in the business plan is this evidence relevant to? (Include refs.)	 We will invest in our network to connect demand customers when they request connections by installing 18 super grid transformers (SGTs) under the common energy scenario We will invest in our network to facilitate the connection of embedded generation customers or consider a whole system solution 	
Does this evidence broadly support the actions? Why?	generation customers or consider a whole system solution Taken together the actions are supported by the evidence. However, the investment in SGTs is a residual requirement that is more supported by licence obligations than be feedback itself. It is the reduction in the number of SGTs and general network asset build solutions that are described in the business plan chapter and the referenced annexes that are more reflective of the evidence from the engagement log. It is not clear that all the evidence from the engagement log has been addressed In particular the DNO's preference for the whole system's coordination to be led	

Document	Engagement Log: Connections and Customer Service
What has been heard (key findings)?	 Several stakeholders commented that there needs to be more coordination between Transmission and Distribution networks and that a more holistic approach to connections is required – speculative investment in advance of need could potentially be justified if it provides this holistic approach. Greater flexibility would be welcomed on the part of networks and regulators, including NGET suggesting the best / quickest places to connect (also requires flexibility on the part of generators) Time, cost and quality are all important – certainty around time provides more clarity to NGET's customers' customers More could be made of the pre-application discussions, because these allow both parties to discuss options and agree details at the right point in the process Communication throughout the whole process is key (and sometimes currently lacking) Outage decisions are not explained enough NG doesn't have an appreciation of the impacts of outages on DNOs and there is not enough dialog with DNOs and customers Retailers can be left in the dark in relation to charging
Who has it been heard from (stakeholder types)?	Network Companies Small/new customers Large customers New business models Generators Battery developers EV developers
What are the key types of engagement?	 BAU Engagement NGET have regular conversations with customers at a working level and through top-down NPS processes. Specific Engagement Workshops

Figure 21 Overall assessment of evidence in engagement log (2 of 2)

	 Online consultations Customers and stakeholder satisfaction surveys in depth consultation with limited numbers of key stakeholders (connection journey, managing profitability journey) Tracking of complaints Customer seminars Stakeholder interviews Subject matter expert interviews
Are there particularly diverse views or consensus?	 There seemed to be consensus in terms of how it can be challenging to work with NGET. However, in respect of certain priorities different stakeholders had different views. In particular: Consumer organisations placed a greater importance on the cost of connection Environmental organisations attached more importance to the prioritisation of low carbon connections
What can be concluded?	 The conclusions that NGET draw from the evidence in the engagement log seem to be appropriate. These are that stakeholders: want a simplified, tailored, flexible and co-ordinated approach to connections, with flexibility around location of connection, cost and speed of connection being important. Would like NGET to provide them with the option for a wider range of services e.g. Noise surveys, planning support, land etc., they want a one stop shop. Would like NGET to provide more information and support upfront (preapplication stages) to give them certainly that are making the best choices prior to them making an investment decision; with the ability to access data in a meaningful (digital) way. Want NGET to be transparent in our charges and more importantly reduce the volatility of charges. Think that there is a need to be more co-ordinated between parties for planned outages, for us to provide visibility of these and minimise the changes as this impacts you and your customers.
Do there appear to be any issues with the robustness of the evidence?	NGET appears to have undertaken a wide range of engagement in this area. NGET has gathered views from stakeholders that seem representative of the various user groups that interact with the network. The overall engagement undertaken seems to have gathered views from a significant number of stakeholders.
Which actions in the business plan is this evidence relevant to? (Include refs.)	 We will invest in our systems, people and products to provide a service that is more tailored to your individual needs We will work with the ESO and others to look at options on how customers can directly contract with us for our aspect of their connection We will make step changes to improve the system access experience for our customers so that they have more warning of network outages and changes to them We will contribute to improve the stability and predictability of our charges
Does this evidence broadly support the actions? Why?	The evidence broadly supports most of the actions.

In the following tables, we assess whether each key proposed action in the business plan is supported by the engagement and research conclusions as set out in the engagement log(s). We also consider whether the logic between the

engagement log conclusions and the business plan actions is clear and sound. Finally we highlight any gaps to be filled, or any areas where we feel that the business plan actions may not reflect the findings set out in the engagement log(s).

Business plan action:	We will invest in our network to connect 17.3GW of new generation, storage and interconnector for customers under the common energy scenario
Supporting documents	N/A
Does the evidence support the business plan action? Why/why not?	We understand from the draft business plan that this is a license obligation. NGET are required to deliver this with or without engagement feedback asking them to.
Does the justification in the business plan match the conclusions from the engagement log?	N/A
Is there a clear audit trail of how the decision has been made?	N/A
Are there any gaps?	N/A

Figure 22 Action-by-action assessment

Figure 23	Action-by-action assessment
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Business plan action:	We will invest in our network to connect demand customers when they request connections by installing 18 super grid transformers (SGTs) under the common energy scenario
Supporting documents	"Demand Investment Decision Pack A7/8.09", "Whole Systems Annex – A7/8.06", "Engagement Log: Connections and Customer Service", "Engagement Log: Investment Plans at Transmission/Distribution Interface"
Does the evidence support the business plan action? Why/why not?	This is a license obligation. NGET are required to deliver in this space (although perhaps not exactly in this manner – the extent to which there is some discretion is something that could potentially be clarified) with or without engagement feedback asking them to.
	There is some evidence from one of the engagement logs that stakeholders want "more coordination between Transmission and Distribution networks". ³ However, from the other engagement log it seems that whilst DNO's recognised that rising fault levels may lead to investment being required in RIIO T2 at some point they were not in favour of these works forming part of the baseline plan. ⁴
	In the Business Plan NGET says that it has worked with DNO's to remove from the baseline investment plan those costs that it can and use Whole systems approaches and non-build solutions. This is supported by the evidence in the Demand Investment Decision Pack which makes it clear that the DNO's have agreed that this residual requirement is the most economic and efficient option for consumers in meeting the DNO's requirements.
Does the justification in the business plan match the conclusions from the engagement log?	The justification in the business plan matches that in the Demand Investment Decision Pack. This seems appropriate for this action because the action represents a residual need for investment in network infrastructure after the engagement feedback has been acted on.

³ Engagement Log: Connections and Customers Service, Page 14

⁴ Engagement Log: Investment plans at Transmission/Distribution Interface, page 10

how the decision has been made? decision was reached with DNOs and directly connected customers. There is also a list of specific examples in the Whole Systems Annex of projects that have been
made?

Figure 24 Action-by-action assessment

Business plan action:	We will invest in our network to facilitate the connection of embedded generation customers or consider a whole system solution
Supporting documents	"Engagement Log: Investment Plans at Transmission/Distribution Interface", "Whole Systems Annex – A7/8.06"
Does the evidence support the business plan action? Why/why not?	We understand from the draft business plan that this is at least in part driven by a license obligation. Therefore, NGET is obliged to invest in the network to facilitate the connection of embedded generation. However, the consideration of whole system solutions does reflect specific engagement feedback from DNOs. In addition the Whole Systems annex makes it clear that Ofgem has emphasised the need for NGET to take more of a whole systems approach. In addition the business plan chapter suggests that adopting a whole systems approach has enabled it to take costs out of the business plan. Taken together there clear support for NGET to propose this action.
Does the justification in the business plan match the conclusions from the engagement log?	Not really. The business plan chapter does not reference engagement feedback as being a driver for this proposed action.
Is there a clear audit trail of how the decision has been made?	Not within the chapter itself. However, the Whole Systems Annex makes clear that this was something that Ofgem said the network companies needed to do and that it has allowed for costs to be reduced.
Are there any gaps?	Yes. DNOs "expressed concern about NGET proposals for collaborative whole system assessments between network companies." They preferred the ESO to lead the process due to conflict of interest. It is not clear how this is addressed.

Business plan action:	We will invest in our systems, people and products to provide a service that is more tailored to your individual needs
Supporting documents	Engagement Log: Connections and Customer Service, "'Future of Electricity Transmission' webinar", "IT System Health Reporting Investment Decision Pack"
Does the evidence support the business plan action? Why/why not?	Yes. There is engagement feedback requesting a more tailored approach and for more communication throughout the process as well as identifying a number of customer relationship management failures. The actions proposed (on IT and to "expertly support our customers") would seem to address this.
Does the justification in the business plan match the conclusions from the engagement log?	Yes. The justification in the business plan is that these actions will help to improve CRM and provide more tailored solutions. This matches some of the conclusions in the engagement log
Is there a clear audit trail of how the decision has been made?	Yes. There is a range of feedback from engagement that shows stakeholders would like improvements in this area, the business plan summarises what stakeholders want in this space in a manner which is consistent with the engagement logs and the actions delivers this. The detailed justification of the specific IT investments is in the "IT System Health Reporting Investment Decision Pack"
Are there any gaps?	Yes. 'The Future of Electricity Transmission' Webinar is listed as being a relevant channel in the business plan but it does not seem to be in the engagement logs or engagement summary for this chapter.

Figure 25 Action-by-action assessment

Figure 26 Action-by-action assessment

Business plan action:	We will work with the ESO and others to look at options on how customers can directly contract with us for our aspect of their connection
Supporting documents	Engagement Log: Connections and Customer Service
Does the evidence support the business plan action? Why/why not?	No. Engagement feedback is mentioned in the business plan chapter that would support this action. However, we have not seen the equivalent feedback in the engagement log that would support the action.
Does the justification in the business plan match the conclusions from the engagement log?	No. The business plan states that "many of our customers are confused by the post legal commercial agreement structure, some have stated that they would prefer a direct contractual link to the party delivering the work.". However, the conclusions of the engagement log do no mention a desire from customers for such a contractual approach.
Is there a clear audit trail of how the decision has been made?	Somewhat. According to the business plan this is acting directly on customer feedback. However, this evidence is missing from the engagement logs.
Are there any gaps?	Yes the evidence of the feedback that supports the action is missing from the engagement logs.

Business plan action:	We will make step changes to improve the system access experience for our customers so that they have more warning of network outages and changes to them
Supporting documents	Engagement Log: Connections and Customer Service
Does the evidence support the business plan action? Why/why not?	Yes. NGET are proposing actions to improve the outage customer journey and this is an area that customers asked for improvements in. Specifically they requested more coordination on outages, more visibility of outages and fore there to be fewer changes to outage schedules.
Does the justification in the business plan match the conclusions from the engagement log?	Yes the reasoning in the business plan matches the conclusions in the engagement log.
Is there a clear audit trail of how the decision has been made?	Yes. There is feedback in the engagement log that highlights stakeholder wishes in this area. This is captured in the conclusions of the stakeholder log. The description of the feedback in the business plan matches that in the engagement log and supports the proposed action.
Are there any gaps?	No gaps identified.

Figure 27 Action-by-action assessment

Figure 28 Action-by-action assessment

Business plan action:	We will contribute to improve the stability and predictability of our charges
Supporting documents	Engagement Log: Connections and Customer Service
Does the evidence support the business plan action? Why/why not?	There are three sub actions that NGET proposes.
	 Improve cost reflectivity Improve stability Improve predictability
	The evidence clearly shows that stability and predictability are important for stakeholders. Therefore actions to improve stability and predictability are supported by the evidence. The engagement log also states that customers have told NGET that they want NGET to be transparent in their charges.
	However, it is not clear that cost reflectivity has the same meaning as 'transparent' in this context. Also there may be a trade-off between cost reflectivity and stability/predictability. Stability is clearly highlighted as the most important factor for stakeholders but the business plan does not address the issue of potential trade-offs.
Does the justification in the business plan match the conclusions from the engagement log?	In general yes. However, it is not clear if 'transparency' means the same as 'cost reflectivity' in this context. The engagement log lists 'transparency' as being important to stakeholders but the business plan says that it will provide greater 'cost reflectivity'
Is there a clear audit trail of how the decision has been made?	Somewhat. At this stage the actions are relatively high level. Therefore the actions are essentially descriptions of the points that NGET will address. Therefore, there is not a detailed audit trail but it is still clear why the actions are proposed.
Are there any gaps?	Yes, there doesn't seem to be a consideration of the potential trade-off between the three sub-actions.

ANNEX C CHAPTER 9: SAFE AND RELIABLE

In the table below we provide a high-level overview of the evidence summarised in the engagement log(s) for this topic area.

Figure 29 (Overall assessment of evidence in engagement log
Document	Engagement log
Document What has been heard (key findings)?	 Engagement log Reliability is a key priority for stakeholders. In ranking topics, stakeholders ranked "provide an uninterrupted supply of energy" as their top priority Maintain current levels of reliability Increased future dependency on electricity Value of Loss Load (VoLL) updates (Energy Not Supplied incentive) Do not limit future network development Demonstrate long term consumer benefit Innovate to deliver an affordable network Comply with all relevant safety legislation NGET are safety exemplars in the industry Some safety process shortfalls (Injury Frequency Rate) Expand NARM to include more assets Maintain asset risk in T2
	 Consumers are willing to pay for a reduced probability of power cuts
Who has it been heard from (stakeholder types)?	Consumer bodies, domestic consumers, business consumers, large customers, small/new customers, members of the public, other TOs, DNOs, supply chain, Ofgem, governmental stakeholders, Energy UK, other interest groups, academics.
What are the key types of engagement?	Workshops, consultations, attitudinal research, bi-laterals and tri-laterals, consumer listening sessions, willingness to pay research, reliability education document, webinar, qualitative research, cultural research, interactive slider tool, acceptability testing.
Are there particularly diverse views or consensus?	There appears to be broad consensus that reliability is a key priority for stakeholders, and that reliability levels should not deteriorate. However, there appear to be mixed views on whether reliability levels should be maintained or improved, and this could be communicated more clearly in the engagement log and business plan, and also on how this feedback has been balanced with feedback on affordability. The acceptability testing carried out shows that the majority of consumers agree with NGET's proposed investments and the bill impact on maintaining the condition of assets, but about a third of consumers do not agree that the bill impact is acceptable (more detail in the table below on network risk).
What can be concluded?	Reliability levels should be at least maintained.
Do there appear to be any issues with the robustness of the evidence?	 No, not based on the engagement log. This is a technical topic that could be difficult for stakeholders to comment meaningfully on. However, NGET has recognised that this is a complex topic for which context and clear explanations need to be provided. The engagement log shows evidence that NGET has provided such context (e.g. in the reliability education document and during workshops), and attempted to provide clear

	explanations (e.g. converting reliability percentages into numbers of hours lost to consumers).
	The number and range of stakeholders engaged with appears to be sufficient to draw robust conclusions from. For example, the initial workshops held in September 2017 collected data from 60 respondents across a broad range of groups. NGET also received a further 665 responses to its initial consultation from members of the public. The Populus survey carried out in 2017 covered over 2,000 consumers.
Which actions in the business plan is this evidence relevant to?	 There is evidence covered in the engagement log that is relevant to NGETs actions around Energy Not Supplied (ENS) targets, network risk position and asset risk position.
(Include refs.)	• There is more limited evidence on using whole system collaboration to optimise the delivery of work to reduce the outage impact on the network.
	There does not appear to be any evidence relating to safety. NGET does explain that safety is not an area where engagement with stakeholders can help shape the business plan.
Does this evidence broadly support the actions? Why?	Yes, the actions are broadly supported (other than safety, for which stakeholder evidence is less relevant). Stakeholders value reliability and want to see NGET either maintain or improve reliability levels. The actions (other than on safety) are all centred around maintaining or improving reliability levels.

In the following tables, we assess whether each key proposed action in the business plan is supported by the engagement and research conclusions as set out in the engagement log(s). We also consider whether the logic between the engagement log conclusions and the business plan actions is clear and sound. Finally we highlight any gaps to be filled, or any areas where we feel that the business plan actions may not reflect the findings set out in the engagement log(s).

Figure 30	Action-by-action assessment
Business plan action:	Maintain our safety standards, aiming for zero harm to our employees, contractors, stakeholders and the public. Injury frequency rate reduced from 0.12 towards zero.
Supporting documents	Engagement log
Does the evidence support the business plan action? Why/why not?	Not applicable - the engagement log explains that because the work done by NGET on safety is driven mainly by legislation and standards, safety is not an area in which stakeholder engagement can meaningfully be used to develop plans.
Does the justification in the business plan match the conclusions from the engagement log?	The business plan states that stakeholders have said that NGET should comply with all relevant safety legislation. While this is reflected in the engagement log (p.2), it isn't clear which of the specific engagements this feedback has come from.
Is there a clear audit trail of how the decision has been made?	It would be helpful to provide more detail on which engagements NGET has heard that stakeholders say that NGET should comply with all relevant safety legislation. Alternatively this statement could be removed as there are no options to offer stakeholders when it comes to complying with legislation, as NGET has explained.
Are there any gaps?	No.

Figure 31	Action-by-action assessment
Business plan action:	We are committed to whole system collaboration with the ESO and our directly connected customers to optimise the delivery of our work to reduce the outage impact on the network.
Supporting documents	Engagement log
Does the evidence support the business plan action? Why/why not?	NGET carried out bi-laterals with six other network companies, where one of the key conclusions was that collaborative working and increased data sharing between networks and the ESO will be necessary to choosing the best whole system option when making investment decisions.
Does the justification in the business plan match the conclusions from the engagement log?	The business plan states that stakeholders have said that NGET should ensure decisions taken in the short-term do not limit future system opportunities. This reflects one of the key conclusions from bi-laterals held with DNOs, which was that NG's short term decisions should not limit future growth – e.g. asset replacement and removal at sites where customers may want to connect.
Is there a clear audit trail of how the decision has been made?	The audit trail could be improved; the engagement log does not bring out clearly where the support for this action is coming from, other than the engagement with DNOs. If there is broader support coming from engagements covered in other chapters, cross-referencing could be helpful.
Are there any gaps?	This action is slightly vague, so if it could be made more measurable that would be helpful, or cross reference to other chapters, such as the ongoing transition chapter, where more detail is provided.

Figure 32	Action-by-action assessment
Business plan action:	 Reduce the amount of Energy Not Supplied (ENS) over T1 targets: No greater than 278MWh (per annum) of energy not supplied 12% improvement over T1 target
Supporting documents	Engagement log, willingness to pay research, acceptability testing, service valuation research
Does the evidence support the business plan action? Why/why not?	Yes, overall reliability is clearly a priority for stakeholders and it there is clear support for maintaining reliability levels. NGET's action to lower ENS therefore addresses stakeholder views, but it would be helpful if NGET could explain why it is reducing ENS rather than holding it constant.
	NGET's initial workshops and consultation in September 2017 found that reliability and value for money were key priorities for stakeholders. The importance of reliability has been echoed in a number of further engagements, including:
	 a 2017 Populus survey, which found that across approximately 2,000 consumers, maintaining a reliable network was the top priority;
	 a bespoke session with Energy UK and 12 other industry participants, which found that most attendants wanted reliability to be maintained at about the same levels as today;
	 a consumer listening session, which found that having a reliable supply of energy was voted the top priority, and was also the area that participants were most willing to pay more for;
	a workshop in May 2019, attended by 27 stakeholders across a number of stakeholder groups, which found that stakeholders generally felt that the need for a reliable network will be greater in future.

Figure 31 Action-by-action assessmen	Fi	gure 31	Action-by-action	assessmen
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	The willingness to pay research (covering 1,000 domestic consumers and 600 business consumers) clearly shows that consumers are willing to pay for improved levels of reliability, so there is consumer support for NGET's proposed actions. The research found that:
	Domestic consumers were willing to pay £7.70 per year for a 2 hour decrease in the hours of powercuts at a 1.5% probability, and £9.70 for a 4 hour decrease in the hours of powercuts at a 1.5% probability. They were willing to pay £3.58 for each fewer day to recover from a blackout.
	Non-domestic consumers were willing to pay £43.30 per year for a 2 hour decrease in the hours of powercuts at a 1.5% probability, and £66.95 for a 4 hour decrease in the hours of powercuts at a 1.5% probability. They were willing to pay £24.15 for two fewer days to recover from a blackout.
	The service valuation research, which included 1,047 respondents who were UK residents and bill payers for electricity, found that 54% of consumers wanted NGET to maintain current levels of reliability, and 33% wanted NGET to increase reliability. Only 9% wanted NGET to reduce costs, even if this reduces reliability.
Does the justification in the business plan match the conclusions from the engagement log?	The business plan states that stakeholders have said that NGET should ensure decisions taken in the short-term do not limit future system opportunities, and that NGET should maintain levels of reliability at an affordable cost. These broadly reflect the messages coming out in the engagement log. However, it isn't clear that the justification matches the action. The justification could be more focused around stakeholders saying that reliability is a key priority
Is there a clear audit trail of how the decision has been made?	and consumers being willing to pay for improved reliability. It is broadly clear how the stakeholder engagement supports this action, but the audit trail could be improved. The justification provided in the business plan does not seem to match the action (see the row above).
	The engagement log states that NGET has concluded that stakeholders want reliability maintained at a similar level, but then goes on to state that NGET will set more challenging targets to reduce energy not supplied (p.24-25). The reasoning for setting more challenging targets could be explained more clearly.
Are there any gaps?	While it is clear that stakeholders value reliability, NGET could provide some additional detail on how the exact targets have been derived.

Figure 55	Action-by-action assessment
Business plan action:	We will maintain our network risk position through condition monitoring, maintenance, repair, refurbishment and replacement of our assets. We will deliver this work at lowest cost (on average per unit) by embedding innovation. (This applies to lead assets)
Supporting documents	Engagement log, webinar outcomes July/August
Does the evidence support the business plan action? Why/why not?	 and value for money were key priorities for stakeholders. As explained in the table above, there is broad support for holding reliability constant, which is supportive of holding network risk constant. NGET held a workshop in May 2019, attended by 27 stakeholders across a number of stakeholder groups, which found that 60% of stakeholders felt that network risk for lead assets should be held constant across T2 (at the level it is at by the end of T1). NGET held two webinars in July and August this year, covering 16 stakeholders including regulators, networks and customers. 90% of stakeholders were either very supportive or supportive of NGET's draft plan to maintain current levels of reliability. Some feedback suggested that stakeholders would like to know more about how NGET would monitor spending and improve efficiency. We note that in the acceptability testing, 58% of consumers surveyed agreed with NGET's investments around "maintaining condition of overhead lines, pylons, underground cables, and substations", as well as the impact on bills. However, 32% did not agree with the impact on bills, and 4% did not agree that the proposed investment was needed. While the majority of consumers surveyed supported the plans, it might be worth further investigating why about a third of
	consumers did not agree with the investment or the bill impact.
Does the justification in the business plan match the conclusions from the engagement log?	The business plan states that stakeholders have said that NGET should maintain levels of reliability, at an affordable cost. This broadly matches the messages coming from the engagements covered in the engagement log.
Is there a clear audit trail of how the decision has been made?	
Are there any gaps?	It would be helpful to add more detail on how embedding innovation will help reduce costs of maintaining network risk, or cross reference to other chapters where more detail is provided.

Figure 33 A	Action-by-action	assessment
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Figure 34	Action-by-action assessment
Business plan action:	By the end of the T2 period, we commit to maintaining the same level of asset risk position as at the end of the T1 period. (This applies to non-lead assets)
Supporting documents	Engagement log
Does the evidence support the business plan action? Why/why not?	NGET held a workshop in May 2019, attended by 27 stakeholders across a number of stakeholder groups, which found that most stakeholders felt that NGET should take less risk on its protection and control assets, and a broadly similar level of risk on bay equipment and instrument transformers.
Does the justification in the business plan match the conclusions from the engagement log?	The business plan states that stakeholders have said that NGET should maintain levels of reliability, at an affordable cost. This broadly matches the messages coming from the engagements covered in the engagement log, but there is limited evidence on stakeholders supporting this for non-lead assets specifically.
Is there a clear audit trail of how the decision has been made?	It is not entirely clear whether stakeholders have explicitly said that the level of risk for non-lead assets should be maintained, or whether this is how NGET is implementing stakeholders' view that reliability should be kept constant. Both approaches are reasonable, but it might help to be more explicit about this.
Are there any gaps?	No.

ANNEX D CHAPTER 10: EXTERNAL THREATS

In the table below we provide a high-level overview of the evidence summarised in the engagement log(s) for this topic area.

Figure 35 C	Overall assessment of evidence in engagement log
Document	Engagement log
What has been heard (key findings)?	 A reliable flow of electricity is important; interruptions to electricity supply should be kept at a minimum and should be as short as possible. NGET should respond and restore supply following an event as soon as possible and consider major metropolitan areas a priority – which means fast restoration in a Black Start scenario. NGET should ensure the network is resilient to external threats: cyber-attack, physical attack, and extreme weather. Due to the confidential and/or sensitive nature of plans NGET should engage with relevant specialists where possible to develop and agree appropriate solutions. Relevant specialists such as BEIS⁵, Ofgem, NIS⁶, the NCSC⁷ and the CPNI⁸ have proposed that: NGET implements the revised standards set out in Engineering Technical Report (ETR)138 (requirements for site flood protection) by the end of the T2 period. NGET implements required levels of Physical Security on designated PSUP sites NGET maintains a network resilient to external threats within T1 and beyond. NGET ensures a rapid restoration in a Black Start Scenario These recommendations emerged from regular interactions, through specific and targeted workshops and events organised by NGET to discuss issues related to each kind of security separately (extreme weather, cyber, physical and Black Start).
Who has it been heard from (stakeholder types)?	DNOs, Scottish TOs, generators, consumer groups, Ofgem, the Department for Business, Energy and Industrial Strategy (BEIS), the Centre for the Protection of National Infrastructure (CPNI), the National Cyber Security Centre (NCSC), Environment Agency.
What are the key types of engagement?	RIIO T2 workshop, online consultations, bi-lateral meetings, topic-specific research, existing threat- specific industry working groups or forums, consumer research.
Are there particularly diverse views or consensus?	There appears to be general support for the actions set by NGET in the business plan. However, stakeholders might have different perspectives in suggesting solutions due to their different level of information and their role in society (e.g. the regulator or a specific body is unlikely to suggest the same as a domestic consumer).

⁵ Department for Business, Energy & Industrial Strategy

⁶ Network Information System

⁷ National Cyber Security Centre

⁸ Customer Proprietary Network Information

	However, it should be noted that these different views and suggestions result in a coherent overall picture.
What can be concluded?	Stakeholders acknowledge the efforts NGET is making to involve its stakeholders and suggest this should be maintained (if not intensified) in the future.
Do there appear to be any issues with the robustness of the evidence?	No, the evidence on this topic appears to be robust.
Which actions in the business plan is this evidence relevant to? (Include refs.)	The evidence is relevant to all the actions.
Does this evidence broadly support the actions? Why?	Yes. The actions appear to have been shaped to respond effectively to the stakeholder priorities, expressed through feedback after each engagement event carried out by NGET.

In the following tables, we assess whether each key proposed action in the business plan is supported by the engagement and research conclusions as set out in the engagement log(s). We also consider whether the logic between the engagement log conclusions and the business plan actions is clear and sound. Finally we highlight any gaps to be filled, or any areas where we feel that the business plan actions may not reflect the findings set out in the engagement log(s).

Extreme Weather: Protect our sites from surface level flooding. Better understand how we protect from weather-related threats in the long term.		
Engagement log		
Yes, it emerges from all stakeholder groups that extreme weather is seen as an area on which NGET should continue focusing on and engaging with stakeholders. The business plan action addresses this feedback.		
The business plan states that stakeholders have said that NGET should implement the standards set out in Flood Resilience Engineering Technical Report 138 by the end of RIIO-T2 and this matches the conclusions in the engagement log, as heard from industry specialists including TOs, DNOs, Environment Agencies, Ofgem and BEIS.		
However, the views of non-specialist stakeholders do not appear to be explicitly mentioned in the justification for this action. These stakeholders said that NGET's approach to extreme weather resilience needs to be flexible, forward-looking, and able to adapt to future challenges. We think NGET should clarify that its approach satisfies these criteria in the business plan.		
There is a clear audit trail showing how the interaction with the specialist stakeholder group led to feedback that NGET should implement the standards set out in ETR138. However, the action in the business plan does not explicitly state that NGET is committing to implementing this, so NGET could be clearer on whether it is planning to do this or not. It is also less clear how feedback from non-specialist stakeholders has helped to shape the proposed action.		
The action could be made more specific, explaining in more detail how NGET will protect sites, what actions it will take to better understand how to protect from weather-related threats, and whether ETR138 will be implemented.		

Figure 36 Action-by-action assessment

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Business plan action:	Physical Security: Continue to meet our PSUP (Physical Security Upgrade Programme) requirements at all designated sites.
Supporting documents	Engagement log
Does the evidence support the business plan action? Why/why not?	On the topic of physical security, there is a limited amount of information that NGET is able to share with stakeholders on its plans, and this is made clear in the engagement log. This is due to the confidentiality and sensitivity around where and how NGET plans to protect its network. Requirements across this topic are also quite prescriptive, giving stakeholders limited ability to influence plans. However, the evidence reported in the engagement log shows that stakeholders support NGET's general approach to physical security (based on a 2018 resilience workshop). More specialised stakeholders such as the CPNI or BEIS have been engaged with to help design physical security standards.
Does the justification in the business plan match the conclusions from the engagement log?	The business plan states that stakeholders have said that NGET should implement required levels of Physical Security on designated PSUP sites. The PSUP is briefly mentioned in the engagement log, stating that the physical security of NGET's sites is primarily mandated by the PSUP, an initiative to protect the UK's most essential infrastructure, and that all works are closely evaluated by Government assigned bodies. It could be made clearer in the business plan justification that this is a Government mandated requirement, and that wider stakeholder views are not the primary driver of this action.
Is there a clear audit trail of how the decision has been made?	As explained above, it could be made clearer that this action is mandated by the Government.
Are there any gaps?	N/A

Figure 37 Action-by-action assessment

Figure 38 Action-by-action assessment

rigure 50 /	Action-by-action assessment
Business plan action:	Cyber Security: Enhanced cyber security and capability as agreed with the NIS Competent Authority.
Supporting documents	Engagement log
Does the evidence support the business plan action? Why/why not?	On the topic of cyber security, there is a limited amount of information that NGET is able to share with stakeholders on its plans, and this is made clear in the engagement log.
	However, the evidence in the engagement log does support the proposed action. In particular it emerges that both specialist and non-specialist stakeholder groups see cyber-attacks as one of the key threats that NGET should be protecting the network against. Stakeholders have also said that for cyber resilience, NGET needs to be joined up with the right organisations to ensure a coordinated approach. In particular NIS issued a specific directive in 2018 setting new cyber security standards and requirements and NGET engages closely with Ofgem and BEIS to discuss and assess the correct implementation.
Does the justification in the business plan match the conclusions from the engagement log?	The business plan states that stakeholders have said that NGET should implement agreed cyber security enhancement in line with NIS Regulation guidance. However, it is not clear that wider stakeholders have said this – it appears rather that this is a Government-mandated requirement, and this could be made clearer in the business plan.
Is there a clear audit trail of how the decision has been made?	Yes, it is clear how, based on the feedback and suggestions of stakeholders reported both in the engagement log and in the business plan, NGET landed on this decision. However, NGET could be clearer on whether it is meeting requirements, or going beyond these (if that is possible given confidentiality of the topic).

Are there any gaps? The action could be made more specific, clarifying what the concrete commitments consist of. If this is not possible due to confidentiality, this could be stated explicitly alongside the action.
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Figure 39	Action-by-action assessment
Business plan action:	Optel (operational telecommunications): Infrastructure to continue to deliver operational communication essential for the day to day operation of the system, supporting cyber and physical security management and support Black Start capabilities in a cyber resilient manner.
Supporting documents	Engagement log
Does the evidence support the business plan action? Why/why not?	The engagement log states clearly that due to the technicality and specialist nature of this topic it is difficult to involve stakeholders and this makes the evidence more limited than for other actions. The plans in this area have therefore been built mainly on taking on board lessons learnt from T1. However, NGET has also engaged with a specialist consultancy, the Scottish TOs and National Grid ESO. However, the findings of these engagements do not appear to be reported, so we cannot verify whether the support the proposed action.
Does the justification in the business plan match the conclusions from the engagement log?	The business plan states that stakeholders have said that NGET should maintain a network resilient to external threats within the T2 period and beyond. This justification could be made more specific to reflect the views of the specialist consultancy that NGET has engaged with, the Scottish TOs and National Grid ESO.
Is there a clear audit trail of how the decision has been made?	As mentioned above, the evidence on this action is relatively limited with a low level of detail shared due to the complexity of the topic. It could be made clearer in the business plan that the action is based mainly on previous learnings and engagement with a few stakeholders with specialist knowledge.
Are there any gaps?	N/A

Business plan action:	Black Start: Enhanced system and people capabilities to ensure an efficient and effective response in a Black Start scenario.
Supporting documents	Engagement log
Does the evidence support the business plan action? Why/why not?	Yes, response in a Black Start scenario is a strong priority for stakeholders across all groups. In particular, this was found in:
	 engagements specifically targeted to topic experts such as the Black Start Task Group, where NGET cooperated with BEIS and other energy sector participants to develop a new Black Start standard, with improved restoration times;
	 more general workshops such as the Resilience workshop organised in 2018, where non-specialist stakeholder categories were first informed and then engaged. During these events, stakeholders highlighted the high priority of this topic and the importance of reducing restoration times in the event of a Black Start.
	This evidence directly supports the business plan actions.
Does the justification in the business plan match the conclusions from the engagement log?	Yes, the business plan states that stakeholders have said that NGET should ensure rapid restoration in a Black Start Scenario and this matches the conclusions in the engagement log. The engagement log also suggests that stakeholders may expect a quicker response to a Black Start than could currently be provided, and NGET is currently considering this. However, the business plan makes clear that the requirements for a Black Start will only become clear later this year.
Is there a clear audit trail of how the decision has been made?	It is clear that NGET has engaged closely with specialist stakeholders such as BEIS to identify the best response to a Black Start scenario, and also that actions in this area cannot be finalised until later this year.
Are there any gaps?	This action could be made more specific, providing some general information on what types of investments NGET is making to improve its response in a Black Start scenario.
	The engagement log states that as part of the Black Start Task Group, NGET is working with BEIS and other energy sector participants to develop a new Black Start standard, with improved restoration times. This could potentially be built into the proposed action on this topic.

Figure 40	Action-by-action assessment
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ANNEX E CHAPTER 11: ENVIRONMENT AND COMMUNITIES

In the table below we provide a high-level overview of the evidence summarised in the engagement log(s) for this topic area.

Figure 41	Overall assessment of evidence in engagement log
Document	Environment engagement log, VIP engagement log
What has been heard (key findings)?	 Investment decisions based on the whole life cost of each option, including the cost of carbon – use this approach to help minimise overall carbon emissions
	 Focus on overall volumes of SF₆ leaked, continuing efforts to finding alternatives.
	 Visual impact divides opinion, but NGET's approach (VIPs) is broadly supported.
	 Minimise carbon impact of construction activities, potentially using carbon offsetting, and aim for net-zero carbon emissions.
Who has it been heard from (stakeholder types)?	NGET have heard from a wide variety of stakeholders, all of whom have differing levels of interest/engagement with the topic. This includes: consumers, interest groups, communities, regulatory bodies, consumer bodies, large customers, small/new customers, network companies and academics.
	The approach to engagement with each type of stakeholder depends on the impact on that stakeholder and the interest of each stakeholder.
What are the key types of eagement?	A wide variety of engagement types including: work by independent stakeholder agencies (including the agency Accent), stakeholder interviews, various stakeholder discussion groups, online surveys, Stakeholder Advisory Group, workshops, focus groups, bilateral talks and responses to the business plan consultation.
Are there particularly diverse views or consensus?	 Particularly diverse views on visual impacts: some think NGET's assets have a highly negative impact, whilst some see them as an acceptable part of the landscape. Those that feel impacted are largely supportive of minimising visual impact rather than minimising cost. There is consensus on NGET's approach to assessing visual impact on new lines. There is support for NGET to introduce a scheme that assesses visual impact on existing lines. Responses to other key topics tended to show strong consensus, in particular:
	 Focus on whole life costing and whole life carbon impact of NGET's activities;
	 Reduction of NGET's carbon footprint;
	 Finding a replacement for SF6;
	NGET are well-placed to provide leadership in the energy transition.
What can be concluded?	 It appears as if stakeholders' key concern is NGET's carbon impact – be it a whole-life approach to costs, or becoming carbon neutral in construction activities.
	 Stakeholders care about NGET's impact on the environment, but there are varying extents to which stakeholders care about this (e.g. NGET conducted a survey showing that some stakeholders were willing for NGET to go

Figure 41 Overall assessment of evidence in engagement log

	 beyond its legal obligations on reducing carbon emissions, even if it meant higher network charges. Other stakeholders disagreed). However, there is an absence of concrete guidance from stakeholders on the level of carbon emissions target. There is little consensus on how reducing carbon emissions translates into a 'willingness to pay'. Visual impact is a divisive issue, but NGET's current approach is well and widely supported by stakeholders.
Do there appear to be any issues with the robustness of the evidence?	 No, because there is: Evidence of engaging with a wide variety of stakeholders. For example, NGET hosted large workshops (Listen workshops) with over 30 different stakeholders representing large organisations. Evidence from a variety of sources taken into account (e.g. consumer surveys by Populus covering over 2,000 consumers, specialist surveys for VIP and the environment more generally, other workshops and focus groups).
Which actions in the business plan is this evidence relevant to? (Include refs.)	 Reduction in carbon emissions Reducing waste and responsible use of assets Caring for the natural environment Stakeholder-led approach of VIPs Providing organisational leadership Actions summarised in NGET draft business plan, July 2019, page 126. Full list of actions in Environmental Action Plan, Annex A11.05.
Does this evidence broadly support the actions? Why?	Yes, the evidence does broadly support NGET's actions. Given stakeholders' interest in the environment, particularly the carbon impact, there is justification for some of NGET's main actions (45% reduction by the end of T2, reducing waste materials). Similarly, there is general support for improving the natural environment, which supports NGET's 'Improving Natural Capital' approach. NGET's approach to VIP is well supported by this evidence, albeit there are more diverse views on the extent of amenity lost owing to over ground transmission assets. There is also strong evidence that NGET should provide leadership in the whole systems transition towards sustainable energy.
	is less clear how NGET arrived at their specific targets and actions. NGET could go further in explaining how it decided on the level of the target in certain areas where stakeholder feedback was supportive but not definitive on preferred actions.

Figure 42	Overall assessment of evidence in engagement log
Document	Communities engagement log
What has been heard (key findings)?	 NGET should not do less to support communities, and there is strong support to expand work in the community.
	 Supporting the local community is very important to the public, but relatively less important to organisations and other stakeholders.
	 It's important for NGET to engage with the communities that they serve, and households consider it important for NGET to provide support for wider society (i.e. areas outside of the local communities impacted by NGET's construction activities) and vulnerable customers.
	 However, there is very little evidence on actions NGET can take to support wider society from other stakeholders. NGET could increase their stakeholder engagement on this topic.
	 NGET's should do more to promote supply chain best-practice, and ensure all suppliers are complying NGET's standards (e.g. paying the living wage, and upskilling employees).
Who has it been heard from (stakeholder types)?	NGET have heard from a wide variety of stakeholders, all of whom have differing levels of interest/engagement with the topic. This includes: consumers, interest groups, communities, regulatory bodies, consumer bodies, large customers, small/new customers, network companies and academics.
	The approach to engagement with each type of stakeholder depends on the impact on that stakeholder and the interest of each stakeholder.
What are the key types of engagement?	Most conclusions appear to be drawn from Listen workshops and online surveys of the public.
Are there particularly diverse views or consensus?	The public thinks minimising impact on local communities is very important, but organisations (specifically organisations with a direct interest in potential new connection projects) find this less important.
What can be concluded?	There are some stakeholders (e.g. the public) who think NGET should do more work in local communities. However, the engagement did not point to specific actions, or how much to expand any actions taken.
Do there appear to be any issues with the robustness of the evidence?	 Yes because: There does not appear to be a large amount of evidence of stakeholders engaging in the process. NGET highlights some meetings and one-to-one conversations, but does not offer depth of research (e.g. a number of dedicated workshops with varied stakeholder groups, online surveys reaching a variety of stakeholders, etc) However, the evidence collected from different stakeholders does appear consistent.
Which actions in the business plan is this evidence relevant to? (Include refs.)	 Supporting local communities Supporting wider society Being a responsible employer Supply chain best practice Actions summarised in NGET draft business plan, July 2019, page 126-127. Full list of actions in Ethical Procurement Plan, Annex A11.06.
Does this evidence broadly support the actions? Why?	The evidence does not necessarily directly support the specifics of business plan actions, but the evidence does support a step up in general action in this area. NGET could go further in explaining how it has moved from stakeholder evidence to its proposed business plan actions.

Figure 42 Overall assessment of evidence in engagement log

In the following tables, we assess whether each key proposed action in the business plan is supported by the engagement and research conclusions as set out in the engagement log(s). We also consider whether the logic between the engagement log conclusions and the business plan actions is clear and sound. Finally we highlight any gaps to be filled, or any areas where we feel that the business plan actions may not reflect the findings set out in the engagement log(s).

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Business plan action:	1. i). Reduction in carbon emissions over the T2 period
Supporting documents	Environment engagement log, NGET acceptability testing, National Grid service valuation research
Does the evidence support the business plan action? Why/why not?	Yes, there is strong evidence that stakeholders want NGET to reduce their carbon impact. For example, members of the public in the 2017 workshops and online consultation rate the environment as the most important consideration (rated ahead of providing an uninterrupted supply of electricity for example). Other stakeholders, including investors, view the reduction of carbon emissions as very important. In a large consumer survey,
	NGET make a number of commitments in this area in its Environmental Action Plan, including: Reduce controllable GHG by 45%
	 Reduce carbon emissions from insulating gases by 20%
	 Reduce carbon emissions from operational transport by 65%
	Reduce carbon emissions from our business mileage
	 Purchase 100% of electricity we use from renewables
	 70% of our top 250 suppliers set a carbon reduction target
	 Achieve net-zero carbon construction
	While these commitments are directionally supported by the consensus of stakeholder feedback, more could be said on how the specific targets proposed have been derived.
Does the justification in the business plan match the conclusions from the engagement log?	Yes, the conclusions from the engagement log strongly point towards action on carbon emissions.
Is there a clear audit trail of how the decision has been made?	Yes, it is easy to understand how the business plan actions follow from the stakeholder input covered in the engagement logs. However, as noted above, it is less clear how the specific actions have been chosen.
Are there any gaps?	Whilst it's clear that stakeholders think these actions is necessary, it's not clear why any of the targets are appropriate. For example, it's not clear why a 45% reduction in controllable emissions is appropriate (against, say 40%, or 50%, or even 100%).

Figure 43 Action-by-action assessment

Figure 44	Action-by-action assessment
Business plan action:	1. ii). Reducing waste and responsible use of assets
Supporting documents	Environment engagement log, NGET acceptability testing, willingness to pay analysis
Does the evidence support the business plan action? Why/why not?	 Yes the evidence suggests NGET should focus on reducing its environmental impact by reducing waste and responsibly using assets. NGET suggests a number of actions in this area, including: We will fully embed sustainability and responsible sourcing within the procurement process We will extend the life of equipment by refurbishment Reducing the waste intensity of our construction projects year on year On construction projects, we will achieve zero waste to landfill with increasing recycling & composting rates year on year Increase the amount of recycled materials used on construction projects We will recycle 60% of our operational and office waste We will set a 20% reduction target on our water use against a 2019/20 target for our main offices We will implement circular economy principles across the business
Does the justification in the business plan match the conclusions from the engagement log?	Yes, there is justification for this type of work – even alongside other carbon reduction activities. However, it is less explicit in the engagement logs. Stakeholders do want NGET to reduce carbon emissions, and responsible use of assets is a method of doing so, but it is not clear that stakeholders have specifically called out waste reduction as a desired action. NGET may wish to comment further on why waste reduction can contribute efficiently to lower carbon and should be in the front line of steps it takes to satisfy general stakeholder feedback.
Is there a clear audit trail of how the decision has been made?	Yes, the audit trail is reasonably clear, although is it less clear how the specific actions relate to the engagement log (other than a general desire to reduce GHG emissions).
Are there any gaps?	Similarly to 1.i). it is clear that stakeholders think these actions are necessary, it's not clear why any of the targets are appropriate.

Figure 44 Action-by-action assessment

	action-by-action assessment
Business plan action:	1. iii). Caring for the natural environment
Supporting documents	Environment engagement log, NGET acceptability testing, willingness to pay analysis
Does the evidence support the business plan action? Why/why not?	The evidence suggests NGET should strive to improve the natural environment around them. NGET have developed 'Natural Capital' as a measure of the environment and natural assets. Stakeholders want NGET to measurably improve the environment around them – which matches what stakeholders want.
	NGET suggests a number of actions in this area, including:
	 Increase environmental value of non-operational land by 2% per annum against a Natural Capital/ Biodiversity baseline
	 Deliver Net Gain in environmental value (including biodiversity) on all construction projects (including those delivered by third parties)
	Improve the visual impact of our assets in protected landscapes
Does the justification in the business plan match the conclusions from the engagement log?	Yes, the justifications match the engagement log conclusions.
Is there a clear audit trail of how the decision has been made?	Yes, the audit trail is clear – there are conclusions from the engagement log, and this had fed into the business plan.
Are there any gaps?	Similar to other actions, it is clear that stakeholders think these actions are necessary, it's not clear why any of the targets are appropriate.

Figure 45	Action-by-action assessment
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l igule 40	Action-by-action assessment
Business plan action:	1. iv). Continue with stakeholder-led approach of VIP selection
Supporting documents	Environnent engagement log, VIP engagement log
Does the evidence support the business plan action? Why/why not?	Yes, there is explicit evidence in the engagement logs that the current stakeholder-led approach is justified.
Does the justification in the business plan match the conclusions from the engagement log?	Yes, it's clear that it is a divisive topic – as evidenced multiple times in the engagement log. NGET's current approach is well-supported, notwithstanding the diversity of views on the extent of amenity lost owing to over ground transmission assets. Therefore having stakeholder-led engagement on VIP selection is the best way forward.
Is there a clear audit trail o how the decision has been made?	
Are there any gaps?	No, this is a comprehensively covered action, and well-justified by the engagement log.

Figure 46 Action-by-action assessment

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Business plan action:	 v). Organisational leadership and open source data to collaborate and drive environmental progress.
Supporting documents	Environment engagement log
Does the evidence support the business plan action? Why/why not?	Stakeholders want NGET to show environmental leadership where it is most able to.
	 NGET proposes the following actions: We will drive forward industry in areas of sustainability where we are leading by sharing our expertise, data and tools. We will work collaboratively with the other Transmission Operators through working groups to deliver this. We will focus on two areas:
	Natural Capital/Net Gain
	Capital Carbon
	 We will be an environmental leader for the energy industry We will have senior management accountability for environmental performance. We will have an engaged workforce on environmental issues that lead by example Sustainability will be fully embedded in our decision making We will deliver a transparent approach to stakeholders on our sustainability performance Educate the public more on environmental issues through our education centres, community events and the role of energy and its impact While some of these specific steps are not identified in the stakeholder feedback, they are highly consistent with the general direction of the feedback and are in our view therefore supported.
Does the justification in the business plan match the conclusions from the engagement log?	Yes, there is a desire from stakeholders for NGET to lead in areas of environmental progress where it can (e.g. whole systems change). This is one of the key pieces of feedback from the February 2019 business plan consultation.
Is there a clear audit trail of how the decision has been made?	Yes, NGET has made clear conclusions from the engagement logs, leading to actions in the business plan.
Are there any gaps?	The action is somewhat vague, with no measurable target – hence it would be difficult to evaluate whether NGET has delivered this action. However, there are no gaps in terms of covering the engagement.

Figure 47	Action-by-action assessment
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Figure 46	Action-by-action assessment	
Business plan action:	 i). Assign up to 0.3% of construction projects aiming to employ 15% of the workforce from local community, and offer STEM engagement with all schools in the area 	
Supporting documents	Communities engagement log, willingness to pay analysis	
Does the evidence support the business plan action? Why/why not?		
	However there is little evidence how they would like NGET to do so – other than continuing and expanding what the 'Business As Usual' (BAU). Therefore this action may cover what stakeholders want from "supporting local communities" but they may want more.	
	Whilst members of the public strongly supported minimising the impact of work on local communities, organisations with an interest with new connection projects ranked this as their lowest priority. However, this was still a reasonably important action scoring 6.7 out of 9.	
Does the justification in the business plan match the conclusions from the engagement log?	Yes, the broad conclusions from stakeholder engagement were to support local communities more – this was the conclusion from workshops and online surveys.	
Is there a clear audit trail of how the decision has been made?	Yes, the audit trail from engagement log to the specific action is reasonably clear. The conclusions of the engagement log are clear, however it is not clear how/why it has been turned into a specific action.	
Are there any gaps?	As per many of the environment actions, it's not clear why the targets are appropriate, or how they have been set. It's also not clear how NGET have accommodated views of stakeholders who do not prioritise work in the communities.	

Figure 48 Action-by-action assessment	Figure 48	Action-by-action assessment	
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2. ii). Identifying educational and employment opportunities as an extension to our business activities	
Communities engagement log, National Grid service valuation research	
There is some evidence to support the business plan action. NGET appears to do lots of this type of work, and stakeholders tend to agree that NGET should continue. There is some evidence from households of considering this as important – around a third of households consider supporting vulnerable people and promoting education as a "very high priority".	
Somewhat, conclusions from engagement are not clear. Households broadly agree that supporting wider society is important for NGET. However the views from other stakeholders on wider society are not well represented in the conclusions from the engagement log.	
Somewhat, as the evidence from engagement log is vague, and appears insufficient to determine a business plan action. However, the evidence from the service valuation research is clear – but is not reflected in the engagement log, and does not reflect the views of all stakeholders. NGET should be clearer on how it has interpreted existing evidence of stakeholder views.	
It is possible that NGET could cover more actions here although the stakeholder views are generic, so it's not clear what actions could take place. NGET may want to explore this area further to get more detailed views from a wider variety of stakeholders.	

Figure 49 A	Action-by-action	assessment
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Figure 50	Action-by-action assessment
Business plan action:	2. iii). Having a workforce that's more representative of the communities we serve
Supporting documents	Communities engagement log
Does the evidence support the business plan action? Why/why not?	The evidence does not entirely support the business plan action. The stakeholder engagement gave broad conclusions that NGET should be a responsible employer, but it wasn't explicit about the range of actions necessary to achieve this.
Does the justification in the business plan match the conclusions from the engagement log?	No, conclusions from engagement were limited and vague, therefore NGET could seek more justification for their actions through further stakeholder engagement.
Is there a clear audit trail of how the decision has been made?	No, it's not clear how NGET have landed on this specific action. NGET could add more detail on why it has chosen this action based on the engagement.
Are there any gaps?	The stakeholder engagement suggests there is more to being a responsible employer than having an inclusive workforce – NGET needs to undertake more engagement to understand what more it can do. The existing action appears vague and it's not clear how NGET will achieve this.

i iguic oi	Action by action assessment
Business plan action:	2. iv). Corporate social responsibility in the supply chain
Supporting documents	Communities engagement log
Does the evidence support the business plan action? Why/why not?	Broadly yes – stakeholders agree that NGET's current approach to promoting a responsible supply chain is suitable. NGET should have accountability for NGET split their actions into social, economic and foundation commitments:
	Social commitments
	 Require all our UK suppliers, Tier 1 and beyond, pay the real living wage to their employees
	 Use influence in sector to identify and address potential modern slavery risks in supply chain
	 Ensure equal opportunities are provided in the supply chain
	Economic commitments
	 Promote skills development in the supply chain by requesting that a minimum of 5% of the supply chain technical headcount is upskilled annually
	 Provide equal opportunities to diverse suppliers as part of the sourcing process where relevant
	Foundation commitments
	 Embed sustainability and responsible sourcing within the procurement process
	 Drive change through industry collaboration
Does the justification in the business plan match the conclusions from the engagement log?	Yes. Conclusions from engagement were that NGET should aim for the best possible supply chain. The justification in the business plan highlights supply chain best practice.
Is there a clear audit trail of how the decision has been made?	Yes. There has been a consistent record of stakeholders approving NGET's approach to supply chain responsibility. However, the audit trail into these actions is clear.
Are there any gaps?	As per many of the environment actions, it's not clear why the targets are appropriate or how they have been set.

Figure 51 Action-by-action assessment

ANNEX F CHAPTER 12: INNOVATION

In the table below we provide a high-level overview of the evidence summarised in the engagement log(s) for this topic area.

Figure 52	Overall	assessment	of	evidence	in	engagement	log	on
innovation								

Document	Engagement log on innovation
What has been heard (key findings)?	 The key findings from engaging with the stakeholders appear to be the following: NGET should engage with stakeholder with the aim to deliver wider societal priorities of clean energy, driving down current and future consumer costs and opportunities for digitisation as well as the integration of the whole energy system and clean energy solutions for other sectors. NGET should share challenges with stakeholders earlier in the process to enhance cooperation and collaboration; NGET should proactively cooperate with a wider group of partners (making it easier for SMEs to be involved); NGET should share more data (balancing between transparency and security) to given opportunities to stakeholders to propose solutions.
Who has it been heard from (stakeholder types)?	Suppliers, customers, government, energy industry and networks, universities, think tanks and other industries
What are the key types of engagement?	Large workshops, online consultation, conferences, topic-specific workshops, bilateral meetings, strategic partnerships with academic institutions, the Smarter Networks Portal, podcasts, social media
Are there particularly diverse views or consensus?	There is some lack of consensus over the scale of NGET's engagement, but NGET has taken specific steps to address this. A number of workshops were specifically organised to debate the points on which certain stakeholders might have different views (this appears to be particularly the case for SMEs, which are asking for a higher level of engagement). In addition, NGET organised targeted sessions to provide information and bring all stakeholders on the same page before they could express views on issues.
What can be concluded?	In general it appears that NGET's innovation is focused on the topics that stakeholders identified as priorities. Collaboration and communication are important to stakeholders.
Do there appear to be any	The evidence appears to be robust.
issues with the robustness of the evidence?	NGET is currently using a considerable number of channels to make sure that the majority of its stakeholders are reached, informed and asked for views to shape the future innovation strategy. It appears that the feedback and results of each session are followed up in the following session (excluding webinars, podcasts and all channels which do not involve presence in person).
	These initiatives are generally well received by stakeholders, reporting good levels of participation as well as a rigorous collection and re-elaboration of the feedback received. It emerges that stakeholders acknowledge the efforts of NGET to achieve greater third parties involvement, but they are convinced that challenges should be shared at earlier stages to give more opportunities to third parties to contribute; funding for innovation projects should be more long term ⁹ and, more generally,

⁹ Less reliance on Ofgem stimulus funding, which works solely at an ad hoc basis

	stakeholders should have a more active role in shaping the future innovation strategy.
Which actions in the business plan is this evidence relevant to? (Include refs.)	 Except for the Deeside Centre for innovation project, there is limited evidence on the topic "delivering cleaner energy". There is indeed material on the events and their follow up, but little information on the proposed actions and how NGET landed on that decision. The same as above holds for the innovation topic "delivering cheaper energy". The situation, instead, is different for the "creating the future" category of actions, where it emerges more clearly which concreate actions the stakeholders are proposing in their engagement exercises and how NGET plans to take on board stakeholder feedback and suggestions.
Does this evidence broadly support the actions? Why?	In general, the evidence supports the actions as there appears to be no instance where NGET's proposed actions contradict or do not account for stakeholders' priorities.

In the following tables, we assess whether each key proposed action in the business plan is supported by the engagement and research conclusions as set out in the engagement log(s). We also consider whether the logic between the engagement log conclusions and the business plan actions is clear and sound. Finally we highlight any gaps to be filled, or any areas where we feel that the business plan actions may not reflect the findings set out in the engagement log(s).

Action-by-action assessment: reducing NGET's carbon

footprint	Action-by-action assessment. reducing NOLT's carbon
Business plan action:	 Investigate alternatives to SF6 which can be retro-fitted, avoiding the need for more costly asset replacement Identify methods for reducing or eliminating cement requirements Look at novel materials with a lower carbon footprint and which also help with the reduction of visual and environmental impacts
Supporting documents	Engagement log
	 Innovation Webinar summary - Delivering Cleaner Energy
Does the evidence suppor	t From engagement log
the business plan action? Why/why not?	 No evidence on this action is available in the engagement log.
	From webinar
	In the webinar evidence, 11 out of 11 respondents stated that "it is important (or indispensable) that we innovate to reduce our carbon footprint" and that NGET is "asking for the right amount of money" for the action.
	The evidence therefore appears to support the business plan action.
Does the justification in the business plan match the conclusions from the engagement log?	 The engagement log reports that stakeholders would like NGET to focus on clean energy among other wider societal priorities and this broadly matches the justification in the business plan; The consumer benefits promised largely match with the general stakeholder priority stated above.
Is there a clear audit trail of how the decision has been made?	f The business plan does not explain how NGET has landed on the specific

Figure 53

Are there any gaps?

N/A

Note: This action broadly consists in reducing NGET's reliance on harmful materials, and finding new materials that are more environmentally friendly

Figure 54	Action-by-action assessment: Deeside Centre for innovation
Business plan action:	 Collaborate with other network companies and expand the facility in the T2 period, allowing the facility to be truly whole system and not just for electricity.
	 Include a facility to trial gas (hydrogen and liquefied natural gas) integration, electric transport technologies, and zero-carbon generation technologies
	Open up the facility to SMEs
	 Be transparent about the activities at Deeside, to allow all parties to share and collaborate regardless of fuel or network
Supporting documents	 Engagement log – there is an annex specifically dedicated to the early stages of this initiative
	Innovation Webinar summary - Delivering Cleaner Energy
Does the evidence support	From engagement log:
the business plan action? Why/why not?	Yes, the engagement log reports that stakeholders felt that the time to implement and roll out new technology created challenges. This clearly supports the case for the Deeside Innovation Centre. Subsequent workshops on the Deeside Centre showed broad support, and stakeholders broadly seemed to agree that the centre could accelerate innovation in the industry.
	From the webinar:
	Webinar evidence shows that out of 13 respondents to the question "how critical do you think it is that we continue to innovate at our Deeside Centre?", all of them responded that it was either "important" or "indispensable" to continue innovating. In addition, 10 out of the same 13 respondents, also stated that NGET is currently asking for the right amount of money for these projects.
	 This evidence seems to broadly support NGET's proposed actions.
Does the justification in the business plan match the conclusions from the engagement log?	Yes, the actions that NGET's is committing to deliver appear to be aligned with the main stakeholder priorities. Also, NGET shows a commitment to improve the mechanism of third-party engagement with the centre, in particular with SMEs.
Is there a clear audit trail of how the decision has been made?	Yes, the engagement log shows the reasoning and process of developing the Deeside Innovation Centre, and how stakeholders have fed into this process. However, a flavour of this could also be brought out in the business plan.
Are there any gaps?	N/A

Note:	Deeside is a unique facility that allows all electricity networks to test new technology prior to being
	rolled out on the system. The facility replicates system conditions to ensure that new technology can
	be trialled without safety, reliability or environmental risk. This facility will be available to all networks
	to benefit the whole energy system, not just our network.

Figure 55 industry	Action-by-action assessment: Decarbonising associated
Business plan action:	 Lead the way to a low carbon future by implementing the government's Clean Growth Strategy Deliver NGET's role in the transition to electric vehicles Actively explore opportunities to support and work with other industries (transport, steel, cement) to identify and implement decarbonisation activities Explore the appetite of other industries to move toward a hydrogen economy and the implications for transmission networks Support industry in the development of technology and systems to help them participate in the future energy market
Supporting documents	Engagement logInnovation Webinar summary - Delivering Cleaner Energy
Does the evidence support the business plan action? Why/why not?	 From engagement log It generally appears that NGET's actions address the views expressed by stakeholders during engagement initiatives.¹⁰ However, the stakeholder evidence tends to provide general guidance rather than specific views on actions that NGET should undertake. For example, why 15% of budget on transport electronification? Why three FTEs? Similar comments apply to most of the specific actions in the tables below. From the webinar: The majority of stakeholders agreed that "it was indispensable that we innovate to decarbonise society and achieve Net Zero"; And the majority of stakeholders thought that "we are not asking for enough money to do this an should be asking for around £25 million". This evidence seems to broadly support NGET's actions.
Does the justification in the business plan match the conclusions from the engagement log?	
Is there a clear audit trail of how the decision has been made?	······································
Are there any gaps?	N/A

¹⁰Here are two examples:

Stakeholder statement: "Government and regulators need to develop an infrastructure programme and market that will enable the fulfilment of our Paris commitments and there is significant uncertainty and no clear path." → NG Action: We modified our innovation strategy and re-directed 15% of our budget to develop a programme in electrification of transport and roads, as well as the future energy networks. We committed 3 full-time innovation engineers to this endeavour. We increased our attendance and involvement in conferences to understand and engage with the wider market segments. We became members of Flexis, the Cheshire Energy Hub and lead the South Wales Cluster study.

Stakeholder statement: "The cost of electricity in the UK is higher than in other European nations such as Germany, potentially driving heavy industry out of the UK." → NG Action: We committed one full-time

Figure 56	Action-by-action assessment: Digitisation	
Business plan action:	 Investigate tools and techniques to allow the digitisation of all maintenance, monitoring, and testing of equipment with automated archiving and analysis of information. 	
	 Research and investigate algorithms for the mixture of data with various levels of accuracies and time-frames. 	
	 Investigate risk in real-time to maximise asset performance and value. 	
	 Investigate the potential of artificial intelligence, robotics and research sensors. 	
	 Explore how Artificial Intelligence can be applied to our asset, financial and other data sets. 	
	Share data across the whole energy system (heat, transport, energy)	
Supporting documents	Engagement log	
	Innovation Webinar summary - Delivering Cheaper Energy	
Does the evidence support the business plan action? Why/why not?	 From engagement log It generally appears that declarations of the stakeholders during engagement initiatives have been followed by NGET actions clearly aimed at satisfying the priority and requests.¹¹ However, these declarations seem to be providing more general guidance rather than stakeholders view on the specific action proposed by NGET in the business plan. From webinar The majority of stakeholders agrees that "it was indispensable that we innovate to digitise our data, systems and operations"; The majority of stakeholders thought that NGET is not currently asking for enough money; This evidence seems to broadly support NGET's proposed actions. 	
Does the justification in the business plan match the conclusions from the engagement log?	The engagement log does not contain any information on the specific action and on how NGET decided to propose it. For example, digitisation and the related cost reduction look aligned with the main stakeholder priority of delivering cheaper energy through innovative solutions, but it does not emerges clearly why NGET opted for the specific actions.	
Is there a clear audit trail of how the decision has been made?	A clear audit trail showing how the decision in the business plan was taken based on the evidence in the log is currently missing. While the engagement log reports a clear track of the different engagement events, the elaboration of stakeholder feedback and suggestions, this is missing in the business plan and therefore it is not clear to the reader how NGET decided on the actions reported in the business plan summary tables.	
Are there any gaps?	N/A	

Figure 56 Action-by-action assessment: Digitisation

innovation engineer and 5% of our budget to develop a co-creation programme with industry to electrify their carbon intensive processes and, where appropriate, develop a plan for them to reduce their carbon footprint

- ¹¹Here are two examples of issues raised by the stakeholders which appear to be tacked by NGET:
 1. We need to share our challenges with you. This will allow our suppliers to propose innovative solutions earlier in the process delivering more and cheaper solutions;
 - We need to collaborate more. Tackling major challenges as a whole energy industry delivers better solutions for customers. Pro-actively collaborating with a wider group of partners will deliver greater benefits;
 - 3. We need to share more data. Getting the balance right between security and transparency is crucial in allowing our stakeholders to understand our challenges and propose better solutions;
 - 4. We need to make it easier for SMEs to collaborate with us

Figure 57	Action-by-action assessment: More responsive and agile
Business plan action:	 Develop offline tools to replicate our live network, allowing us to respond to customers more quickly. Develop new assets and installation methods that can be quickly deployed and moved around the UK to support the fast connection of customers.
Supporting documents	 Engagement log
	Innovation Webinar summary - Delivering Cheaper Energy
Does the evidence support the business plan action? Why/why not?	 From engagement log It generally appears that declarations of the stakeholders during engagement initiatives have been followed by NGET actions clearly aimed at satisfying the priority and requests. However, these declarations seem to be providing more general guidance rather than stakeholders view on the specific action proposed by NGET in the business plan. From webinar The majority of stakeholders think it is "indispensable" that NGET continues to investigate responsive and agile solutions. The majority believes the NGET is asking for the right amount of money; This evidence seems to broadly support NGET's proposed actions.
Does the justification in the business plan match the conclusions from the engagement log?	There are some specific comments on the Deeside centre Annex which highlight which benefits and challenges stakeholders see in off-grid developments. However this are from Dec 2014, so more up to date evidence would help to support the case for this action further. Beside this, there is no justification on how NGET decided on the specific actions
Is there a clear audit trail of how the decision has been made?	A clear audit trail showing how the decision in the business plan was taken based on the evidence in the log is currently missing. While the engagement log reports a clear track of the different engagement events, the elaboration of customers feedback and suggestions, this is missing in the business plan and therefore it is not clear to the reader how NGET decided on the actions reported in the business plan summary tables.

Figure 58 consumers	Action-by-action assessment: Addressing vulnerable
Business plan action:	Engage further with stakeholders on our role
	 Collaborate with parties closer to consumers (suppliers, DNOs, supply chain)
	 Explore our role in this area with stakeholders (leadership or supporting)
	 Collaborate with SMEs to develop further understanding in this area of how we can support vulnerable consumers
Supporting documents	Engagement log
	Innovation Webinar summary - Delivering Cheaper Energy
Does the evidence support	From engagement log
the business plan action? Why/why not?	 Evidence reported in the engagement log supports the idea of increased cooperation, involvement and collaboration naming it as one of the key stakeholders priorities.
	From webinar

Are there any gaps?	Not remarkable ones.
	Compared to the other actions, an audit trail is probably easier in this case as the topic is less technical.
Is there a clear audit trail of how the decision has been made?	These are actions for which there appears to be a clear audit trail. Indeed, the business plan clarifies what were the conclusions from the engagement exercises and how they could be translated into concrete actions.
Does the justification in the business plan match the conclusions from the engagement log?	It does. It appears that NGET is carrying out a number of initiatives aimed at involving all stakeholders in different steps (as fundamental part of their stakeholder engagement approach). The process seems to consist in gathering stakeholders to provide them with targeted information and then engaging with them to ask for feedback on previous actions and proposed/preferred next steps.
	 Majority of stakeholders think it is important that develop an innovation programme around vulnerable consumers; And that we are asking for the right amount of money; This evidence seems to broadly support NGET's proposed actions.

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Business plan action:	Lead research into new safety technology for the whole energy industry
Supporting documents	Engagement logInnovation Webinar summary - Delivering Future Energy
Does the evidence support the business plan action? Why/why not?	 From engagement log In general, network safety is reported to be one of the priority for stakeholders and there is evidence in the engagement log regarding how NGET has been delivering it during the course of T1 and it is planning to improve this further in T2. From webinar Majority of stakeholders agreed that it is "indispensable" that NGET continues to perform some investigations in the area of H&S. And majority of stakeholder think that NGET is asking for the right amount of money. This evidence seems to broadly support NGET's proposed actions.
Does the justification in the business plan match the conclusions from the engagement log?	The justification provided in the business plan is that safety is delivered as it is a stakeholder priority. This matches what we find in the engagement log. However, there is no specification on the action and what exactly this consists in and this appear to different compared to other proposed actions.
Is there a clear audit trail of how the decision has been made?	A clear audit trail showing how the decision in the business plan was taken based on the evidence in the log is currently missing. While the engagement log reports a clear track of the different engagement events, the elaboration of customers feedback and suggestions, this is missing in the business plan and therefore it is not clear to the reader how NGET decided on the actions reported in the business plan summary tables.
Are there any gaps?	N/A

Figure 59 Action-by-action assessment: Step change in Health & Safety

Note: This action refers to reducing the number of injuries to NGET staff and the public from NGET operations.

Figure 60 sustaining'	Action-by-action assessment: Making innovation 'self-
Business plan action:	Work with industry partners and Ofgem to reduce the need for innovation stimulus funding
	 Deliver a mechanism that allows regulated entities with short regulatory periods to fund long-term strategic innovation
Supporting documents	Engagement log
	Innovation Webinar summary - Delivering Future Energy
Does the evidence support	From engagement log
the business plan action? Why/why not?	 There is evidence in the engagement log showing that stakeholders would value long term innovation strategies and are asking NGET to develop procedure that would make access to funding quicker and more effective and this appear to support NGET's proposed actions.
	From webinar
	 The majority of stakeholders thinks that it is indispensable (and some thinks it is important) that NGET develops the capability to self-sustain innovation.
	 The majority of stakeholder thinks that NGET is asking for the right amount of money.
	This evidence seems to broadly support NGET's proposed actions.
Does the justification in the business plan match the conclusions from the engagement log?	The justification in the business plan matches the statements in the engagement log saying that NGET is negotiating with OFGEM and industry partners to reduce the reliance on stimulus funding as well as trying to define procedures that would make the project selection process faster and more long term.
Is there a clear audit trail of how the decision has been made?	There appears to be a clear audit trail. Indeed, the business plan clarifies what were the conclusions from the engagement exercises and how they could be translated into concrete actions.
Are there any gaps?	N/A

Figure 61 Action-by-action assessment: Implementing and rolling out innovation projects and increasing collaboration

Business plan action:	Implementing and rolling out innovation projects
	 Create, deliver and support the implementation of innovation projects
	 Roll-out benefits in the current period and future periods
	Increase collaboration
	Reach out to a broader range of stakeholders
	 Use a wide range of communication methods to include harder to reach stakeholders
	 Focus on how we increase collaboration with SMEs and other parties
Supporting documents	Engagement Log
Does the evidence support the business plan action? Why/why not?	The evidence reported both in the business plan and in the engagement log shows the importance for stakeholders to have NGET playing an active role in the implementation and delivery of innovative projects as well as increasing collaboration.
Does the justification in the business plan match the conclusions from the engagement log?	The justification in the business plan matches the conclusions of the engagement log which show the efforts of NGET to play an active role in increasing collaboration, delivering and implementing innovative projects but also in embedding the current benefits in future periods.

Is there a clear audit trail of how the decision has been made?	There appears to be a clear audit trail. Indeed, the business plan clarifies what were the conclusions from the engagement exercises and how they could be translated into concrete actions.

Are there any gaps?

N/A

Figure 62 Action-by-action assessment: Increasing transparency

Business plan action:	Work with the ENA, Ofgem, EIC & wider industry to develop a framework to measure the outcomes of innovation
Supporting documents	Engagement log
Does the evidence support the business plan action? Why/why not?	Both the engagement log and the business plan show how an increase in the level of transparency is an important priority for customers.
	Here transparency refers to the process of selecting projects, in providing information on the innovative projects currently carried out as well as finding a way to evaluate the outcomes of innovation.
Does the justification in the business plan match the conclusions from the engagement log?	The justification on the business plan matches the conclusions in the engagement log as they both suggest that NGET should commit to a greater level of transparency.
Is there a clear audit trail of how the decision has been made?	There appears to be a clear audit trail. Indeed, the business plan clarifies what were the conclusions from the engagement exercises and how they could be translated into concrete actions.
Are there any gaps?	N/A

Figure 63 culture	Action-by-action assessment: Embedding innovation in our
Business plan action:	 Undertake research into best practice across other companies and industries Further embed our performance excellence culture to capture the
Supporting documents	benefits of our innovative culture
Supporting documents	Engagement log
	Innovation Webinar summary - Delivering Future Energy
Does the evidence suppor the business plan action? Why/why not?	 From engagement log There was a specific event in July 2018 where stakeholders were initially informed about the innovation strategy plan in T1, then their feedback was collected and discussed and finally the plan for T2 was discussed in order to incorporate all the key priorities emerged from the discussions. The main findings from the event support the NGET action. From webinar The majority of stakeholders thinks it is that indispensable or important that NGET embeds a culture of innovation. The majority feels that NGET is not requesting enough money; This evidence seems to broadly support NGET's proposed actions.
Does the justification in the business plan match the conclusions from the engagement log?	The justification provided in the business plan matches with the conclusions drawn in the engagement log.

Is there a clear audit trail of how the decision has been made?	There appears to be a clear audit trail. Indeed, the business plan clarifies what were the conclusions from the engagement exercises and how they could be translated into concrete actions.
Are there any gaps?	No relevant gaps.

ANNEX G CHAPTER 13: TRANSPARENCY

In the table below we provide a high-level overview of the evidence summarised in the engagement log(s) for this topic area.

Figure 64	Overall assessment of evidence in engagement log "I want you
to be trans	parent in your performance"

Document	Engagement log
What has been heard (key findings)?	 More transparent and consultative business plans. Transparency on the link between activities, operational performance and financial reward. Transparency on differences between actual costs and allowances. Focus on good quality Regulatory Financial Performance Reporting (RFPR). Consistent in our reporting with other networks.
Who has it been heard from (stakeholder types)?	Consumer groups, Customers (demand and generation) and TOs, Energy suppliers, Regulator
What are the key types of engagement?	Bi-lateral meetings, Webinars and Online Surveys, Ofgem workshop, Consumer listening workshop
Are there particularly diverse views or consensus?	There is a general consensus across the different stakeholder groups that more information sharing from NGET would be valued. However, the focus on the level of transparency requested differs significantly across stakeholder groups. For example, consumer groups are interested in the ability to compare NGET's performance with other networks, while customers and TOs are seeking to compare performance in the last RFPR reporting, energy suppliers are interested in any change in charges and the regulator in consistent reporting and measures of efficiency. All value transparency therefore, but for different reasons.
What can be concluded?	NGET should focus on delivering a more stakeholder-led business plan and more transparency of performance, making sure that the different priorities of different stakeholder groups are accounted for.
Do there appear to be any issues with the robustness of the evidence?	There do not appear to be any issues with the robustness of the evidence as NGET has used different channels to reach a range of stakeholder categories and collect their feedback.
Which actions in the business plan is this evidence relevant to? (Include refs.)	 The evidence in the engagement log appears to be particularly relevant for the following two actions mentioned in the business plan: Increasing the clarity of the reporting (in general, referring to performance as well as regulatory issues); Strong commitment in delivering the right outputs for the T2 period. There appears to be more limited evidence for the other two actions.
Does this evidence broadly support the actions? Why?	Yes. The actions are generally supported by the evidence as NGET appears to be making efforts to increase the level of transparency in its reporting and creating opportunities for stakeholders to get involved in the process.

In the following tables, we assess whether each key proposed action in the business plan is supported by the engagement and research conclusions as set out in the engagement log(s). We also consider whether the logic between the engagement log conclusions and the business plan actions is clear and sound. Finally we highlight any gaps to be filled, or any areas where we feel that the business plan actions may not reflect the findings set out in the engagement log(s).

Figure 66 Action by action assessment	
Business plan action:	We will be clearer than ever on our reporting, reporting on what really matters to you in the way that you want it
Supporting documents	Engagement log
Does the evidence support the business plan action? Why/why not?	The evidence in the engagement log appears to support the action as an increased level of transparency is a priority for all the stakeholder groups. We also note that this action is listed as a licence obligation, so stakeholder evidence in this area is not essential to support this action.
Does the justification in the business plan match the conclusions from the engagement log?	Yes. Both the engagement log and the business plan suggest that NGET should provide more transparency to its stakeholder concerning its performance. Therefore, the NGET commitments to increase transparency appear to be appropriate.
Is there a clear audit trail of how the decision has been made?	There appear to be a clear audit trail between what is stated in the business plan and what could be found in the evidence. In other words, it is clear how, based on the evidence reviewed, NGET took the decision reported in the business plan.
Are there any gaps?	No relevant gaps on this action.

Figure 66	Action-by-action assessment
Business plan action:	We will involve you in the updating of our business plan
Supporting documents	Engagement log
Does the evidence support the business plan action? Why/why not?	The evidence in the engagement log appear to support the action as more involvement in the updates of the business plan is a priority for all the stakeholders categories.
Does the justification in the business plan match the conclusions from the engagement log?	Yes. Both the engagement log and the business plan suggest that NGET should make more efforts in involving stakeholders in the update of its business plan. Therefore, the NGET commitments to increase transparency appear to be appropriate.
Is there a clear audit trail of how the decision has been made?	
Are there any gaps?	Yes, we think the action could be expressed in more details.

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Figure 67 Action-by-action assessment

Business plan action:	Retaining our Independent Stakeholder Group to hold us to account
Supporting documents	Engagement log
Does the evidence support the business plan action? Why/why not?	The evidence supports the action as retaining the independent Stakeholder Group could be a way to respond to the priority "we want to have confidence that the revenue they earn is fair and they want us to be a responsible and fair business". However, the engagement log fails to explain what would be the role of the Group.
Does the justification in the business plan match the conclusions from the engagement log?	The engagement log contains evidence on the importance of the stakeholder priority mentioned in the row above, but it does not suggest that the Independent Stakeholder Group could play an active role in addressing this stakeholder priority.

	NGET also states in the business plan that stakeholders have said that they "want to have confidence that the revenue they earn is fair and they want us to be a responsible and fair business". However, based on the engagement log this appears to be a general sentiment that NGET has picked up on, rather than direct feedback from stakeholder engagements. If this is the case, it could be clarified in the business plan.
Is there a clear audit trail of how the decision has been made?	No, it is not explained how from the evidence reported in the engagement log, NGET lands on the decision that retaining the Independent Stakeholder Group could be the best response to the stakeholders' need of confidence on the fairness and responsibility of NGET business.
Are there any gaps?	Yes, additional evidence on this action should be provided in order to make the audit trail and the justification clearer and more consistent.

Figure 68 Action-by-action assessment	
Business plan action:	We are all aligned and committed in delivering the right outputs for the T2 period
Supporting documents	Engagement log
Does the evidence support the business plan action? Why/why not?	Not clear - the pay and reward system is mentioned as a priority by different stakeholder groups. However, it is not clear that the action proposed by NGET actually addresses the point around pay and reward.
Does the justification in the business plan match the conclusions from the engagement log?	Yes. Both the engagement log and the business plan suggest that NGET should provide more transparency on the fairness of the pay and reward mechanism.
Is there a clear audit trail of how the decision has been made?	The business plan actions seems to be slightly vague given that the stakeholder evidence directly mentions pay and reward, and it is not quite clear why this is.
Are there any gaps?	NGET could either make the action more focused on pay and reward to reflect the stakeholder feedback, or alternatively NGET should explain why it is not feasible or suitable to make a commitment around pay and reward.



