

# Electricity Transmission Stakeholder Engagement Incentive Scheme

## Part Two Submission



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Introduction

# Finding a better way

I am immensely proud to share with you Part Two of our Stakeholder Engagement Submission.

Within the past year, we have made great progress in putting stakeholders at the heart of our business. This has been led by our Executive Board of Directors which has committed to ‘Finding a Better Way’ for our stakeholders.

Within Electricity Transmission, we have challenged our ways of working to make real performance improvements. Through a clear strategy, we are making sure that we engage effectively with our stakeholders to fully understand their needs. Through this, we are identifying how we can work collaboratively to achieve mutually beneficial outcomes.

But it doesn’t stop there. Our stakeholder engagement continues after we’ve finished projects so that we can accurately review our performance. Learning from experience makes sure that we continue to evolve in line with stakeholder expectations.

This year has been both exciting and challenging. There has been significant engagement and the range of people with whom we interact continues to expand. We have achieved some notable accomplishments. More importantly, we continue to learn from where stakeholders advise us that we could have performed better.

**In 2015/16 we have focused on three key areas:**

**Proactively acting on feedback and using this to inform our future strategy.** We were advised that we could do more to encourage wider industry participation in Demand Side Response; this led us to launch ‘Power Responsive’ to break down barriers to entry to this market and encourage participation (see page 3).

**Improving our processes to increase value to stakeholders.** When stakeholders tell us we could have done things better, we listen and

act. They advised that our approach to gaining consent for developments needed to change, so we did exactly that. We have now improved how we engage and both capture and act on the views of communities (see pages 5-6).

**Clearly identifying, and prioritising, the outcomes our stakeholders are seeking from our engagement.** By listening to our stakeholders, we better understood the frustrations of smaller wind and solar generators who wanted to connect to the transmission network, but were hampered by a connection process that wasn’t designed to support this rapid increase in requests. Our engagement helped us find and implement a solution which meant they could connect successfully to the network (see pages 7-8).

Both I, and my colleagues right across the Electricity Transmission business, are truly committed to finding a better way for our stakeholders. Building trust with our stakeholders is a critical priority across our business. Through this submission, we have demonstrated not only where we have made great steps forward, but also how we will continue to apply these learnings well into the future. This way we can continue to deliver against the four strategic initiatives around which this submission is structured: shaping the market, managing the network, delivering energy and the environment.



**David Wright**  
Director of Electricity Transmission  
National Grid Electricity Transmission  
Board Member

## Your guide to this submission

To help guide you through our achievements over the past year, we’ve included the following icons next to our case studies. They demonstrate how we are delivering against the criteria set for this incentive.



Initiatives that best serve specific interests of stakeholders and resulted in measurable benefits



Initiatives that reflect innovative thinking in responding to needs of stakeholders



Outcomes of stakeholder engagement activities are part of a holistic approach embedded in the business



Initiatives are supported by robust project management processes and appropriate resource



Initiatives resulting from stakeholder engagement activities are recognised as exceptional and best practice

# Working with others to share best practice

Scottish Power Electricity Transmission, Scottish Hydro Electric Transmission, National Grid Electricity Transmission and National Grid Gas Transmission have established a working group to share best practice on stakeholder engagement.

Representatives from the organisations meet on a regular basis to share knowledge and experiences (both good and bad) in the area of stakeholder engagement. Key activities and outcomes are summarised below and described in more detail in the TO/ SO Joint Appendix.

**Coordinating communications:** identifying how best to coordinate stakeholder communications on matters of common interest to minimise clashes and maximise the opportunities for stakeholders to get involved.

**Maximising benefits from stakeholder surveys:** ensuring that annual stakeholder satisfaction surveys are undertaken in a coordinated manner.

**Customer Connections task group:** working to improve the customer experience of the transmission connection process.

**Engagement for a sustainable supply chain:** sharing best practice on ensuring smaller and local businesses have equal access to business opportunities.

We will develop these and other topics during future meetings to ensure that all stakeholders with an interest in transmission have the highest standards of engagement from all three TOs.

As well as working with the other TOs, during the past year we have taken the lead on forming a virtual community around stakeholder-related best practice. This work is still at an early stage, but we are already in conversation with the electricity distribution networks, EirGrid in Ireland, Elia in Belgium, Open Grid Europe in Germany, RTE in France, and Severn Trent Water and Network Rail outside of the energy industry.

## Shaping the market

Facilitating development of the energy market to meet changing stakeholder needs

The rest of this document provides a number of case studies that demonstrate how we have worked with our stakeholders in 2015/16

# Tackling the energy trilemma

The energy trilemma is a fundamental challenge for the UK and it’s one of our key business priorities. Put simply, how can we reduce carbon emissions while keeping energy costs down and the lights switched on? The right solutions will only be found by industry, Government and other stakeholders working together. Engaging in a holistic way allows us to be a leading voice for change in the industry.

We have engaged with people on three levels this year: looking at the overall challenges through our System Operability Framework (SOF), the tools needed to work in this new world through Power Responsive (PR) and what this means to individual stakeholders so that we can collaborate to solve these future energy challenges.

Initiative tailored to:  
Energy industry

Criteria reflected:



## Sharing best practice

Our Future Energy Scenarios (FES) explore the changing energy landscape and how the future might play out. They are an established reference point for the industry and we have developed our stakeholder engagement process to the point that it is considered **best practice within the industry**.

### EirGrid

EirGrid recognised our scenario development process as being best practice. They were particularly interested in our detailed stakeholder engagement and network planning, so they asked to discuss these with us to understand how, when and who we engage with. We shared our stakeholder plans and explained how we mapped stakeholders, enabling EirGrid to use these as a benchmark when establishing their own scenario development process.

“We found it to be very informative and insightful. We will be sure to keep this line of communication open and keep you updated on our progress with developing scenarios.”

**Noel Cuniffe, Scenario Planning, EirGrid**

Initiative tailored to:

Energy industry, customers, regulators and educational interest

Criteria reflected:



# Helping stakeholders target their investment

We developed the SOF to provide an overview of how changes in the future energy landscape will affect the operability of GB power networks. This means there is a pathway for identifying and developing the solutions needed for operating electricity networks in the future to maintain security of supply and mitigate any risk.

To develop the right solutions, we need insight from a broad range of people. So, for SOF 2015 it was important that we increased the involvement of stakeholders.

### How we engaged

- Launched a pre-assessment workshop in April 2015 involving a cross-section of **70 stakeholders**.
- Continued consultation throughout the assessment period. Ongoing industry dialogue was achieved through a programme of **engagement activities** that allows those interested to be involved in developing the framework. These events also gave people the chance to review and challenge our analysis.
- Introduced a new webinar approach, which we tailored to specific audiences. This increased engagement reach and captured the **views of 120 people**.
- Welcomed **140 stakeholders** to the SOF launch event. Here they could meet our operability experts and discuss the findings with industry colleagues.

- Significantly increased the number of people we’re talking to, gathering insights from **200 organisations**.

### Outcomes

**Informing stakeholders of the long-term view of capabilities needed means they can now identify potential revenue streams and build a business case to develop new solutions.**

**1,106**  
SOF downloads in first 30 days – a **400% increase on the previous year.**

**5** risk mitigation activities supported



**4** times as many stakeholders got involved in 2015/16 reflecting just how strongly people want to hear our voice.



SOF launch event, November 2015.

### Next steps

SOF 2016 will continue to be a platform for **collaborative industry working**, providing a route to commercial appraisal for solutions which support the future operability of GB power networks.

Attendees loved the webinars so we will use these more next year. We received a clear message that stakeholders want us to distil the assessment and main messages further for a non-technical audience. We will be looking to improve the accessibility of our document next year.



Initiative tailored to:  
Energy industry, energy users, innovators and political stakeholder groups

Criteria reflected:

# Working together to save the consumer £500 million a year

The SOF looks at the practical steps needed to achieve the minute-by-minute balance between supply and demand that keeps our energy networks functioning effectively. Demand Side Response (DSR) is one way to make that balancing act more achievable and cost effective because if just 5% of peak demand is met by DSR solutions it could benefit consumers by approximatively £500 million a year. In our conversations with stakeholders, they told us that we weren’t doing enough to support the DSR community and they were looking for a clearer route to provide DSR to us. We acknowledged this and responded with the launch of Power Responsive to take a leading role in reshaping the energy industry and solving the trilemma.

### Business objective

As the generation mix changes significantly and our traditional sources of balancing supply and demand diminish, we have to think innovatively about how we balance the system in the coming years. Traditionally we have focused on additional generation to make sure we can keep the lights on. However, DSR is becoming a more cost-effective option for consumers because if just 5% of peak demand is met by DSR solutions it could benefit consumers by approximately **£500 million a year**.

We need to do the work now so we can continue to use DSR in the future. If we don’t increase the volume of DSR the balancing job becomes harder and more costly, particularly as a wider variety of new energy sources is connected.

### Strategy

Energy generation is only part of the story; the way we use electricity also needs to change and demand side solutions have a big role to play. By increasing, decreasing or changing

“We welcome National Grid’s Power Responsive campaign as it is also raising awareness of Demand Side Response and identifying changes that will enable wider participation. And we continue to work closely with it to address the issues identified.”

**Andrew Burgess, Associate Partner, Energy Systems at Ofgem**



Launch event, June 2015.

the time of use of electricity consumption, businesses and consumers can reduce costs and lower their carbon footprints. We launched Power Responsive as a means of turning demand side debate into action and increasing the DSR available in our toolkit.

### Our approach

- Created Power Responsive at a **cost of £600,000** to lead the debate on DSR, engage more stakeholders and lay the groundwork for increased DSR participation.
- Developed the Power Responsive website and used social media to encourage two-way communication.
- Defined a programme of work **led by the views of stakeholders**.

### How we engaged

- Established a Power Responsive **steering committee**, featuring **17 organisations**

across 13 sectors. The group ensures it is truly stakeholder-led, rather than a National Grid initiative.

- Brought together 100 senior business leaders, decision makers, policy creators and energy experts for a debate on key issues.
- Supported this with our tailored Power Responsive website, which provides videos, resources, case studies and webinars on the major issues that underpin the work.
- Developed **sector-specific engagement** plans for the industrial and commercial sector. For example, we attended the Haven Power Forum to discuss the role of DSR and its opportunities.
- Held **three webinar events** to focus on specific stakeholder concerns and needs. Over **100 participants** were involved in market design webinars.
- Recruited a full-time employee to manage the project on a day-to-day basis to reflect its scale and make sure it met its objectives. »

Initiative tailored to:  
Generators (Energy industry customers)

Criteria reflected:

# Partnership approach saves the consumer £15 million per year

As well as engaging with large industry groups, we are delighted to work with individual organisations. Through these engagements this year we have saved the consumer £15 million. This was partly achieved through working closely with EDF Energy to help them understand what the future system challenges will mean for their operations and our ability to balance supply and demand.

They told us that they needed to understand what our data on the future of energy meant in reality for their operations and decisions they needed to make. Working with EDF Energy we have made a **cultural shift in the way we engage**, moving beyond providing analysis and insight towards working collaboratively to determine how this data can be applied here and now to guide better decision making that benefits consumers. For example, our partnership has led to an agreement that EDF Energy will stop generating when needed so we can balance supply with demand. This decision has contributed towards overall savings of over £15 million in constraint charges as we strive to balance the system in the most cost-effective way.

### How we engaged

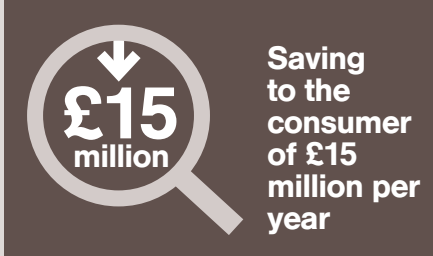
- **Communicated regularly** with EDF Energy through which it became obvious, through the questions raised, that our current approach of

- providing information to them was not sufficient.
- Developed a **new approach** to engagement to understand their concerns, so we can tailor our existing energy analysis to their specific requirements.
  - Used detailed analysis of future issues from our Future Energy Scenarios and System Operability Framework to explore what this meant on a day-to-day operational level for EDF Energy and our ability to manage the network.
  - Used a **collaborative approach** through a joint EDF Energy and National Grid steering group. This guided three different activities and led to wider discussion of what lies behind the energy numbers.
  - Challenged our teams to apply practically the lessons from our data – not something we normally do.

### Next steps

We will continue to meet with EDF biannually to help them understand the future challenges of system operability and drive value for the end consumer. Through this work we now have a formal and repeatable process that can be used to effectively work hand in hand with generators and demand side providers to both improve their understanding and continue balancing the system in the most economical way.

### Outcomes



**Saving to the consumer of £15 million per year**



**Created a programme of work that can now be applied to future engagement with customers**



**“We have really welcomed National Grid’s engagement with us. This engagement enabled us to better understand the system operability challenges that they face and how these challenges translate in practice to our operational assets. It has enabled us to share the challenges we face as a nuclear operator and help us determine with National Grid the best way to mitigate risks and, through this, we should achieve better outcomes for us and the end consumer.”**

**Mark Cox, EDF Energy**

### » Outcomes



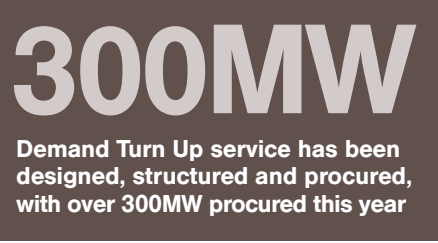
**Created a network of 700 individuals to develop long-term solutions**



**260 businesses** have increased awareness about routes into DSR



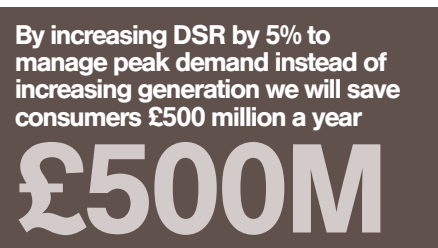
**2 new DSR products developed**



**300MW** Demand Turn Up service has been designed, structured and procured, with over 300MW procured this year



**20** case studies published from a range of organisations currently taking part in DSR



**By increasing DSR by 5% to manage peak demand instead of increasing generation we will save consumers £500 million a year**

### Embedding benefits

Through this approach, we will continue to promote **collaboration** and increase use of DSR over the next four years. Ultimately the goal is to see around 30-50% of balancing capability coming from the demand side by 2020.

We’ve already used feedback from our webinars to develop two new DSR products and simplify existing ones. This stakeholder-led approach will continue.

The Steering Group will continue to deliver a fully co-ordinated, cross-industry approach to create value.

### Next steps

We will work with the media to encourage more balanced coverage of DSR and raise awareness of the positive impact DSR can have in creating a low-carbon energy system. Stakeholders want to know more about the practical next steps in their own sphere of work. To do this we will expand our sector-specific engagement, including sessions with the NHS, the water industry, public services, retail and manufacturing.






We will be widening the scope of Power Responsive to look at all our flexibility work.



Managing the network

Initiative tailored to:  
Customers, communities and their representatives,  
political, small businesses, non-government organisations,  
general public, media and landowners

Criteria reflected:



# Giving the community a voice in planning new connections

It’s our job to connect new energy to power the UK for future generations. For this to happen we need planning permission to build hundreds of kilometres of new electricity connections across some of the most valued places and landscapes in England and Wales. We are never going to be popular doing this work, so it’s important to us that we engage widely to listen to people’s concerns and build trust.

**Business objective**  
We hold a critical role in the electricity system – planning and building new connections so the lights stay on. We have to get consent but we understand this is an emotive topic, so it’s important to us, and for our reputation, that local communities trust us to act responsibly at all times. **Effective stakeholder engagement** is crucial to this.

**Strategy**  
We needed to take a **different approach** to the consenting system introduced in the 2008 Planning Act. We now do much more design and development work upfront, and also talk to technical experts and local communities in an unprecedented way to achieve consent, which is something we really value.  
This is a substantial and emotive task and we got it wrong at the initial stages back in 2010 when we first developed our major infrastructure projects. Communities didn’t trust us, technical stakeholders lacked the information they needed and the chair of the Planning Inspectorate made it clear to our leadership that we were heading for failure.  
The reputational impact of failing to get consent, and possibly not being able to recover our costs, was enormous. It could have led to delays of several years for new generators to connect to the grid. We took the issue incredibly seriously and knew we needed to **change the way we consulted**. We had to move from being formulaic, risk averse and setting unrealistic expectations to really changing how we consulted with the public. In short, we needed to rebuild people’s trust in us.

**Our approach**  
Since 2013 we have established a major project board, chaired by our UK Executive Director. The board gives high-level strategic guidance, meets monthly to oversee and steer the projects and has established a new External Affairs team of professional communications advisers, with one allocated to each project.  
These changes led us to communicate better, listen more to communities and change



(Main image): North Somerset MP Dr Liam Fox chairs Q&A session with National Grid and his constituents. (Inset left): Exhibition event in Talwrn, Anglesey, November 2015. (Inset right): Public meeting Anglesey, February 2016.

our approach to stakeholder engagement. The success of this approach was evident in 2015/16 (see ‘learning from our engagements’ panel on the opposite page).  
**How we engaged**  
In 2015/16 we gave communities better, easier-to-understand information. For example, we produced a film for our North Wales connection project.  
To rebuild trust we met with communities more regularly sharing up-to-date information in bite-sized pieces immediately, rather than waiting until we had the full picture. Previously, we sometimes went for months without saying anything, and then communicated and asked for detailed feedback.

We were more upfront during consultations in 2015 about which aspects of a particular connection people could influence and explained what had – or had not – changed in response to their feedback.  
We used a **fresh approach** in 2015/16 when assessing options. As industry experts, we usually publish high-level options for how a connection can join the existing network. In North Wales, following feedback, we considered a further strategic option put forward by Anglesey Council alongside our own, so we could explain how we’d assessed both potential solutions equally. »

Creating and maintaining our energy network so that it meets stakeholders’ needs now and in future

» Outcomes



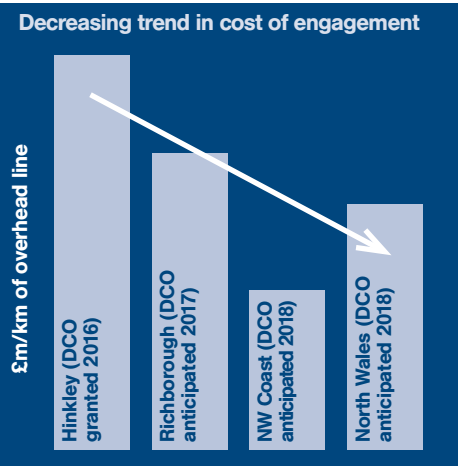
Received consent for the Hinkley Project in January 2016. This is the longest linear project that has been consented and we were commended by the Planning Inspectorate for it.

3

We now have three projects consented

Adopted best practice approach and created an internal best practice platform for our Development Consent Order (DCO) process.

**Embedding benefits**  
In 2015/16 we’ve worked hard to make sure the lessons learned from each project are reflected in the way we do business. We’ve created an internal DCO **best practice website**, for everyone involved in these projects to see what we did well, share tools and templates, and add their own ideas – so **we’re always improving**. This means we can re-use the most effective techniques and concentrate on what stakeholders want.  
We’ve changed how we conduct stakeholder surveys and turned the process into a business procedure, with clear timeframes, responsibilities and action plans for how we can improve. This ensures we’re measuring what people think of us, and **acting on their concerns**.  
We’ve also introduced a better, streamlined sign-off process for public communication documents. This has made our internal processes quicker, cheaper, and our external stories are sharper and easier to understand.



We’ve participated and learnt from Inspire Grid – an EU academic research project which shares best practice on engagement and participation in new electricity connections across Europe. We held a day-long workshop in February 2016 with National Grid employees sharing how we develop projects and learning how it’s done in mainland Europe. We’ll be looking to use what we learnt from the research projects when the conclusions are published later this year.

**Next steps**  
We face an even greater challenge in future: to improve what we’re doing while reducing the cost and time, so we continue to benefit shareholders and UK consumers, alongside local communities. It’s a difficult balance to strike, especially on the most sensitive projects – winning consent and acceptance for new overhead power lines. We’ve made a good start, but we know we have to go further.

AA1000SES health check outcomes

Our consultations are progressing towards a recognised high standard of stakeholder engagement, according to the findings, published in April 2016, of a AA1000SES health check carried out by AccountAbility. They outlined the following:

- The scope for engagements are clearly documented and justified.
- A range of communication techniques are in place to ensure the best and most suitable methods are used for each audience.
- Stakeholders are involved in the process.
- The approach considers engagement risks by making documents more accessible.
- It demonstrated how the right training makes for quality engagement.
- Efforts are made to ensure briefing materials are inclusive.

This means that when we refine and repeat this process for future consultations, stakeholders will also benefit from our new approach through well structured, tailored engagement ensuring timely, inclusive communications.

“Project level engagement is strongly developed at National Grid. The teams always go beyond compliance and requirements by authorities in terms of engagement.”

**AccountAbility: AA1000SES**

## Learning from our engagements

### From Hinkley shop fronts to Richborough pop-up supermarkets

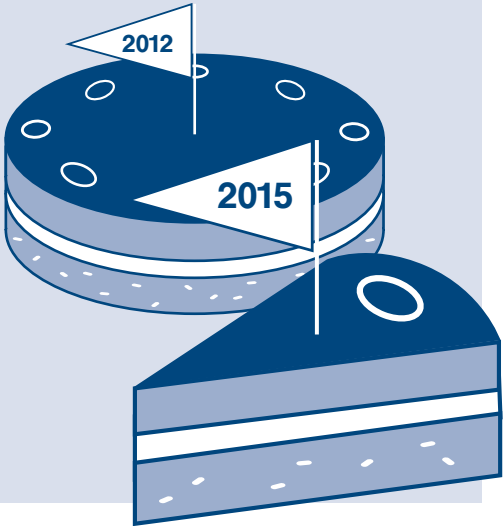
In 2013, we rented a number of shops in locations along the Hinkley route so people could learn and give us feedback about the connection project. While these worked well, they were expensive to set up and run. We learned from this, and in our consultation for Richborough in 2015 we used pop-up stands in supermarkets along the route, where we signposted people to our consultation events and website.



### A whole cake into a piece of cake

In 2012 in Mid-Wales, we gave communities a lot of information in one go and only one opportunity in the year for them to give feedback. They told us this approach was overwhelming, did not help their understanding and was a blocker to successful communication.  
We listened to this feedback and learned from it. Since then we have adapted our approach and in North Wales in 2015 we communicated in ‘pieces of cake’ – frequently sharing bite-sized information with people as and when it became available. This meant we weren’t storing up all of the information, waiting until it was all ready and then overpowering people with it.  
These changes led us to communicate better, receive feedback that we could act on in a timely manner and rebuild trust with the communities, as they had more interaction with us and an opportunity to

have their say. This was achieved in North Wales through community bulletins, letters, public exhibitions and through the creation of a film to help strengthen dialogue.





Initiative tailored to:  
Energy industry, customers and educational interest

Criteria reflected:    

# Finding innovative ways to connect an extra 5.7GW of low-carbon generation

Working with stakeholders from across the industry, we are leading a project to improve the way that embedded generation, such as wind and solar power, connects to the network to prevent costs to the consumer of £140 million per year.



Customer Interface Tool display stand, Electricity Customer Seminar.

### Business objective

Embedded generation is smaller than traditional generation and is connected to the distribution network. It is a vital component in helping society move towards a low-carbon future and meet the 2050 emissions target set out in the Climate Change Act 2008.

Last year we faced a rapid increase in embedded generation wanting to connect to the system. This was a problem that was building on a number of the Distribution Network Operators' (DNOs) networks and it meant the cost of balancing supply with demand was increasing as embedded generation caused transmission-connected generation to be cut back and compensated accordingly.

Additionally our existing connection process could not keep pace so we needed to achieve two objectives. Firstly, to connect these new generators in a controlled way to maintain security of supply and a strong transmission network. Secondly, to minimise the cost to the consumer of balancing the network.

### Strategy

We recognised that we needed to do more to support the connection of embedded generation, in a cost-effective way for consumers, by **taking the lead** in open conversations with key stakeholders to find the right solutions. Doing nothing would have seen the cost to consumers increase by around

£140 million per year due to us having to compensate large-scale transmission generators for stopping generating so that we could balance supply with demand.

If we'd simply taken a 'business as usual' approach, much of this distributed generation connection would not have been allowed to connect until distribution and transmission solutions were developed and installed. This was not acceptable to us, because it would have been discriminatory and contrary to the government's commitment to a low-carbon future. Consequently, an approach that continued to allow embedded generation to connect without incurring additional costs to consumers was needed.

### Our approach

- **Gained agreement** from Ofgem and the Distribution Network Operators (DNOs) that our approach was the right one.

- **Developed new solutions** to make sure the next 12 to 24 months (from April 2015) of connections go ahead according to plan. We worked closely with our technical experts and the DNOs to develop these solutions.
- Trialled some potential technical and commercial solutions in local areas on the live network, with DNO colleagues and under Ofgem's oversight, so the expected benefit could be achieved in real time. These trials were successful and are now part of the everyday operation of the whole network.

### Outcomes

Savings to the consumer of  
**£140m**  
per year

**7.7GW**  
of low-carbon generation has been connected since April 2015, the equivalent of fifteen coal-fired power station units. This has provided an extra 5.7GW of low-carbon generation as without this project we would only have achieved 2GW.

**2.6m tonnes CO<sub>2</sub>**  
The embedded generation brought online is enough to save 2.6m tonnes of CO<sub>2</sub> and supply energy to 1.8m homes

**Greater transparency and clear guidance is now available to generators, so they can see where there's capacity to connect new generation.**

**We didn't compromise Security of Supply**

### How we engaged

- Developed a **robust methodology** for our approach to engagement, ensuring that we understood the importance of all stakeholders along with their specific needs.
- Considered how we could best **tailor our communications** to meet the needs of all, »

Initiative tailored to:  
Energy industry, customers and educational interest

Criteria reflected:  

# Simplifying connections to our electricity network

Stakeholders told us during seminars and face-to-face feedback meetings that they would like more tailored information to help them make informed connection decisions. We thought innovatively and developed an interactive online engagement tool bringing together complex information, making it easy to digest.

### How we engaged

- **Listened upfront to feedback** from industry, through bilateral meetings and seminars, where they asked for a connection 'heat map'\* and clearer connection information in one location.
- After considering similar tools, we **acted on this feedback** and developed a Customer Connections Interface Tool (CCIT) in stages. We gathered feedback from stakeholders along the way **tailoring engagement**, through one-to-one meetings, telephone discussions and workshops to understand how it could be most useful to them.
- We created a prototype based on initial feedback covering England and Wales. It received very positive comments and feedback at our seminars, encouraging its roll-out.
- We sought more feedback when we presented a final version of the CCIT at a further Customer Seminar and the System Operability Framework launch conference in November 2015 to gain final feedback ahead of its publication.
- We then shared the CCIT at the end of November 2015, publishing it on the National Grid website.

\* A graphical illustration of data where values are represented by colours.

### Next steps

We will now expand the geographical coverage of the CCIT to include Scotland, as this is where most of our new connection queries come from. This will be driven by ongoing discussions with Scottish Transmission Owners to assess feasibility and further development.

*"The tool is ideal for identifying potential connection points, which can then be investigated further through the Transmission Entry Capacity register and Electricity Ten Year Statement"*  
**Mathew Brett, Brightsource Energy**

Very positive comments from stakeholders on how the CCIT has helped them to assess different connection sites

### Outcomes

The CCIT means stakeholders will be better informed ahead of connection discussions with National Grid and is helping to deliver faster, efficient connections

Immediate take-up from people with over 200 downloads in the first week and 800 within five months

**300**  
Around 300 users have now provided their details and signed up to receive updates of the CCIT

» meaning everyone was clear on roles and responsibilities and could influence the final outcome.

- **Segmented the engagement** to look first into the overall challenge of how to solve this problem and secondly to establish the technical specification.

- **Collaborated** with DNOs, DECC, Ofgem and embedded generators – individually and collectively – at industry workshops to develop new solutions and ways of working.

- Led two industry workshops with Ofgem and DECC.

- Chaired Energy Networks Association forums and spoke at DNO events and conferences to provide updates, share our approach and gather feedback.

- Developed a **programme of workshops**, individually tailored to stakeholders so we could learn from each other and find out what was happening on the distribution network, while our stakeholders could understand the

challenges the transmission network faces. These included: high voltage workshops with DNOs, a combined presentation with UK Power Networks to engage the developer community and two customer seminars.

- Looked beyond new infrastructure by working with DNOs on solutions that do not require the construction of new assets.

**10** engagement events involved nine organisations in five locations at a cost of £20,000. This project has resulted in savings to the consumer of £140 million per year.

- Engaged with a total of **16 organisations** with contributions from over **40 individuals**.

### Embedding benefits

The lessons we learned from embedded generation are now being applied to the high volumes of storage connections that the network is seeing, making sure our processes are fit for purpose and we avoid delays and keep costs down for the end consumer.

We are making this approach 'business as usual' by developing a project board to look at all operability issues, so the work can be expanded into other areas.

### Next steps

The DNOs, DECC, Ofgem and National Grid will continue to work together with the Energy Networks Association to develop longer-term solutions and a regulatory and commercial framework that's fit for purpose.



Initiative tailored to:  
Suppliers, construction industry

Criteria reflected:



# Reducing our carbon footprint

The development of an award-winning Carbon Interface Tool (CIT) is an industry-leading step that will help us and suppliers reduce our environmental impact. We led a two-way engagement and training programme, which has made the CIT part of our procurement processes and helped us reduce carbon and save money.

### Business objective

We want to take the leading position for the energy industry to drive change in carbon reductions.

Our objective is to reduce greenhouse gas emissions that are a direct result of our operations by 80% by 2050.

### Strategy

We are focusing on reducing our carbon emissions and making our operations more sustainable. We can't achieve our aims alone, so we're **working with suppliers to find innovative ways** to minimise our carbon footprint and change the culture of the industry. This means going beyond the normal interactions we have with our supply chain, and creating a mindset that focuses on carbon reduction as a viable way of achieving cost savings.

We want to ensure the changes we make are measurable and make a difference. So we created the CIT so that we could increase 'carbon knowledge' within National Grid and to give our suppliers a single, consistent platform to calculate their own carbon footprints.

### Our approach

The CIT allows us to calculate the carbon footprint of major construction projects.

We now score carbon in procurement tenders. We've demonstrated our commitment to carbon reduction to suppliers by including a 5% carbon weighting in a new electricity sub-station tender at Wimbledon.

The winning bid was the lowest carbon solution – the project's carbon footprint was reduced by over 20% – and it was also the lowest cost solution, demonstrating the link between reducing carbon and reducing cost.

### How we engaged


We realised that developing the CIT was only part of the solution. As with any project that's trying to **change behaviour**, how you engage with those you're trying to influence is equally important as the tools you use. So we made sure our engagement was geared towards changing mindsets. To do this we:

- Shared the CIT with our supply chain as part of the tender process, asking them to show how they could reduce the project's lifetime carbon footprint.
- Used **one-to-one and group sessions**, engaging **27 suppliers** in the Wimbledon project, during which they completed a quantitative assessment of their solution's projected carbon impact.

### Outcomes

20%

reduction against the original design in the carbon footprint of the Wimbledon substation project through reducing the volume of insulating gases, such as SF6, in electricity transmission equipment; using low-carbon concrete and sourcing recycled steel for reinforcements



£3million

cost saving from reducing carbon in the Wimbledon tender process, over the lifetime of the substation, set against an estimated £200,000 National Grid investment to develop the CIT and £22,000 for the supplier engagement and training activities.

Award-winning engagement

Our work to develop the CIT and the way we engaged with suppliers was recognised with an award in the Carbon Management category of the Edie Sustainability Leaders Awards, where it was described as "going beyond existing good practice".



6

suppliers trained and provided with CIT after they decided to tender for this contract

27

suppliers engaged – changing the way that they consider tendering for future business

- **Talked openly** with potential suppliers, sharing good practice, raising opportunities to unlock innovation and increasing carbon knowledge.
- Built on our existing Supplier Forum to maximise the reach of the carbon reduction effort, offering training support to suppliers.
- **Tailored engagement** to supplier needs by holding focused one-to-one sessions.
- Developed a sustainable construction **best practice handbook** which shares experiences and successes across the supply chain. This has been shared with our whole construction supply chain.
- Shared our carbon work as part of the Prince's Trust Accounting for Sustainability project. This has generated significant interest. For example, we hosted Sainsbury's at our Warwick office to share what we'd learned from developing the CIT. Sainsbury's is now looking to introduce something similar.
- By sharing the CIT and weighting the tender, we are going beyond existing carbon work in the utilities sector, and trying to lead the industry by sharing best practice.

### Embedding benefits

This work is driving a **cultural change** within National Grid and our supply chain on sustainability issues, moving away from decisions being purely cost driven and demonstrating how focusing on carbon will also bring cost savings.

Our Sustainability and Climate Change team facilitates a quarterly forum with management representatives from across the National Grid business. They share best practice and learning from the construction teams on how to make carbon management part of their decision-making.

Using the CIT, we will continue to include a 5% carbon weighting in tenders, something that will yield further benefits. Current tenders include Hinkley to Seabank Cable Works and the Richborough Connection Scheme.

### Next steps

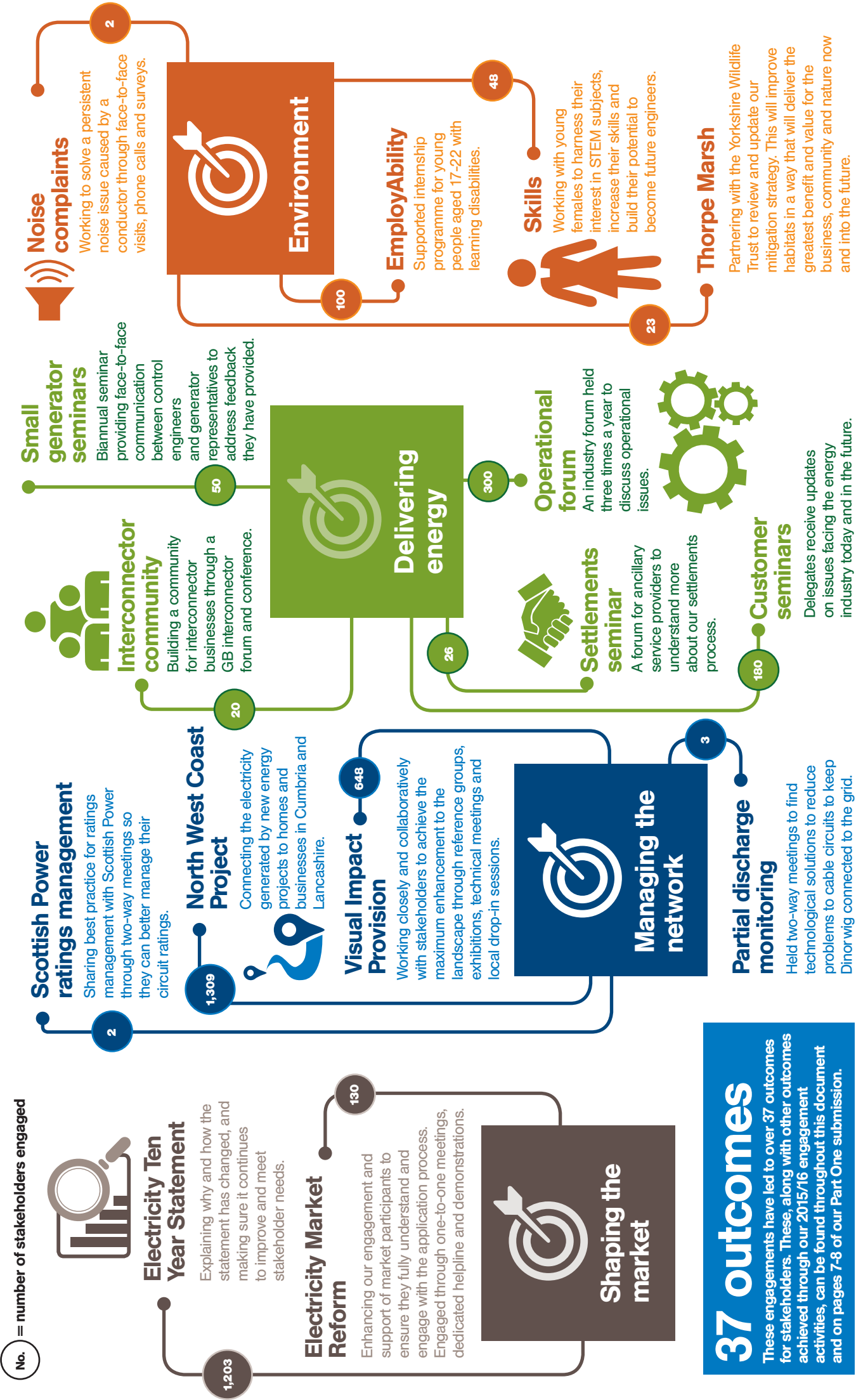
We will continue to work with more suppliers to innovate and reduce carbon and cost through targeted workshops and one-to-one meetings.

We will work with our procurement department to incentivise suppliers by weighting carbon in future tenders for major infrastructure projects.

And finally, we will support and talk to our suppliers during tender events to identify carbon reduction opportunities.

## Other key engagements 2015/16

This submission has outlined the main ways we've engaged this year. Below we highlight some of our other engagements that could not be contained within these pages. Part one of our submission outlines the outcomes against each of these and more (see Part One, pages 7-8)



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