

Electricity Stakeholder Engagement Incentive Submission (Part 2)

2014/15

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Discuss



I'm delighted to share with you Part 2 of our stakeholder submission report. In this document, we describe our progress over the past year and share examples of some of our engagement activities and their outcomes. I'm proud of what we've achieved and we're committed to improving how we listen, discuss and act with our stakeholders. This report highlights some of the positive changes we've made within Electricity Transmission.

We understand that asking for views and feedback from the right stakeholders at the right time is very important in making sure we deliver our responsibilities to them. We aim to get better all the time and we set ourselves challenging targets. The challenge we have set within Electricity Transmission is to focus much more on our stakeholders and less on ourselves.

In 2014/15 we asked our stakeholders what they wanted us to focus on. We then published a number of commitments, which were aligned to our five stakeholder output areas – safety, reliability, the environment, connections and engagement. In support of these commitments, we've made some significant changes to what we do including identifying key priorities we will focus on. Working with our stakeholders is crucial in helping us to improve our business and work more efficiently, in a way that will ultimately benefit all bill payers.

I'm particularly proud that our great work with stakeholders contributed to us being named Business In The Community's Responsible Business of the Year in 2014, and that by working with schools, universities and other organisations, we have promoted technical subjects to over a quarter of a million young people and helped create thousands of new apprenticeships.

Changing our approach and looking forward

In March 2015 we held a leadership conference focused on finding a better way of delivering for our customers and stakeholders. At the conference we challenged our people to involve stakeholders in all of the decisions we make. We believe that what's right for our stakeholders is right for our business.

So there will be more discussion, more focus on what is right for our stakeholders, and more measurement of what our stakeholders think about our performance. All of this will help us make better decisions and deliver what our stakeholders want from us.



David Wright
Director of Electricity Transmission
Asset Management

Responsible Business of the Year 2014

In 2014, we were awarded Responsible Business of the Year by Business in the Community. This prestigious accolade rewards an organisation that can demonstrate it is operating responsibly in everything it does and how it is improving outcomes for society through its work.

One of the reasons we won the award is that hundreds of our employees volunteer in communities across the UK. Sharing our skills enables charity and community organisations to access expertise they may otherwise have to pay for, helping them to be more commercial in the way they operate and making them more sustainable. We've also invested our time and energy to work with the next generation of talent through education programmes, and inspired schoolchildren to study Science, Technology, Engineering and Maths (STEM) subjects.



Engaging more broadly to reach a wider range of stakeholders

Throughout the rest of this document, we provide examples of the many ways in which we worked with our stakeholders in 2014/15. The case studies highlight some of the innovative channels and techniques we've used, and we've expanded this approach to some of our more 'traditional' methods of engagement, such as conferences and events. We've led or participated in a much broader range of events to provide opportunities to connect with an even wider range of stakeholders, particularly those who have previously been harder to reach. In 2014/15, these included:

- presenting our Future Energy Scenarios to University of the Third Age (U3A) groups
- participating in the first sustainable supplier forum to collaborate with suppliers on innovative ways to combine reductions in cost and carbon footprint (attended by 20 suppliers)
- being invited to partner with the Major Energy User Council to engage with large energy users through a conference and panel representation (approximately 450 attendees)
- participating in the annual Euromoney Conference, attended by MPs and many banks and financiers from across Europe (more than 200 attendees)
- participating in the Waterfront Grid Connection conference aimed at transmission and distribution grid connections for new generation (around 50 attendees)
- participating in a Government/UK Trade and Industry event in Madrid, which aimed to help the Spanish supply chain understand the UK market and promote the UK industry to encourage investment in UK generation (100 attendees)
- renewing our involvement in the AllEnergy conference that covers Scottish energy industry developers, with more than 7,000 attendees, from developers and supply chain members to affected and interested stakeholders
- becoming an affiliated member of the Scottish Energy Advisory Board and being invited to sit on the Industry Leadership group, focused on transmission grids, Carbon Capture and Storage and thermal generation.

1. A summary of our engagement activities and outcomes in 2014/15

Our stakeholders' views have influenced significant changes over the last year – the table below highlights some of the main outcomes of our engagement activities in 2014/15. The case studies that follow demonstrate how the changes relate to the key priorities our stakeholders asked us to focus on, as well as their tangible outcomes and benefits.

Stakeholder Outcomes	Our activities	Who we've been engaging with	How we engaged	Approximate cost to deliver these engagement activities	Stakeholder benefit	How our engagement activities are making an impact
Safety	Listening and responding to EMF concerns Page 3	Consumers & Communities	Dedicated helpline and website, public exhibitions and events	Our EMF website costs £50 to run per annum	<ul style="list-style-type: none"> Increased understanding of EMFs amongst stakeholders Online EMF calculator created in collaboration with representative groups. 	<ul style="list-style-type: none"> A total of 487 conversations around EMF with stakeholders via the helpline Our EMF website generated 123,000 views from approximately 45,000 unique users.
Reliability	Guardian Big Energy Debate inspires big ideas Page 4	Non-Government Organisations, Political, Communities, Energy Industry, Suppliers	Year-long series of events	We invested £50,000 to run the Big Energy Debate with the Guardian	<ul style="list-style-type: none"> Increased awareness of future energy challenges through events, research and interviews Increased interest in energy. 	<ul style="list-style-type: none"> 245,000 users viewed our content through online articles, interviews and videos 2,000 people took part in independent research to share their views on energy Over 50 stakeholders from environmental, community groups and the industry and 30 MPs attended three of our regional round table conferences across the UK.
	Preparing the industry for Electricity Market Reform Page 5	Regulators, Customers, Energy Industry	Workshops, tutorials, one-to-one sessions	90 days of our employees' time to facilitate training events and general industry support	Participants were educated and informed to enable successful qualification at auction	Security of supply, following capacity market auction bringing in 67.3 gigawatts
	SMART thinking addresses future challenges for bill payers Page 6	Educational Interest, Supply Chain	Strategic partnerships, dedicated website, stakeholder events	£6.9 million of funding secured from NIC for SMART Frequency Control project	Collaborative innovation to develop SMART project for improving our services	By the end of 2020 we envisage annual cost reductions for consumers of up to £200 million
	Collaborating to help SAM help stakeholders Page 6	Supply Chain, Customers, Energy Industry, Non-Government Groups	Conferences, roadshows and workshops	10 days of our employees' time to present at conferences including the Low Carbon Network Innovation fund conference and a National Grid shareholder conference	Increased access to information via our new online portal	Reducing the length of outages which cost between £10,000 and £1 million per day
Environment	Working together to conserve natural beauty Page 7	Non Government Organisations, Communities	Stakeholder panels, reports and consultation documents	2 full time employees designated to facilitating the programme	<ul style="list-style-type: none"> Input into which projects will benefit from the Visual Impact Provision funding Dedicated team and news updates service to answer questions from organisations and the general public. 	We now have an agreed, prioritised list of projects to take forward for funding
	Creative community integration Page 7	Communities	Innovative engagement methods including photo montages and time lapse video to share information. Partnership with local arts charity to improve visual impact on community	A donation of £61,000 was made to the arts charity partner for delivery of 12 community workshops, a trainee support worker and materials	Minimising our visual impact on the community	<ul style="list-style-type: none"> Over 800 local residents engaged with on their views on substation design Greater community integration for National Grid.
	Collaborating to reduce carbon Page 8	Suppliers	Supplier forums to share best practice	<ul style="list-style-type: none"> 21.5 days of our employees' time A total cost of approximately £200,000 to develop the tool. 	Increasing our suppliers' ability to identify the carbon impact of their construction projects using our carbon interface tool.	Forum attended by 20 suppliers
	Protecting biodiversity on our sites Page 8	Communities, Non Government Organisations	Local Trust partnership, innovative tools	Investment of £29k in the delivery of site management plan and actions over the next three 3 year period	Partnering with Yorkshire Wildlife Trust to develop sustainable management plan involving the local community	Measurable and quantifiable improvements in the condition and value of nature on our sites. At Thorpe Marsh the value of benefits provided from the natural capital and ecosystems increase from a baseline of £164k to £407k
Customer Connections	From misunderstood to trusted advisor Page 9	Energy Industry	Collaborative working with an industry partner	3 days of our employees' time	Improved business planning through better communication and shared views	Revision in customer connection dates and volumes contributing to an efficiency saving of approximately £8-10 million
	Upfront information across networks Page 9	Customers	Seminars and an online tool	A total of 17 man-days have been utilised to develop the tool, this will grow to an anticipated 60 once fully developed	Customer Interface tool developed and shared with Distribution Network Operators	Over 100 of our customers and stakeholders attended the London and Glasgow events
Engagement	Listening to reduce the noise Page 10	Consumers	Working closely with the community	14 days of our employees' time	<ul style="list-style-type: none"> New approach to selecting overhead line technology based on stakeholder impact Approach being applied to other projects. 	Potentially avoiding £10 million in replacement costs

2. Extending our focus on safety to keep the public safe

Our stakeholders say we perform well on safety, giving it a strong emphasis, and they want this to continue.

2.1 Sharing best practice with South Yorkshire Fire and Safety Rescue

When South Yorkshire Fire and Rescue (SYFR) visited our Woodhead site as part of our regular engagement on fire hazards and safety, they saw that our Victorian tunnels would be the ideal place for them to practise tunnel rescues.

The firefighters needed to experience working in confined tunnels, which are common in South Yorkshire. We were delighted to let them use our site to help them train and protect the community. It was also a good opportunity for our project team to test our emergency plans.

We worked with SYFR to develop a training day in which our project team set up a training facility and SYFR developed rescue scenarios and risk assessments.



South Yorkshire Fire and Safety rescue team



Coming together for site induction and briefing

Outcome – This was an excellent opportunity to work together. More than 40 members of SYFR were trained and now have experience of working in confined tunnels. During quarterly community meetings afterwards, local people praised the exercise and said they felt reassured that their fire service had done this safety training.

We are now looking for opportunities to share what we've learned at our other sites, particularly in London where underground tunnels could be used.

2.2 Listening and responding to EMF concerns

Our communities have told us that they are concerned about the perceived impact of the electromagnetic fields (EMF) produced by electricity power lines.

Outcome – To help address our stakeholders' concerns, we provide bespoke services for advice and helpful information. In 2014/15, we used a range of channels including:

- an EMF helpline with a nationally advertised phone number and email address to make contact as easy as possible. In 2014/15 the helpline led to conversations about EMF with 487 people
- a website (EMFs.info) – last year we transferred the content to a new package that gives more flexibility – including the use of animations and interactive graphics to explain issues. The site costs only £50 per annum to run. Between its 'go live' date in October 2014 and the start of April we had 123,000 page views from 45,000 unique users, as shown in the graph below.

This ongoing communication has shown us that stakeholders want to understand the changing levels of EMF at different times. In 2014/15 we worked with EMF stakeholder groups Powerwatch and Revolt to introduce a new online power line field calculator to address this.

We have also included this work in our new projects, as we talk to people at public exhibitions and meetings. Often, stakeholders will raise concerns when there are proposals for new overhead lines or substations – and we talk to grantors, neighbours of grantors, community groups, councils, lobby groups and protest groups. For example, when the pan-European collaboration group BestGrid held a workshop at which EMFs could feature as a case study, we proposed a joint presentation with representatives of organised stakeholder groups who might otherwise not have been involved.

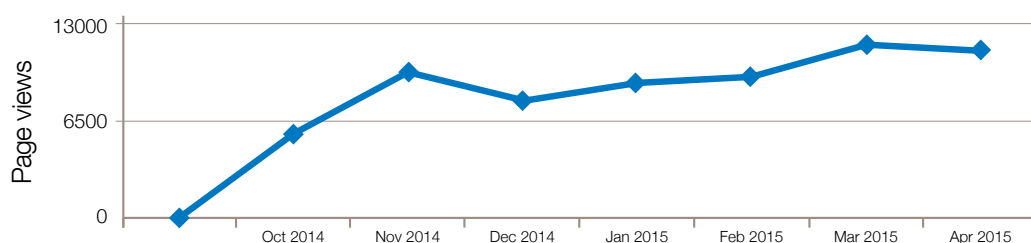
"Emfs.info offers a refreshing openness to the debate on electromagnetic fields and public health... the website is a very valuable online resource to industry representatives, academics and lay people."

Graham Lamburn, Powerwatch UK

"Thank you so much for all the trouble you took to explain in depth the details about substations in general and in particular to talk me through the anxieties I had over the substation next to the house I am considering buying. You have offered me the information I needed in order to make an informed decision and I now feel much more knowledgeable with regard to the magnetic fields from these units. The clarity with which you answered my questions was most helpful and reassuring, and as a result I feel I can proceed safely with my purchase. I am very grateful for your help."

Stakeholder feedback letter

Increase in use of EMF website



3. Expanding our engagement activities to influence the future of energy

The most important thing that supports our understanding about the future of energy is the views of our stakeholders. Having positive and informed discussions is the right way to find solutions to the energy challenge.

3.1 Future Energy Scenarios (FES) approach endorsed as European best practice

As part of our 2014 FES development process, we built on what we'd done in 2013 and listened to make sure our scenarios were as robust as possible.

Outcome – We delivered on our promise to stakeholders to double the number of scenarios in the final publication from two to four.

When we surveyed stakeholders at the FES launch conference, more than 65% of the 302 respondents felt we had 'met or exceeded their expectations' on the breadth of the scenarios. Attendees appreciated the new ways of communicating, such as an interactive 'expo' where they could talk to the team and really dig into the detail with experts who have carried out the analysis.

They also praised our improved website. The expo and the website contributed to more downloads of the FES documents than in previous years (7,694 between January and March 2015).

In 2014/15, we reached out to a wider group of stakeholders and responded directly to those who wanted us to focus on small generation, rather than on larger-scale generation activities.

For example, we communicated proactively with isolated and small Scottish Highland communities to increase awareness of FES among a wide range of interest groups. We took part in the Orkney Renewable Energy Forum (OREF) – a great opportunity for us to learn more about the issues around managing large volumes of renewable generation and the broader operational considerations.

The OREF showed us various renewable energy projects on the island, which allowed us to see the issues – and their solutions – at first hand. We took part in a wide-ranging and detailed Q&A session around energy and Orkney's part in the wider GB future of energy. These discussions with harder-to-reach stakeholders have brought many advantages, including being able to include broader and more accurate marine energy scenarios in FES.

Outcome – Our approach to communicating FES is viewed as industry best practice by the European Network of Transmission System Operators for Electricity (ENTSO-E) and wider transmission system operators throughout Europe. Based on our FES experience and proactive stakeholder communication, ENTSO-E found some significant ways of improving its Ten Year Network Development Programme (TYNDP) process. We are actively working with ENTSO-E to improve its engagement activities. This will make sure that pan-European future energy scenarios represent the views of a broad range of European stakeholders.

As well as considering small changes for the 2016 TYNDP, ENTSO-E is looking even further ahead. For the 2018 TYNDP, it's planning to make broader changes so that the approach to stakeholder communication is more in line with the process we follow for FES.

"National Grid's focus on stakeholder communication for scenario development has inspired us to develop stakeholder communication further for the ENTSO-E scenario development. The full effect of this will be apparent with the 2018 version of the ENTSO-E scenarios."

Niels Franck, Energinet.dk (ENTSO-E representative)

3.2 Engaging to help us keep the system working

We introduced our System Operability Framework (SOF) in 2014 as an opportunity to engage and explain how the radical changes to the energy landscape identified in FES will affect our energy system and services. This annual process also provides an opportunity to highlight potential future problems and invite the industry to work with us on providing the right solutions for them.

As part of the structured approach of SOF, we spoke to interested parties to discuss our findings and understand how we can adapt and improve to deliver the services that our stakeholders need. The reaction to SOF 2014 was positive and stakeholders told us that they wanted to be more involved. We reviewed our process using Performance Excellence, which is a new, structured approach to problem solving that we are embedding throughout Transmission in partnership with Unipart.



SOF engagement

Outcome – In early 2015 we held a workshop with more than 60 experts from across the industry and presented a project timeline for the development of SOF, which built in engagement at each stage of the process. This plan was well received and our stakeholders' contributions during the workshop were invaluable in helping us to shape the 2015 proposals. We are continuing to work with them.

3.3 Guardian Big Energy Debate inspires big ideas

We know that the public debate about energy can be confusing, with conflicting messages from industry, government and others. Work is needed across the industry and with government to help people understand the 'energy challenge' and inspire a more constructive discussion about the future of energy in the UK.

That's why we invested £50,000 to run the Big Energy Debate with the Guardian. This year-long campaign saw us debate the future of energy with the public, energy experts, the industry and policy makers. In collaboration with DECC, Siemens, The Crown Estate and four major industry associations and institutions, the campaign included online editorial, regional and political events, public attitudes research, interviews and Q&As to inform, educate and stimulate discussion.

3. Expanding our engagement activities to influence the future of energy cont.

Outcome – The results of the campaign were even better than we expected:

- 245,000 unique users viewed the content online with articles, commentaries, interviews and videos throughout the year, with more than 50% returning to the site. The content generated 2,000 online comments and 15,000 shares on social media
- 2,000 people took part in independent research to share their views on important energy issues. This gave us detailed information that we used to inform the debate throughout the campaign
- more than 50 stakeholders from environment and community groups and the energy industry, plus independent experts and policy makers, debated at three regional roundtables in Bristol, Glasgow and Staffordshire to discuss the future of energy in the regions
- public events were held at the Conservative, Labour and Liberal Democrat party conferences and more than 30 MPs attended three Westminster roundtables to discuss the main 'asks' highlighted in the campaign and feed into the policy-making process
- we held three live online Q&A sessions to discuss important issues like energy efficiency and fuel poverty with experts in the field and with the Secretary of State for Energy and Climate Change
- the campaign ended with a Westminster reception where policy, industry, environmental and rural groups discussed the crucial themes of the campaign.

We are now working with government and industry partners to apply this understanding of best practice as we use new channels to reach wider audiences.

3.5 How we connect with large energy users

Our stakeholder mapping approach helps us to understand the needs of each of our stakeholder groups. This process has shown us that high users of energy, such as Vodafone and BT, have a significant interest in the energy debate and the associated cost. We're already talking to some of these organisations because they help us to balance the flow of electricity by using less energy when we ask them to. However, we don't usually have a direct relationship with these stakeholders because they connect to the distribution networks.

In 2014/15, we teamed up with representative body the Major Energy User Council (MEUC) and participated in its 2015 spring conferences over three days in Bolton, Coventry and London. This helped us to reach some of the organisations that use lots of energy.

Outcome – We engaged with hundreds of our stakeholders through exhibition stands, presentations and a lively panel discussion:

- MEUC was keen to work with us to help shape the future energy industry and has asked us to work together on the political debate around this topic
- members who were interested in greater visibility and understanding of energy costs attended an information session about the energy market and outlined the various options for maintaining security of supply
- this gave members a better understanding of, and addressed any concerns around, the recent media coverage of electricity supply during the winter
- they also learnt about our services and how significant end users can take part in demand side balancing activities.

3.6 Preparing the industry for Electricity Market Reform

In July 2011 the Energy Bill introduced Electricity Market Reform (EMR), a £110 billion investment programme set up to make sure there are sufficient energy supplies in the future, that there is long-term investment in low-carbon technologies and that market mechanisms are introduced efficiently, minimising the cost to consumers. These aims will help the UK achieve its target of reducing greenhouse gas emissions by 20% by 2020.

As part of this work we began the launch of the capacity market in January. This focuses on providing regular retainer payments to reliable forms of demand- and supply-side capacity.

To prepare the industry we collaborated with Ofgem and government bodies and ran joint workshops for groups affected by the changes. These involved presentations, tutorials and one-to-one question sessions. We updated the content with government legislation and policy as it became available. Ahead of these events, we said we would assess their success by looking at the number of applicants later offering capacity.

Outcome – The engagement events helped us to make sure that participants had the information they needed to qualify and take part in an auction. This work helped to bring 67.3 gigawatts to that auction, which gives the industry confidence that there will be a reliable, long-term supply. It will also keep costs low for consumers.



Panel discussion at the Big Energy Debate

3.4 Connecting with the public on the energy debate

We recognise that we need to engage the wider public about the future of energy, working with our industry partners who typically attend our more formal events. So in 2014, Richard Smith, National Grid's Head of Network Strategy, and David MacKay, from DECC, attended the Hay Festival to listen to the public's opinions, test their ideas and explain the harsh realities behind achieving the UK's 2050 decarbonisation targets.

The event was a timely reminder that education and collaboration between the Government, industry and the public are the best ways to help us make the right decisions in this time of energy uncertainty.



4. Getting better at delivering today's energy reliably

The future of energy is important, but so is providing a safe, reliable and efficient service to our stakeholders today.

4.1 SMART thinking addresses future challenges for bill payers

The energy landscape is changing, and we know we have a key role to help find innovative ways of being more efficient, including the ways in which we meet the growing challenges around balancing the flow of electricity. That's why we've set up partnerships with a variety of interested stakeholder groups, including Alstom, Flexitricity, Belectric, Centrica, the University of Manchester and the University of Strathclyde.

Outcome – In 2014 this collaboration resulted in a successful application for Network Innovation Competition funding of £6.9 million to introduce the SMART Frequency Control project. The three-year project will develop and demonstrate an innovative approach to monitoring and controlling the network's system frequency. We will also develop a commercial framework to provide robust foundations for a new generation of technologies.

To broaden our communication, we're setting up a dedicated website for interested stakeholders and we'll share more detail at stakeholder events. As a direct result of our partnering approach, there will be new balancing services products by the end of the project in 2018, leading to annual cost cuts for consumers of up to £200 million by 2020.

4.2 Collaborating to help SAM help stakeholders

Our stakeholders want us to provide a reliable and cost-efficient service. Our strategic asset management (SAM) system helps us to do this. SAM provides near real-time information from remote monitoring systems at several sites, allowing us to keep a closer eye on equipment and replace it only when we need to.

It's important that we share this best practice approach and involve our stakeholders as we develop it. Suppliers, research organisations and other innovative companies help us to run discussions and presentations on the benefits of SAM at a range of conferences, roadshows and workshops.

Outcome – During events we've shown how effective condition-monitoring equipment can be, and how stakeholders can benefit from the non-invasive approach of monitoring assets by capturing thermal imagery and using radio frequency profiling techniques. This work can help to defer replacement costs of up to £5 million for a transformer, and can reduce the outage costs associated with maintaining equipment (which can be up to £1 million a day).

As part of the strong relationships we have with our stakeholders, they're continually challenging us to provide a service that is even more reliable and efficient. By working with IBM, we developed internal analytics modelling techniques that help us to maintain assets more efficiently. And we worked with Flir to develop new ways of using data from its thermal imagery technology.

Last year we responded to feedback by creating an online portal to share information about the next generation of asset intelligence tools in Electricity Transmission. We'll be introducing these in 2015/16.

4.3 Evolving our strategy to communicate more widely about security of supply

We publish an annual suite of reports that update the market and wider stakeholder groups on security of supply. We keep improving these documents by going through an annual

engagement cycle that helps us to get valuable feedback from our stakeholders.

For the 2014 Winter Consultation Report, we used an online survey for the first time because stakeholders told us this would make it easier for them to respond.

Outcome – We received 10 times more consultation responses than before, and responses from a larger group of industry participants led to better quality data and more robust analysis for the report.

The Winter Outlook Report was headline news in October 2014 because of fears around energy supplies, so we worked hard to reach a wider audience to communicate its key messages:

- we spoke to government and regulatory bodies at all levels before publishing the document
- we presented the report at an Ofgem industry and media seminar on the day of the launch
- our senior leaders appeared on major news programmes, including BBC News and ITN.

In early 2015 we asked our growing stakeholder audience for feedback about our suite of outlook reports.

Outcome – In response, we introduced the following changes to the 2015 Summer Outlook Report:

- we built the structure around stakeholders' interests and focused on sharing clear messages, using plain English definitions and including relevant case studies
- we featured the topics that stakeholders told us were important, such as system operability and educational issues
- we introduced a stronger digital strategy that included online data and more use of social media.

Early audience feedback has been very positive, with both Ofgem and DECC noting a marked improvement in the report's relevance to current issues.

"We had the opportunity to feed into the Summer Outlook 2015 Report at National Grid's excellent customer service seminar in Kensington. National Grid followed up on these comments after the event, to make sure they were fully understood."

Zoltan Zavody, RenewableUK

4.4 Helping our customers manage uncertainty

Balancing System Use of System Charges (BSUoS) is the mechanism we use to share the cost of balancing the flow of electricity among industry participants.

Charges can vary on a daily basis, because they depend on the volume and costs of the actions we have to take, such as introducing constraints on high wind generation days.

Through our regular Electricity Operational Forum, industry participants raised the importance of forecasting costs on their generation decisions. A small increase in charges, when combined with all of the other associated running costs (like fuel or maintenance), could change an individual generator's outlook from profitable to unprofitable.

We worked with a diverse group of people from across the industry to understand what forecast information would be useful, when to publish it and how far ahead to look.

Outcome – Based on this feedback, in December 2014 we introduced a rolling three-day-ahead BSUoS forecast to the market. This was very well received by the industry at subsequent forums.

5. Reducing our visual impact on the environment

Stakeholders told us in our Stakeholder Commitments consultation that they wanted us to reduce the visual impact of our assets in their communities and in Areas of Outstanding Natural Beauty (AONB). We've listened.

5.1 Working together to conserve natural beauty

Our assets have a visual impact on the landscape and many of our stakeholders feel very strongly about this.

With the introduction of the Visual Impact Provision (VIP) programme under RII0, we identified the opportunity to change the way we communicate with our stakeholders and create a more open and trusting relationship with them.

The VIP is a £500 million fund to help reduce the visual impact of existing transmission assets within National Parks and AONB in England and Wales. In early 2014 we set up the Stakeholder Advisory Group to determine the priorities for action. This independent panel includes representatives of the National Parks and AONB, statutory bodies with relevant responsibilities and technical expertise, and organisations with an interest in protected landscapes and rural areas, such as English Heritage and the National Trust.

Outcome – Since April 2014, the Stakeholder Advisory Group has identified the first potential projects that could benefit from VIP funding, also taking into consideration the views of stakeholders not directly represented on the panel.

This is a more collaborative, inclusive and transparent approach than we have taken in the past, and is an example of how we're improving the way we engage in general. We're actively involving our stakeholders at the start of the decision-making process, listening and discussing challenges openly, and explaining some of the technical challenges connected with certain options.

We are expanding this approach to include a high-profile national media launch that will share details of the first potential projects. We'll support this with additional communications to MPs, AONB, National Parks and communities in shortlisted areas that will ask for feedback.

We've also created a new, dedicated team to answer questions from organisations and the public, and developed a news update service that interested parties can subscribe to.

"It is encouraging that National Grid is communicating so openly with groups like CPRE to remove transmission lines and electricity pylons from our precious landscapes."

Neil Sinden, Director of Policy and Campaigns, Campaign to Protect Rural England

5.2 T-Pylon progress: positive community response

T-Pylon is a new design that provides another option for communities when we build or replace certain assets on the electricity network. We mentioned last year that we included the design as an option for the Hinkley connection project in South-West England. In 2014/15, this option received a positive response from stakeholders and, as a result, we reviewed our original plans so that we could use the T-Pylon for a section of the route.

In early 2015, we started to construct a T-Pylon at our training centre in Eakring, giving stakeholders an opportunity to see the new design on the landscape. We raised awareness of this widely through press and internet coverage, becoming one of the top three BBC Online news stories and recording more than 2,500 online references and blogs.

5.3 Creative community integration

We recognise that the visual impact of substation sites is extremely important to local communities. People sometimes see our sites as an inconvenience, so we're doing more to make sure that we become part of the community by being a good neighbour.

Seeing the light in Ealing

During regular discussions with the Residents' Association, it became clear that our Ealing substation site's appearance was extremely important to the local community.

So when we were planning to build screens to reduce noise from the substation, we proposed a number of options so that residents could understand the visual impact of the screening and decide whether this was acceptable to reduce the noise level.

To do this, we used some innovative approaches – we produced photo montages to show how the screening would look, and we realised that any potential impact on light was as important as the appearance of the screen. So we produced a time-lapse video to show the level of shadow produced by the screen during each season.

We identified the favourite design through holding public information sessions, and receiving feedback to leaflets we sent to more than 800 local residents and information posters we put outside the substation. We also kept local councillors and MPs up to date through written communications.

Art in Islington

Building on this success, we recognised the impact a new substation in Islington would have on this densely populated area. The site is on a main road served by a number of bus routes, with a large primary school close by, and many people walking past each day.

Protective hoardings are due to stay on the site for more than three years, so we launched an innovative project to improve their appearance, while also building new and improved relationships with the local community and educating people about the energy challenge. We tested a unique partnership with a local arts charity, working with local people to produce large-scale artwork, designs and poetry now prominently displayed on the site hoardings.



Unveiling the hoardings

We held community workshops, including one workshop tailored around creative language for a stakeholder group with particular needs. We also hosted a community event to mark the unveiling of the finished hoardings – a positive opportunity to demonstrate our commitment to working with our neighbours.

Outcome – In both cases, by engaging in an innovative way, we were able to integrate our activities into the community and build much stronger bonds with local people.

6. Safeguarding the environment for future generations

We've improved the way we put communication, sustainability and environmental management at the heart of our business. We have a responsibility to make this happen, so we've introduced a range of initiatives that we're working on with our stakeholders.

6.1 Collaborating to reduce carbon

In 2013 we signed up to the Infrastructure Carbon Review, which sets out six commitments to reduce carbon from the construction and operation of the UK's infrastructure assets, one of which is to 'define clear low-carbon targets and respond to innovation in the supply chain'.

In October 2014 we held our first sustainable supplier forum, attended by our top 20 suppliers. The event included Dragons' Den-style sessions where suppliers presented sustainable solutions that addressed our carbon challenges. We talked to them about ways to work more sustainably, and shared some of the work we've been doing on assessing the carbon footprint of our infrastructure projects.

Responding to feedback from this session, we have since trained suppliers to use our carbon interface tool, which helps them identify their carbon impact for construction projects.



The Dragons' Den

Outcome – These collaborations have proved a great opportunity for us to use our suppliers' expertise when we're developing technical specifications, helping us to find more innovative ways to reduce our costs and carbon footprint. And by also sharing our knowledge with them, we've helped them become more competitive. We can now build on these first conversations to make more environmental improvements across our wider supply chain, and set new standards and expectations across our industry.

6.2 Protecting biodiversity on our sites

We know that protecting the natural environment is very important to local communities and environmentalists – it's also very important to us. So we work closely with wildlife organisations to minimise our impact. To support this work we have innovative tools that evaluate our 'natural capital' (such as the land around our substations) and the benefits provided by these sites.



Natural capital

Outcome – Using these applications we identified the former Thorpe Marsh power station in Doncaster as a site that is rich in biodiversity and home to a wide variety of notable species, including rare birds. It's also a significant site for the local community because it includes a memorial garden for four local workmen who lost their lives in an incident there.

Working with the Yorkshire Wildlife Trust we developed sustainable management plans that involve the local community. In order to manage, protect and enhance the natural environment of the site we have committed to:

- monitoring species, and manage their habitats and biodiversity effectively
- communicating proactively with the local community through volunteering opportunities, events and educational sessions
- increasing the natural capital value of our site and work with nearby wildlife reserves.

6.3 Accounting for Sustainability

We have signed up to the Prince's Charities Accounting for Sustainability (A4S) project which challenges organisations to demonstrate that it makes sense to consider sustainability when making decisions. It focuses on placing financial values on the benefits that we receive from the natural environment and through our social interaction. The project brings together organisations who are leading the thinking in these areas (including The Crown Estate, Sainsbury's, SSE, Anglian Water and British Land).



Andrew Bonfield at A4S

Our Chief Financial Officer (CFO) Andrew Bonfield is a member of the A4S CFO network and was a speaker at the A4S Summit in December 2014. Our Group Financial Controller, Stuart Humphreys, chairs the A4S Capex Appraisal working group.

Outcome – Through A4S working groups, we have contributed to the promotion of cross-sector collaboration and the production of A4S 'guides' that provide practical ways to integrate sustainability into business decision making. These guides, published in December 2014, will help us deliver environmental outputs for our stakeholders, such as identifying low-carbon solutions and mitigating the visual impact of our equipment.



7. Building shared understanding to help customers make informed choices

Stakeholders have told us that the connections process can be a confusing experience, so we're making this better by improving our communication.

7.1 From misunderstood to trusted adviser

RenewableUK (RUK) is an industry organisation with almost 500 members, including wind and marine energy, financial, academic and engineering companies. When we were working with RUK, we realised that our two organisations didn't match up in terms of communication and our approaches to grid-related issues. In some cases this mismatch was affecting our work, so we spent time learning more about RUK, its priorities and interests, to find the source of the problem.

Our discussions with RUK representatives revealed that they didn't always have a positive view of the way we work. But it turned out that some of this negativity came from a misunderstanding about our role and accountabilities, and because we had previously been seen as inaccessible to them.

To address this, we worked with RUK to establish ourselves on many of its governance groups. This meant we were able to provide information on particular topics or issues at each meeting, and could contribute to the wider industry debate.

Outcome – This has led to some great results over the year, an example of which was when RUK took the lead and contacted its membership on our behalf on an issue around queue management of new connections – demonstrating a partnership approach, where both parties can use the other's strengths and relationships to achieve the best combined result.

We now have a 'trusted adviser' relationship with RUK: the organisation benefits from our support but also promotes National Grid and helps us get useful feedback and ideas from its members.

7.2 Upfront information across networks

'Customer journey mapping' is a tool that allows us to understand how a customer feels about their experiences with us and shows us what they actually value. Using this tool revealed that customers at the early stage of our connections processes were usually small businesses with employees who didn't have an engineering or technical background.

We wanted our connecting customers to understand the options available to them so that they could enter the process with all the information they needed. This is particularly important in Scotland because of the need to reinforce the existing network for new generators.

To meet this need, and following internal and external consultation, we tested an innovative tool that had three elements:

1. a graph showing likely capacity by area, using data which shows contracted generation and possible future scenarios
2. information about all substations managed by National Grid
3. a colour-coded map showing connection capacity and timeframes.

Outcome – We showcased the tool at customer seminars in London and Glasgow in early 2015 and in response to positive customer feedback we are now developing this for use. This will save time and money for relevant stakeholders, and allow us to share information in a more transparent way. Customers shared their ideas with us too, and we'll build these into future versions.

One industry user told us that the tool *"would help customers do their own homework and save time. The tool helps create*

a link between embedded generators and National Grid."

And we have been contacted by electricity Distribution Network Operators who like what the tool can provide.

7.3 BestGrid – sharing best practice across Europe

Across Europe, Transmission System Operators (TSOs) are facing the problem of how to develop their grids to transition to more renewable energy, when the public and stakeholders are often opposed because of the impact the projects will have.

So we have taken part in a pioneering pan-European project that brings together TSOs and non-governmental organisations. This project, called BestGrid, aims to develop, test and share innovative approaches to stakeholder and public engagement on grid connection projects.

We worked with UK and European stakeholders to develop a best practice action plan to improve stakeholder engagement and public acceptance around new interconnector projects. We did this by reviewing the Nemo Link project between the UK and Belgium, including detailed interviews with stakeholders, a series of UK workshops and presentation and review sessions with European stakeholders from the BestGrid project. And we hosted a conference in February 2015 to bring together nearly 100 UK and European stakeholders to showcase the results of this work.

Outcome – Our involvement with BestGrid has been extremely positive. Our interconnector action plan will help improve our own engagement on new projects, and will also support the wider development of interconnectors across Europe. In addition, the London conference provided a fantastic platform to share best practice with UK and European stakeholders and build better relationships with our European partners. Following the conference, we have already hosted a workshop with French TSO RTE to share best practice in public engagement. We hope to arrange similar sessions with other TSOs in future.

7.4 Co-ordinating engagement to reach a consensus

With more and more offshore wind developers wanting to connect to our network, we found that some had unrealistic expectations about how quickly they could connect.

Developers told us that timescales were driven in part by the requirements of The Crown Estate (TCE), which leases the seabed. We met with TCE to discuss what could be done. We also spoke to the developers to make sure that if the blockers were removed, they would be willing to sign up to a realistic build profile.

In our discussions with TCE, it became clear that they could take action to solve the issues, so we worked with them to make sure that developers understood why this change was important to the whole offshore industry.

Outcome – Through this co-ordinated approach we were able to act as a facilitator to all parties, and in 2014 offshore developers started declaring build profiles that allowed the Transmission Owners, System Operator and other industry stakeholders to prepare appropriately for these connections.

This change, among other factors, has contributed to a deferral of spend on building the network until it is necessary, saving approximately £8–10 million.

8. Improving our communication to meet the diverse needs of our stakeholders

It's vital that we listen to our stakeholders, discuss their requirements and act on their feedback if we're to deliver the results they're looking for.

8.1 Addressing diverse stakeholder needs

As part of major construction work, we work closely with the local communities that may be affected. Our policy (called Our Approach) explains how we identify and do our best to address the individual needs of stakeholders, including the most vulnerable and those with special requirements. Through the development and use of Our Approach, we are able to make sure that our standards are consistent across all of our construction work. Here is an example from 2014/15:

Flexible working at New Cross

We regularly spoke to local community groups and businesses to understand their needs around the construction of New Cross substation, and we changed how we worked accordingly.

Outcome – The management committee of the local mosque told us it needed a peaceful environment during Ramadan and on Fridays, so we agreed that we would move all the work that might affect the mosque to a convenient time.

A local recording studio was located within a building prone to shaking. We worked with them to identify how we might carry out work without affecting them, and changed our working hours to suit theirs. We shared our learning with UK Power Networks when it began work on site, and the team continued this agreement with the local community.

8.2 Listening to reduce the noise

We re-wired a section of overhead line in Cheshire, but after re-wiring we discovered that the line often hummed loudly. We worked closely with local residents to identify the cause of the noise and kept the community informed of our progress through letters, home visits, a community relations hotline, and even invited them to visit our laboratories.

In 2014, as a direct result of community feedback, we installed the latest conductor technology on a short section of the line.

Outcome – As well as making it easier to fix the immediate noise problem in a way that suited local stakeholders, the relationships we built with the community meant that when an unexpected problem arose during the construction works (affecting some mobile phone signals) we could act quickly to resolve it. We were also able to provide one vulnerable resident with a new temporary mobile phone.

The work is now complete but, importantly, talking to stakeholders in Cheshire has already allowed us to use our technical learning on other projects to avoid future noise disruption. We used this experience and applied the learning to conductor installations near Dungeness, Kent in 2014. We considered different options and how they would affect the stakeholders closest to the overhead line, installing a quieter conductor along part of the line, which would minimise disruption to the local residents. The installation at Dungeness cost £5 million more than other conductors available, but it has the potential to reduce future spending by up to £10 million by avoiding future replacement, so reducing the overall cost to consumers.

8.3 New generations, new ideas

The engineering sector in the UK faces some big challenges around recruiting the next generation of engineers and we have a part to play to help the UK meet this challenge. Throughout 2014/15 we worked with more than 288,000 young people to promote Science, Technology, Engineering and Maths (STEM) subjects through a variety of different initiatives, including:

- the National Skills Academy for Power
- the Energy Efficiency Industrial Partnership (apprenticeships and traineeships)
- partnering with five University Technical Colleges
- The Get Skilled Project (working with young people who have been out of education, training or work)
- sponsoring the TeenTech Awards
- supporting the 'Engineer your Future' exhibition.

David Cameron recently visited our Eakring training facility and congratulated us for leading the way on apprenticeships in 2014/15.

Last year we also worked regularly with 16 universities and signed an agreement with the University of Manchester to take a further step forward in electricity education and research. We are already using what we've learned to develop a similar relationship with the University of Warwick.

Outcome – We continue to support the Government's aim to raise school standards in maths and science and promote engineering in schools, and continue to play a leading role in helping the UK to address the skills challenge.



Promoting STEM

Continuing on our journey

This has been an exciting year that has seen us further develop our customer and stakeholder ambition and strategy for the Transmission business.

We increased satisfaction levels across Electricity Transmission from 7.5 in 2013/14 to 7.7 in 2014/15 – it's very encouraging to see our stakeholders agreeing that things are improving.



Nicola Paton

Head of Customer Service
for Transmission

