

As a part of the NGET Business Plan Submission

nationalgrid

ENGAGEMENT LOG

Priority: I want you to care for the environment and communities

Topic: environment and communities

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EXECUTIVE SUMMARY

The topic of the environment aligns to the stakeholder priority of 'I want you to care for the environment and communities. This priority is about the steps we, as a responsible business, will take to improve the environment, and serve communities and society. It covers our contribution to tackling climate change, reducing waste, improving the natural environment and improving the visual impact of our assets. It also covers how we support local communities, wider society, act as a responsible employer and promote responsible practices in our supply chain.

The environment has a few existing outputs for RIIO-T1. There an incentive relating to SF_6 leakage management, our overall environmental approach (the Environmental Discretionary Reward – refer to appendix 5 for details on how this works) as well as a price control deliverable for Visual Impact Provision.

The aim of our engagement on this topic was to understand our stakeholders' views on what we should be delivering in relation to the environment and communities and how we need to adapt our current approach. We know from previous engagement that some environment topics (notably visual impact) split opinion amongst stakeholders around the relative benefits of environmental improvements versus their costs, so gathering different views to reach an informed approach is a key outcome of our engagement.

Throughout this period of engagement on our T2 plans, given the increase in national focus on climate change we have seen opinions on Net Zero strengthen and move to the top of the priority list. A summary of all our approach and findings is below and this is also simplified again within section 3 of chapter 11 in the 200-page Business Plan. For further detail on our overall current and future engagement strategy, this is described in chapter 6 of the 200-page Business Plan. Page 19 within this document contains a table with all our engagement listed by date to help navigate the data.



Engagement relating to the Environment Purpose and To understand our stakeholders' views about our impact on the environment, including carbon emissions, local environmental impacts and the improvements we could make. approach Establish the values business and domestic consumers feel they should pay for certain visual impact activities and which projects would deliver the most value. What All stakeholders want us to take ambitious action on climate change and potentially stakeholders use carbon offsetting to make relevant activities carbon neutral as well as adopting told us responsible use of assets. In our latest research, 60% of consumers, especially younger people, want us to deliver net zero for our business ahead (2030 or 2040) of the legislated 2050 target. We should reduce the overall volume of SF₆ we leak and continue efforts to find alternative insulating gases. We should make investment decisions based on the whole-life cost of each option. including the cost of carbon, and use this approach to help minimise our overall carbon emissions. We should minimise the local impact of construction on the environment. We should achieve environmental net gain at our construction projects, provided the costs are reasonable. We should be ambitious in improving biodiversity. We have an established assessment methodology for assessing the VIP project priorities, created by an independent landscape specialist, consulted on and approved by Ofgem. This methodology, along with extensive engagement reduced the short-list down to 12 potential projects and then 4. With respect to VIP costs, most bill payers (66% in T1 and 62% in T2) find it acceptable for the cost of VIP to be socialised via household bills. Key trade-There is a wide mixture of views on **visual impact** from those most impacted offs and how stakeholders who feel that we should do anything possible to avoid negative visual engagement impact, and are willing to pay for this to those who are less impacted and don't want influenced to pay. Whilst the views are mixed, stakeholders feel that the current stakeholder-led our plans approach, assessing visual impact on a case-by-case basis, is robust, therefore the decision to continue the T1 approach in to T2 is valid and supported by nationally representative consumer data. In shaping our proposal to meet net zero, we have considered the views of most consumers 60% who want us to meet targets ahead of 2050, against those 8% who want us to go slower, by exploring and accelerating what is possible efficiently. We are developing an uncertainty mechanism proposal which will aim to drive efficient solutions with the flexibility to go faster than the Net Zero where this can be delivered affordably and with stakeholder support. How we've Following independent stakeholder group challenge (ISUG) we provided data on responded our external industry benchmarking exercise and undertook engagement with to external experts to validate the ambition of our targets. As the result of the independent comprehensive engagement with vehicle manufacturers we have reduced our stakeholder commitment of achieving 70% EVs by 2026 to 60% based on current and forecast group / availability of suitable vehicle products. We were also able to confirm our Science challenge Based Net Zero pathway and that our natural capital targets are an ambitious first group step for T2. The ISUG also wanted us to map out our vision for getting to Net Zero which we have included in the executive summary as a roadmap and set of commitments. For VIP - the independent stakeholder group asked us to provide value for money and innovation information which was included in July's submission. The challenge group requested – details of our proposed greenhouse gas targets. justification for cost and ambition. In response to this and our ambition to support net zero we have set out our two-key investments relating to fleet and SF₆.



Engagement relating to the Communities Purpose and To understand the views of local communities and how we can best support them. approach To understand the areas where our business activities affect society and understand how we can maximise our total societal impact (TSI). What We should **engage deeply with local communities** affected by our construction stakeholders projects. We should do more to help such local communities. told us We should be a **responsible and sustainable business**. We should work closely with business, our supply chain and consumers to achieve shared goals. Our investors expect us to make our contribution to society a central axis of our long-term strategy, leading the energy transition. Our total societal impact work suggested that we will have by far the biggest effect by advancing clean energy systems. Our contribution could be large in each area of electricity, transport and heat. Interviews and surveys also highlighted the priority that the consumers place on securing and accelerating the energy transition and doing so in a way that ensures fairness and equal access to the benefits of the transition. Our engagement concluded that consumers are also willing to pay a material amount for us to carry out more community activities but that overall this topic on a local basis comes out mid-low ranked. Key trade-Most engagement supports doing more for local communities, and that minimising the offs and how impact on local communities is a high priority. However, there are some engagement organisations (particularly organisations that have direct interests in new connection influenced projects) that are more ambivalent about impacts on local communities, therefore, our plans given support for local communities will not materially impact those stakeholders we have maintained the majority view in this aspect. Supporting specifically the fuel poor and vulnerable attracts opposing opinions. Some feel it should be a given whilst others feel it's not our role. We have addressed this by prioritising education and employment and by funding our community commitments both via consumer bills and our business. Our proposed commitments are to increase the proportion of employees and businesses from local communities used on the projects, and increase STEM interest in local schools using an allocated budget, with funding shared between consumers and us which is supported by the consumer acceptability and slider testing. We have also made a strong and far reaching commitment to upskill 6,000 people over the T2 period, focussing on the low-income communities we serve which is a direct response to our stakeholders wanting all society to be able to benefit from the benefits of the green transition. Response to • Our independent stakeholder group asked us to clarify what our visual amenity policy independent was in deprived areas. We have created an additional commitment to improve our stakeholder assets or public space in deprived communities as a direct response to this challenge group / - this has received excellent support from consumers in our acceptability testing challenge workshops on the assumption that Ofgem approves efficient costs and selection is group completed by a panel of stakeholders. Following a suggestion also from the Independent Stakeholder Group that we should provide centralised resilience advice, we concluded that this is more appropriate for distribution networks due to their direct connections to the relevant organisations.



Exe	ecut	tive	e Summary	1
hon	ic l	ntra	oduction and existing insight	6
.op	1.		stakeholder mapping	
	2.		vhat are the desired outcomes for this engagement?	
	3.		What existing Insight has been used?	
EN	GA	GEI	MENT OUTCOMES	19
	4.	Е	Engagement Summary Table	19
	5.	R	Research Data Sources table	21
	6.	Е	Ingagement Assurance	23
		1.	Truth; Environment and Communities Engagement Coverage Assessment – November 2018	
	:	2.	Frontier; Engagement Conclusions and Triangulation Assurance, September 2019	
	7.	R	Record of Engagement Outcomes	
		1.	Listen workshop, July 2017 – Engagement Ref#11.1 and 11.2	
	:	2.	Populus Consumer Research, October 2017 – Engagement Ref#11.3	
	;	3.	VIP FORMAL meetings – Engagement Ref#11.4-11.8	
		4.	Engagement Ref #11.4 - SAG 11	30
		5.	Engagement Ref #11.5 - SAG 12	30
	(6.	Engagement Ref #11.6 - SAG 13	31
		7.	Engagement Ref #11.7 - SAG 14	33
		8.	Engagement Ref #11.8 - SAG 15	
		9.	VIP Acceptability Testing – Engagement Ref#11.9	
		10.	Environmental Workshop – Engagement Ref#11.10	
		11.	Environmental Plans, Online consultation – engagement ref#11.11	
		12.	Willingness to Pay Outcomes – Engagement Ref#11.12	
		13.	Populus Max Diff Survey, November 2018 – Engagement Ref#11.13	
		14.	Total societal Impact – Engagement Ref#11.14	
		15.	Consumer engagement on environmental and social topics – engagement ref#11.15	
		16.	Business plan consultation - Engagement Ref#11.16	
		17.	Expert Engagement, vehicle manufacturers – Engagement Ref#11.17	
		18.	Acceptability Testing (Environment) – Engagement Ref#11.18 'Explain' interactive Tool Research – Engagement Ref#11.19	
		19. 20.	Full business plan publication, July 2019 – Engagement Ref#11.19	
		20. 21.	Expert Engagement, Science Based Target Institute (SBTI) – Engagement Ref#11.21	
		21. 22.	Natural Capital Coalition – Expert Engagement Ref#11.22	
		23.	Responsible Procurement – Expert Engagement Ref#11.23	
		24.	Bi-lateral with the supply chain sustainability school – Engagement Ref#11.24	
		25.	Challenge Group Feedback following July Business Plan submission – engagement ref#11.	
	•		55	
	:	26.	Net zero SF ₆ Repacement Proposal Webinar – Engagement Ref#11.26	55
		27.	· · · · · · · · · · · · · · · · · · ·	
		28.		
	:	29.	Expert engagement, Waste Facilities Audit Association – Engagement ref#11.29	58
	;	30.	Independent Stakehodler User Group (ISUG) Engagement – Engagement ref#11.30	
\sim	NC		SIONS and business plan impact	
CO	NC	LU	Sions and business plan impact	70
API	PEN	IDI	X 3 - POPULUS CONSUMER RESEARCH	82
			X 4 - FRONTIER-ECONOMIC COMMENTS	
API	PEN	IDI	X 5 – HOW EDR WORKS?	82
۸Di		וחו	X 6 - DECISION MAKING FRAMEMWORK CHECKLIST	ຂ2



APPENDIX 7 - NATIONAL GRID STATEMENT TO STAKEHOLDERS ON DECISION TO PAUSE WORK ON NEW FOREST NATIONAL PARK PROJECT......83

TOPIC INTRODUCTION AND EXISTING INSIGHT

The topics of the environment, VIP and communities aligns to the stakeholder priority of 'I want you to care for communities and the environment'. It includes our overall approach to the environment and business carbon footprint (including management of sulphur hexafluoride (SF_6)), the impact of our construction activities on the environment and local community, the visual impact of our assets, how we manage our land from an environmental perspective and how we make a wider contribution to society.

Our commitments for the environment and communities are influenced by net zero, global and government ambitions, stakeholder, society and end consumer impacts. We are signatories to the United Nation's Global Compact, support their strategy to achieve the Sustainable Development Goals (SDGs) by 2030 and report annually on our sustainability commitment. These goals promote prosperity while protecting the planet. Information on how these SDGs map to our business is here.

The Environment - We are facing an unprecedented global emergency. Urgent action against climate change is required if we are to prevent further increase in events which could entirely change life as we know it today, especially for those in vulnerable circumstances. We fully support the UK government's introduction of legislation to achieve net zero. In recent months, there has been an increase in consumer demonstration on climate change and also through and previous engagement, including our RIIO-T1 engagement, our 2017 <u>Listen</u> phase and other consumer research, we know that our environmental impact is top priority the majority of our stakeholders. However, taking stakeholders as a whole, it is seen as being less important that providing a reliable network and delivering value for money.

Visual Impact Provision (VIP) - The visual impact provision is £500m (2009/10 prices) set aside by Ofgem across Great Britain to carry out work which will help to reduce the impact of existing electricity transmission lines in designated landscapes, including English and Welsh Areas of Outstanding Natural Beauty (AONBs) and National Parks. The Visual Impact Provision was established following direct lobbying of Ofgem by campaign groups. The ultimate aim is to restore treasured landscapes for the benefit of all who visit, live or work there. The 'customer' for this work is therefore 'community' in its widest sense, including not just all British residents who live in or travel to National Parks and AONBs, but also overseas visitors.

The size of the provision was set in 2012/13 based upon consumer research which established willingness-to-pay for a range of potential landscape improvements including undergrounding, novel tower designs, screening and tree planting around existing transmission infrastructure.

https://www.nationalgridet.com/sites/et/files/documents/Willingness%20To%20Pay%20Report%202012.pdf

Our Role in the Community - The recent 'State of the Nation' report from the Social Mobility Commission presented worrying findings that social mobility has stagnated. More must be done by all both public and private sectors to support citizens of disadvantaged backgrounds earn more and contribute equally to shaping our society.

We want a future where disadvantaged citizens have the same opportunities to take part in the green transition as the rest of society. We also believe that as an engineering business, it is vital to commit to maximising the current workforce and stimulating the industry pipeline of future engineers for this purpose.

To meet our vision to 'exceed the expectations of our communities', our commitments will focus on social mobility through education and employment, continuing to listen to the needs of the communities we impact.

Our role in the community includes:

- Supporting locally near to our construction and operations
- · supporting wider society and
- supporting communities through employment and our supply chain.



Supporting local communities around our construction projects

We support local communities around our construction projects in many ways such as extensive engagement, improving sites on project completion compared with their original state and grants to reflect local needs.

An example of how we have worked with local communities on a construction project is the Thorpe Marsh substation extension. Following project completion, we wanted to return the site to its natural state. Part of the site clearance involved removing vast quantities of wood and other materials left over from cable works. We denoted over 15 van loads of material to local organisations. This reduced disposal costs and benefitted our local communities. For example, they intend to use the materials for walkways, benches, bridges, stiles, pond-dipping platforms, fishing platforms and much more.

An example of the extent of our engagement with communities around our construction projects is the North-West Coast Connection project to connect and export the electricity that will be generated by Moorside, the proposed nuclear power station near Sellafield in West Cumbria. We sought consent for 119km of overhead line and 45.4km of underground cable, some through a national park. We engaged with 512 statutory bodies, 7,500 people with an interest in land and thousands of residents along the route. These interactions helped shape our application for a development consent order (DCO).

Examples of grants we have provided to local communities near to our construction projects and assets are: repairs and upgrades to community centres; building and refurbishing centres for disabled people; providing play equipment for children; and making improvements to sports facilities.

Supporting wider society

During 2017-18 the value of our UK electricity and gas businesses' community initiatives was £66 million. Most of this was the first part of our £150m Warm Homes Fund to tackle fuel poverty in the hardest hit communities across the country, which we are funding through the sale of one of our businesses, rather than our totex.

We have a strong record for supporting our employees to carry out volunteering activities within communities as well as providing funding support to community projects. For further information on our track record in the space, please see section 2, of chapter 11.

Supporting communities through employment and our supply chain

We continue to raise awareness of the career opportunities in the energy utility industry. In the UK, the need for a skilled workforce to develop, deliver and use new technologies within the energy sector is becoming more acute per the EU Skills Workforce Strategy. STEM skills underpin our business, so we promote STEM as an exciting career path for young people through education outreach activity such as the Big Bang Fair, work experience, and hosting school visits to our sites. Our employees and charity partners have given over 2,500 quality interactions of over one hour to young people, focusing on science, technology, engineering and maths (STEM) subjects. Also, in relation to education, our four environmental education centres (Skelton Grange, West Bolden, Bishops Wood and Iver) received 46,542 visitors in 2017 and 25,000 educational visits.

National Grid was the winner of <u>Business in the Communities Award for Outstanding Employment.</u> This award recognised our apprenticeship schemes and the work we do to support hard to reach groups of young people gain vital skills for work, such as our EmployAbility programme in the UK. Our 'Employability-Lets work together' internship programme for young people aged 17-25 with special educational needs and disabilities aims to significantly improve the likelihood of them achieving paid employment. We have also recently been ranked second in RateMyApprenticeship's Top 100 Employers in recognition of our commitment to developing the future careers of young people. <u>RateMyApprenticeship</u> is an external organisation that supports students, schools and parents with possible future career options.

National Grid is a founding partner of the City Year programme in the UK which places recent school leavers and graduates as volunteers for a year in schools where they can have the most impact. The volunteers work with children to help them understand their potential and widen horizons, showing what both the world of work and broader participation in social institutions could bring to their lives. The volunteers themselves gain experience in leadership and mentoring, preparing them better for the workplace.



We have been working with our supply chain to improve their social and environmental impact. For example, the <u>Business and Human Rights Resource centre</u> recently identified National Grid as being in a small cluster of leaders standing out in addressing modern slavery. National Grid were positioned as 12th in the FTSE 100 list.

We work closely with our supply chain to learn and share best practice. We have a contractor resource forum with our tier 1 contractors for our construction projects, through which we have developed a plan to meet ambitious resource targets on waste reduction, diversion from landfill and non-primary aggregate use, in collaboration with our contractors. They also have provided positive feedback on our approach to including sustainability in tender.

Our procurement processes where possible look to source goods and services from local suppliers to give back to the local communities impacted by our work. We have examples of some of our major projects at Hinkley and Menai, where the use of local suppliers promoted through our main contractors has been part of the Development Consent Order (DCO) using a tool which advertises packages of work to the local supply chain. Another example of is at Walpole 132kv substation dismantling project, the proceeds from the scrap metal are being collected for recycling and are turned into £ at a local recycling centre. They have been using the initial scrap proceeds to fund donations to local charities (in Norfolk) to the value so far of £44k. This has been done at a team level in partnership with the recycling centre. We are looking at some other innovative ideas where we could work more actively with social enterprises as part of standard procurement activity, where over 50% of profits go to social initiatives. This is still under development.

National Grid is part of MIROG, a group of infrastructure clients, including Network Rail, HS2 and Heathrow, who share best practice for sustainable construction projects. Our sustainable construction ambitions align with theirs.

Being a responsible business covers every aspect of our work, both what we do and how we do it. When we are undertaking major infrastructure projects, we work with our customers, stakeholders and communities to gather their views to help inform what we do. For example, at our new Highbury substation in London we are building retail units and residential apartments to help support urban regeneration in the area, half of which are affordable homes.

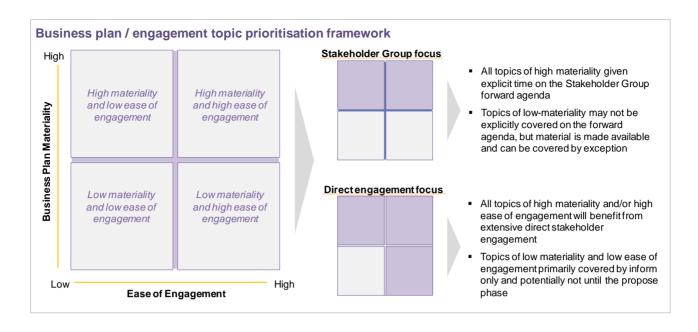
Companies are increasingly focusing on the value they deliver to society, and using this as another lens to look at their current and potential new business activities. Most other companies focus on leveraging their core capabilities to make positive contributions to society, and are making 'commitment statements' focussed on progressing towards a clean energy future.

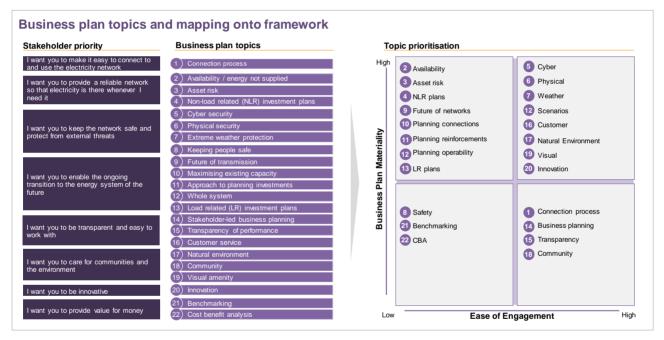
One of the overarching challenges for the energy sector in the RIIO-2 period is the need to build trust with our stakeholders, consumers and communities through transparency and responsible action. Our engagement with and support for communities is an important part of building this trust. Caring for communities fits with our National Grid value of "Do the right thing".

1. STAKEHOLDER MAPPING

This topic is deemed to have **low materiality** and **high ease of engagement**. We used the framework below to determine the topic prioritisation:







We judged communities to have low business plan materiality because the expenditure involved is small relative to areas such as asset health and customer connections. Our expenditure was higher at £66 million in 2017-18 due to the Warm Homes Fund, although this is funded from the sale of one of businesses rather than our totex. We judged communities to be easier to engage with stakeholders on because issues such as how we engage with local communities and apprenticeships are less technical and easier to understand than the resilience and reliability of our business.

Prior to engagement, we only share details of the sub-topics being covered and do not circulate any pre-read material. During the engagement, itself, we share details of our current approach to each of the sub-topics along with enough information to allow participants to be able to have an informed conversation and make informed decisions around the topics being covered (see details below).

Wherever possible and relevant, we created and presented costed options for each of the sub-topics, and converted these to the impact on the average household bill. This information excluded anything



that could be considered confidential or commercially-sensitive, and was shared during our engagement activities.¹

The VIP project is material. The latest forecast capital costs for the four undergrounding projects total ~£350m (2018/19 prices) in the RIIO-T1 and RIIO-T2 periods. Any additional projects which deliver in RIIO-T2 would add to that total. In addition, we are seeking to increase operational expenditure on LEI projects in RIIO-T1 through subsequent waves of funding. The SAG wish to encourage more of this work in RIIO-T2, using smaller projects to spread benefits over a greater number of designated landscapes and hence benefiting all parts of England and Wales.

2. WHAT ARE THE DESIRED OUTCOMES FOR THIS ENGAGEMENT?

The aim of our engagement is to understand whether our current environmental and community approach aligns with what stakeholders want from us, or whether we should change our plans. We know from previous engagement that some environment topics (notably visual impact) split opinion amongst stakeholders, so gathering different views to reach an informed approach is a key outcome of our engagement.

We also undertook an extensive piece of work to understand our current societal impact, and understanding which areas our stakeholders see National Grid driving a greater societal impact in. This will influence our thinking of where we leverage our capabilities to maximise our Total Societal Impact. As some of these roles & activities may be enabled and delivered through our RIIO-T2 Business Plan, we want to ensure any potential proposals we put forward are truly stakeholder-led, and reflective of the key findings from their insights. This may articulate areas where National Grid should lead the transition for our customers and communities, through activities and investments that we should make, to deliver this transition in the most fair and equitable way.

VIP - The engagement associated with RIIO-T2 is needed to assess whether there is support for a second round of visual impact reduction projects and, if so, of what scale and ambition.

This additional engagement is predominantly consumer focussed (other stakeholders covered through SAG). Subject to the outcome of this further consumer engagement, a second desired outcome would be some prioritised project(s) that stakeholders would like to see taken forward for funding during RIIO-T2. (As in RIIO-T1, this might include preparatory work for outputs delivered in a subsequent price control period because the average duration for complex undergrounding projects is more than five years.)

From this engagement, we need to be able to I) answer the questions that we've established prior to the engagement to a level of detail which can inform our business plan creation process, ii) identify (from our stakeholders) other areas of our plans that we have not focused on but which may require further engagement and iii) check whether we have engaged in a way that works for our stakeholders, and gather learning which can be used to improve future engagement activities.

For our Societal Impact engagement, an ability to articulate clearly our current societal impact to internal & external stakeholders, and a clear prioritisation of areas in which we can make a greater societal impact in.

Other measures of success included:

- 1. That we present clearly and that our stakeholders understand our current approach to communities:
- 2. That we provide plenty of opportunities for our stakeholders to engage with us on our current approach to communities;

¹ NOTE: prior to the workshop in June 2018, we realised that information relating to our approach to building new lines was out of date and incorrect. This was corrected for the presentation materials but was spotted too late for us to be able to amend handout materials. This error was pointed out to attendees at the workshop and via email after the event.



3. That we listen intently to what our stakeholders tell us about our approach to communities. That we reflect the messages we have heard from our stakeholders in our plans for our approach to communities in the RIIO-2 period in our business plan.

3. WHAT EXISTING INSIGHT HAS BEEN USED?

We used existing insight from other sources of engagement to i) identify the need for this engagement and ii) help shape its design. These sources included the formal Listen phase workshops and online consultation, where we established that the environment was more or less of a priority focus for different segments of our stakeholders, and also confirmed which sub-topics we needed to focus on. We also used results from a consumer research study (conducted for us by Populus – report here) which again showed us the relative priority of the environment (in general) to over 2,000 household consumers. In addition, we used anecdotal feedback from colleagues in our Safety, Health and Sustainability team who regularly engage with stakeholders on these topics, and insight from our Visual Impact Provision Stakeholder Advisory Group.

For our societal impact work, a range of general perspectives from BAU engagement were leveraged early in the process, including: our senior leaders on their experiences working with stakeholders, Government & Regulator perspectives, from our ongoing engagement and employees through Employee Engagement Surveys which among various aspects explore their motivations for working at National Grid.

For the SF₆ webinar we used the knowledge of our in-house experts who regularly engage with suppliers and other transmission owners in order that they can keep up to speed with the information and resources available.

We are members of the supply chain sustainability school and were able to apply best practice knowledge when building the responsible procurement action plan.

Existing knowledge was also used to build our environmental action plan using our current performance with a focus on the areas where we have a material impact on the environment. For more information, please see the Environmental Action Plan.

Business as usual insight - We do a considerable amount of engagement with communities and have existing relationships which form part of our business as usual activities, where we engage with our stakeholders so that they can influence our decisions. In this section, we provide further detail of these activities, how we engage and how this influences our decisions. We use this existing insight from our ongoing engagement to:

- i) identify the need for this engagement; and
- ii) help shape its design.

New and existing lines (not Visual Amenity) - We have two processes outlined for how we engage with stakeholders on proposed new lines and the refurbishment diversion of existing lines (which may require underground cabling). These give a broad outline for how we develop new projects and our stakeholder engagement;

- Undergrounding policy: Approach to existing overhead lines
 https://teams.nationalgrid.com/sites/ETAM/ETOCustomerandCommercial/ECC/Stakeholder
 %20Engagement/2018%20engagement%20topics/Environment/Undergrounding%202%20A
 pproach%20to%20Existing%20OHLs.pdf

Major Construction projects - We engage extensively with local communities and local stakeholders on all our projects. Our projects range from delivering a new transformer at an existing site, to trying to consent



and build a new connection across a distance of over 160km. Broadly, our larger projects fall into two main stages – consenting a scheme and then building it. Both elements involve significant engagement with local communities:

Our larger projects generally require us to apply for a Development Consent Order – a large and detailed planning application. As part of this we consult extensively with local communities and landowners, in addition to a range of other interested groups and statutory stakeholders. We listen to and learn from local communities and their representatives about the impacts of the project on them. This period of engagement can last for several years for large projects. When we have submitted a DCO the Planning Inspectorate usually expects us to carry out minimal communications while it goes through its own process. When the Planning Inspectorate approves a DCO we engage with local communities and discuss our plans to manage traffic, noise, dust and light and other impacts as we construct our scheme.

Throughout both these stages we engage extensively with local representatives, such as Members of Parliament (MPs), Welsh Assembly Members (AMs), local councillors, parish councillors, and other local groups. We also consult and engage with environmental, historic and archaeological groups such the Environment Agency, Natural England and Historic England, and their equivalents in Wales. We also inform governments about our plans, such a BEIS, the UK Business and Energy department, and the Welsh Government. We also keep our regulator Ofgem informed about the progress of our projects.

We engage through many different channels including one-to-one meetings; drop-in sessions at supermarkets and libraries, as well as a mobile consultation vehicle; formal consultation events at village and community halls; Parish council meetings and local council meetings; and sometimes we are invited to public meetings. We disseminate information using dedicated websites, blogs, social media (e.g. Twitter updates), email updates and newsletters to people who have signed up for them. We also regularly post paper newsletters and letters. Additionally, we tell our story though the local media, and are regularly covered in the local press and on radio and TV.

We also try to promote local employment and contracting opportunities for local people and businesses, and funding or delivering education initiatives for local schools.

An example of the extent of our engagement is the North-West Coast Connection project - a project to connect a proposed new nuclear power station in Moorside, near Sellafield in West Cumbria. We sought consent for 119km of overhead line and 45.4km of underground cable, some through a national park. We engaged with 512 statutory bodies, 7,500 people with an interest in land and thousands of residents along the route.

Examples of new infrastructure work and how our engagement influences the outcome

Туре	Project	Engagement	Outcome
Substation	Yaxley Substation- customer connection	Workshops with Parish Council, Ward Councillors and Local Planning Authority planners.	Layout and colour of substation building informed by stakeholder input.
Substation	Stoke Bardolph Substation – grid supply point	Engagement with local council, Environment Agency and wildlife group.	Acquired larger area of land to extend the local nature reserve. Relocated substation to avoid flood zones and loss of local development land.
Substation	Islington Substation – grid supply point and tunnel headhouse	Engagement with local planning authority, urban designers, local community and school.	Progressive architectural design of substation building. Reinstated shop front façade to street scene. Re-use of waste heat from electricity cables



Overhandling	Overhead line and		to heat adjacent school. Educational visitor centre.
Overhead Line	Overhead line and tunnel to connect Wylfa Newydd Nuclear Power Station	Engagement with Natural Resources Wales, Cadw (the Historic environment service of the Welsh Government), National Trust, local councils, community councils, residents and PILs (persons with interest in land).	Change to tunnel crossing of Menai Strait Area of Outstanding Natural Beauty (AONB). Line route changes in vicinity of rural communities. New access road to reduce potential effects from noise and air quality and improve road safety. Use of low height towers at sealing end compounds to reduce visual impact on local community.

Environment and sustainability - There is a cross-over between our work for communities and our work on the local environment. We have established relationships with several environmental organisations including the RSPB and Wild Life Trusts. Through engagement with us over recent years they have helped influence how we carry out our work in local communities. They have provided guidance on the way we should approach land management. Through our Environmental Education Centres, we also work with the volunteering organisations TCV, FSC and Groundworks to help increase access to land use. One example of how we have worked with these stakeholders to change our approach is our substation site in Feckenham. We worked with Worcestershire Wildlife Trust and a farmer to implement a conservation grazing regime that can protect and restore historic grassland as part of a wider conservation project.

VIP - In developing our RIIO-T2 submission, we will be using all our existing VIP stakeholder engagement channels and all insights gained from RIIO-T1. In addition, we have output from our 'business-as-usual' stakeholder workshops and the 'listen' phase of our RIIO-T2 engagement.

- 1. The workshops held in the summer of 2017 included a topic on the environment and communities. Mitigating the visual impact of existing assets was seen as less of a priority for the majority, although opinions were divided. A couple of stakeholders commented that the RIIO-T1 provision should be carried over into RIIO-T2 if not fully used, while some commented that overhead lines have less of an environmental impact than burying cables underground (for example, the construction process is more intrusive). Others were more concerned with the ongoing visual impact of overhead lines.
- 2. The online consultation generated a high volume of responses from members of the public, with almost all of these coming from residents in areas where we have recently been consulting on building new overhead lines to connect new power stations (notably Anglesey and the Lake District). These people were very concerned about the visual impact of both new and existing assets, scoring it as their highest priority within 'environment and communities'. NB The visual impact associated with new assets it is not covered by the Visual Impact Provision;
- 3. The <u>Populus research</u> carried out in late 2017 concluded that, of the stakeholder priorities put forward for ranking, "Replacing all existing overhead lines in National Parks and Areas of Outstanding Natural Beauty with underground cables" ranked above "Reducing the number of pylons in favour of underground cabling in all areas of England and Wales". This confirms that focusing on nationally-designated landscapes is marginally preferred (with a priority score of 202 vs 195). This outcome is broadly consistent across all age and socio-economic groups, and is not affected by gender.



- 4. The June 2018 the Environment workshop included a session on visual impact. At this event, visual impact continued to divide opinion, although it was noted that "visual impact is a big thing for local communities". Some stakeholders believed that our assets have a highly negative visual impact, while others see them as part of the landscape. Those who said they are more impacted by this topic were largely more supportive of minimising visual impact than minimising costs. Most attendees (24 out of 31) supported some form of scheme for existing overhead lines in RIIO-T2, with 16 of those supporting a wider scope than just National Parks and AONBs. A summary of key themes from the table discussions can be found below:
 - We need to explain the pros and cons of undergrounding for local communities and for bill payers more generally
 - The social and economic impact of new lines also needs to be considered, as does the impact of underground cables on certain types of land.
 - Some stakeholders believe that pylons are ugly and intrusive while others see them as part
 of the landscape
 - Some stakeholders felt that as existing lines are often visible from inside National Parks and AONBs, the scope of any future scheme should go beyond these designated areas, but others felt that the current focus was right
 - Could we look at other ways of lessening the impact of pylons, e.g. by camouflaging/painting them, using new technologies, screening? These could be more cost effective than undergrounding.
 - Even when using cables, sealing end compounds (where cables join) can have a visual impact, and several stakeholders commented that upgrading a buried cable is more difficult/expensive than for an overhead line
 - A couple of stakeholders commented that although it may not be right to replace pylons purely for visual reasons, we could consider replacing sections of our network with underground cables when the current assets reach the end of their life
 - When showing cost comparisons, we should also include the costs of decommissioning
- 5. We have worked with the Scottish TOs to share best practice between our VIP project and their VIEW and VISTA projects. This has involved Scottish representatives attending a SAG meeting and presenting some of their proposals, as well as seeing our project updates.

The VIP project is aligned to the stakeholder priority "I want you to care for communities and the environment". It also with our care for the environment because, in carrying out visual improvement works, we need to balance the benefits against the potential impact on protected environments and the carbon footprint of the construction works.

National Grid's Visual Impact Provision (VIP) project was established to deliver the ambition of this new provision. The most important task for us is to use this opportunity to achieve the maximum enhancement to the landscape in England and Wales², whilst avoiding unacceptable environmental impacts. To ensure that we get this right and bring the most benefit from the Visual Impact Provision project, National Grid is working closely and collaboratively with stakeholders. For that reason, information has been made available via National Grid's dedicated external website found here.

We first published our VIP Policy in 2013; it contains the five guiding principles that underpin decision-making to ensure fairness and balance. This was consulted upon and updated during 2017/18.

The principles are as follows:

Working with stakeholders, we will prioritise proposals which:

• result in **greatest landscape** enhancement benefits

² This provision is also available to the Scottish Transmission Owners to address the visual impact of transmission infrastructure in Scotland. They have their own projects (VIEW and VISTA) but we work together and share learning in this area.



- result in greatest opportunities to conserve and enhance natural beauty, wildlife and cultural heritage whilst avoiding unacceptable impacts on the natural and historic environment
- result in greatest opportunities to encourage public understanding and enjoyment of the protected landscapes, including positive socio-economic impacts
- are technically feasible in context of the wider transmission system
- are economical and efficient

Further detail on the principles can be found here.

An independent advisory group was established in 2014 to guide decision-making on the project. The national Stakeholder Advisory Group is chaired by environmentalist and broadcaster Chris Baines and is comprised of senior representatives of organisations dedicated to conserving and enhancing the landscape throughout England and Wales as well a representative from Ofgem and National Grid.

Figure 1 shows the list of organisations that make up the national Stakeholder Advisory Group and further detail on the Group can be found here.



Fig 1: Stakeholder Advisory Group

An independent landscape expert (Professor Carys Swanwick) was appointed to create the <u>Landscape and Visual Assessment Methodology</u> which has been used to work through the 571 km of existing overhead line in 30 AONBs and National Parks in England and Wales.

Because of this process, 53.7 km of line in 12 sections within eight protected areas were judged to have the highest visual impact. Following engagement with local stakeholders (reports are available via the website), these were prioritised down to four major undergrounding projects as shown in Figure 2 below.





Fig 2: The Four Visual Impact Provision Projects

A Stakeholder Reference Group was then set up for each of these, and they have been closely consulted in developing the preferred option. We have also carried out wider stakeholder engagement, attending Parish Council meetings, country shows, holding drop-in sessions and offering individual briefings to all affected stakeholders. Each project has its own web pages where project progress is regularly updated.

The details of the four sections of overhead line proposed for undergrounding are summarised in the Fourth Annual Report (available in English and Welsh), along with a list of the smaller Landscape Enhancement Initiatives.

https://www.nationalgridet.com/sites/et/files/documents/VIP%20Fourth%20Annual%20Report%202018%20English.pdf

https://www.nationalgridet.com/sites/et/files/documents/VIP%20Fourth%20Annual%20Report%202018%20Welsh.pdf

In September 2018, we had planning permission for Dorset and Ofgem approved our funding request (totalling £120m, 2018/19 prices) in November 2018. Our Licence has been updated to include a project-specific output and the associated funding which will then allow us to deliver the project. The New Forest³, Peak East and Snowdonia projects will follow the same process.

For smaller (non-undergrounding Landscape Enhancement Initiatives) LEI projects, Ofgem have decided that the T2 funding will be set at an indicative 2.5% of the final provision. A stakeholder-led change for the T2 period is that the £200,000 individual project limit has been removed, which stakeholders feel could lead to more ambitious projects being proposed. We also propose to improve the T1 period process by appointing a grant management company to oversee the funding applications from stakeholders, which will streamline the process. In line with Ofgem's consultation, we are proposing that the independent sub-panel of the SAG would decide on the funding requests for the LEI and report annually on project delivery and expenditure. These are assessed by the LEI Approvals Panel (chaired by Mary O-Connor from the Landscape Institute and including experts from Cadw, Historic England, Natural England and Natural Resources Wales) which then recommends to Ofgem which projects to fund. The initiative is supported by our project team and external specialists,

³ Please see appendix 7; the decision to pause the New Forest project was taken in March 2019.



including landscape advisors to offer guidance to eligible applicants. Again, there is a dedicated website (http://lei.nationalgrid.com/) to provide information and encourage applications:

To date, we have £1.6m of approved LEI projects and figure 3 below shows the landscapes eligible to receive LEI funding.

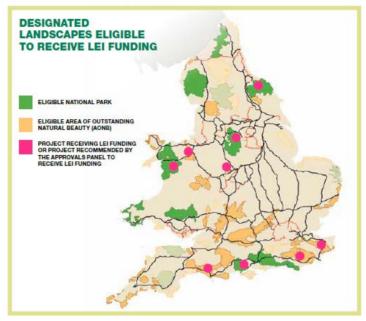


Figure 1 - Fig 3: The landscapes eligible to receive LEI funding

Spotlight on: High Weald AONB

The High Weald AONB is an internationallyimportant landscape characterised by a mosaic of interconnected small woods, fields, shaws and hedges – many of which are ancient and species-rich. Beautiful Boundaries aims to restore the historic medieval landscape by regenerating ancient hedgerows to divert attention from the overhead lines. Particular focus is being placed on locations where the lines can be seen from the area's extensive network of public rights of way including promoted paths such as the 1066 Walk and the Sussex Border Path.

The scheme was granted £200,000 in the first round of LEI funding, and the High Weald Partnership is working with a number of landowners in the Wealden and Rother districts of East Sussex to implement the improvements.

The gaps we intended to fill with our engagement - Our previous business insight and initial T2 engagement workshops had helped us to better understand stakeholders' priorities, without getting into the level of detail that we needed to use as meaningful input to our business planning process. We therefore used this engagement to discuss the next level of detail with our stakeholders for each of the sub-topics (some topics lend themselves better to this than others because of the data available and the choices we can offer), hence creating costed options where possible and asking stakeholders to choose how they would like to see us proceed.

We use the principles of the AA1000 stakeholder engagement standard to determine the most appropriate approach to engagement, so that engagement is tailored by topic and stakeholders. These principles align with the principles of good engagement set out by our Independent Stakeholder Group (see Appendix 1). Added to this, we use ongoing feedback from stakeholders to shape our engagement. For example, we used feedback from our 2017 Listen workshops to improve the way we ran our 2018 workshop.



The primary purpose of engagement on this topic is to consult our stakeholders on what we need to include in our plans for RIIO-2, by sharing options (including our current/default approach where appropriate), understanding their priorities and preferences, and including any new insight in how we build our plans. To do this, we realise that we also need to inform stakeholders – different stakeholders have differing levels of knowledge about what we do, particularly when looking at subtopics, so informing stakeholders sufficiently at the beginning of our engagement is important to allow them to contribute in a meaningful way and provide an informed opinion.

For our total societal impact engagement, key gaps were our stakeholder perspectives, both internally and externally, on where we create societal impact today and what potential roles they see us playing to deliver greater societal impact in the future. We then want to take these into defining roles & activities we can undertake to deliver greater societal impact, and how we set ourselves up to carry these out. For this work, our approach was chosen to maximise the breadth of stakeholder perspectives drawn in on our current impact on society, and importantly on where we can act in the best interest of all stakeholders to improve our impact on society. Engagement therefore largely focussed to 'consult' and 'collaborate' on developing where we should focus to drive societal impact.

Our expert engagement was intended to play back the plans that we had built from business experience plus original engagement and therefore it is right that we have a proposal to present for comment. The aim of our expert engagement was to test whether an external community thought that our targets and commitments were stretching enough. This included the SF_6 webinars where the gap was alternative options and wide international views. Although our SF_6 experts regularly engage with international contacts, it was a great opportunity to engage simultaneously with experts from around the globe. For the SF_6 Webinar - the geographical spread was so wide, such that two separate webinars to accommodate the east and west side of the globe was the best way to engage with the technical community. We could offer plausible options which could be selected by stakeholder and we also asked whether there was anything we hadn't offered.

We engage widely on community matters as part of our business as usual activities but recognise that we need to bring this information together to provide our stakeholders with a holistic view of what we currently do within communities. Some external consultants 'Truth' reviewed our approach to engagement and identified several gaps, this is covered in section 1.4 (III).

Given the number of stakeholders involved and the types of issues being discussed (which lend themselves well to debate rather than bilateral conversations), we firstly ran an initial workshop, with stakeholders from all the relevant groups/organisations identified and invited. We also included representatives of communities affected by our activities. This was supplemented by an online consultation, to allow those not at the workshop to provide feedback on the same topics. In addition, as customers were not well represented through either of these channels, we gave them the opportunity to provide feedback in our face-to-face meetings with them.



ENGAGEMENT OUTCOMES

4. ENGAGEMENT SUMMARY TABLE

Ref #			10	Channel	Who	When
1101 11	Environment	VIP	Communities	G illarinio.		
11.1			Initial listen workshops		NGET stakeholder list invite 15 x network companies 11 x interest groups 8 x customers 4 x academics and think tanks 4 x regulatory / government 3 x consumer bodies 13x other	July 2017
11.2				Online consultation	NGET stakeholder list invite – 627 consumers	July-August 2017
11.3				Populus Consumer research including Prioritisation (Max Diff)	Nationally representative sample of 2,081 household energy bill payers	October 2017
11.4				SAG Formal Meeting 11 - generation and discussion of ideas for the future of the VIP project	SAG Interest Group Stakeholders, details here	February 2018
11.5				SAG Formal Meeting 12 - Review long-list of next highest priority route sections and criteria to short-list next tranche for detailed consideration		September 2018
11.6				SAG Formal Meeting 13 - Review of short-listed sections to prioritise potential projects for wider stakeholder engagement		December 2018
11.7				SAG Formal Meeting 14 - Decision on the future of the New Forest project		March 2019
11.8				SAG Formal Meeting 15 - Decision on the planning application for the Peak East project		July 2019
11.9				Acceptability Testing • Using 'Accent' • 9 x vulnerable consumer interviews • 10 x discussion groups • Quant survey -2,002 consumers	Consumer discussion groups Hard-to-reach vulnerable consumers billpayers 16+	Spring 2018
11.10				Topic-specific workshop	Targeted stakeholders from NGET stakeholder list	June 2018



11.11				Online consultation	NGET stakeholder list invite	July-September
11.11	Qual a 22x co 7x Int 5x Go 5 x Ne 1x Su		Offline consultation	Qual and Quant, 44 responses 22x consumers 7x Interest groups 5x Governmental/Regulatory 5 x Network companies 1x Supply chain	2018	
11.12				Overall T2 plans Willingness to Pay – NERA & Explain	6x Other Nationally representative household bill payers Representative Sample of 5000 domestic consumers + 600 business consumers	Sept 2018 - June 2019
11.13				Populus Consumer research incl. Engagement/knowledge segmentation and attitude to energy related initiatives and challenges	3,056 Nationally representative sample of the public and 621 Small to Medium sized business consumers. Max diff	November 2018
11.14				Total Societal Impact Interviews, polling and research	Qual interviewing of 61 Stakeholders, 41 employees and online quant with 3,000 Nat Rep consumers	January 2019
<u>11.15</u>				ET Consumer Workshop	Domestic 34 consumers, ABC1 and C2DE Workshop – qual and quant -Birmingham	January 2019
11.16				Overall T2 plans - Online consultation and Webinar	NGET stakeholder list invite	February 2019
11.17				Bilaterals - Electric Vehicle Fleet	Every mainstream vehicle manufacturer in the market as well as one of the new trailblazers in electric vehicle development ('Arrival'). By 'mainstream manufacturer' we mean Ford, Mercedes, Vauxhall, PSA (Peugeot & Citroen), Nissan, VW, Fiat, Mitsubishi, Toyota and Renault.	January 2018 – July 2019
<u>11.18</u>				Acceptability Testing Eftec – Workshops, interviews, focus groups and surveys	Household bill payers Business bill payers Nationally representative sample	July-September 2019
11.19				Slider Tool Testing Online gamification of T2 plan costs - Explain	Online and face to face interviewing – nationally representative sample	August 2019
11.20				Full Business Plan Publication and webinar	NGET stakeholder list invite	July 2019
11.21				Expert engagement – Emissions	Science Based Target Institute	July 2019
11.22				Expert engagement – Natural Capital	Natural Capital Coalition	August 2019
11.23				Responsible - expert engagement Procurement Cross-industry webinar	-Supply Chain Sustainability School members -Achilles UVDB steering group members -EU Procurement Skills Accord members -Other interested utilities –NGN, SGN, Cadent, Wales & West Utilities (over 50 stakeholders attended the webinar representing 31 different companies)	August 2019
11.24				Responsible Procurement - Bilateral with plan overview and direct feedback – expert engagement	Supply Chain Sustainability School Infrastructure Steering Group	August 2019
11.25				Formal Engagement presentation and challenge	Ofgem Challenge Group Members	August 2019



11.26		Net zero SF ₆ Replacement Proposal - International Webinars x 2	Qual engagement with polling, 15 stakeholders of 5 x suppliers, 4 x utility networks, 1 x academic, 1 x consultancy and 1 x regulator.	September 2019
11.27		Expert engagement – waste and resources Bi- lateral	MIROG – Major Infrastructure Resource Optimisation Group (circular economy experts)	September 2019
11.28		Webinar- closing the loop with stakeholders	Webinar being held to update on our latest plans and ensure all feedback has been reflected	October 2019
11.29		Expert Engagement - Waste	Waste Facilities Audit Association	November 2019
11.30		Workshops / Forum	Independent Stakeholder User Group - Wide representation of NG stakeholder groups	SG3 October 2018 -April 2019 – closed session -Buddy session June 2019 -SG8 June 2019 -VIP Engagement Dates: -SG5 January 2019

5. RESEARCH DATA SOURCES TABLE

Sub-Topic	What	When	What input was taken
Total Societal Impact	Desktop research	January - April 2019	Analysis of where we could have the biggest scale impact on society looking forwards also highlights that investing to advance clean energy systems could have an order of magnitude larger impact than other societal impact areas we have access to. This is largely because of our core capabilities in this space, where our contribution to advancing these systems has the potential to be material in addressing society's needs in the future developments of clean electricity, transport and heat.
Total Societal Impact	Desktop Case- Studies;	Jan – April 2019	Many energy companies across the world are making statements with a focus on how they will help to support and reach a clean energy future, once again pointing to the criticality of focusing our statements on how we will lead the transition to a clean energy future.
T2 Framework Consultation	Citizen's Advice response to T2 framework consultation	March 2019	 Think about current and future consumers Failure to take climate change action impacts on the most vulnerable in society Differentials created for vulnerable consumers by policy should be highlighted Majority of fuel poor support should be through DNOs and Suppliers
Responsible and Sustainable Business	Canopy: Cultural Analysis - Key current and emerging cultural influences (in-direct) Evidence based research of the UK	January 2019	Canopy combined fieldwork with digital scoping & analysis to get the widest possible body of evidence. The fieldwork comprised 10 days investigating responsible and sustainable business in-market across the UK – during which we visited dozens of locations We supplemented this fieldwork with 14 days of digital scoping to complete the picture. This gave us insight into places, spaces, ideas, initiatives and technologies which couldn't physically be accessed during fieldwork. It also gave access to thousands of examples and pieces of cultural evidence drawn from a range of locations. Through this process, Canopy took a holistic, 360-degree view of the evolving cultural meaning of responsible and sustainable business. A link to the full report can be found here. • The key opportunity themes reported were for our business to enable communities by inviting intervention and collaboration from business & consumers and providing strong collective leadership and partnerships with other businesses and industries to achieve shared goals. • From the dominant themes on "Responsible and Sustainable Business" we can note inclusion of:



Improving local communities – focus of our community's commitments to help local communities prosper
Supporting small business – we continue to do this through our procurement practices
• From the emergent themes on "Responsible and Sustainable
 Business" we can note inclusion of: Cross industry collaboration through our responsible procurement
engagement
 Openly Sharing data on our leading environmental commitments (natural capital and capital carbon)
Whole chain accountability through our supply chain code of conduct
Zero waste – commitments working towards zero waste and carbon
Taking a stand – our T2 plan makes bold statements about our views on climate change and environmental issues, contrary to traditional

6. ENGAGEMENT ASSURANCE

1. TRUTH; ENVIRONMENT AND COMMUNITIES ENGAGEMENT COVERAGE ASSESSMENT - NOVEMBER 2018

We partnered with Market Research consultants, Truth to review our approach to engagement in terms of gathering robust evidence of stakeholder opinion for evaluation. The audit identified gaps. Truth looked at the environment, visual impact and communities together. Having reviewed this report, we have recognised that we did not provide Truth with evidence of our business as usual engagement which links directly to the gaps identified.

The following extract has been taken from the truth report which details how this review was carried out. Truth assessed our engagement on the environment, visual impact and communities against the following four categories:

- **RECENCY**: Most of the engagements we have reviewed are from 2017 and 2018 although we have been flexible on this not to discount work that is older than that if we feel it is still relevant.
- **EVIDENCE:** This analysis indicates whether we can reasonably link a reported insight to evidence captured through stakeholder engagement.
- **DESIGN AND EXECUTION:** this explores how the engagement or piece of research was designed, carried out, analysed and presented. We have taken a commercial view of what is fit for purpose e.g. if there are small issues that use research design such as presenting smaller base sizes as percentages, the outputs are still deemed fit for purpose.
- DEPTH AND SUBSTANCE: this is an indicator of how useful the content is for the purposes of stakeholder feedback/ information.

The table, below, shows a summary of Truth's assessment for communities and the environment (including visual impact).

	Recency	Evidenced	Design & execution	Depth and substance
1. Listen report				
2. Sandown Park environment workshop				
3. Four x VIP engagements*				
4. VIP Acceptability research				

^{*} Dorset AONB, New Forest National Park, Peak District National Park, Snowdonia National Park Multiple documents e.g. questionnaires, raw data files, PPTX presentations, reports, summaries, emails have been analysed for each engagement – for this reason it is not possible to limit the document type to one specific file.

Key for recency, evidence, design & execution:

	Satisfactory
•	Opportunity for improvement/ information gap but does not usually disqualify the content for analysis purposes
	Disqualifying criterion e.g. too old or no evidence provided

Key for depth and substance:

In addition to the colour coding, this column also indicates the following:

	Engagement focuses largely or wholly on the chapter topic
4	Engagement only partially addresses the chapter topic. Does not denote inherent quality – this is shown in the colour coded indictors (RAG)
	(2)



Truth summarised its overall view that: "Individually, these engagements are well designed, executed and analysed. The stakeholder coverage has been satisfactory but there are some gaps, so we recommend that in addressing the gaps, National Grid takes the opportunity to secure more input from more stakeholder groups e.g. convening one or more workshop(s) or localised webinars."

Detailed assessment by source of insight

Truth summarised its desired outcomes for future engagements as follows:

	Desired outcomes					
Relevant	How should NG	How should NG	How should NG	How should NG		
segments for	approach	approach new	approach	approach land		
engagement	investment	and existing	construction	management and		
	decision-making	transmission	activities from an	environmental		
	from a carbon	lines from a	environmental	corporate		
	perspective?	visual impact perspective?	perspective?	responsibility?		
Regulatory						
Large customers		-				
DNOs and TOs						
Consumers (HH)						
Interest groups						
Supply chain						
Small customers		-				
Academics						
Consumer bodies						
Communities						
Think tanks/ innovs.						
New business						
models	Less relevance compared to priority stakeholder groups					
Political						
Governmental						
	Satisfactory/ fit for purpose					
	Boost or update required					
	Significant action required					

As you can see from the table Truth gave "communities" three reds meaning "significant action required". Truth said that "We have seen little feedback from community engagement in areas outside of the VIP project. We would expect these in areas where significant local impacts may be experienced e.g. Bridgwater, East Huntspill, Sandford, Churchill, Puxton, Nailsea, Tickenham, Avonmouth."

Truth also commented that there are two stakeholder groups that have not been consulted sufficiently across communities and the environment:

- direct customers (large, small and new)
- consumers (households and businesses)

Truth suggested that our future surveying of members of the public could take account of communities who may be affected by large scale works that are outside of our visual impact projects although we acknowledge that we did not provide them with evidence of our business as usual engagement particularly for major infrastructure projects.

For an explanation of how we are taking into account Truth's feedback please see below on "What were the initial National Grid Conclusions?".

Response to Truth's findings - we agree with Truth's findings based on the information we gave them (this was missing our business as usual activities). We recognise our other engagement to date (workshops and online consultation) on communities has been included within the other topics under this priority



(Environment and Visual Impact). On reviewing our engagement so far and taking account of the Truth analysis of our engagement, we recognise that we need to bring the information on all the work we do for communities across a wide range of areas together to make it more visible. We also need to explain it to our stakeholders and understand their views to influence how we develop our business plan going forward.

Our plan going forward is to include communities in a round of engagement we are planning with our direct customers during January and February, where we can discuss all the topics for our business plan development. We have also included this topic within our planned January consultation where we will playback the feedback we have heard from stakeholders and make suggestions for what we could do to address our stakeholders' feedback in the T2 period. In relation to consumers we intend to conduct some willingness to pay research over the coming months to capture consumers' views on whether we should carry out more activities to improve the natural capital around our assets. We are also considering a mini consultation on this topic and would welcome your feedback on this. Consulting our stakeholders on the full scope of our current activities and establishing whether we should be carrying out the same amount, in the T2 period will provide us with the additional insight we need to inform our strategy for T2

2. FRONTIER; ENGAGEMENT CONCLUSIONS AND TRIANGULATION ASSURANCE, SEPTEMBER 2019

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.

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

- Environment engagement log (Dec 2019, now all contained in one log);
- Visual Impact Provision (VIP) engagement log (Dec 2019, now all contained in one log);
- Communities engagement log (Dec 2019, now all contained in one 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

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 a % 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 community's sections generally correspond well to the conclusions of stakeholder engagement: all stakeholders want NGET to act 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.

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 most 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.
- NG response no formal response is required against this comment as the action clearly supports the findings.



Caring for local communities

- Most evidence in the engagement log 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.
- NG Response from a consumer research perspective, the majority data supports doing more for communities, therefore the ambivalent view of the organisations having an interest in connection projects has been largely downgraded given support for local communities would do little to negatively impact their interests.
- NG Response specific actions have been decided based on what has been requested by local stakeholders, what activities were prioritised through our consumer research, what activity is within our remit to deliver and that which fits with our desire to improve social mobility through education and employment.

.....

7. RECORD OF ENGAGEMENT OUTCOMES

1. LISTEN WORKSHOP, JULY 2017 - ENGAGEMENT REF#11.1 AND 11.2

The anecdotal messages we have received from our stakeholder feedback from the workshops and online consultation, is that we should continue and potentially expand our work in communities. Community work is always welcomed but some felt we could do more. Supporting local communities and playing our part in educating young people about the energy industry were also given high importance. For our work with schools, stakeholders felt it would be good to see outcomes. How is our work impacting on the numbers of people studying STEM subjects for example? The importance of National Grid promoting STEM subjects was recognised by many stakeholders, as was the need to adopt a cross-industry approach to this.

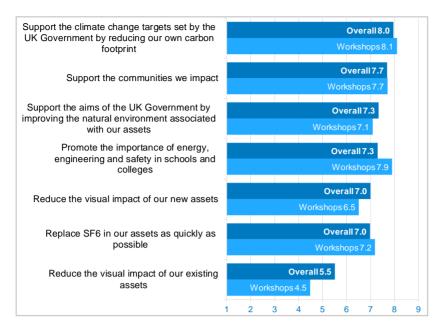
Our online consultation generated a high volume of responses from members of the public, with almost these coming from residents in areas where we have recently been consulting on proposals to build new overhead lines to connect new sources of supply, notably Anglesey and the Lake District. Although our online consultation on communities and the environment was not part of the formal consultation process for these projects, we were keen to give all stakeholders a say on whatever topics were important to them. We have a separate and extensive consultation process we have put in place in relation to visual impact issues.

The impact of our work on communities and the environment is viewed as the most important consideration for those members of the public who participated in the online consultation. All other topics (including the reliability and cost of our network) are seen as less important, relative to our wider stakeholder population (See page 20 of the write-up of our 2017 workshops and online consultation).

- Overall environmental priorities rated as follows:
 - 1. Reducing our own carbon footprint (8.0/10)
 - 2. Supporting communities (7.7)
 - 3. Improving the natural environment (7.3)
 - 4. Energy education in schools (7.3)
 - 5. Reducing the visual impact of new assets (7.0)
 - 6. Finding a replacement for SF₆ (7.0)
 - 7. Reducing the visual impact of existing assets (5.5)

On the topic of communities, Stakeholders at our 2017 Listen workshop told us the following:





Supporting the communities, we impact

Q: On a scale of 1-9, where 1 is not at all important and 9 is very important, how important is it to you that we...? (Mean scores. Overall base size: 44)

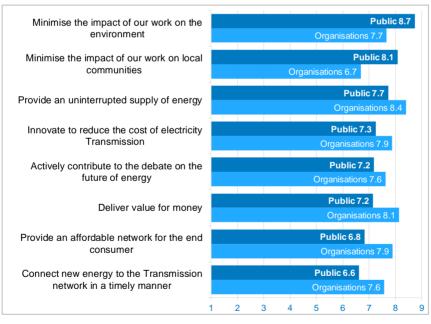
The respondents at our workshop and to our online consultation ranked "Support the communities we impact" as their second highest priority of the environment and community priorities we asked them about.

(The dark blue bars include online responses as well as those present at our 2017 workshop. The light blue bars include only those responses at our workshop.)

Results from members of the public (online consultation):

Q: Thinking about the next ten years, on a scale of 1-9, where 1 is not at all important and 9 is very important, how important is it to you that we...? (Mean scores. Base sizes: Members of the public: 608, Organisations: 58)

Members of the public rated "Minimise the impact of our work on local communities" as the second highest of the priorities we consulted them on, ahead of topics such as affordability and delivering value for money.



The chart also shows that organisations with a direct interest in potential new connection projects have very different priorities from our general stakeholder population. These organisations rank "Minimise the impact of our work on local communities" as the lowest of the eight priorities we consulted them on.

Members of the public who responded to our consultation were most concerned with the visual impact of our assets

- Reducing the visual impact of new and existing assets were rated as the highest priorities (at 8.8 and 8.6 out of 10 respectively)
- Improving the natural environment around our assets (8.3/10) and supporting communities (8.1/10) were next highest

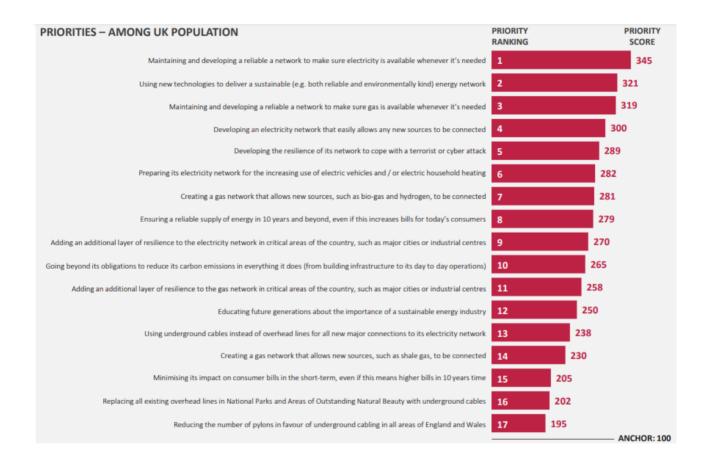
The full write up of the listen workshop and online consultation can be seen here



2. POPULUS CONSUMER RESEARCH, OCTOBER 2017 - ENGAGEMENT REF#11.3

Environmental Topics:

- Ranked no: 2/17 using new technologies to deliver a sustainable (e.g. both reliable and environmentally kind) energy network (behind reliability)
- Ranked no: 10/17 Going beyond its obligations to reduce its carbon emissions in everything it does (from building infrastructure to its day to day operations)
- Ranked no:15/17 Minimising its impact on consumer bills in the short-term, even if this means higher bills in 10 years' time



3. VIP FORMAL MEETINGS - ENGAGEMENT REF#11.4-11.8

Summary of Engagement

The purpose and summary of engagement activities included within the VIP SAG are:

- Generation and discussion of ideas for the future of the VIP project
- Review of long-list of next highest priority route sections and discussion of criteria to short-list next tranche for more detailed consideration
- Review of short-listed sections to prioritise potential projects for wider stakeholder engagement
- Decision on the future of the New Forest project
- Decision on the planning application for the Peak East project



- Decisions on the progression (or otherwise) of the projects which will be submitted to Ofgem under the RIIO-T1 Visual Impact Provision and will incur spend in both the T1 and T2 periods
- Generation and discussion of ideas for the future of the VIP provision, about which they are unanimously positive
- Review of long-list of next highest priority route sections and discussion of criteria to short-list next tranche for more detailed consideration for the T2 period
- Review of short-listed sections for potential initiation in the T2 period to prioritise projects for wider stakeholder engagement

May 2019, At the request of the RIIO User Group, the SAG members were surveyed. Excellent scores were received identifying the engagement process as thorough and effective. Only a small area for improvement was identified around NG engaging more directly with the LEI rather than through our consultant partners

Detailed Engagement Record

As previously found, this is a topic which divides opinion. Some stakeholders believe that our assets have a highly negative visual impact, while others see them as part of the landscape. Those who said they are more impacted by this topic are largely more supportive of minimising visual impact than minimising costs. Most attendees believe that our current approach to new lines is about right, although we could consider alternative ways of mitigating visual impact. Several stakeholders commented that we should look at all considerations when developing our proposals, including visual impact, whole life costs, carbon and impact on land. Most attendees supported some form of scheme for existing lines in RIIO-2. More detail can be found on pages 14-18 of our workshop report.

4. ENGAGEMENT REF #11.4 - SAG 11

- Detailed discussion at SAG 11, the outcome of which was:
 - → Support for continuation of the VIP scheme
 - → Keep the core of the existing framework and build on it, e.g. by including World Heritage Sites, National Trails and socially-deprived areas
 - → Evolve the LEI, e.g. by broadening its remit and opening it up to a wider range of stakeholders
 - → Seek to collaborate with DNOs and other utility/infrastructure providers to improve outcomes
 - → Apply the learning elsewhere, e.g. other regulated infrastructure sectors
 - → Encourage more innovation, e.g. in camouflaging assets rather than undergrounding
 - → Consider substations as well as overhead lines
 - → Full details are here.
- Revisiting the original landscape and visual assessment to make sure that the scoring was still correct, updating the route section score sheets as required for the highest priority sections (purple and red), and incorporating learning from the first tranche of projects. In summary, for the major undergrounding projects, we have learned that:
 - → It is important to consider where Sealing End Compounds could be sited because, in sensitive landscapes which (by definition) these are, these can dictate the feasible scope of work
 - → Engineering considerations are important because they impact the likely final solution and hence cost (especially if tunnelling is required). Given our duty to achieve the best landscape benefit with the available funding, this is a material consideration.
 - → Environmental and heritage constraints can also have a major impact on the scope and engineering solution, as we must avoid unacceptable environmental impacts such as those associated with digging up the ground

5. ENGAGEMENT REF #11.5 - SAG 12

- At SAG 12, the Group reviewing the score sheets to shortlist line sections for more-detailed consideration at SAG 13.
 - → Stakeholder Advisory Group members were provided with a set of information sheets about each of the previously assessed schemes including route and constraints maps, photographs, the original Landscape & Visual Impact Assessment score (and breakdown), and an overview of the engineering options and technical/environmental issues for each project.



- → The Advisory Group then split into sub-groups to discuss the relative merits of the schemes, whether they should be taken forward on a long-list and what further information the Group required from National Grid and its consultants before the next meeting of the Stakeholder Advisory Group in December 2018.
- → There was a reminder that the Stakeholder Advisory Group was not being asked for a definitive shortlist, and that the focus of the discussions at this stage was to provide National Grid with a steer on where to focus its attention and identify what needs to and can be done before the next meeting in December 2018 to facilitate more detailed discussions and decisions.
- → The Group reached consensus over eight projects which should be considered in more detail as the likely next candidates.

Since the last meeting, the National Grid project team had looked at other designated areas to see whether there is any existing National Grid infrastructure that could be considered for inclusion in the VIP programme. A plan of World Heritage Sites was overlaid on the National Grid transmission network. For World Heritage Sites, most overhead lines have already been considered as the areas where they cross designated World Heritage Sites occur in AONBs or National Parks. There are two areas however that have not been considered to date:

- A section of line in the English Lake District World Heritage Site this section is also now within the National Park due to the Lakes/Dales boundary extension which took place after the last LVIA was carried out.
- ii. The Frontiers of the Roman Empire World Heritage Site (Hadrian's Wall).

It was confirmed that these areas should be considered only where they fall within AONBs and National Parks. Including them as standalone designations would require a change to the VIP policy which explicitly excludes them as it is currently written. There was a reminder from Ofgem that the primary aim of the VIP funding is to improve visual amenity, and that there is a statutory basis for work within the AONBs and National Parks.

A map plotting National Trails against National Grid transmission lines also revealed a strong correlation between the Trails and the areas that had already been surveyed. It was also pointed out that the views from National Trails were taken into consideration when the original LVIA was carried out and where a viewpoint from a National Trail was affected by a subsection of pylons, this would have increased its score.

In terms of coastal paths, again many of these were covered in the original survey as they run through AONBs and National Parks. National Grid also pointed out that its lines tend to run slightly inland from the coast rather than along it.

With regards to including areas of social deprivation, National Grid had considered this as a potential measure. There are numerous factors contributing to social deprivation, and the existence of transmission lines as a factor has not been tested and is consequently unproven. It is therefore difficult to see how the impacts of overhead power lines and the potential for 'improvements' in social deprivation through removing them could be identified or assessed.

The potential benefits of addressing areas of high landscape quality within AONBs and National Parks that are near to areas of social deprivation were acknowledged, and it was suggested that social deprivation could be a factor that is used to weigh up the relative merits of potential projects.

Full details of SAG12 are here:

 $\underline{https://www.nationalgridet.com/sites/et/files/documents/Stakeholder \%20Advisory \%20Group \%2012 \%20minut} \\ \underline{es_September \%202018.pdf}$

6. ENGAGEMENT REF #11.6 - SAG 13

SAG13 was held on 4 December 2018. Full SAG13 minutes are here: https://www.nationalgridet.com/document/129251/download

The purpose of the meeting was for the Stakeholder Advisory Group to:



- Hear updates on the four schemes prioritised for replacing existing overhead electricity transmission lines with underground solutions in Areas of Outstanding Natural Beauty (AONBs) and National Parks in England and Wales
- Receive an update on the Landscape Enhancement Initiative and consider a potential option for funding from an external organisation to stimulate project development
- Hear updates on the work carried out by National Grid on potential future projects for the next price control period (RIIO-T2)
- Provide further input to National Grid to help them shape their submission to Ofgem for the next price control period.

The emerging legal situation surrounding the potential (temporary) impact of the New Forest project on protected species was discussed. It was agreed that National Grid should continue work because the project was recognised as providing longer-term opportunities to enhance the habitat for the affected species. In particular, National Grid should take part in discussions with the RSPB and local Wildlife Trust which were being facilitated by Natural England.

The prioritised options for potential future projects (in RIIO-T2) were discussed as follows:

Anglesey AONB 4ZA.1 (RED) – Prominent short section seen from many nearby heritage assets that crosses the Anglesey AONB and over the Menai Strait, adjacent to Britannia Bridge to reach the mainland. National Grid has been holding discussions with the Welsh Government, Traffic Wales and their own team working in North Wales about the possible interaction with plans for a potential third crossing of the Menai Strait.

Cotswolds AONB ZF.2 (RED) – A long section in the west of the Cotswolds running north / south to the east of Cheltenham. The line runs through a rural but well-populated landscape, past ancient woodland and designated sites and passes numerous heritage assets which would benefit from the line removal. This is a very long section of line with lots of complexities meaning that it would be a challenging and potentially expensive project to deliver.

North Wessex Downs AONB YYM.4 (PURPLE) – The line section runs through mainly undesignated agricultural land along the broad flat Vale of Pewsey below a succession of hills from Pewsey in the west to Burbage in the east. A DNO line runs close in parallel for much of its length.

North Wessex Downs AONB YYM.5 and YYM.6 (RED) — A long section adjacent (east) of (and contiguous with) YYM.4 running through mainly agricultural land in open downland along the Vale of Pewsey from Burbage at the foot of the scarp and rising up to an elevated downland plateau. Part of YYM.5 (like YYM.4) has a DNO line running close in parallel for some of its length.

These three contiguous sections of line have been considered together for several reasons, including the fact that it is very unlikely that a suitable sealing end compound location could be found within one of the red sections. The project is relatively straightforward from an engineering perspective, however there is a DNO line right next to the middle section and National Grid has therefore been holding initial discussions with SSE about the potential for its line to be buried underground at the same time. Although these conversations have been very positive, there are issues around available funding and the different timing of price control periods for the DNOs.

North Wessex Downs AONB YYM.1 (RED) - Short, most westerly overhead line section in the North Wessex Downs. The line runs through open downland along the foot of the scarp terminating just north of Devizes. In comparison to some of the other schemes, this would be a relatively straightforward and cost-effective project to pursue, and after an initial, high-level review not overly challenging from a technical or engineering perspective.

Peak District National Park 4ZO.3 & 4ZO.4 (Western section) (PURPLE) – A section running west from the Woodhead Tunnel along the Trans Pennine Trail / Longdendale Valley to Tintwistle. The highly-designated, wild moorland landscape is dominated by five drinking water reservoirs and the Woodhead Pass. The Stakeholder Advisory Group was reminded of the discussions and investigations that have already taken place for this highly complex project. The two engineering solutions potentially available are a tunnel option, or an option to underground most the route via direct burial and/or troughs along the alignment of the TPT. This



latter option would mean that two short sections of overhead line would remain within the National Park at the end of the Bottoms Reservoir.

Tamar Valley AONB YF.1 (PURPLE) – The overhead line dominates the tranquil landscape as it crosses the Tamar and Tavy estuaries and Bere Peninsula. Highly-designated and within the Cornish Mining World Heritage site. There was a reminder that this was the highest-scoring of all sections and that extensive conversations took place when the projects were first being looked at during 2014-2016. The only engineering option is to build a tunnel under the Tamar and Tavy estuaries which would be expensive and still potentially complex due to the environmental designations and access restrictions in the area. As with the current Snowdonia project, the fact that the project would necessitate the removal of pylons in the vicinity of an estuary designated for marine habitat and associated wildlife may also prove challenging.

Lake District National Park ZX.1 – A section of line was assessed during the original LVIA as it was on the boundary of the proposed Lakes/Dales extension. With the extension now in place, the line receives a score that would place it among the 'red' line sections (without the extension it scored amber in the original assessment). As the extension had not been confirmed at the time, this scheme was not included in the 2014 LVIA report. This section of line runs through a remote area but is also part of an 'infrastructure corridor' containing the A6 and a DNO line that runs through the same area. Replacing the overhead line would require either going through designated landscapes or a route much further out that is significantly longer. There is a DNO line running in parallel to National Grid's line for almost the entirety of its length and the landscape is heavily impacted by other infrastructure.

Hadrian's Wall – The central 45km section of the wall (and associated National Trail) is the most heavily visited with some of the overhead line adjacent to/affecting the setting of the Northumberland National Park. The subsections of overhead line that are in/adjacent to the Northumberland National Park or in the Solway Coast AONB at the western end of the wall were assessed during the original LVIA and scored mainly amber and yellow. Although further LVIA work on the potential additional sections of line has not been formally carried out, it is felt that it is unlikely that they would be scored red or purple. The VIP provision is focused on National Parks and AONBs because they are statutory landscapes that Ofgem has a regulatory responsibility for, and World Heritage Sites as such are not included in that. For these reasons, the Stakeholder Advisory Group concluded that Hadrian's Wall does not fit the criteria of the project but, as sections of the line would fall under the scope of the LEI, they would be eligible for consideration under that scheme.

Stakeholder Advisory Group members were provided with a set of updated information sheets about each of the above schemes including route and constraints maps, photographs, the original and/or updated LVIA score (and breakdown), and an overview of the engineering options and technical/environmental issues for each project. The Advisory Group then split into sub-groups to discuss which projects they would prioritise in the next price control period, and which they would add to a list of potential projects in future price control periods.

There was a reminder that the Stakeholder Advisory Group was not being asked for a definitive or final shortlist, and that the focus of the discussions at this stage is to provide National Grid with guidance on where to focus its efforts in continuing with more detailed investigations and talking to relevant third parties, etc. All of the line sections discussed remain on the 'long list' and it remains the Stakeholder Advisory Group's aspiration over time to enhance the landscapes of all 12 of the sections scored purple in the original assessment as well as the sections that scored red noted above.

Full details of SAG13 are here:

https://www.nationalgridet.com/document/129251/download

7. ENGAGEMENT REF #11.7 - SAG 14

Full SAG14 details are here: https://www.nationalgridet.com/document/131001/download

SAG14 was held on 26 March 2019, specifically to discuss the future of the New Forest VIP project in light of emerging legal advice regarding the impact of European legislation on the planning process. This was a long and difficult discussion, but the conclusion was to pause the New Forest project and thus remove it from the RIIO-T1 portfolio. Variations on the statement included as Appendix 7.5 were shared with external stakeholders depending on their involvement and level of familiarity with the project.



The communication plan was as per table below.

Audience	Activity	Channel/media
SAG members not present at 26 March 2019 SAG meeting	statements	,
National Grid team working on project	Update on decision taken and reasons / impact on team members	with those not able to make call
ET and Capital Delivery employees	Announcement and explanation on decision taken	Wright
Contractors involved in live tender	Update on decision taken and reasons / impact on contractors	Calls followed by email
New Forest National Park Authority: Sarah Kelly (SAG member) Alison Barnes (CEO) Steve Avery (Planning Director)	Update on decision taken and reasons	Calls followed by email
Chair of Hale Parish Council	Update on decision taken and reasons	Call followed by email
Local MP – Sir Desmond Swayne MP	Update on decision taken and reasons	Call followed by email
The Official Verderer	Update on decision taken and reasons	Call followed by email
New Forest Association	Update on decision taken and reasons	Call followed by email
Stakeholder Advisory Group statement published on VIP project website	•	VIP project website
Local / regional media – proactive engagement	•	Email
Individual Stakeholder Reference Group members	Update on decision taken and reasons	Email
Community Liaison Group members, including: CPRE RSPB Commoners Defence Association		
Community Liaison Group		
	Update on decision taken and reasons	Email
Hale residents	Update on decision taken and reasons	Letter

Depending on how the legal situation develops, it is possible that the New Forest project could return as a RIIO-T2 project. In addition, on the advice of the Stakeholder Advisory Group, we are reviewing the shortlist of other potential VIP projects to understand if it would be practicable to develop and achieve planning and regulatory approval for a similar-scale project in the current (RIIO-T1) regulatory period.

SAG15 will be held on 2 July 2019 in London, and will focus on the planning application for the Peak East project.

For wider engagement, we need to consider the inevitable fact that there is a minority of vocal people who feel very strongly about the visual impact of existing transmission infrastructure and a majority of people who barely notice its existence. This makes engagement challenging, because the people who choose to respond to website consultations and write letters tend to be from the vocal minority. For this reason, we engage professional market research experts to lead this activity.

We have included questions about the VIP project in our RIIO-T2 willingness-to-pay study in order to gauge the wider appetite for further projects. The results show a positive willingness-to-pay for VIP projects in RIIO-T2; the full details will be made available in the willingness-to-pay report which will be included as an annex to



our draft business plan submission in July. The values are higher than the actual cost of major undergrounding projects and are therefore not suitable for establishing the exact level of VIP spending in T2. We will therefore be carrying out further consumer research to establish an acceptable level of VIP spend in T2; this will be included in either our October or December business plan update.

Once we know the outcome of this further research and Ofgem have indicated that they are satisfied with our approach, we can begin to engage with local stakeholders who would be directly affected. We will not do that until we have some certainty that a given project could be funded and would be technically feasible because we learnt from our RIIO-T1 approach that sometimes we got local people's hopes up for a project which was not going to be deliverable in the period.

For local stakeholder engagement, we have been supported from the beginning of this project by the communications agency 'Camargue' (https://camargue.uk/).

Their expertise and long-term involvement has helped us create a robust approach to working with all affected parties. We have extensive stakeholder communities which include local landowners, nearby residents, local wildlife groups, national organisations (such as those with representatives on the SAG), heritage and archaeology groups, local parish councils through to county councils and members of Parliament.

Based on the approach to engagement spectrum (see item 7.4), our approach has included a mix of:

Inform – Each prioritised project has its own dedicated website so that local stakeholders and interested parties can keep abreast of the latest developments. In each of the shortlisted areas, we have established communications networks enabling us to reach a wider local community audience by tapping into the pre-existing networks of local stakeholders. We have held a series of drop in information events in all of the shortlisted locations where local people can find out more about the projects

We have also held numerous meetings and given presentations on the project to a wide variety of stakeholder groups including Partnership boards of the AONBs, the Friends Groups of the National Parks. We have also spoken twice at the Landscapes for Life conference staged by the National Association of AONBs, at a dinner for the CEOs on the National Parks and at other events including CIGRE, National Parks England conference and EUROPARC Atlantic Isles.

II. Consult – since 2015, we have held public information sessions at a variety of local locations and times to allow interested parties to come along, see the proposals, ask questions and make suggestions. We ask all attendees to fill in feedback forms, and then consider all ideas put forward in developing our projects. On the existing undergrounding projects, we have so far held 24 events in 14 locations, welcoming 1,100 people.

Stakeholder Reference Groups is each of the prioritised areas have also been central to the shaping and decision making on each of the projects. Their influence in guiding each scheme has been significant. In each location, the unique nature of the project has led to a particular focus e.g. in Dorset, the extensive and rich archaeology of the region; New Forest – the European environmental designations; the Peak District the diversion of a national promoted trail and in Snowdonia the peculiar challenges of removing pylons from an estuary and salt marsh.

As well as presenting proposals to wider groups, we have asked their opinions on our plans and where appropriate incorporated them into our plans.

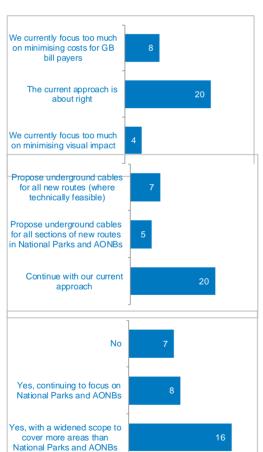
- III. Involve Stakeholder Reference Groups is each of the prioritised areas have also been central to the shaping and decision making on each of the projects. Their influence in guiding each scheme has been significant. In each location, the unique nature of the project has led to a particular focus e.g. in Dorset, the extensive and rich archaeology of the region; New Forest the European environmental designations; the Peak District the diversion of a national promoted trail and in Snowdonia the peculiar challenges of removing pylons from an estuary and salt marsh.
- IV. **Collaborate** For each new project, we established a Stakeholder Reference Group. These groups are attended by representatives of the relevant AONB Partnership or National Park Authority and local technical stakeholders. They provide vital information and advice to inform project development.



- V. **Empower** guidance from stakeholders has led to significant changes on each of the projects i.e.
 - a) Dorset input from Historic England and local archaeologists led to the archaeological investigation of our work area being a major part of the project. A total of 160+ trial pits were excavated as part of our pre-construction work all overseen and reviewed by stakeholders. The archaeological finds are now being written up and will provide a fascinating insight into the history of the local area.
 - b) **New Forest** input from stakeholders has led to the significant re-alignment of the proposed route on several occasions to avoid environmentally sensitive wet heath and mire systems.
 - c) Peak District the need to keep a national trail open and equalities act compliant during our construction work has been heavily influenced by local organisations including the access forum and Trans Pennine Trail Office. Their input has influenced the diverted trail's alignment, surfacing, gradient, fencing and promotion.
 - d) **Snowdonia** the sensitive removal of the pylons from the estuary and salt marsh has been driven by a range of local landowners and stakeholders.

We have considered innovative engagement techniques, but strongly believe that human face-to-face interactions are most effective. In the New Forest, where local residents were specifically concerned about the potential impact of construction noise, we wrote to 123 residents and have so far visited 37 homes to hold one-to-one discussions and answer their questions.

We will continue to use these approaches for any new projects which are put forward in RIIO-T2.



Q: What are your views on our approach to obtaining planning consent for new projects?

(Number of respondents. Base size: 32)

<u>Notes:</u> Of the eight people who said they are impacted a great deal by this subject, four said that we currently focus too much on minimising costs. Our current approach for new lines is to seek to deliver the best balance of all considerations.

Q: Should our default approach be to ...?

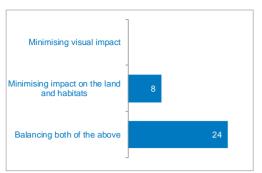
(Number of respondents. Base size: 32)

<u>Notes:</u> Further to a query at the workshop, we clarified (before stakeholders voted) that our current approach is to consider all feasible technologies and would usually, but not always, result in underground cables being proposed in a National Park or AONB.

There were no significant differences in the results for this question according to how impacted respondents said they were by this topic.

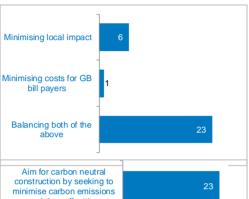
Q: Should there be a scheme to address the visual impact of <u>existing</u> overhead lines and other assets in RIIO-2? (Number of respondents. Base size: 31)

<u>Note</u>: There were no significant differences in the results for this question according to how impacted respondents said they were by this topic.



Q: And when considering whether to use underground cables, do you think our focus should be on ...? (Number of respondents. Base size: 32)

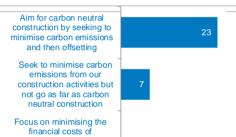
Note: There were no significant differences in the results for this question according to how impacted respondents said they were by this topic.



The impact of our construction activities

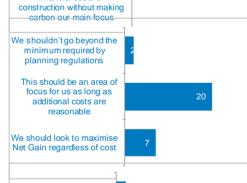
There were no significant differences in results according to how impacted respondents said they were by this topic.

Q: Do you think our main focus should be on...? (Number of respondents. Base size: 30)

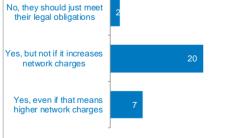


Q: Should we...?

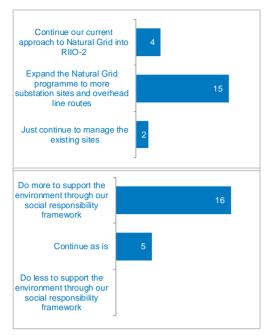
(Number of respondents. Base size: 30)



Q: What are your views on how we should approach environmental Net Gain in RIIO-2? (Number of respondents. Base size: 29)



Q: Should networks be encouraged to go beyond legal obligations and focus more on their overall carbon emissions? (Number of respondents. Base size: 29)



Managing our assets

There were no significant differences in results per how impacted respondents said they were by this topic.

Q: Should we...?

(Number of respondents. Base size: 21)

Q: Should we...?

(Number of respondents. Base size: 21)

8. ENGAGEMENT REF #11.8 - SAG 15

The purpose of the meeting on 2nd July was for the Stakeholder Advisory Group to:

- 1. Hear updates on the schemes prioritised for replacing existing overhead lines with
- 2. underground connections in Areas of Outstanding Natural Beauty (AONBs) and National
- 3. Parks in England and Wales
- 4. Review the planning application for the Peak District project
- 5. Review progress on the feasibility of a project in the North Wessex Downs
- 6. Receive an update on the Landscape Enhancement Initiative
- 7. Receive an update on the future of VIP in RIIO-T2

The SAG15 minutes are here: https://www.nationalgridet.com/planning-together-riio/visual-impact-provision

9. VIP ACCEPTABILITY TESTING - ENGAGEMENT REF#11.9

To support our funding submissions, we carried out acceptability testing for the cost of the first four undergrounding projects being recovered from electricity bills. Given that these projects would increase consumer bills over the long term, it is particularly important that we capture the views of a wide cross-section of billpayers including those who find paying their bills difficult. For example, in carrying out our most recent acceptability testing, we made an effort to get the views of vulnerable and hard-to-reach consumers. The research comprised a multi-strand programme of research with bill-payers, including ten discussion groups, nine in-depth interviews with vulnerable bill-payers and a quantitative survey of 2,002 bill-payers aged 16+. This was carried out in Spring 2018 by Accent and the full report is available on line.

Engagement Summary

- National Parks and AONBs are widely used. One in four (26%) visit either a National Park or AONB once a month or more frequently. Bill-payers are attracted to these areas of countryside for their inherent qualities or attributes (such as fresh air, tranquillity, the countryside's beauty) or the benefit it brings them as a user (e.g. 'getting away from it all', finding it calming).
- Electricity bills are generally seen as affordable but expensive, and there is an underlying level of mistrust towards the energy sector



- Many do not have strong feelings towards electricity infrastructure in the countryside, but most concede it is ugly and an eyesore in these environments
- A strong majority find it acceptable to pay for the VIP project (66% of bill-payers found it acceptable for the cost to be passed on to consumers, while 15% found it unacceptable)
- Acceptability is highest among users of protected and rural areas and declines with income and age

10. ENVIRONMENTAL WORKSHOP - ENGAGEMENT REF#11.10

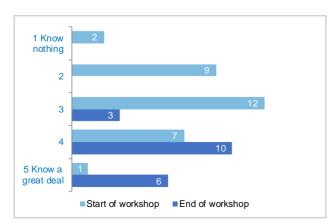
Questions were asked on each of the sub-topics, both as part of our workshop and through our subsequent online consultation. Our approach, including drafts of these questions and the material presented at the workshop to inform stakeholders on each topic, was reviewed by Frontier Economics prior to our workshop, and updates made as necessary to reflect their advice (see appendix 4 for their comments). A copy of the slides from our workshop (a slightly revised version of which was also used for our online consultation) can be found here. After our workshop, we published a write-up of what we collectively discussed and what we heard, to check that we had correctly understood what stakeholders had told us. This was emailed to all attendees and can be found here.

After the workshop (at stakeholders' request and for reasons of transparency) we also shared our methodology for calculating the impact of our costs on household bills, published here.

A summary of our boundaries for disclosure for our June 2018 workshop:

nationalgrid **Boundaries of disclosure** Shared within the engagement: Not shared: Corporate environmental approach Any commercially sensitive Corporate targets information Current performance/business carbon footprint Losses Other carbon (SF₆) Shared after the engagement: Current incentives/schemes Potential full disclosure of results, Decision-making process and future options (costed) but without public attribution (to National Grid approach to new lines individuals) of who said what Indicative cost of OHL vs undergrounding vs other options Cost of current VIP scheme Future options for treatment of existing lines Summary of environment-related CSR and options All relevant costs where available/able to disclose Impact on consumer bills where possible (using Ofgem's RIIO-T1 methodology)

Those who attended our environment and communities workshop and answered the relevant question scored themselves as follows on knowledge of this topic:



Q: On a scale of 1 to 5, where 1 is know nothing and 5 is know a great deal, how much would you say you know about National Grid's impact on the environment? (Number of respondents)

Start of workshop mean score = 2.9 (31 respondents)

End of workshop mean score = 4.7 (18 respondents)

NOTE: the lower number of responses at the end of the workshop was a result of some attendees leaving for travel reasons



Levels of impact varied by each sub-topic, and we used the results to analyse whether preferences differed according to how impacted stakeholders said they were by each area discussed. Details can be found in the sections below and in our workshop output report.

There was a clear message that we should make investment decisions based on the whole life cost of each option, including the cost of carbon, and use this approach to help minimise our overall carbon emissions. We should focus on overall volumes of SF_6 leaked and continue efforts to find alternatives. Visual impact continues to divide opinion, although the majority of attendees were largely supportive of our current approach. We should look to minimise the carbon impact of our construction activities and potentially use carbon offsetting to make these activities carbon neutral.

On a topic-by-topic basis, stakeholders at our June 2018 workshop told us the following:

Our corporate approach to the environment - Stakeholders generally supported our approach, but had questions around how we'd arrived at our targets, how we compare to other organisations, and what is within or outside of our control. There was support for a whole life costing approach (including carbon), and a call for us to explore best practice and use innovation to reduce our environmental impact. More detail can be found on pages 9-10 of our workshop report.

The environmental impact of our decision making - Stakeholders all supported an approach to investment decision-making that looks at whole life costs including the cost of carbon, and all favoured investment in lower loss equipment if it provides the best whole life value. Most attendees said we should focus on minimising SF_6 leakage volumes, and many suggested that we should use innovation to develop alternative solutions. More detail can be found on pages 11-13 of our <u>workshop report</u>.

The impact of our construction activities - Most workshop attendees thought that we should balance the local impact of our construction activities with the cost to bill payers in general. There was general support for aiming to minimise our carbon impact and then using carbon offsetting to achieve carbon neutral construction, and for improving the biodiversity of land after our construction activities, if costs were reasonable. More generally, most attendees thought that networks should focus more on their overall carbon emissions, but not if that leads to increased network charges. More detail can be found on pages 19-22 of our workshop report.

Workshop attendees supported our land management approach and the environment-related aspects of our corporate social responsibility work. The majority believed that we should expand our approach to more sites, but some questioned whether this should be funded by bill payers or by National Grid. More detail can be found on pages 23-24 of our <u>workshop report</u>.

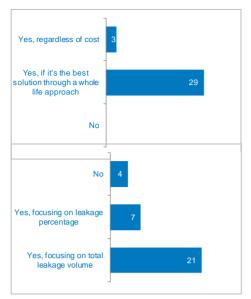
We presented and asked for views on the following options for each of the sub-topics:

The environmental impact of our decision making - There were no significant differences in results per how impacted respondents said they were by this topic.



Q: How should we make our future investment decisions? (Number of respondents. Base size: 32)





- Q: Should we invest in lower loss equipment? (Number of respondents. Base size: 32)
- Q: Should we continue to focus on SF₆ leakage? (Number of respondents. Base size: 32)

On the topic of communities, Stakeholders at our June

2018 workshop told us the following:

Managing our assets - Workshop attendees supported our land management approach and the environment-related aspects of our corporate social responsibility work. The majority believed that we should expand our approach to cover more sites, but some questioned whether this should be funded by bill payers or by National Grid shareholders. You can find more details on pages 23-24 of our <u>workshop report</u>.

Our Natural Grid programme improves the natural environment at sites on non-operational land around our energy assets. There were no significant differences in results per how impacted respondents said they were by the following topic.

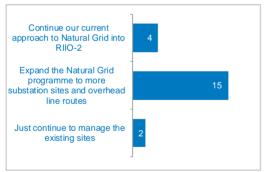


Figure 3 -Should we...? (base size 21)

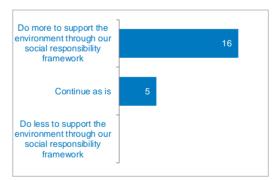


Figure 2 - Should we....? (base size 21)

11. ENVIRONMENTAL PLANS, ONLINE CONSULTATION - ENGAGEMENT REF#11.11

Most responses were from members of the public who felt highly impacted by our activities and able to comment on our activities. The key outputs were that we should consider whole life cost and whole life carbon impact in our decision making.

With respect to visual impact, respondents felt we spent too much time on minimising cost rather than visual impact, we should consider undergrounding for all new routes and that we should widen our scope to include areas not in National Parks or AONB.

We should also focus on total SF₆ leakage volume rather than leakage percentage, on minimising local construction impact, aim for carbon neutral construction (by offsetting if necessary) and focus on net gain if



costs are reasonable. Respondents also clearly favoured going beyond our legal requirements with respect to greenhouse gas emissions, even if it costs more to do so (15/19 responses).

Link to the full online consultation report

12. WILLINGNESS TO PAY OUTCOMES - ENGAGEMENT REF#11.12

NERA Economic Consulting (NERA) and Explain Market Research (Explain) were commissioned by a consortium of the four Transmission Operators (TOs) in Great Britain (National Grid Gas Transmission, National Grid Electricity Transmission, SP Transmission and Scottish Hydro Electricity Transmission) to design, implement and analyse a series of stated preference (SP) surveys to estimate customers' willingness to pay (WTP) for improvements

in the service provided by the TOs, domestic and non-domestic gas and electricity customers.

The project consisted of four main parts:

- 1. Set up and design of the survey, defining service attributes, designing and building the survey and selecting the SP technique;
- 2. Survey testing, through cognitive interviews, pilot fieldwork, and analysis of pilot results;
- 3. Fieldwork, consisting of face-to-face interviews and online surveys; and
- 4. Quantitative analysis of the fieldwork data to derive WTP estimates and conduct sensitivity and robustness checks.

We conducted four SP surveys, one each for domestic and non-domestic electricity and gas end users. The surveys used a mix of face-to-face and online methods, adhering to best practice in the conduct of WTP surveys, and we conducted fieldwork only after a thorough process of defining attributes and testing the survey instrument.

The two electricity surveys consisted of nine attributes related to the service provided by the TOs:

- Risk of power cuts:
- Time taken to recover from blackouts:
- Undergrounding of 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.
- £8.92 for 25 additional sites or £10.78 for 45 additional sites (as per the text below)
- £8.26 per year per household to support local communities through their bill
- £4.81 per year per household to support Visual Amenity (VIP) in national parks and elsewhere

These values will need to be translated to the impact on NG Electricity Transmission but indicates a higher than expected value placed on all aspects researched. During consumer engagement sessions, consumers have anecdotally stated that support for vulnerable consumers should not be funded by the bill payer, however the nationally representative willingness to pay results conflict with this view by outlining local community support is something that could be supported by the bill payer.

Domestic consumers (£/year)

- Natural capital improvement at 25 additional sites = £8.92
- Natural capital improvement at 45 additional sites = £10.78

Business consumers (£/vear)

• Natural capital improvement at each additional site = £1.68



13. POPULUS MAX DIFF SURVEY, NOVEMBER 2018 - ENGAGEMENT REF#11.13

The survey concluded that decarbonisation was the 2nd overall priority behind future reliability and ahead of apprenticeships, EV investment, Women in STEM, community grants and attracting employees from underrepresented groups.

14. TOTAL SOCIETAL IMPACT - ENGAGEMENT REF#11.14

An extensive process was followed to model our current impact on three key categories: Economic, Social and Environmental. The initial outcome of this modelling activity highlights our current impact is broadly positive with most material impacts in "economic" – wages, taxes, supplier spend; grid reliability & availability – and "environmental" – NG emissions (incl. supply chain) counterbalanced with positive impacts from the activities we do undertake to help reach a clean energy system.

The most material potential positive future impact is in "environmental" via larger impact in our role in driving the clean energy transition through enabling clean energy systems. Current commitments we have in place are focused almost exclusively on our own emissions, and on social or governance topics. This suggests we may need to consider our role in leading this, or what we seek to achieve, either directly or indirectly to reach clean energy systems.

Through our societal impact work, as part of the engagement process, external stakeholders were given an overview on the direction of the project, and informed of the way in which the insights would be applied. Commercially sensitive information was not shared. Much of the engagement with external stakeholders on the topic of TSI was through the form of a one-off interview, poll or focus group.

In understanding our current societal impact, we brought in an external consultancy to perform an externally benchmarked Total Societal Impact modelling approach. To understand areas where we may make a greater societal impact, we interviewed a range of our investors, conducted desktop research on other companies (e.g., Utilities, Oil and Gas, Automotive Original Equipment Manufacturers, industrials), and for consumer opinion polling & external stakeholder interviews we have brought in another external consultancy to conduct this in an unbiased manner

Summary of engagement

This research highlighted the priority that the public places on securing & accelerating the energy transition, and doing so in a way that ensures fairness and equal access to the benefits of the transition. An important element is that many want an energy system that delivers the energy transition per their expectations, not one simply at lowest cost.

Investors expect National Grid to make our contribution to society a central axis of our long-term strategy. Expect focus on being a leader in the energy transition, and driving whole system solutions.

Details of engagement

Opinion polling of consumers was conducted by an external consultancy. It is an established feature of opinion polling that often people give answers that don't reveal their whole selves, either because they tell you what they think you want to hear (social acceptability bias) or they don't understand their own emotional drivers (immediacy bias). In our consumer polling, we use a mixture of binary choice variables and analysis to draw out the underlying drivers that are motivating citizens' attitudes.

All four elements of stakeholder engagement highlight that we should focus our priority commitment statements on how we will lead the transition to clean energy systems:

- Investors: when interviewed, eight sample investors expect National Grid to make our contribution to society a central axis of our long-term strategy. They expect this to be **focused on leading the energy transition**, and expect National Grid with our central role to be driving whole system solutions. This is an important perspective, as investors will be key to securing the capital we need to accelerate the low carbon transition at the lowest cost.
- <u>TSI:</u> analysis of where we could have the biggest TSI impact looking forward also highlights that investing to **advance clean energy systems** could have an order of magnitude larger impact than



other impact areas we have access to. Our contribution to advancing these systems has the potential to be material in each of electricity, transport and heat.

- External Interviews & Polling: This analysis highlighted the priority that the public places on securing & accelerating the energy transition, and doing so in a way that ensures fairness and equal access to the benefits of the transition. An important element is that many want an energy system that delivers the energy transition per their expectations, not one simply at lowest cost.
- Reference cases: Companies in the energy system who are making TSI statements (e.g., Utilities, Oil and Gas, Automotive Original Equipment Manufacturers, industrials) are all making statements with a focus on how they will help to reach a clean energy future, once again, highlighting the criticality of focusing our actions and activities on how we could lead the transition to a clean energy future. An example of this is SSE recently issuing four public commitments outlining 'what they stand for', two of which are: "Build electricity network flexibility and infrastructure that helps accommodate 10 million EVs in GB by 2030" and "Reduce the carbon intensity of electricity generated by 50% by 2030, compared to 2018 levels". We engaged with their Chief Sustainability Officer to understand their approach and discoveries from the development of their journey, to ensure we embed best practice and learning both from an internal and external stakeholder perspective.

Whilst all the above stakeholder considerations highlight that we should focus our **priority** commitment statements on driving forward the energy transition in a way that is fair, there are several further important considerations on wider statements we should be making in other areas of societal impact:

- Other areas of societal impact have lower TSI than our potential in driving the energy transition, but are still very important to our stakeholders. We need to make sure we meet our stakeholder needs in these areas, for example our economic contribution to the UK, our own greenhouse gas emissions, or inclusion & diversity of the workforce we employ.
- We have many existing commitments in some of these areas which meet our stakeholder needs, or are considered leading practice (a non-exhaustive selection of examples below), but we may need to make further commitments in other areas important to stakeholders
 - "By 2050 we will make an 80% reduction in our own Greenhouse Gas Emissions (from a 1990 baseline)" ['Our Contribution']
 - "In the UK, we commit to paying our employees and contractors the real living wage in accordance with the Living Wage Foundation" [Living Wage Foundation]
- A non-exhaustive list of these other areas of societal impact include actions and activities on:
 - Economic: supply chain, taxation, partnerships
 - Environmental: our own greenhouse gas & air quality emissions, our land use, and our water use
 - Social (external to NG): visual impact, community engagement
 - Social (internal to NG): diversity, training, mental health & wellbeing, social mobility, fair remuneration

15. CONSUMER ENGAGEMENT ON ENVIRONMENTAL AND SOCIAL TOPICS - ENGAGEMENT REF#11.15

Summary (note: this engagement is not a nationally representative sample)

- Of the choices selected, overall the consumers ranked helping the fuel poor and vulnerable as 5th out all options including 1) reliability 2) Being responsible 3) helping shift to low carbon and 4) keeping bills down
- Ranking amongst the C2DE changed the order to 1) reliability 2) keeping bills down 3) being responsible 4) helping vulnerable and fuel poor and 5) low carbon economy
- Theoretical willingness to pay more (under £1) for reliability, low carbon economy but not being responsible of the fuel poor.
- ABC1 were willing to pay for low carbon economy, reliability and helping the fuel poor but not being responsible
- C2DE were willing to pay more for reliability and being responsible but not low carbon economy and vulnerable / fuel poor.

Full details



Areas of focus - Participants were asked to think about different responsibilities National Grid have, and whether they thought each area was something National Grid should be focusing on. Following this discussion, they were asked to order each of the areas discussed in terms of how important they were. Each area was given a score depending on where it had been ranked, with 5 for the most important and 1 for the least important. These scores were then combined to give an overall ranking of importance across the workshop. Participants thought ensuring a reliable supply of electricity was most important and helping the fuel poor and vulnerable customers was least important.

Overall Area	Order of importance	Mean score out of 5
Reliable supply of electricity	1st	4.1
Being a responsible business	2nd	3.4
Helping the move towards low carbon economy	3rd	2.8
Keeping electricity bills down	4th	2.6
Helping the fuel poor and vulnerable consumers	5th	2.1

ABC1 Area	Order of importance	Mean score out of 5
Reliable supply of electricity	1st	4.4
Being a responsible business	2nd	3.8
Helping the move towards low carbon economy	3rd	3.4
Keeping electricity bills down	4th	1.9
Helping the fuel poor and vulnerable consumers	5th	1.5

C2DE Area	Order of importance	Mean score out of 5
Reliable supply of electricity	1st	3.8
Keeping electricity bills down	2nd	3.2
Being a responsible	3rd	3.1
business		
Helping the fuel poor and	4th	2.7
vulnerable consumers		
Helping the move towards	5th	2.2
low carbon economy		

Ways of helping members of the public

Unprompted, participants were asked to think of ways National Grid could help members of the public. The following suggestions were made:

- Educational initiative support e.g. offering work experience
- Lobby for lower rates for vulnerable customers
- Make vulnerable people aware of help available
- Ensure reliability of electricity supply
- Being ethically responsible
- Funding charities
- Provide education about the energy system and energy use
- · Giving back to the community supporting community and environmental based charities
- Inspiring people to be environmentally friendly raising awareness of renewable energy, recycling
- Offering apprenticeships
- Offering work based initiatives e.g. cycling to work
- · Promoting electric vehicles

Participants were then asked to discuss National Grid's suggestions of how they could help members of the public, and whether they thought these suggestions were a good idea. Following this discussion, they were asked to order each of the areas discussed in terms of how important they were. Each area was given a



score depending on where it had been ranked, with 5 for the most important and 1 for the least important. These scores were then combined to give an overall ranking of importance across the workshop. Participants thought making money available to be used within the community, followed by working with others to help communities, were most important. Employees dedicating volunteer hours was seen as least important.

Overall Area	Order of importance	Mean score out of 5
Making money available to be used within the community	1st	4.4
Work with others to help communities	2nd	3.7
Make property and land available for others to use	3rd	2.2
Sponsor something	4th	2.8
Employees to dedicate volunteer hours	5th	1.9

ABC1 Area	Order of importance	Mean score out of 5
Making money available to be used within the community	1st	4.2
Work with others to help communities	2nd	3.9
Employees to dedicate volunteer hours	3rd	2.4
Make property and land available for others to use	4th	2.2
Sponsor something	5th	2.2

C2DE Area	Order of importance	Mean score out of 5
Making money available to be used within the community	1st	4.6
Work with others to help communities	2nd	3.5
Sponsor something	3rd	3.4
Make property and land available for others to use	4th	2.2
Employees to dedicate volunteer hours	5th	1.4

Participants were then asked to think about who should pay for some of the areas that had been discussed throughout the workshop. They were asked to vote 'yes', 'no', or 'unsure' as to whether they would be willing to play slightly more on their annual bill (less than £1) to help pay for the areas discussed. Participants were most willing to pay for ensuring a reliable electricity supply, which is reflected in the areas participants felt were most important in exercise one.

Overall Area	Yes	No	Unsure
Ensuring a reliable electricity supply	69%	22%	8%
Helping the move towards a low carbon economy	61%	28%	11%
Helping the fuel poor and vulnerable consumers	44%	50%	6%
Generally being a responsible business	28%	72%	0%

ABC1 Area	Yes	No	Unsure
Helping the move towards a low carbon economy	89%	0%	11%
Helping the fuel poor and vulnerable consumers	78%	22%	0%
Ensuring a reliable electricity supply	72%	28%	0%
Generally being a responsible business	6%	94%	0%

C2DE Area	Yes	No	Unsure
Ensuring a reliable electricity supply	67%	17%	17%
Generally being a responsible business	50%	50%	0%
Helping the move towards a low carbon economy	33%	56%	11%
Helping the fuel poor and vulnerable consumers	11%	78%	11%



16. BUSINESS PLAN CONSULTATION - ENGAGEMENT REF#11.16

52% (11/22) of the substantive responses received (a paragraph or more of commentary) related to the environment. More detail is as below:

- All responses suggested we should be improving the environment and most argued we could be more ambitious in relation to areas such as biodiversity, lower carbon emissions, reducing transmission line losses or being an environmental leader.
- "Not a strong enough commitment to biodiversity"
- "NG should have high levels of ambition in this area as an industry leader"
- "Reducing waste and clean energy is important more so than visuals"
- "Research shows wellbeing from the natural environment"
- "...more heavily factored into design and operational decisions (e.g. procurement evaluation criteria based on life cycle cost and projected future cost of carbon)"

17. EXPERT ENGAGEMENT, VEHICLE MANUFACTURERS – ENGAGEMENT REF#11.17

All engagement for this topic was covered under an NDA. We have however taken in to account all the latest forecasts in model specification and costs, to build our investment plan for 60% EV transition. This is a reduction from our original July business plan 70% estimate.

18. ACCEPTABILITY TESTING (ENVIRONMENT) - ENGAGEMENT REF#11.18

Consumers were presented with a variety of investments under the general theme of continuing to protect and help improve the environment and supporting the local communities, reducing carbon emissions from National Grid's operations, undergrounding pylons in protected landscape areas (National Parks and Areas of Outstanding Natural Beauty), and local community projects (Figure 3.11). Three specific investment needs were described as below:

Improving the environment and supporting local communities

We invest to support communities and continue to protect and help improve the local environment:

- Improving plants and wildlife in and around our sites - including introducing wildflower meadows, introducing beehives/animals to graze and planting trees to screen our sites.
- Putting overhead electricity lines underground in National Parks and Areas of Outstanding Natural Beauty to reduce their visual impact.
- Reducing our own carbon impact, for example by offsetting our emission and changing our vehicle fleet to low/zero emissions.
- Providing education promoting and sponsoring electrical safety and engineering.
- Providing employment and training opportunities to vulnerable people and young people.



In the qualitative research, there was strong support for investments that delivered improved environmental outcomes. For instance, in the Stage 1 qualitative research the general view was that, particularly 'environment' investments, were almost as important as safety and reliability for National Grid. Indeed,



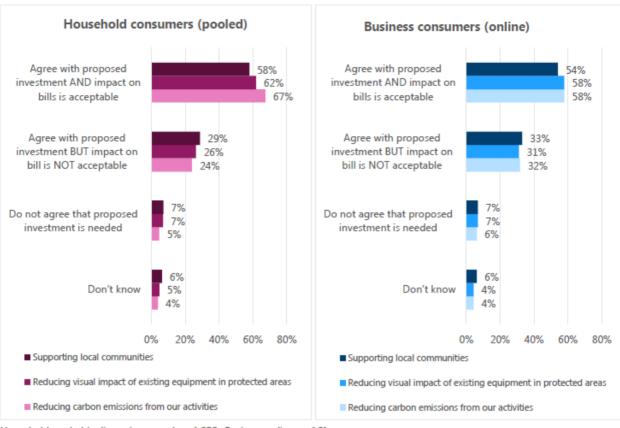
several the participants felt passionately about the environment and were very supportive of National Grid working to improve it. Similar views were also heard in the Stage 3 research, including suggestions that some consumers would be happy to forfeit the return of efficiency savings if they were channelled into improved environmental outcomes.



In contrast, the environment and local community investment area was mid-low ranked by household and business consumers in the survey. In part the differing views may reflect the general value attached to the 'environment' *per se* – which tended to underlie the qualitative research discussion – and the specific proposals set out in the ET Business Plan, which potentially are not as far reaching as consumers would prefer. Indeed, supplemental responses showed that the highest level of support would be for more investment in further reducing carbon emissions from operations (around 20% respondents in total) – just ahead of support for increasing investment in maintaining the condition of ET network assets (i.e. overhead lines, pylons, etc.). and investments to support future increases in supply/demand for electricity. In addition, the survey responses may also reflect the effect of combining local community outcomes and environment investments under one topic area. Certainly, lower priority was assigned to local community investments in the qualitative research, since these were somewhat targeted in scope and therefore having a small number of beneficiaries – in contrast to reducing carbon emissions, for example. Added to this, there was recognition among participants in both the Stage 1 and Stage 3 research that environmental benefits would also be delivered though the other investment areas, including safety and reliability, and the future energy system.

The lower priority placed on the environment and local community investments in the survey responses did not, though, equate to lower levels of consumer support for the proposed investments (Figure 3.13). Between 87% - 91% of household respondents indicated that they agree with the proposed investments, whilst 87% - 90% gave the corresponding view among business respondents.





Household pooled (online + in-person): n=1,258. Business online: n=161

Like other investment areas, the level of support was split between the majority (on average 62% households; 57% business) stating that both the individual investments and impacts on bills were acceptable, and a smaller proportion majority (on average 26% households; 32% business) that stated their support for the proposed investments but not the associated bill impacts. Around 6% - 7% of respondents stated that each of the investments was not needed.

Communities - Consumer Acceptability Testing Qual Workshop (Eftec) - September 2019

A separate topic was introduced into the acceptability testing research in the focus groups based on questions raised by stakeholders on supporting urban deprived areas. This was not covered in the Stage 2 survey quantitative research. Specifically, the National Grid stakeholder group queried whether the visual amenity investment could be extended to disadvantaged urban areas. The proposal to test was an investment pot of £20m-50m, managed by an external stakeholder panel, to improve National Grid's assets and/or public space in deprived urban areas where assets are located. Examples given were screening substations to improve visual amenity, and/or building community facilities such as skate parks for the local teenagers.

The purpose of the discussion in the focus groups was to understand if this was initiative consumers would support, and if so, how big should the investment pot should be. Participants were told that £20m would be roughly 6p per year on the average household bill; £50m would be 15p per year.

The proposal was first discussed in the Newport groups and, in principle, all participants stated that they would support helping deprived areas. A mix of landscaping and community facilities would be welcome. Landscaping (e.g. substations), was appealing it felt that people should be able to be proud of where they live. There was considerable discussion about the less well-off households not having much choice on where they live – so this had high levels of support.

"To put in a couple of places where kids could actually get out and do something" (Guildford, C2DE 18-45)



"You can think it looks okay - I'm proud of where I live" (Newport, C2DE, 46+)

However, in the Newport groups participants were not able to say the optimal amount of money to invest as they wanted to know more details:

- How many areas would receive investment and where i.e. near them?
- What they can be delivered for the money i.e. what exactly does £20m or £50m buy?
- Who else is helping e.g. other energy companies?
- Will local councils and Government do less as a result so what is the net gain?
- Who will decide and administer the monies (participants recommended a stakeholder panel)
- How will it be communicated to people in the community?

Without this detail, participants felt that it was difficult to say what level of investment they would support. The topic area further discussed in the Guildford group that focused on electricity transmission. In the absence of further details participants were asked to assume that:

- The scheme would be overseen by stakeholders (which in turn meant the areas selected and projects identified would align with consumer and community views);
- Ofgem would ensure costs are efficient;
- There would be engagement with local communities on what they want in their local area to meet their needs; and
- Landscaping improvements would be on National Grid land if appropriate and available, otherwise may involve public land. Deprived areas would be the main priority.

On this basis, six of the eight participants in the Guildford group supported the proposal and thought there should be further discussions with consumers once the specific details have bene considered further.

"It's got legs" (Guildford, C2DE 18-45)

In terms of the amount (an extra 6p or even 15p) those that supported the scheme opted for 15p over 6p.

"I'd happily pay more to help people in deprived areas" (Newport, C2DE, 46+)

"I think it's a really good idea, I don't have a problem with either 6p or 15p. I'd happily pay 15p, that's not a problem to me" (Guildford, C2DE 18-45)

"I think it would be cheaper for us if we go through the National Grid to do it, because if the council did it they'd probably put up the council tax by £30" (Guildford, C2DE 18-45)

The Guildford group noted that this would be more important to them than the electric vehicle charging infrastructure investment in the electricity transmission plan. Participants in both the Newport and Guildford groups pointed out that whilst they support in principle – this is a lower priority than affordability and ideally, some of the £20m or £50m should be directed to that.

Two people in Guildford felt that investment proposal was, in effect, a 'forced' donation to charity and that this wrong in principle. One of those that disagreed said they would change their mind if National Grid contributed to the funds; the other disagreed in all situations.

"It feels a bit like a forced donation as in, alright it's a small amount but we're being charged to fund this when there are community projects that I would prefer to donate to rather than this"

(Guildford, C2DE 18-45)

"I still disagree, it's just the same as giving a donation with GiftAid" (Guildford, C2DE 18-45)

Across the groups there were concerns that any projects need to be thought through properly – e.g. skateboard parks may be more susceptible to being vandalised -and that any facilities need to be appropriate, easy to maintain and robust.

"I think investment in deprived areas is really important, part of the problem you find is that when a park is built its vandalised within a week and you look at it and think what's the point almost" (Newport, C2DE 46+)



Participants were asked why if this is a priority, it did not feature in the "what else do consumers want" section in the Stage 2 survey. The general view was that since it was not a core part of National Grid's business it would not be front and centre of people's mind. However, this should not be the reason for National Grid not to explore further.

19. 'EXPLAIN' INTERACTIVE TOOL RESEARCH — ENGAGEMENT REF#11.19

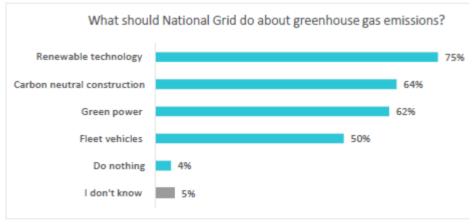
Respondents were asked to consider National Grid's broader impact on the environment from greenhouse gases to land usage.

- 8. Tackling greenhouse gas emissions
- To encourage informed decision making, respondents were offered a brief explanation of greenhouse gases and how National Grid's work contributes to their release. They were then asked what National Grid should do to reduce its emissions. Where there was an associated cost, this was highlighted on their virtual bill.

Ideas presented were:

- Renewable technology- for example, install solar panels and heat pumps on National Grid sites (bill impact +1p).
- Minimise emissions and fund projects that help remove carbon dioxide from the atmosphere (planting trees for example), so that the overall impact of construction work is neutral (bill impact +1p).
- Replacing fleet vehicles with more eco-friendly alternatives (bill impact +1p)
- Only buy energy from renewable sources (bill impact +1p).

There was strong support for action with fewer than 1 in 10 believing that National Grid should do nothing or unsure of what should be done. Three quarters supported the installation of renewable technology, such as solar panels and heat pumps, on National Grid sites. This was closely followed by carbon neutral construction (64%) and the use of green energy to power operations.



Base size: 1,000.

A number of sub-group differences were observed.

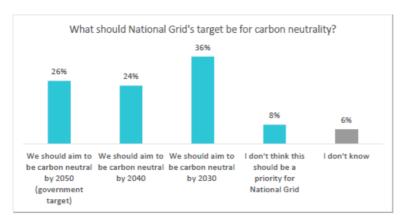
- Women were significantly more likely than men to support carbon neutral construction (66% vs 60%) and green power (64% vs 58%).
- AB SEG respondents were significantly more likely than other socio-economic groups to support ecofriendly fleet vehicles (58%) and a little more likely to support renewable technologies (80%) and carbon neutral construction (69%).
- There was strong support for green power in Scotland (80%) and for carbon neutral construction in Yorkshire and Humber (77%), while respondents from London were significantly less likely than average to select each one of the interventions.

Becoming carbon neutral - Between 1990 and 2018 National Grid reduced greenhouse gas emissions by 65%. However, with a government target of carbon neutrality by 2050 National Grid must also revise its targets. Respondents were asked what target they would like to see. No costs were specified on this



question, but respondents were alerted to the fact that the sooner National Grid aims to be carbon neutral the more it is likely to cost.

There was strong support for action on the carbon footprint with 6 in 10 favouring a more ambitious target than that set by the Government. 36% would like to see carbon neutrality by 2030 and 24% by 2040. Only 8% did not feel like this should be a priority, although this rose to 13% amongst over 55s.

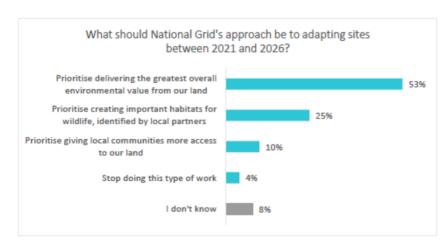


Base size: 1,000

Respondents from the North East of England were significantly more likely than the average to support a 2030 target (56%).

Priorities for land usage - National Grid owns the land surrounding many of its sites in England, Scotland and Wales. This may be developed into wildlife habitats or local community spaces. Respondents were asked what type of improvement they would prioritise with examples given for each project type. No impact was shown on the virtual bill as this work would be cost neutral.

Over half would like National Grid to decide on a case-by-case basis and focus obtaining the greatest overall environmental value from each site. A quarter would favour habitat creation and 1 in 10 community access. Only 4% felt that National Grid should not undertake such projects and opposition declined with age from 9% amongst 18-24 year olds to 2% in over 55s.



Base size: 1,000.

- The 65 or overs were the age group most likely to prioritise the overall environmental value (64%).
- There was a gender split with women significantly more likely than men to prioritise wildlife habitats (28% vs 22%) and men to prioritise community access (13% vs 7% of women).

20. FULL BUSINESS PLAN PUBLICATION, JULY 2019 - ENGAGEMENT REF#11.20



All the feedback received from stakeholders on the July plan consisted of requests for extra information rather than comment on the targets and commitments. Those specifically related to:

- Requests for challenging ambition on greenhouse gas emission reduction
- Further clarity requested on how we will measure biodiversity and natural capital
- Clarification request for transmission losses and their inclusion in GHG
- · Further clarity was requested on how we will measure natural capital and biodiversity

An example of some of the feedback is below:

"As you might expect I was interested in the aspiration to reduce greenhouse gas and understand that this is an area of uncertainty at the moment. I wonder if the government target of zero emission by 2050 is in line with National Grid ambitions? Is there enough of a sense of urgency? The plan might benefit from a comment about level of priority from your perspective.

The section that concentrates on caring for the environment and communities is of particular significance for TCV. The investment of £226m is welcome and offers opportunities for us to engage and perhaps enhance our partnership. This section is comparatively short and focusses on education and employment. Does this include programmes to improve access to opportunities for more vulnerable groups?" Email from "August 2019", August 2019"

- "Your plan states that you intend to increase the natural capital value of non-operational land by 10% over the RIIO2 period. This doesn't seem very ambitious or challenging. Why isn't this higher?
- We note that NGET plans to reduce controllable greenhouse gas emissions by 45% by the end of the RIIO2 period. What would a more challenging target do to the bill?
- How will you have to change or reconsider your plan in light of the recent Net Zero commitments? Where does your plan NOT facilitate Net Zero?" 'Citizens Advice' response by letter, August 2019

21. EXPERT ENGAGEMENT, SCIENCE BASED TARGET INSTITUTE (SBTI) - ENGAGEMENT REF#11.21

Our environmental expert engagement (carbon, waste, procurement and natural capital) was for ensuring that experts in each field have been able to offer comment on whether our targets are stretching enough for our T2 plans.

The SBTI have confirmed through bilaterals that our 2030 Scope 1 and Scope 2 Greenhouse Gas emissions reductions target should be 50%.

22. NATURAL CAPITAL COALITION - EXPERT ENGAGEMENT REF#11.22

Our environmental expert engagement (carbon, waste, procurement and natural capital) was for ensuring that experts in each field have been able to offer comment on whether our targets are stretching enough for our T2 plans.

Summarised verbal and written feedback from the Natural Capital coalition:

We have had positive confirmation from the Natural Capital Coalition that setting our baseline and achieving a 2% target is an ambitious first step for T2. There is a natural decline of habitats if left unmaintained and the normal practice is to exclude this decline from targets. Therefore, preventing depreciation requires a level of maintenance and a gain requires further intervention to achieve. Our preference is to assume the baseline doesn't decline as is usual practice.

Full written verbatim feedback from the natural capital coalition below:

- One of the key areas we discussed was establishing a baseline. A target of increasing natural cap and biodiversity value on your non-operational land by 2% year on year could mean quite different things from a static baseline (e.g. taking the state of the land in 2021 and looking to improve this by 2% each year) versus a degrading baseline (e.g. taking a future scenario baseline, where you look at what the state of the land might have been without National Grid's intervention (probably degrading) and aim to improve on that by 2% each year.). This means that a 2% target could in practice mean mitigating losses, aiming for no net loss, or aiming for net gain all depending on the baseline you select.
- We also discussed communicating this clearly to your stakeholders. Comparing your 2% target with the Defra proposed 10% national requirement could imply that yours is a less ambitious target. However,



National Grid's activities in protecting and enhancing its non-operational land are quite different to the activities of a land developer, who is buying and converting land. So, the targets are not like-for-like and mostly likely involve quite different baselines (this is worth looking into in more detail!).

- There is no established 'right level' of gain. The Science Based Targets Network is specifically looking at how corporates can set meaningful targets for biodiversity (as well as climate, freshwater, land and ocean). Whilst some may find target setting controversial (we don't know how much is enough of where the tipping point is), not having a target can lead to inaction so we need to consider what the alternative is. Many organisations are committing to targets such as No Net Loss, or Net Gain. Often without consulting the key stakeholders in the business if this is feasible (see Rio Tinto's about turn on their commitment to 'net positive impact' which they initially made in 2004) I applaud them for openly withdrawing that commitment when they discovered the full range of challenges this would involve and that it wasn't achievable, rather than trying to fudge their way through it. Therefore your approach to stakeholder engagement to explore the 2% target is fantastic, and critical to avoid setting a target that is under/over ambitious.
- As mentioned above, scoping your assessment will be key to this commitment as well (Stage 2 of the Protocol!). Understanding whether you want to include direct and indirect impacts, and even enabled impacts will really drive how ambitious the 2% target is. E.g. if development of electric vehicle charging points is one of the options for your sites, then this would enable reduction in emissions by facilitating the switch away from emitting vehicles (note there are other impacts to consider with electric vehicles). However, this might be a stretch to include in your target, but worth disclosing alongside it as it would surely feature in your decision-making process of what to do with the land.

All of these points really feed from following the logical process laid out in the Protocol, and making sure you scope your assessment and work out how that relates to your target, before diving into measuring your impacts.

23. RESPONSIBLE PROCUREMENT - EXPERT ENGAGEMENT REF#11.23

Our environmental expert engagement (carbon, waste, procurement and natural capital) was for ensuring that experts in each field have been able to offer comment on whether our targets are stretching enough for our T2 plans.

Our responsible procurement webinar invited knowledgeable attendees from across multiple industries (utilities, construction, defence and academics). We had a large attendance of over 50 people which gives a suitable sample size for this engagement. The purpose was to present our proposed T2 plan and to see where stakeholders thought we should go further or make other changes.

- Of the 65% of webinar attendees that responded to the question about carbon in our supply chain, 83% were satisfied our commitment to carbon reduction in the supply chain was ambitious enough '75% percentage of top 250 suppliers with carbon reduction targets' (2 very dissatisfied, 9 dissatisfied, 45 satisfied, 9 very satisfied, 35 no answer)
- When asked whether the supply chain should be expected to set a science based target for carbon reduction, the opinion split was nearly half and half for "not sure" and "yes" with just a few less people opting for 'yes'. There was also someone who thought this shouldn't be the case.

The key feedback from our responsible procurement engagement webinar can be summarised as below:

• Survey monkey feedback

- o It is useful to understand the key requirements of National Grid as a customer.
- o It could have been more condensed and a few bits were repeated
- o Very inciteful regarding future strategy and commitments of NG
- o understanding NG's vision and thus what is likely to be expected of their supply chain.
- o Understanding of NG approach to key areas to allow supply chain alignment
- insight into the future of energy providers and how they are meeting customers' demands for the future
- o It was useful to get an insight into NG's sustainability strategy

Gaps identified

- Social value and biodiversity net gain
- o Zero carbon by 2050 is a huge challenge and will rely heavily on other industries



o How is NG approaching this issue when sourcing from the Far East suppliers? the UK needs a level playing field across resource costs and employee standards of living.

Challenges

- o commitment of your suppliers to help meet your proposed commitments
- o buy-in from organisations not interested/committed
- o to deliver the long-term strategic sustainability supply chain commitments I think you must be in a long-term relationship
- can be difficult to pass down all commitments to all tier 2 contractors, some of which may only be
 on site for a short duration or for lower value subcontracts

Because of the **responsible procurement** engagement, we will continue to engage with the supply chain to deliver our responsible procurement plan through our suppliers. We have removed the metric for #diverse/minority suppliers as this could not be easily tracked. To complete up front approach to engagement with diverse suppliers and support and explain how to work with NG and to include a new metric on events supported / suppliers engaged under the diverse supplier commitment. Considering broader options for environmental commitments as part of our global strategy.

24. BI-LATERAL WITH THE SUPPLY CHAIN SUSTAINABILITY SCHOOL - ENGAGEMENT REF#11.24

The output of the engagement was as below:

- •Consensus on scope of approach being taken
- •Challenge to be more ambitious on environmental commitment include wider aspects like waste and biodiversity
- Suggestion to reflect more clearly the internal business ambition/targets use our supply chain as an extension of our business to deliver our values

25. CHALLENGE GROUP FEEDBACK FOLLOWING JULY BUSINESS PLAN SUBMISSION - ENGAGEMENT REF#11.25

The draft plan contains some good early signs, but there are other areas which are significantly underdeveloped- and where we expect improvement by October. There are encouraging signs on moves to create a more sustainable supply chain and on land reclamation and biodiversity/natural capital. In the October plan, we expect you to provide more evidence and explanation of your proposed Green House Gas Targets, including SF₆ reduction, with justification for level of ambition and relationship to net zero by 2050. Overall, we are looking for evidence that all outputs and proposals are supported by stakeholders, cost effective and back up by delivery plans.

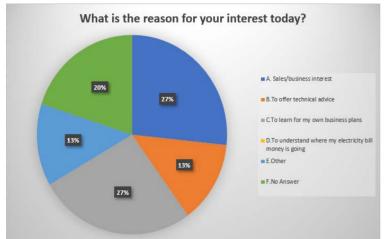
26. NET ZERO SF6 REPACEMENT PROPOSAL WEBINAR - ENGAGEMENT REF#11.26

For the SF_6 engagement we wanted to find out from the expert international community, whether 1) the proposed replacement strategy seemed a sensible technical and financial solution 2) What other solutions (if applicable) the community might suggest and 3) whether the £150m was an acceptable value given the outcome it would achieve (34% reduction in CO_2 e emissions) and 4) what was the industry assumption about when mechanical SF_6 -free alternatives would be commercially available in the market.

For our SF_6 webinar, we requested that all the attendees should have a good level of knowledge of the use of SF_6 in the energy environment and therefore would, can make informed responses to the questions posed. We used the same stakeholder team to co-ordinate the webinar as all our other webinar engagement to ensure that lessons learnt were carried forwards.



For the SF₆ webinar we wanted to understand what the drivers were for the people attending the call. Our



invite list included business contacts, members of relevant forums (CIGRE) and requests to other industry contacts to invite relevant people from their business. Below indicates that nearly 2/3 were there to offer sales or learn for their own business and 13% were there to offer advice.

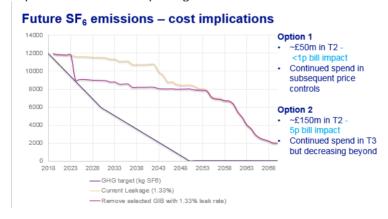
Stakeholders were clear that we should focus on a total carbon impact approach rather than just solely on scope 1(direct) emissions. Over half of the stakeholders also indicated that they believed that it would be around 2030 when commercially viable SF₆-free technology

would be available and over half of the stakeholders also thought it was realistic to pay up to 20% more for SF_6 free technology. The following questions were then asked of the groups which listed out the option we feel we have available.

- Option 1 continue with increased focus on leak repair
- Increase focus on leak repair
- Incremental annual reductions in percentage losses
- Outcome: will not meet a science-based target trajectory and SF₆ reduction unknown, estimated <10%
- Option 2 increase leak repair and replace highest leak assets
- Increase focus on leak repair
- Replacement of leaking/high-risk assets earlier than planned; targeted by asset knowledge
- Outcome: will meet a science-based target, estimated 34% reduction

The response was a clear selection of the early asset intervention option with over 70% selecting this and no stakeholders selecting the "I have another idea option".

We then asked the same question again but with the options costed as below. The options chosen were the same as before but there was a reduction in the selection of option 2 down to 60%. Interestingly we noticed that suppliers and a transmission owner from Japan believed repairing leaks was the appropriate solution rather than early replacement and felt that the SF_6 -free technologies were going to be available later than the majority (European stakeholders) at 2030. We believe this is due to the eastern countries having younger transmission systems than in Europe, where later models of SF_6 technology were installed which perform better to keep the gas contained.





 SF_6 Webinar outcome – most stakeholders agree with our approach on early asset intervention but, although not in the majority, opinions were different in the east. We also have a clear steer on 2030 being the time we can plan for the availability of SF_6 products with moving parts. We should also ensure that our decisions make a calculation on the whole life carbon of the investment rather than purely the scope 1 emissions.

27. EXPERT ENGAGEMENT, MIROG - ENGAGEMENT REF#11.27

Our environmental expert engagement (carbon, waste, procurement and natural capital) was for ensuring that experts in each field have been able to offer comment on whether our targets are stretching enough for our T2 plans. The key material feedback from MI-ROG on our proposed T2 Environmental Action plan was as below:

- To link to external standards where possible e.g. ISO 20400 for procurement or the relatively new ISO 8001 for circular economy.
- To be more specific with targets and baselines (e.g. xx% by 20xx based on baseline of 20xx)
- Separate some of the targets out e.g. operational and office waste, they commented these are different so should be separate and the zero waste to landfill with increasing recycling for construction target should be one target on zero waste to landfill and one on recycling.

Because of the engagement with **MIROG**, our ambition and targets will remain the same but the language and clarification around our targets will be tightened for transparency and measurement.

28. CLOSING THE LOOP, ENVIRONMENTAL WEBINAR - ENGAGEMENT RFF#11.28

On 6th November 2019, we held a stakeholder webinar to consult with stakeholders about our current Environmental Action Plan. The objective was to obtain feedback on whether our stakeholders though the targets we were proposing were ambitious enough as well as informing stakeholders how our original engagement with them had informed the plan. A total of13 stakeholders dialled in to the call including members of the public, Ofgem, customers, sustainability organisations and other stakeholders. Overall the polling answer "these targets seem about right" was chosen 60% of the time. Stakeholders wo did not know what they thought (8%) or did not provide an answer (31%) accounted for 39% of the responses.

Slides and recording for this webinar are here: https://www.nationalgridet.com/document/131526/download

Question	Answer 1	Answer 2	Answer 3	Answer 4	Answer 5	No answer
What is the	Sales	Environmental	Ideas for my	See where	Other	
reason for		Interest	business	my bill goes		
your interest?						
	1/11	4/11	1/11	0/11	2/11	3/11
What do you	These	These targets	They are not	I don't know	N/A	
think of our	targets are	seem about	ambitious			
climate	too	right	enough			
change	ambitious					
targets?						
	1/13	9/13	0/13	0/13		3/13
What do you	These	These targets	They are not	I don't know	N/A	
think of our	targets are	seem about	ambitious			
resources	too	right	enough			
targets?	ambitious					
	0/13	6/13	0/13	2/13		5/13
What do you	These	These targets	They are not	I don't know	N/A	
think of our	targets are	seem about	ambitious			
natural	too	right	enough			



environment	ambitious					
targets?	0/13	8/13	0/13	1/13		4/13
What do you	These	These targets	They are not	I don't know	N/A	
think of our	targets are	seem about	ambitious			
leadership	too	right	enough			
targets?	ambitious					
	0/13	8/13	0/13	1/13		4/13
Total Votes	1/52 (2%)	31/52 (60%)	0/52 (0%)	4/52 (8%)	N/A	16/52 (31%)

29. EXPERT ENGAGEMENT, WASTE FACILITIES AUDIT ASSOCIATION - ENGAGEMENT REF#11.29

We sent the WFAA all our waste related commitments to review in November 2019. Our current baselines were not sent and because of their feedback below and the feedback from the Independent Stakeholder User Group we have included the current baseline in the EAP against every target.

30. INDEPENDENT STAKEHODLER USER GROUP (ISUG) ENGAGEMENT - ENGAGEMENT REF#11.30

Env	Environment specific challenges from Stakeholder Group discussion						
ID	Date	SG#	Challenge	National Grid Response			
2 4	Jan 19	SG5	Evidence of how we are using existing forums to engage (where consumers are comfortable) plus more evidence of BAU to be captured in Engagement log.	All the engagement documented to date has been specifically for the purpose of defining TSI or T2 outcomes. Further work to be done to document BAU activity. There is a substantial amount within our capital delivery team and the VIP project.			
2 5	Jan 19	SG5	Seek to be as quantitative as we can	Engagement to date progresses this further and will be progressed further still with the slider tool. Results to be updated in the 2 nd iteration			
			More clarity on engagement strategy and how we will segment	The engagement strategy will involve: 1) Additional work on costs through the consumer slider tool including a range of options against the proposed 2) Additional work needed in the community space to define how we could support mobility for the disadvantaged – research and direct engagement with councils and citizens and transport planners 3) Additional engagement will be needed for customers and industry stakeholders to solicit feedback after the July publication Further research in to the areas of impact on apparament agree the progress and physical.			
2 5	Jan 19	SG5	topics and tailor engagement	consumers eg network charges and physical presence in the community.			

VIP specific feedback and points of clarification



[&]quot;Environmental commitments look good. You might want to consider putting these into context with where you are currently e.g. today % of our waste is either recycled or other etc. Adding a general statement of principal such as diverting waste to other uses giving both economic & social benefits — shifting waste to a potential resource".

Source - meeting calls	Feedback	National Grid Response
SG5 Premeeting calls	What % of total allowance is used?	Of the T1 provision of £500m in 2009/10 prices, less than ~10% is spent to date but £116m (2017/18 prices) has been approved by Ofgem for the Dorset project and so is committed. In addition, SSE have submitted an undergrounding project for consideration by Ofgem; we do not know the value.
		If all four major National Grid projects are approved, plus the SSE project and currently known landscape enhancement projects, it is estimated that ~80% of the provision would be used.
SG5 Pre- meeting calls	Is the VIP policy consistent across all TOs? If so how much collaboration and learning is shared across the TOs and ESO?	The Visual Impact Provision is available to all three TOs. Each TO has their own VIP policy, but the intent is broadly consistent. We talk to the Scottish TOs regularly and (for example) their representatives attended one of our SAG meetings last year to share progress and ideas. We share a number of the same national stakeholders, although obviously they are different at a local level.
		The VIP provision does not apply to the ESO.
SG5 Pre- meeting calls	How are the recommendations of the VIP Advisory Group managed by NG?	The individual projects pass through the same process as all other National Grid investments, and are/will be developed, sanctioned, delivered and governed in the same way as all other projects.
SG5 Premeeting calls	If there is a lot of success coming out of VIP, how is it used to promote the energy system as a whole?	It is a bit early to promote the success of the VIP projects because we have not yet removed any infrastructure from designated landscapes. However, we have contributed to a number of articles in specialist publications, e.g. The Ramblers magazine, to show how networks can work positively to restore landscapes.
SG5 Premeeting calls	Challenges: Only seems to have used evidence from direct stakeholder engagement – no comparative data, other research etc.	I'm not sure what other research would be available? As far as we know, the Dorset VIP project will be the first such undergrounding project (removing existing transmission infrastructure purely for reasons of visual amenity) in the world. We understand that the initial decision to create the Visual Impact Provision was made by Ofgem based on long-term lobbying by landscape and environmental groups.
SG5 Premeeting calls	Seems like a lot of our engagement is largely to do with T1 and not much has been done in T2. What plans have we therefore got for T2.	The majority of work to date has been on the T1 projects, and only one of the four undergrounding projects has been approved; only a few LEI projects have been delivered. The point of describing what we have done for the T1 projects is that the T2 projects will follow exactly the same process. We currently have a list of potential T2 projects which has been prioritised by the SAG and we are assessing engineering and environmental feasibility before talking to local stakeholders.
SG5 Premeeting calls	Would like to understand the process the team/advisory group followed to arrive at the 4 major projects. How did Dorset for e.g. end up on the list and others didn't	The Landscape and Visual Impact Assessment methodology was used to score all sections of overhead line. The highest scoring sections (referred to as Purple and Red) were then considered by the SAG. The Group assessed whether each was deliverable without causing environmental damage that outweighs the benefit. They sought some projects which could be delivered relatively quickly (in order to establish the benefits), and that were affordable in the T1 provision. We then spoke to local stakeholders to test whether they would welcome such projects (reports are published on the website) before concluding on four major projects.
SG5 Premeeting calls	The current and proposed VIP work appears to mainly focus on the undergrounding of overhead lines. What about consulting on other infrastructure, large substations, compounds, etc, has any of the consultation work addressed this??	National Grid does not have any substations in National Parks and AONBs. We have some which are close to boundaries, but their visual impact is lower than that of overhead lines that pass through the designated areas. They are therefore a lower priority and are not currently under consideration.



VIP s	VIP specific challenges from Stakeholder Group discussion			
ID	Date Meeting	Challenge	National Grid Response	
43	10 Jan 2019 SG5	Consumer engagement – need to do deliberative engagement, broad enough scope (location, etc.)	A review has been done of all activities being undertaken in relation to consumer engagement. It has been ascertained that this covers requirements for VIP and the results will be provided alongside our submissions in July, October and December.	
44	10 Jan 2019 SG5	Hard to reach stakeholders – how are they represented?	Our recent acceptability testing report for the RIIO-T1 projects describes how we approached getting a response from hard-to-reach billpayers. https://www.nationalgridet.com/sites/et/files/documents/Acceptability%20Test ing%20report.pdf In summary, discussion groups were supplemented with nine in-depth interviews with vulnerable or hard-to-reach bill-payers. All participants were incentivised £40 for the involvement, with each interview taking up to an hour. The participants were recruited to meet one of the following criteria: be on a low income (social grade E); be 'power reliant' (have a medical condition or disability that means they rely on energy); have English as a second language. The majority of people participated in the quantitative survey on-line, but this was supplemented with an in-home survey to ensure coverage within the sample of vulnerable or hard-to-reach bill-payers. The in-home survey therefore targeted individuals who were older, lower SEG, or without access to the internet at home. The results showed is a clear correlation with acceptance of the VIP project and participants' annual income as well as how affordable they think their electricity bill is. Unsurprisingly, participants at the lowest end of the income and affordability spectrums, (namely those who earn under £5,200 per year and who said their bills are not at all affordable), are the most likely to find the VIP project unacceptable. Apart from this most vulnerable group, the majority of participants in all other income brackets and affordability classifications found the VIP project to be acceptable or very acceptable. Even in the lowest income band, a higher proportion find the project acceptable (33%) than unacceptable (26%). **Receptable of VIP project by annual income and perceived affordability of electricity bill but an unacceptable (26%). **Wederbidge definition of the project by annual income and perceived affordability of electricity bill but an unacceptable (26%). **Participants of the project by annual income a	
			26% of total respondents saying that they visited either once a month or more frequently. A further 43% visited at least once a year, while 27% hardly ever or 7% never visit these places. 67% of those who earn £5,200 a year or	



	1	T	
			less have visited AONBs or National Parks (rising to 96% of people earning more than £15,600).
			This reflects recent Government statistics on the use of National Parks, with the Peak District recording 13.2 million visitors a year and Snowdonia 4.7 million a year (compared to residential populations of 38,000 and 26,000 respectively). The estimated annual economic impact of visitors eating, shopping and sometimes staying in these two Parks alone was over £1bn. For comparison, the most visited tourist attraction in the UK is the Tate Modern, with just under 5.9 million visitors in 2018.
45	10 Jan 2019	Measuring impact – how do	The approved Landscape and Visual Impact Assessment methodology is available on the dedicated external website:
	SG5	we do it (including where other assets nearby)	https://www.nationalgridet.com/sites/et/files/documents/37294- Landscape%20and%20Visual%20Assessment%20Methodology.pdf
SG	10 Jan	Visual Impact	Shared with the Stakeholder Group:
05- E0 4	2019 SG5	Provision Stakeholder Advisory Group terms of reference to be	https://www.nationalgridet.com/sites/et/files/documents/37288- Our%20statutory%20duties.pdf
		shared with the Electricity Transmission Stakeholder Group	
SG 05- E0 5	10 Jan 2019 SG5	Survey of the Visual Impact Provision Stakeholder Advisory Group members to be undertaken to establish how they feel their views have been represented in the process.	Survey undertaken as requested and returns completed by 1 May 2019 have been summarised and provided to the Chair of the SUG. A copy is attached: VIP Survey collated results v2 0619.xlsx.c
103 a	21 May 2019 SG7	National Grid to demonstrate how they are delivering value for money on the environment and	The VIP provision (£500m in 2009/10 prices for all three TOs) is large and was set by Ofgem as part of RIIO-T1 discussions based on a Willingness-to-Pay study undertaken in 2012. In order for TOs to access this provision, we need to make separate funding submissions to Ofgem. This process is described on page 5 of the approved VIP Policy: https://www.nationalgridet.com/document/120581/download
		communities approach – in particular on the visual impact proposals. Context: The visual impact financial	To get the best value for money on these projects, we will continue to run market tenders for the delivery and build. This is in line with our strategy under the RIIO-T1 VIP projects. For Dorset, Ofgem agreed that our procurement process was robust and that it allowed for a competitive outcome. Ofgem approved funding of £116m for the Dorset VIP project, which equates to £14.5m per route km (or £7.3m per circuit km). We provide a variety of evidence to support our funding submissions, for example:
		provision is relatively large. We are unclear how NG came to these figures?	Benchmarking - We assess our costs using a combination of historical data gained from previous undergrounding projects and independent figures compiled by the IET (Institution of Engineering and Technology). The IET compiled a report in 2012 which found the build costs for undergrounding a 400kV double-circuit route ranged between £9.2m and £22m per km



We understand that Ofgem sets the majority of options – what has been considered beyond undergrounding? How are you benchmarking your costs? Per mile costs – seem very high relative to those we are aware of.

depending on the terrain, length of cable and the rating of the circuits (i.e. size and number of cable cores per phase). The report can be found below:

http://www.theiet.org/factfiles/transmission.cfm

Historical data - The figures above are representative for double-circuit, high-voltage transmission cables (400kV). For lower voltages, we would expect the 'per km' costs to be lower. A recent example is from SHE-T who was recently given approval from Ofgem to underground 14.1km of primarily 132kV overhead line. The approved cost was £31.9m, which equates to £2.26m per route km (this is a mix of single and double circuit).

The User Group suggests that our costs are "very high relative to those we are aware of". We would expect Distribution Network Operators (DNOs) - who also have equivalent visual impact provisions in their regulatory frameworks - to have even lower costs per km as their voltages and ratings are lower again. "High Voltage" for a DNO is defined by Ofgem as being less than 22kV. According to Ofgem, in 2017/18 the DNOs installed 41km of underground cables costing £6.5m. This equals £0.16m per km and, although there is probably a mixture of voltages, a proportion will be removing circuits previously carried on 11kV wood poles.

https://www.ofgem.gov.uk/data-portal/undergrounding-overhead-lines-electricity-distribution-riio-ed1

email

Regarding delivering value for money on the Visual **Impact** Proposals, to articulate how innovation is going to deliver cost savings in this area including undergrounding - both learning from historic innovation and innovation going forward.

We will add a summary of the below innovations in to the narrative, the majority of which offer future opportunity for cost reductions.

Gas Insulated Line: We have been working to reduce undergrounding costs through a joint innovation project with Siemens. This is defined under the Public Procurement Directive to research and trial Gas Insulated Line innovative technology. The goal is to reduce the whole-life cost and environmental impact of underground transmission for consumers. The ultimate aim is for this technology to be a cheaper alternative to underground cables, which will help to reduce costs through increased market competition.

The option to use GIL has been explored on several VIP projects, with the most recent being at Peak East. This is currently out for a market tender and so the technology has not yet been chosen.

Development of GIL will continue until the end of T1 with the ambition to continue to drive the cost of high-capacity underground transmission down and develop new low global-warming potential gases, with a GWP of less than 10, to replace SF_6 .

Liquid soil

When undergrounding, the soil must be excavated to lay the cable and then reinstated (backfill). Liquid soil is an innovative backfill, which has low thermal resistivity properties, meaning it can conduct heat away from a cable better than standard backfill. By removing heat more effectively, you can run higher ratings on a cable.

This is currently undergoing tests at Cardiff University, with the expectation that we can use this in a variety of environments in the future.

Project specific innovations

1. Ducting: On the Dorset VIP project, rather than directly burying the underground cable, our contractor will be placing the cable in a duct. This has the benefit of faster reinstatement of land and maintenance of the cable is less disruptive. Longer term, it will also be easier to replace the cable.

2. Cable jointing: Underground cables are not manufactured on a continuous length, which means that they have to be joined together on site. Normally, this is done under a tent system. On Dorset, our contractors will be using an innovative container system to house the jointing and welding equipment.



	This increases the quality and productivity compared to the traditional tent system.
	eyetem.

Challenges Received from the	
Environment and Communities deep	
dive on 21st May	Response
	Given your guidance on the initial draft commitments required to meet the
	CCC report, we have removed them from the July business plan with a
Many of the proposals are currently 'woolly'	view to working up and consulting ahead of October. We have instead
 they lack detail as to precisely what NG 	added hooks in to indicate this throughout the plan. These commitments
is committing to achieve and how it will	will be handed mostly to Ivo for electricity under the 'future system'
know when it gets there - this makes them	chapter. The heat commitments are being assessed by the gas team but
hard to assess. The lack of quantified or	there is also some relevance to the electricity side. I have removed these
time-bounded targets is particularly	wider proposed commitments so that my chapter focuses primarily on our
concerning.	direct impacts to tangible environmental and community commitments.
NG has not clearly articulated its role, the	
rationale for this, and how it differs from	
other organisations in these areas. e.g. it	
says it will take a leadership position, but at	
the beginning of the chapter NG talk about	
as 'an industry' leading on the low carbon	
agenda, in questioning the company	
seemed unable to articulate the difference	
between its role and the ESO on the zero	
carbon agenda.	As per the above, removal of the broader CCC challenge has helped this
	articulation. I have illustrated the community strategy at the start of the
Formal Challenge: National Grid to	chapter which described what we are best placed to deliver. The
articulate what it sees as its role, as	commitments table within the section 'our proposals for RIIO-2' outlines
opposed to other organisations in this	where we believe we lead and where we are meeting expected industry
space and the rationale for this. To provide	standard. Our environmental benchmarking annex wll be available this
evidence as to where and how you will	week also plus the procurement benchmarking annext which will be
genuinely be a leader. In particular to	available for the final July plan on 1 st July. I have also included 2 policy
consider its role in relation to different	documents for your review which articulate what we see as our role in
environmental and social initiatives.	community engagement and environmental support.
We heard several different descriptions of NG's environmental and social ambition	
suggesting this is not yet properly decided. This included "decarbonisation and	
fairness"; "Accelerate green transition and	
look after those not able to look after	
themselves". Further information is needed	As per item 1 above – the scope reduction of the chapter allows for a
on what this means in practice and what's	simpler and more logical narrative. I have also added in our community
the road map to get there.	strategy to the first section of the chapter.
Under fairness NG lists "Consumer	As per item 1 above – the scope reduction of the chapter allows for a
focussed solutions". We are unclear what	simpler and more logical narrative. The Hydrogen proposals will be made
that means e.g. NG said that hydrogen fits	through the gas business plan with some relevance to electricity by
in here, but to what extent to consumers	ensuring that the teams are working tohether on the best solutions for
really want hydrogen?	consumers.
At the moment, the community approach	
reads as a random list of things that you	Following your feedback I have illustrated the communities strategy which
think are good to do. We are unclear how	is at the front of the chapter. We have a centralised sustainability team
they link together, have been or are being	who created the sustainability strategy and who also worked with ET and
prioritised and have and will change. The	GT to create the Environmental Action Plans (Annex documents). This is
Sustainability Strategy shared provides a	available for you to view now with clear outlines of what we have
much more comprehensive picture of your	committed to externally versus what we have delivered. There were only
environmental approach, leading us to	official VIP and SF ₆ targets for the environment for T1. All the other
believe that the chapter does not do your	commitments are voluntary through the 'our contribution' publications in
proposals or thinking justice.	2012 and 2017 or the ET Strategy.



Linked to vision and strategy, the chapter would benefit from better articulation of your journey to date within a wider context. We would like to see a realistic evaluation of where NG has been, where it is now, where you expect to be at the end of T1, and where it wants to get to at the end of T2 and the rationale for this?	As above – the EAP annex will describe for you our performance to date against every target.
In terms of historic performance - what did NG commit to previously that was not delivered? Where has it done well and exceeded performance? How do you expect your historic performance to influence your approach/performance going forward?	As above. The historic performace has been used to work out what awould be stretching targets for us in T2. We also collaborate with the Scottish TOs to benefit from standard approaches where possible.
No benchmarks have been provided. NG makes reference to wanting to be 'best in class' but does not explain what it sees as this. We would expect to see a range of comparative data, plus customer and stakeholder insight information to support this.	Environmental benchmarking is complete and will be sent to you this week as an Annex and procurement benchmarking is in progress.
The chapter would benefit from NG more explicitly articulating what is its minimum regulated activity and where it is proposing to go above and beyond.	Paragraph included to make this clearer that the commitments are not based on any legal or regulatory obligations other than to deliver a successful VIP implementation and SF ₆ .
	For the development of 'Our Contribution' we worked bottom up on areas that are important and material – which we impact. We then reviewed the progress made so far to work out what was physically achievable by 2026. On carbon reduction for example – if we had a commercially viable solution to SF6, our targets would be more ambitious – but at the moment we are targeting what we think is ambitious but possible. We haven't gone through the process of 'we could have target A or target B', because, following our stakeholders requests for focus areas, we have pushed our subject matter experts to tell us what is the most ambitious thing we can do by 2026. We will do further engagement with stakeholders, ahead of the October business plan, to assess their opinion on our proposed targets.
There is no visibility of the options that were considered but discounted and the rationale for this.	We do know however that an option assessment is applicable for the alternative fuel vehicles and we are completing a cost benefit analysis to support this.
The engagement feedback provided is welcome but very high level. We are unclear how customer and wider insight have genuinely driven decision-making e.g. NG say stakeholders say they did not have enough focus on biodiversity, the company appear to be proposing to do what it did before (biodiversity net improvement). Where's the shift in approach?	I have included in the top of section 5 in the chapter on 'how we will deliver' - how the stakeholder views from the February consultation impacted our commitments. We will also be refining our reporting of stakeholder feedback for the overall October plan as we realise some of the research specifics have been lost in efforts to make the chapters more plain english.
Has NG asked customers and stakeholders how it could exceed their expectations in this outcome area?	We work with communities through our capital projects as a matter of course and are guided by our environment, community and amenity policy to leave a positive legacy. I think in practice this will be applied differently in pockets on the ground. To ensure implementation we will need a policy change to standardise the approach and ensure we start engagement with this specific question.
How have customer and expert stakeholders been engaged on setting the proposed targets?	Primarily our targets have been set by our past performance and industry best practice for example the SDGs and other benchmarking practice. We welcome further stakeholder feedback against our targets when we launch our July draft business plan. We will also plan additional engagement on the proposed targets.



We'd expect to see differences of views between stakeholder and customer groups , and regional variations including on things like willingness to pay.

The WTP results and approach need further scrutiny. The findings have not yet been applied to the decision making process, yet the environment approach is said to be 'mature' – what difference might this make?

There are regional differences where we are constructing locally and these differences are accounted for during community engagement with some freedom provided within our standard strategy framework to cater for local requirements. This is described by the "community project" part of our strategy wheel plus our policy to look for opportunities to enhance the environment through community engagement. WTP will be used as an upper threshold rather than a value we should spend to - therefore it is 'sense check' only. Primaily all other proposals and targets are common sense as part of being a responsible business.

The financial information provided appears

The overall direct cost impact of this area as a proportion of the total plan is relatively small but it is still important for NG to demonstrate how its proposals are value for money.

inconsistent or lacking

Formal Challenge: National Grid to demonstrate how they are delivering value for money on the environment and communities approach – in particular on the visual impact proposals. We'd expect this narrative to include when doing the right thing for the environment saves you money i.e. EVs and low carbon construction should be most cost effective. Also, articulate what you see as the wider benefits to the business of being more environmentally and socially focussed. E.g. in terms of recruitment and retention of staff for example.

The visual impact financial provision is relatively large. We are unclear how NG came to these figures? We understand that Ofgem sets the majority of options – what has been considered beyond undergrounding? How are you benchmarking your costs? Per mile costs – seem very high relative to those we are aware of.

How does NG see and propose to manage uncertainty? E.g. what reopeners use?

How will the company handle the need for anticipatory investment? E.g. enabling electric vehicles and off shore wind will require a big investment and more than simply being reactive – this again links to what will be your role and the evidence to justify it?

As above - wtp will be deep dived by Stakeholder User Group seperately. Primarily most of the environmental activity is embedded in to the way we run our business and cannot be split out - similar to safety. Following your feedback in this are there are however costs which have been added in since the previous version you saw in May. These include the capitalised portion of the environmental team (as most of their work applies to capital schemes) (+£5m), +£2m for carbon offsetting and £18m with is the continued vehicle replacement allowance. A CBA is being completed for the vehicle expenditure which may adjust the costs further.

VFM detail added in to VIP chapter describing the tendering process. We are undertaking a cost benefit analysis for fleet vehicles to see how this activity will benefit consumers and the company through lower costs. To be available for the July plan release. Additional detail for low carbon construction and the benefits and specifications within it are to be outlined within this plan following stakeholder feedback that this is unclear. I have included benefits for consumers in the section 3 commitments table. We are also undertaking an internal audit on our responsible business activities which we plan to have available for the October plan. I will add some narrative to the July plan articulating what the advantages of being a responsible business are.

The provision is not an estimate but an arbitrary value for the projects we expect to be approved. This was based on the T1 willingness to pay figures, as agreed with Ofgem. This undergoes a thorough tendering process to ensure value for money. Ofgem will award the project funds once the costs and VFM have been verified on each individual project, as applicable. The £208m does not include a provision for all 12 projects. Uncertainty is less relevant to this chapter as we are primarily dealing with elements that are controllable ourselves. There is uncertainty in how we will exceed expectations of communities and where this cannot be met through education and employment – we have the community grant fund. This is articulated in section 2.

As discussed above – the wider decarbonisation ambition has been descoped from this chapter. This has been handed to Ivo for the future energy system chapter and further work is needed ahead of the October plan.

Formal Challenge: NG to provide more detail on its optioneering and decision making – in particular to articulate what options were considered, which were discounted and the rationale for this. We would expect this to be supported in part by customer and stakeholder insight, for you to clearly articulate what benchmarks you've used and also what innovation was considered from both T1 and beyond

Formal Challenge: Much stronger evidence base is needed around performance commitments, any proposed incentives and uncertainty mechanisms.

We have undertaken a benchmarking exercise for our environmental activities and are currently undertaking this for procurement as well. The options we have pursued are based on our core expertise and where we can have the most material impact. Please also refer to the previous answer above against the options question.

Formal Challenge: Much stronger evidence base is needed around performance commitments, any proposed incentives and uncertainty mechanisms. Please link this to the outputs of the Common Scenario work. In addition, and as part of this, NG to carry out further engagement with its customers and stakeholders on its proposed environmental and community performance commitments – in particular to get views on whether they are the right areas, suitably ambitious, justified. Also to ensure you understand what customers and stakeholders think you exceeding their expectations looks like

As discussed above the wider decarbonisation work descoped form this chapter. We also agree that are proposed targets now need confirming (or editing) with stakeholders after the July release. This will include their views on 'exceeding their expectations'.

Email from 16th June

Consult with expert stakeholders and individuals on the proposed measures for the outputs selected, targets and incentives. In particular to understand their expert views on whether it is the right measure to deliver the outcome, and how stretching or ambitious they think the proposed target is. In addition to, where applicable benchmark against key stated goals e.g. how do NG's targets relate to CCC and Environment Agency targets among others.

This is a fantastic next step for our engagement, to confirm our commitments and have added an additional column in to the EAP to state the expert bodies or systems we are considering. At this stage we cannot confirm who but will aim to complete engagement before the next plan iteration

Provide more detail on how you will ensure appropriate governance and leadership accountability in this area. In particular linking pay directly to performance/bonuses.

Performance and leadership transparency will be covered in the 'transparency chapter' and discusses how we can better reflect customer outcomes in our performance framework. Our short and long term bonus structure already incentivises both financial and operational performance.

Challenges Received from the Environment and Communities business plan review at SG8- 10 June 19			
. #	Comment	What has been done for July iteration (ref page number if possible)	What will be done for October iteration
. 1	NGET to clarify what the policy is on visual impact for site s that are not sites of outstanding natural beauty.	. We have now stated in the plan that we will prioritise disadvantaged areas for site natural capital upgrade commitment.	. For October, we will assess what community opportunities there are for improvements of our assets or natural capital in areas which are not designated AONB/National Park.
. 2	. NGET to update the Stakeholder Group on how they are progressing with their six capitals	. We recognise that stakeholders are expecting recognition and reporting on value created by business, beyond financial.	. To review our reporting plans and consider how we adopt industry best practice (e.g. the six



	integrated reporting approach and the difference this will make to the business.	Included in the July plan, within the transparency chapter is: "We are committed to widening the scope of Our Performance reporting to include key societal measures. This will demonstrate how we are operating as a fair business and making a positive contribution to the society that we serve."	capitals) - further detail to be included for October within the transparency chapter.
. 3	NGET to demonstrate how they have understood and are addressing regional differences; addressing their key concerns. Explicit feedback to be provided on proposals/wider feedback from metropolitan mayors, Welsh Government for example.	. We do Government and policy level engagement. This is not included in this release of the plan.	Further detail on External Affairs approach to community engagement to be included.
. 4	Further to the strong story, in terms of responsible treatment of staff (diversity, living wage etc), NGET to share their diversity policy and current statistics on disabled, BAME and split male/female staff - and any benchmarking. How does NGET monitor and report on this?	Inclusion & Diversity Policy has been included as Annex A11.02. We have included Female split and BAME split and an industry comparison for each for our complete workforce. These values have also been provided within the "We are ready and able to deliver" chapter for critical roles as separate statics. Additional text has been included to outline how we monitor and report on this on page 122 of the business plan.	. N/A
. 5	A request was made for a discussion about NGET's proposed carbon-off set approach. It was considered that carbon offset has had some media coverage with some schemes seen as more acceptable than others. What's the likely materiality of this?	We have added some information in about this on page 129 of the plan stating that "Our focus will be on carbon sequestration (e.g. tree planting) on our own land in the first instance and then within the local communities impacted by our projects. As we finalise our business plans we will develop costings to understand the materiality and feasibility of this approach."	Further detail about costs and plans for offsetting to be provided in October.
. 6	NGET to pull out their journey a bit more with regards to what they are doing now and what they are proposing to differently/better in T2 - where they are being more stretching?	Extra detail has been included against the commitments to ensure that T1 performance is provided against each of the commitments for the environment and procurement activities. Employment and educational examples have also been included. For communities	
. 7	NGET to justify its proposed allowance for electric vehicles. During the May presentation, NGET suggested that they were unlikely to need extra money for EVs. There is, however, now a request for £18m for a 3-4 year payback period. An understanding is required as to why NGET suggest they get an allowance for this but not for petrol/diesel, if they keep EVs beyond 3-4 years and therefore see lower costs in the future.	In the plan, we have continued to carry-over the diesel/petrol vehicle replacement allowance through T2. This has not yet factored in the changes required for electric vehicles. There is also an extensive piece of work that is required to specify and cost the charging infrastructure to support the electric vehicles. This explanation has been to page 135 of the plan and states:	Further detail on specifications and costs for vehicles and charging infrastructure are to be provided for October.



"To focus on our fleet vehicle replacement, a pilot is being run this year, which will replace 30 ET fleet vehicles. This study will provide data and requirements to help us plan our replacements against changing factors like vehicle availability, ranges and charging speeds as well as substation integration requirements." 110 At this point, we consider that We will consider further Given National Grid's privileged position as a monopoly provider of an essential service, NG the total package offered to vour feedback about 1) Board to consider if it should be more communities (in the areas of the magnitude of our ambitious in its role, 'innovative-ness' and level impact outlined) is proportional offering overall 2) what of support on the social and community side. to the impact we have. we are providing for This includes for small businesses as well as domestic consumers domestic communities. This seems and small businesses Information has been added to particularly relevant given the company's size, is ambitious and 3) clarify that the school ambition to 'exceed expectations', ensure that what regional variations engagement is over and above "nobody is left behind", and "to support a we need to account for. what would be expected (page prosperous economy for future For information, the 121 and 126) because a) we are generations". This is also given that value of 0.3% (~£7.5m) looking to offer this as standard affordability is a customer priority. was of planned whether or not explicitly construction requested by stakeholders and expenditure rather than b) we will offer this to every In particular. profits. school along or around a Has NGET engaged, beyond local For further response construction project, not just authorities, with customers and those directly impacted. see next table stakeholders, to ask what they would be expected to do to "exceed their expectations" in this area? There may be Information on DNO and possible scope for innovation here if supplier collaboration for NGET listens to their ideas. vulnerable support to be Is NGET in line with available benchmarks included in the innovation and 'the new normal' in terms of chapter. expectations in this area? e.g. NGET has a community fund which is 0.3% of profits, half of which is paid for by customers. Other utility companies have community funds which are 1-1.25% of profits (which doesn't result in some of the poorest paying for support). How does NGET compare in terms of amount of support; type of support and who pays? Is NGET in line with key stakeholder expectations given current discussions around the 'social contract' /benchmarks in water- are they doing enough? How does some of NGET's engagement with schools go beyond what would be expected for standard stakeholder engagement around sites where they are doing work? The innovation chapter makes a passing reference to innovation to support customers in vulnerable situations but includes no proposals. Further work is needed in this area. E.g. what do stakeholders say NGET should be focusing on in this area e.g. should they be working in collaboration with key parties or DNOs? How can they help ensure nobody is left behind? Should they play a supportive or leadership role

	e.g. encouraging SMEs they work with to consider distributional impacts?	
. 111	NG to justify its proposed allowance for electric vehicles. Last time we looked at environment, you agreed you were unlikely to need extra money for EVs, but now you need £18m for a 3-4 year payback period. We'd like to understand why you suggest you get an allowance for this but not for petrol/diesel, if you keep EVs beyond 3-4 years and therefore see lower costs in future periods. This may be symptomatic of a bigger story you might want to tell about how consumers support your investment, and then see lower costs in subsequent price control periods - or it may be that you don't need the £18m allowance. We hope this will be answered by your future CBA in this area.	

Section	Requirement	Response
	This "golden thread" of stakeholder	
Ctructure	engagement could be stronger in places and gaps still need filling	Improved stakeholder table in section 3.
Structure	We welcome the strong focus on affordability	Improved stationals table in educino.
	and costs to consumers. This is not matched	
	by business affordability and impacts and, overall, there is a worrying lack of reference	
	to industrial and commercial consumers and	
	customers. NGET needs to do much more to	
	explain the bill impact for them and provide a more balanced stakeholder engagement	
	picture. It means the current plan is weak	
	and not transparent on the trade-offs	We have improved the stakeholder table in section 3 to outline specifically the key trade-offs and the
Business	between customer groups/consumers and different distributional impacts. NGET should	stakeholder golden thread. We have also added in a
affordability	do more to define its role on affordability,	proposal to support vulnerable consumers by
and defining	such as the impact and influence of its	providing resilience expertise through forums to key
role on	affordability proposals on fuel-poor	organisations supporting these groups eg care homes and hospitals.
affordability	consumers.	Clear social commitments have now been added in
	On social responsibility, the plan needs to do	to the overall topic commitments table at the front of
Social	much more to demonstrate ambition,	section 4 and also have supporting narrative within section 5.
responsibility	leadership and tangible commitments. The justification is generally solid, although	Section 3.
	further work needs done to evidence some	
Environment/	sweeping statements, for example, on social	Addressed by July plan release, places feedback if
communities/ VIP	mobility and workforce diversity, and make them tangible.	Addressed by July plan release - please feedback if you don't agree.
VIF	them tangible.	Information included in the narrative on the
		economic benefits of VIP, section 5 "Improving the visual impact of our assets in protected landscapes". We have also listened to the stakeholder group and made a proposal for improving our assets or public spaces in disadvantaged urban communities. This has been tested through acceptability questionnaires and indepth workshops and has received an excellent response.
	We know that the regulatory framework for VIP sets the parameters for NGET. However, the plan could draw out more the economic and wider social benefits of VIP projects. We also asked NGET clarify its approach to visual impact and environmental justice for areas that are not sites of outstanding natural beauty, and areas of urban disadvantage. We would like this part of the story to read stronger in the plan. More, NGET needs to better demonstrate how it has understood, and will address	We have also been working in our innovation team (NIA Fund project #NIA_NGTO021) on a project specifically to map out an economically and technically suitable pathway for South Wales to decarbonise, taking in to account the impact on local industries and the economy as a result of the energy transition. We have been leading the community forum to develop this plan with stakeholders. The outcome summary is the project identified an alternative roadmap for industrial and power decarbonisation in South Wales, noting that more industrial decarbonisation appeared to be technically feasible than anticipated by the Committee on Climate Change. This means that the Welsh targets could be achieved without deep decarbonisation of agriculture and heating which are considered to be difficult and costly sectors. Learning from this project has led to collaboration with over 30 stakeholders including the Welsh Government, academics, Small Medium Enterprises (SME's) and Original Equipment Manufacturers
Environment/ Communities VIP	regional differences and concerns, including those of the devolved Welsh government and city mayors.	(OEMs) to lead the way on decarbonising the South Wales region. The project has identified a number of areas that



		should be further researched which include: -detailed techno-economic assessment of decarbonisation options for Port Talbot, -detailed modelling of the electricity system, including strategies for the management of intermittency through demand management -storage technologies and the implementation of mid-merit localised hydrogen-fuelled generation, -additional assessment of options for decarbonisation at Valero's Pembroke refinery, LNG terminal and cement works in the area, -assessment of risk management solutions for carbon shipping from use of multiple storage sites (e.g Liverpool Bay and Kinsale Head). The stakeholders will again come together and continue to work on 4 initiatives; Industry, transport, utilities and cities with a detailed plan being submitted to the Welsh government early in 2020. More details can be found on www.zero2050.co.uk
Environment/ communities/ VIP	More justification is needed on NGET's approach to carbon off-setting and the extent of its materiality. NGET needs to better demonstrate its journey in this area throughout RIIO-1 and the level of stretch proposed for RIIO-2. The proposed allowance for a fleet of electric vehicles needs more justification too.	Carbon materiality values and a graph have been included in the latest narrative to outline how material the different proposals are. In section 2, sub-section 'our climate commitment and sustainability leadership', a graph has been included which outlines the materiality of scope 1, 2 and 3 of our greenhouse gas emissions. Also, within section 5 each greenhouse gas emissions section has an explicit materiality value within the narrative to outline the size of that emissions category. We have a fully costed fleet justification report which outlines all the costs and assumptions associated with transitioning 60% of our fleet to low carbon emissions vehicles. A detailed outline of the options associated with carbon offsetting are also included in section 5 - scope 3 emissions reduction, which outlines our capital carbon target to get to net zero emissions by 2026. Section 2 - Track record and implications for T2 now outlines more detail on our SF ₆ performance, plus each element within our business carbon footprint. This section has been slimmed down in general, to fit in to the Ofgem business plan page limit, but has included out T1 performance in every area of commitment within this topic. The only T1 outputs in this topic relate to VIP and reduction of SF ₆ emissions.

Communities specific <u>feedback</u> and <u>points of clarification</u>			
Pre-Meeting Calls	Feedback	eedback National Grid Response	
	What is NGET's overall strategy for communities and engaging with communities?	Our approach to communities fits with our corporate vision of: "we will exceed the expectations of our customers, shareholders and communities today and make possible the energy systems of tomorrow."	
	What is the Board's view? How does NGET decide on the particular community activities	We are part way through a 12-month review of our approach to Corporate Social Responsibility (CSR). Our review is looking at the concept of Total Societal Impact (TSI) and rethinking the role of our business in society. For our CSR work we are currently focussing on three priority areas, these are: • social mobility – youth transition to work;	



it carries out rather than other ones?

- promoting environmental sustainability; and
- economic development.

These three areas are guiding our approach to communities ahead of our detailed review that will conclude later this year.

Our review is also looking at how we can bring together all the activities we carry out for society and articulate them better to the public. Our key project areas are:

- Campaigning, including storytelling, use of film and other technology;
- External digital and social channels;
- External stakeholder management; and
- Crisis management.

We launched a pilot of Grid for Good in the USA in December 2018 and are launching it in the UK in January 2019 for six weeks. 'Grid for Good' will focus on social mobility in our local communities by creating a network that connect disadvantaged people to the services they need to encourage, motivate and ultimately improve the quality of their lives. We want to learn from the pilot as part of our 12-month review. The outcome of the review will help us shape our CSR activities in terms of employee volunteering and charitable giving.

The 12-month review period matches the period we have left to finalise our business plan for Ofgem in December 2019. Our review of our approach to CSR and TSI will involve extensive engagement with our stakeholders. For further detail on how this work has developed please see the environment engagement log.

How are NGET's community activities funded? What price control deliverables will NGET commit to on communities in the T2 period? How will NGET report on delivery? How will NGET be incentivised to deliver on its price control deliverables?

Funding

All expenditure originates either from consumers or shareholders' funds.

In 2017-18, of the £66m of expenditure on communities, the large majority was from the Warm Homes Fund. This was funded by shareholders from the sale of our former gas distribution business Cadent.

Our volunteering work is carried out by our staff who are paid for by consumers. However, some of the volunteering represents extra hours our staff would not otherwise have worked and that proportion will not result in more cost to consumers.

Our work to engage with communities around our large construction projects is funded from the project budgets. We anticipate that this will reduce costs due to the reduced time to obtain planning permission when community funding is agreed upfront.

Deliverables, reporting and incentives for the T2 period

As mentioned in our response to question 1 above, we have started a 12-month review of our approach to CSR. We will be involving our stakeholders in this review. This engagement will help define our approach and deliverables for the T2 period.

We will define some outputs in relation to communities. In our January consultation, we are asking stakeholders for their views on our ideas to make our reporting more transparent in the T2 period and to keep our Stakeholder Group going to challenge us on our performance and our reporting. This will give us a strong reputational incentive to deliver on our outputs.

We are also considering whether we should be incentivised through penalties, and in some cases rewards, for under or out-performance of our outputs. We are currently consulting on potential social and environmental outputs for the T2 period.

How do NGET's community activities compare with other large organisations, such as FTSE 100 companies? As mentioned in our response to question 1 above, we have started a 12-month review of our approach to CSR, involving extensive engagement with our stakeholders. We have completed several benchmarking activities and our CSR activity scores highly against other FTSE100 companies in most areas. Our plan will seek to push the organisation to the next level to ensure that we remain best in class



How could NGET be an exemplar in community activities and community engagement? What would NGET hope to achieve by the end of the T2 regulatory period? Do you adopt a natural capital / general capital accounting approach?	for the next regulatory period. Some detailed commitments will remain internal rather than external. We use a natural capital accounting approach for our 'Natural Grid' project sites. Our 'Natural Grid' programme is transforming the way we manage our land and contributing to better, bigger and connected spaces for nature alongside our energy grids. We use our bespoke Natural Capital Tool to create a natural capital baseline. We also use the tool to measure the improvements we deliver at our Natural Grid sites. More details are on page 19 of our publication; "Delivering our environmental future - Annual Statement March 2018"
How is your work with the Sustainability First New Pin project on the public interest feeding into your approach to communities and environment?	https://www.nationalgrid.com/sites/default/files/documents/NG_EDR.pdf We are part of the Sustainability First New Pin project on public interest. The project is looking at how network companies can better address the politics of fairness and the environment. As the project develops we are taking account of its findings and it is influencing our approach to issues such as fair returns, communities and the environment as we develop our business plan.
What proportion of your total budget goes into working in/with the community?	In the UK (electricity and gas) the contribution of our corporate responsibility work was £66m in 2017-18, although this was significantly higher than usual due to the Warm Homes Fund starting. The total revenue of our UK electricity and gas transmission businesses in 2017-18 was £2.4bn. This means that our corporate social responsibility work was 2.8% of our revenue in 2017-18.
Does NGET engage with any community experts in identifying best practice? Has NGET been learning from DNOs and water companies about community engagement?	We and our contractors have developed a high level of expertise in engaging with communities around our large infrastructure projects over a number of years. We and our contractors sometimes engage community engagement experts to support us carrying out our community engagement. Many of these experts have worked on DNO, water and other infrastructure schemes and therefore bring their best practice with them, which we learn from. We also share our learning with other utility companies.
How does educating young people in the community link to your workforce planning?	We promote science, technology, engineering and maths (STEM) as an exciting career path for young people through our education outreach activities. We also raise awareness of the career opportunities in the energy utility industry. These activities help encourage people to join our workforce, although they also help promote educational opportunities more generally. Our apprenticeship schemes represent the more formal part of our future workforce planning. Pages 20 and 36 of our Annual Report and Accounts 2017-18 provide some more information: https://investors.nationalgrid.com/~/media/Files/N/National-Grid-IR-V2/reports/2017-18/annual-report-and-accounts.pdf
Is most of your engagement with Tier 1 (national) as opposed to Tier 2 (local) suppliers? Do we stipulate any conditions for Tier 1 suppliers to source materials locally?	We tend to engage primarily with our Tier 1 contractors because they are responsible for managing the Tier 2 contractors. However, as we explained in the engagement log we are promoting a number of initiatives with our supply chain in relation to issues such as resource and waste management and promoting local employment and contracting opportunities. As part of the Development Consent Order (DCO) process we sometimes agree with our local stakeholders an aspiration for what local sourcing we would like to achieve.



What is the impact of the Warm Homes Fund?	The £150 million fund incentivises the installation of affordable heating solutions in fuel poor households who do not use mains gas as their primary heating fuel. The fund supplements local strategic plans and other funds available. The Fund has awarded in excess of £60m to date, which is expected to deliver around 16,000 measures to fuel poor households. You can find more details about the Warm Homes Fund on the "Overview" pages of its website here: https://www.affordablewarmthsolutions.org.uk/warm-homes-fund/overview
How many grants have you handed out? What projects are they linked to? What is the impact of the grants?	We have handed out 21 grants so far. The average award is just over £11,000 per project. Some examples of projects and their impacts are: 1. We awarded £20,000 to Louie's Helping Hands for building an education and therapy centre for disabled children. This was because their centre is three miles from the Richborough Connection and there are users of the centre from across the area. 2. We awarded £5,000 to Wild Kind CIC for the development of a cabin for outdoor play. This was because our Walham to Clifynydd site affects the local community through footpath and road closures and their four playgroups are between one to four miles from the replacement pylon route. 3. We awarded £17,000 to the Sandwich Bay Bird Observatory Trust for a conservation project to support the local barn owl population. This was because the Richborough connection runs through the area and the work is having an impact on barn owls.
Development Consent Orders (DCOs) What is the average time a consent order takes to obtain? What is the scale of the number of parties? How many are successful and how many are not? How many large construction projects take place at a given time? What engagement is required by the DCO process and what is discretionary by National Grid.	The time taken and number of parties involved in obtaining a DCO varies considerably depending on the size of the project. As we mentioned in the engagement log, for a large project such as the North West Coast Connection, involving 119km of overhead line and 45.4km of underground cable, we engaged with 512 statutory bodies, 7,500 people with an interest in land and thousands of local residents along the route. All our DCO applications have been approved. We think this is in part because of the extensive engagement we carry out before we submit them. The number of large construction projects we have taking place at any one time varies. At the moment, we have two really large projects in construction: Hinkley, which is just starting and Richborough, which is just finishing. We also have about 20 other projects that require some level of stakeholder engagement. The engagement with communities we carry out before making a DCO application is discretionary, although it should make it easier for us to obtain a DCO. Once we have submitted an application the Planning Inspectorate carries out its own consultation process. When the Planning Inspectorate approves a DCO it might require certain levels of engagement, which we build on where appropriate.
Why were no innovative engagement methods considered? Could you have adapted a more collaborative approach?	For our CSR work we are currently focussing on three priority areas, these are: • social mobility – youth transition to work; • promoting environmental sustainability; and • economic development. We developed our approach with the help of experts. As we say in our response to question 1, we have started a 12-month review of our approach to Corporate Social Responsibility (CSR). Our review is looking at the concept of Total Societal Impact (TSI) and rethinking the role of our business in society. Our review will involve extensive engagement with our stakeholders. As we say in our response to question 3, as part of this review we will be looking at what activities other FTSE 100 companies carry out and how we can become a leader in this area.
Should community consultation be referred to as "high	The stakeholder group has made this point to us before and we forgot to update the diagram in the Communities Engagement. Many apologies for the oversight.



materiality" rather than low? How have you responded to Truth's feedback on communities? Are you involving your customers and consumers in your engagement on community activities? We accept Truth's findings based on the information we gave them. Since Truth's report and your request for a Communities Engagement Log we have brought together all our information on communities in one place to make it easier to engage our stakeholders on. Once we have taken on board your feedback from the Stakeholder Group 5 meeting we consider we will have a good summary of our work to engage on with stakeholders. Our plan is to include our community activities in our round of engagement with our customers in January and February 2019. We plan to engage with consumers on specific aspects of community engagement where they can influence how much we do, such as how much work we do to improve the environment at non-operational land around our assets. As we say in our response to question 1, we have started a 12-month review of our approach to Corporate Social Responsibility (CSR). Our review will involve extensive engagement with our stakeholders.		
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CONCLUSIONS AND BUSINESS PLAN IMPACT

It can be seen that an extensive engagement exercise has been undertaken for this topic and we will continue to engage as our stakeholder approach matures. Below is the full list of our commitments for this topic and examples of some key feedback provided, which led to these commitment outcomes. Also attached here is our golden thread document which summarises all the key information relating to this topic.



Golden Thread

Stakeholder Topics - Environment	What our stakeholders are telling us	Our proposals	Consumer benefit
1.i) Environment – our climate commitment and sustainability leadership	Focusing on green house gas emissions should be the highest priority in this topic. 60% of consumers want National Grid to be carbon neutral by 2030 or 2040 (earlier than the legislated target of 2050)	1 of 3 Net Zero pathway investments towards a science based target (SBT) of 34% scope 1 & 2 emissions reduction i) agree funding with Ofgem and deliver a targeted SF ₆ asset replacement programme ii) leakage control ODI − volumes to be independent of replacement programme. iii) Stop designing with 132kV SF ₆ assets in new builds by 2021 iv) Stop using 275/400kV SF ₆ assets in new builds by 2024 (once two solutions are available), sending clear market signals to support this (in 2020) v) continue to use collaboration and innovation to develop alternative technologies so that we no longer have to buy equipment that uses SF ₆ as an insulating gas. Measure: tCO₂e	Reduces the impacts of climate change, cleaner air in urban areas and climate progress across industry
	acceptability testing - the highest level of support would be for more investment in further reducing carbon emissions from operations (around 20% respondents in total) – just ahead of support for increasing investment in maintaining the condition of ET network assets (i.e. overhead lines, pylons, etc) and investments to support future	2 of 3 Net Zero pathway investments towards a science based target (SBT) of 34% scope 1 & 2 emissions reduction i) Operational fleet - replacing 100% with alternative fuel vehicles, where alternatives are available today (2019) ii) this commitment translates to 60% ET fleet replacement at today's market availability iii) the benefit will be a 54% reduction in ET fleet emissions and -1% of scope 1 emissions iv) we will install and maintain charge points across 234 ET sites to enable our fleet commitment v) work with DNOs to ensure efficient use of infrastructure. Measure: % vehicle replacement	
		3 of 3 Net Zero pathway investments towards a science based target (SBT) of 34% scope 1 & 2 emissions reduction - Purchased electricity – We will focus on an efficiency-first approach to decrease the carbon emissions from our office energy use by 20% - We will purchase 100% of our metered electricity from renewable sources. Measure: tCO₂e and date of renewables contract	
	increases in supply/demand for electricity.	- We will continue to report annually on the actions we have taken to reduce the transmission losses induced by our network as well as any activities that have impacted on the losses. Measure: Actions taken	

		- Substation usage - We will create a substation energy efficiency programme Measure: tCO₂e - Capital carbon - Achieve Net Zero carbon construction by 2025/26 by further implementing PAS2080, supported by an offsetting policy and based on current business assumptions that 180,000tCO2e can be offset with up to £2.5m. Measure: tCO₂e - Business transport - Reduce carbon emissions for our business transport by 10% from T1 to end of T2 - reduce vehicle use by promoting rail and virtual meetings and promote EVs on company car scheme and install Electric car charging points at ET substations Measure: tCO₂e - Supply chain - 75% of National Grid's top 250 suppliers (by category/spend) will have carbon reduction targets Measure: % of suppliers with reduction targets - We will lead in transparency on capital carbon and natural capital using data and tools to collaborate and drive environmental progress Measure: We aspire to a consistent industry approach to	
1.ii) Environment - enhancing the natural environment and preserving precious	We should also focus on Biodiversity and natural capital to support carbon reduction and ecosystems	capital carbon and natural capital by 2026 -10% increase in environmental value on all non-operational land by the end of the T2 period – prioritising deprived urban areas. -The ET estate is currently 2798 hectares and environmental value is measured in Biodiversity units and £ natural capital Measure: £ natural value and Biodiversity units # - Deliver 10% Net Gain in environmental value (including biodiversity) on all construction projects (including those	Better local environment for communities, improved ecosystems and reduced climate
resources	'Waste is more important than visuals'	delivered by third parties) Measure: #projects and % net gain - We will reduce the waste we create at our offices (waste tonnage) by 20% from a 2019/20 baseline - Reduce water use in our offices by 20% by the end of RIIO-2 compared to a 2019/20 baseline Measure: tonnes and # litres	Reduced consumer bill and finite resource use.
		- We will achieve – We will recycle 60% of our office and operational waste - On construction projects, we will achieve zero waste to landfill and we will increase the recycling or reuse materials by 2026 - baseline and set a target for construction waste recycling - we will reduce the waste intensity of our construction projects year on year Measure: % of waste recycled, % to landfill and tonnes of waste / £100,000	
		- We will maintain our high standards of oil containment and pollution management Measure: # litres of oil lost in to environment - We will implement the ISO20400 sustainable sourcing process Measure: alignment to ISO20400	
		- We will pilot and implement circular economy principles across the business	



		Measure: # of pilots that implement circular economy principle, circularity metric defined and process to purchase products that can be recycled/reused.	
1. iii)	62% of consumers	- Existing infrastructure in designated landscapes - We will	Improved
Environment	find it acceptable	continue with the stakeholder-led approach for Visual Impact	areas of
improving	for the cost of VIP	project Provision project selection.	beauty for
visual impact	to be socialised via household bills	Measure: # of kms of overhead line removed	society to enjoy

L L			Onjoy
Stakeholder Topics - Communities	What our stakeholders are telling us	Our proposals	Consumer benefit
2.i) Communities -supporting local communities *here we define a 'major project' as one lasting a year or more	We should do more to support local communities but when taken as a whole against all topics, local communities is a mid-low ranked priority 'people should be able to be proud of where they live'	- Communities close to a major* project - assign up to £7.5m (0.3%) of construction projects to focus on local employment and STEM engagement with every local state owned school -continue to fund the community-led grant scheme of up to £20k near to a construction project and £10k near our operations Measure: £m spent, # of schools engaged and % local employment - Communities close to assets - stakeholder-led prioritisation of budget to benefit urban disadvantage through an Urban Improvement Provision by improving our assets or public spaces (focused in the top 30% most deprived areas, per the index of multiple deprivation (IMD)). Measure: stakeholder group satisfaction & # of projects implemented in IMD 1.0-3.0	Enabling more diverse citizens to take part in the green transition and improved community spaces – helping to build pride and wellbeing in the local area.
2. ii) Communities – supporting wider society	'include programmes to improve access to opportunities for more vulnerable groups'	- Provide skills development which will increase employment potential for 6,000 people, focussing on the low-income communities we serve Measure: #people trained	Supports vulnerable consumers nationally, using core skills and expertise
2. iii) Communities – prosperity through employment and the supply chain	All stakeholder	- We want to better represent the communities we serve and we will increase our hires from diverse backgrounds every year - We will report transparently on our entire workforce representation at all levels Measure: % of BAME and % of female - We require all our suppliers, to pay the real living wage to	Improved employee wellbeing and ability to serve our stakeholders
-Further supply chain commitments are listed in annex NGET_A11.06 Responsible Procurement Plan	requests above are applicable to the supply chain too in order to amplify positive practices towards carbon reduction and a level playing field for vulnerable groups.	their UK workers and will verify this at Tier 1 in relevant categories. Measure: # of individuals with wage increase as a result of National Grid commitment - Promote skills development in the supply chain by requesting that a minimum of 5% of the supply chain technical headcount is upskilled annually Measures: # of suppliers signed up to Skills Accord and % technical headcount under training plans - Use influence to identify and address potential human rights exploitation in the supply chain Measure: Modern Slavery Index (MSI) rating #	Access to opportunity, fair pay and skills development can support social mobility.
		- Promote equal opportunities in the supply chain	



Measure: # events supported to identify and # of projects	
using CompeteFor (a tool used to adverstise opportunities in	
the supply chain)	

1. DOCUMENT CHANGE CONTROL

Version Number	Date Updated	Updated by	Comments
1	14/09/18	Gary Stokes	First draft of background, initial engagement activities and initial results (sections 1 and 2)
2	18/09/18	Jonathan Ashley	Updated section 1
3	14/5/19	Sarah Kenny- Levick	Updated with Project Impact, Business Plan consultation, Cultural Analysis Research and Willingness to Pay.
4	8/10/19	Sarah Kenny- Levick	Updated with SF ₆ engagement, Procurement engagement and expert engagement against the Environmental Action Plan.
8	4/12/19	Sarah Kenny- Levick	Updated with environmental webinar data from November 2019 and WFAA expert engagement. Included commitment and stakeholder feedback linkage in conclusions and golden thread.

APPENDIX 1 - ENGAGEMENT PRINCIPLES CHECKLIST

1	Define and map your stakeholders - anyone who believes they are affected by your decisions. Recognising the different threads of the public interest – stakeholders, customers, consumers, citizens, communities (geographical and interest)
2	Be clear what you want to achieve with "engagement" – have clear policy objectives and measures of impact; (incl. where you most need to engage)
3	Understand the "spectrum of participation" and difference between each part of that spectrum: inform, consult, involve, collaborate, empower
4	Engage early in the process, review and improve throughout
5	Leadership – effective stakeholder engagement must be led from the top of the organisation
6	Commitment – to listen to stakeholders' views and act on or respond to them
7	Objectivity – an open approach to obtaining stakeholders' views and to interpreting them. Seek to understand views on a range of topics and on all aspects of the business plan, rather than predetermining their priorities or seeking to endorse your own priorities
8	Transparency – to build stakeholder trust and show that you take their views seriously (incl. how we've considered views, weighted and managed trade-offs)
9	Be inclusive: work with stakeholder groups to gather the fullest range of interests. Understand and balance the differences between different segments. Understand and balance the differences between existing and future stakeholders
10	Be aware that those who often participate i.e. the "usual suspects" are not always representative
11	Be accessible to all (e.g. in consideration of the tasks, timelines, contact person, tech., locations, challenges of communication, etc.)
12	Use targeted approaches to tailor engagement to suit the knowledge and awareness of different groups
13	An ongoing process that is embedded across the business – not just a stand-alone business planning/price control review exercise.
14	Evidence based – use a full range of available sources of info to identify priorities, views and challenges (e.g. operational insight, bespoke research,
15	Gather evidence through a range of methodologies and tools including willingness to pay, qualitative research, surveys, complaints intelligence, market data
16	Be responsive – seek to adopt a flexible process to engagement, responding to the information revealed as the process progresses
17	Demonstrate impact of engagement – ensure that the engagement design process plans for and allows evaluation of success
18	Innovation – trying new and innovative ways of engaging

APPENDIX 2 - STAKEHOLDER SEGMENTS, ELECRICITY

Stakeholder Segment	nts – Electricity Description	Example organisations
Political	Elected officials and advisors; Westminster + Cardiff	MPs, SpAds, Assembly Members
Governmental	Civil service and committees	BEIS, DEFRA, NIC, CCC
Regulatory	Energy and safety regulators	Ofgem, HSE
Consumers	Members of the public, commercial & industrial	Members of public and businesses
Consumers bodies	Members of the public, commercial & industrial	Citizen's Advice, NEA, Which?, MEUC, CBI
Communities	Local councils, community representatives	Greater London Authority, Anglesey County Council
Large customers	Large, often vertically integrated and international	Big 6, Drax, Orsted, Network Rail
Small / new customers	Small, often specialist organisations or non-energy	OVO Energy, Robin Hood Energy, JLR
Network companies	Other regulated energy network companies	UKPN, WPD, NPG, ENW, SPEN, SSEN
New business models	New business exploiting the '3 Ds'	Pivot Power, Limejump
Think tanks & innovators	Elected officials and advisors; Westminster + Cardiff	Energy Systems Catapult, IET, EIC
Interest groups	Groups representing special interests	Green Alliance, Sustainability First,
Academics	Energy specialists and researchers in academia	Imperial College, Exeter Uni., Newcastle Uni.
Supply chain	Developers and suppliers of network assets	Siemens, ABB, Prysmian
Other	Stakeholders not defined in other segments	Media, Consultants, EU bodies, etc.

APPENDIX 3 - POPULUS CONSUMER RESEARCH

APPENDIX 4 - FRONTIER-ECONOMIC COMMENTS

APPENDIX 5 – HOW EDR WORKS?

APPENDIX 6 - DECISION MAKING FRAMEMWORK CHECKLIST

PLAN AND PREPARE	IMPLEMENT & REVIEW	ACT
Clear scope and outcomes defined□	Triangulate diverse views □	Use conclusions to build business plan □
Information sources identified \square	Share outcomes and conclusions \square	
Unbiased material produced □	Evidence to justify conclusions \square	
Tailored to our diverse stakeholders; targeting those most impacted □	Undertake further engagement where required □	
Options consistent with our checklist \square	Articulate where trade-offs or no action taken and why □	
Ensure inclusivity of views □		



APPENDIX 7 - NATIONAL GRID STATEMENT TO STAKEHOLDERS ON DECISION TO PAUSE WORK ON NEW FOREST NATIONAL PARK PROJECT

Despite strong support, National Grid has decided to pause work on its landscape enhancement project to remove eight pylons from Hale Purlieu in the New Forest National Park following advice from legal experts, the regulator and its independent Stakeholder Advisory Group.

The decision has been made due to emerging complexities surrounding the European regulations designed to protect the natural habitats of protected species. While these regulations are designed to prevent the permanent loss of habitats, and not stop short-term work that we believe could have provided a net gain to the environment in which we were working, it is evident that the legal position is complex and, importantly, untested for a project of this nature. It is therefore unlikely that a planning application for this project would receive approval before the funding deadline.

David Wright, Director, Electricity Transmission, at National Grid, said: "This project would remove eight electricity pylons while enhancing a nationally important landscape, and potentially improving and extending the important habitats in this beautiful part of the New Forest National Park. It has been developed over three years with the close collaboration and support of many local people and national environmental bodies. Our extensive community and stakeholder engagement throughout has shown strong support for these plans.

"However, the current round of funding is only available for a limited time, and due to what we believe is an unintended consequence of the regulations it has become clear that we will not be able to complete this in time

"We would like to thank everyone for their engagement and involvement to date and sincerely hope that it will be possible to return at some future date when the legal position has been resolved."

The decision was made in consultation with National Grid's independent Stakeholder Advisory Group, which comprises representatives from national organisations with an interest in enhancing landscapes and environments throughout England and Wales.

The Group's Chairman and leading environmentalist, Chris Baines, said:

"After three years of extremely intense work, it is disappointing to have to recommend pausing this project.

"There has been terrific support from many local people and environmental professionals, and I remain convinced of the long-term landscape and environmental benefits of this scheme. I do believe that it remains possible in the longer term to deliver exceptional visual improvement whilst at the same time enhancing the wildlife habitat at Hale Purlieu.

"However, there is a need to build confidence in the legal process before the project can move forward again."

National Grid will continue to progress its other VIP projects to replace pylons with underground alternatives in the Dorset Area of Outstanding Natural Beauty and the Peak District and Snowdonia National Parks. Early works on the construction of the fully-consented Dorset project to remove 22 pylons near the villages of Winterbourne Abbas and Martinstown began earlier this year.

