

Electricity transmission Innovation stakeholder event summary report

R110-T2
INNOVATION
FRAMEWORK

Why aren't we self
funding innovation?

Consider innovating
for where open
expertise

Bas
W

Introduction



The need to adapt and change to meet the changing energy landscape head-on should be obvious to anyone in our industry. As the business charged with operating and maintaining our transmission network across England and Wales, National Grid's Electricity Transmission is acutely aware of that need.

National Grid is incentivised through the RIIO regulatory deal to innovate and run the network. With the need for transparency and openness key, it is important that we evolve and change as we move from RIIO-T1 to T2. This includes clearly showing fair returns on investments and that we are clear about where profits are driven by our efficiencies and innovations.

From what you told us on the day, we are making good progress in some areas, but need to improve in others.

No one can work in isolation and the workshop on 17 July was the first step to developing our RIIO-T2 innovation plans. As we continue to listen to your feedback and suggestions, we hope that your own businesses will grow alongside ours to face the changing world.

Over the next few pages, we present some reminders of the information from the workshop and the results of the questionnaires. If you'd like any further information or insights, please get in touch.

Many thanks
Iliana Portugues,
Head of Electricity
Transmission Innovation

Executive summary

We held a workshop on 17 July 2018 at Sandown Park to consult with stakeholders on the parts of our business plans relating to innovation.

Through previous engagements, including our 2017 workshops, online consultations, research surveys and ongoing conversations, innovation has been identified by our stakeholders as one of their priority focus areas.

The aim of this workshop was to explore the topic of innovation in more detail, and in particular, give stakeholders the opportunity to shape our future plans and processes.

There were 39 stakeholders representing 30 organisations at the workshop, covering six of our main stakeholder segments. The full breakdown can be found on page 6.

The workshop covered what themes stakeholders thought we should be focussing on in T2, and prioritised them. We also asked what attendees thought about the key topic areas in the framework consultation and we included challenges on what should or shouldn't be added or removed.



You told us



There is a need for us to share our business technical challenges with you.

There is a need for better collaboration within the innovation space and National Grid should facilitate this.

You need more data to be shared within the innovation community and improved access to information.

Educating consumers is missing from Ofgem's priorities and is a key area to focus on.

A forum is required to share ideas and early engagement.

Communication needs to improve between stakeholders and National Grid.

Ofgem's insight is required to understand and shape what National Grid can do.

Stakeholders would like access to National Grid test facilities.

Context

In 2017, we ran a programme of engagement activities as the England and Wales Electricity Transmission network to understand our stakeholders' priorities and explore what they would like us to focus on in our future business plans.

From this engagement, we established eight stakeholder priorities and three consumer priorities, as shown below. Being innovative is one of these.

These priorities form the basis of our engagement topics, throughout 2018 and beyond we are talking to stakeholders about what they would specifically like to see in our plans for the next regulatory period, RIIO-2, which begins in 2021.

As part of this programme, we held a workshop at Sandown Park on 17 July 2018 to consult stakeholders on our plans for innovation.





This report summarises the comments and feedback we received from the workshop.

Objectives and format

Through regular conversations with our stakeholders, (through a variety of channels), we have established what we need to achieve from the engagement: who needs to be involved, and therefore how we should be engaging with people.

For the topic of innovation, we recognise that different stakeholders have different views when it comes to certain elements of our plans, and that holding a workshop where these could be aired and debated was the most suitable approach. We also recognise that some stakeholders may not be able to attend the workshop and further opportunity to contribute will be made available in the coming months.

The intention of the workshop was firstly to ensure attendees were able to provide input into our plans in an informed way, so we began the day with a high level view of what we do, our approach to engagement and how we currently manage innovation.

The day was structured around topic-specific sessions and involved:

A short presentation

to provide context for all stakeholders to be able to discuss the subject area.

A facilitated table discussion,

during which all stakeholder comments were captured to provide qualitative feedback.

A short voting exercise,

allowing us to capture quantitative feedback on questions and where there are options.

We deliberately chose not to use a third party to facilitate the event, and made sure that National Grid employees were fully briefed so as not to introduce any potential bias to the conversations. This seems to have been well received by attendees, with a **Net Promoter** score of **+46** and an average 8.3 out of 10 when asked how likely to recommend the workshop to a friend.



Attendees



39 attendees came to the workshop. The following organisations were represented.

- | | |
|------------------------------|--------------------------------|
| 3M | JSM Group |
| Elemridge Cable Services Ltd | Scottish Power Energy Networks |
| National Composites Centre | Burns McDonnell |
| ABB | Lagoni |
| Energy Innovation Centre | Siemens |
| Oxford Computer Consultants | Capula |
| Amazon | Megger |
| Fraser Nash Consultancy | University of Chester |
| PA Consulting | Digital Engineering |
| Arenko Group | Morgan Sindall |
| Haesco Ltd | University of Manchester |
| Pricewaterhouse Consultancy | EDES Ltd |
| Atkins | Mott MacDonald |
| GlobalHighview Power | University of Southampton |
| Scottish and Southern Energy | |
| Baker Hicks | |



And the following stakeholder segments.

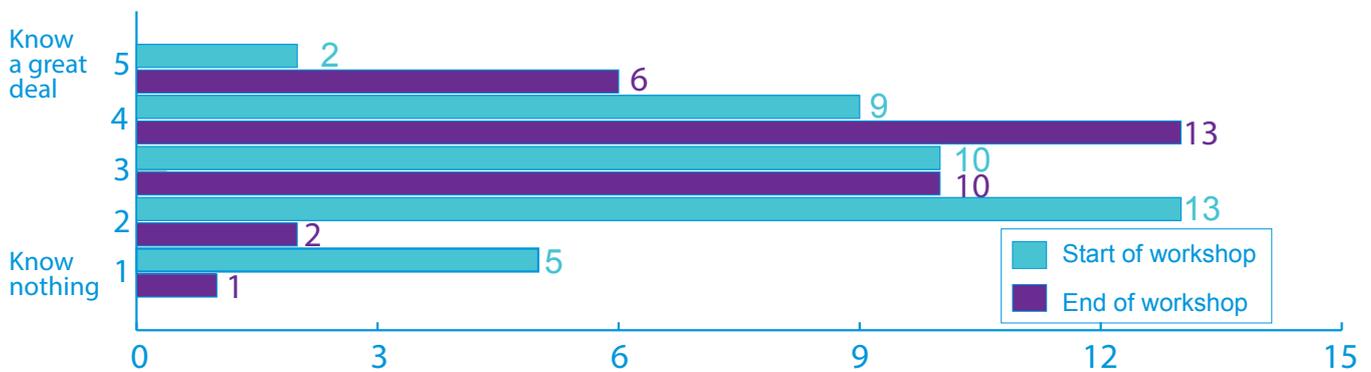
Stakeholder group	Attendees
Supply Chain	20
Other energy industry	7
University, think tank or academic	6
Energy network owner or operator	3
Other non-energy industry	2
Customer	1

Level of knowledge and impact

At the start of the workshops, we asked you to tell us how much you knew about Electricity Transmission

Innovation and we asked the same questions at the end of the day to gauge how well we explained what we do.

On a scale of 1 to 5, where 1 is know nothing and 5 is know a great deal, how much would you say you know about National Grid's electricity transmission innovation?

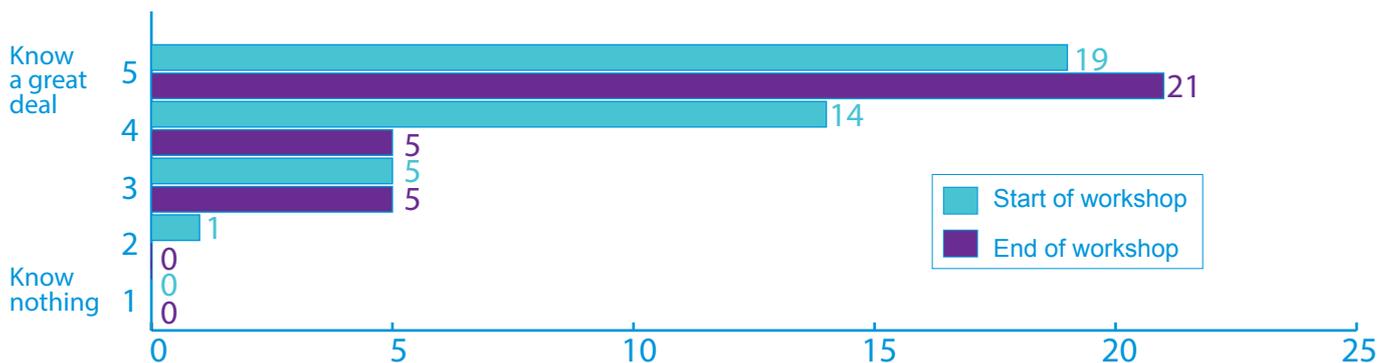


On a scale of 1 to 5, where 1 is know nothing and 5 is know a great deal, how much would you say you know about National Grid's electricity transmission innovation?

We also asked you the following question on how impacted you are by the topic of Innovation and we asked

you the same question at the end of the day to gauge how well we explained impact.

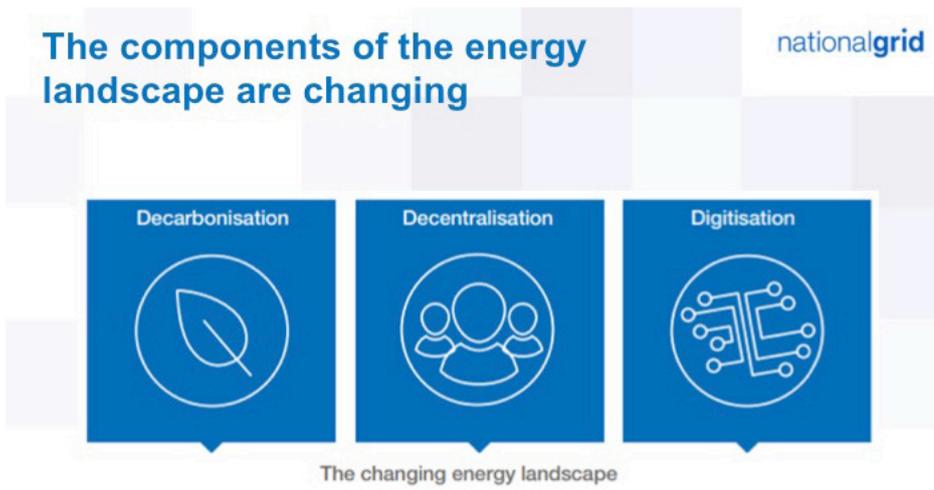
On a scale of 1 to 5, where 1 is not impacted at all and 5 is impacted a great deal, how impacted are you (or those you represent) by the topic of innovation?



On a scale of 1 to 5, where 1 is not impacted at all and 5 is impacted a great deal, how impacted are you (or those you represent) by the topic of innovation?

Stakeholder feedback

Session 1: Future energy landscapes



In the first session we introduced you to the changing components of the energy landscape; decarbonisation, decentralisation and digitalisation. We explained that the energy landscape is undergoing significant transition and that political, economic, societal and technological trends impact the

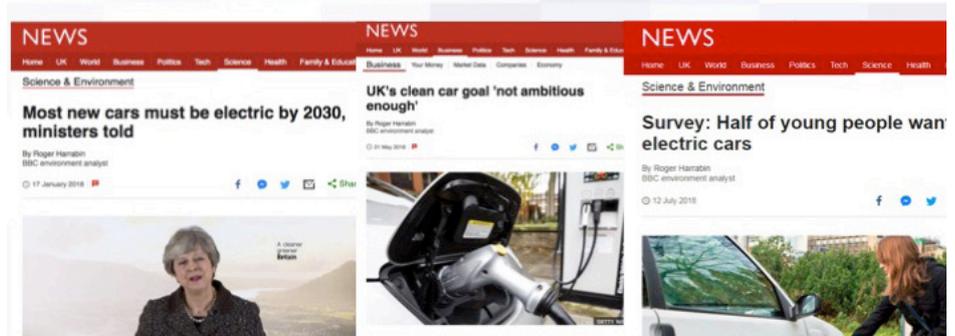
way in which we produce and consume energy.

We discussed how innovation can drive change in behaviours and shared examples of other companies who have been innovative and how society has changed their behaviours because of the innovative idea.



What should our innovation ambition be?

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In the table discussions, we used the following questions to begin the conversation:

What do you think we should be focussing our innovation on in the future?

What should be our top 3 focus areas?

Think long term, beyond RIIO-2 (2026)

No limitations

How will consumers benefit?

And how we should be doing this?

You then shared the table discussions with the room with your top 3 focus areas and we pulled together all of the focus areas and categorised to obtain the list below. You then voted for your priority order and this was the result.

1 Whole System – be open to more third party involvement & incentives, consumer involvement. Better smart meters, future scenarios

2 Dynamic and Flexible – speed of innovation, internal policy

3 Balance of risk – incentive for others not just NGET

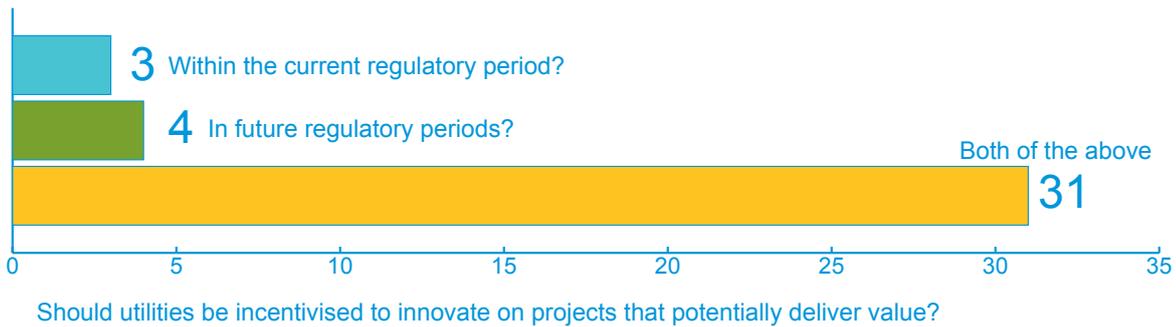
4 Disruption – sharing data, analytics, better asset management technology

5 Environment/carbon impact

6 Storage – batteries

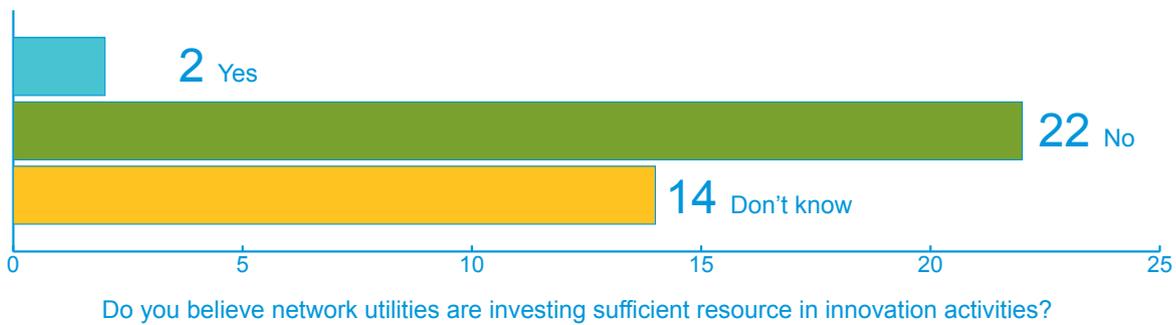
We then asked you

Should utilities be incentivised to innovate on projects that potentially deliver value?



We then asked you

Do you believe network utilities are investing sufficient resource in innovation activities?





We then discussed that in a truly competitive market for transmission, what do you

think a network company should prioritise based on these priorities?

- 1 Delivering value to their existing customer base**
- 2 Delivering short-term value to their shareholders**
- 3 Developing new products and services for existing customers**
- 4 Growing their customer base**
- 5 Delivering long-term value to their shareholders**
- 6 High-risk, disruptive innovation**
- 7 Meeting government targets**

You voted and told us that the priorities should be:

- 3 Developing new products and services for existing customers**
- 1 Delivering value to their existing customer base**
- 7 Meeting government targets**
- 5 Delivering long-term value to their shareholders**
- 4 Growing their customer base**
- 6 High-risk, disruptive innovation**
- 2 Delivering short-term value to their shareholders**



Session 2: Innovation in T1

We next discussed and shared with you our opinion what had gone well in T1 and what did not work so well against our mechanisms of Network Innovation Allowance, Network

Innovation Competition and Innovation Rollout Mechanism followed by introducing the RIIO-2 framework consultation.

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We have 3 innovation mechanisms in T1

	Network Innovation Allowance	Potential for Direct Impact on the Network <ul style="list-style-type: none"> New equipment (including software) or Novel application existing equipment or practice or Novel commercial arrangement 	Potential to deliver benefits to the customer Potential to develop learning Avoids duplication
	Network Innovation Competition	The Allowances 0.7% turnover 90% Cost Recovery	The Competition £70m available max 90% Recovery
	Innovation Roll-out Mechanism		

Network Innovation Allowance

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What went well... <ul style="list-style-type: none"> Nearly £1bn benefits delivered Life extension of a range of protection relays: £57m Factors affecting life expectancy of SGTs: £76m Online PD and CM tools: £25m Analysis of Grade 4 steelworks: £100m Large & diverse portfolio Driving innovation culture throughout the organisation 	What not so well... <ul style="list-style-type: none"> Use it or lose Management of IP Uncertainty after 2021 Capability for academic support Governance requirements Resourcing implementation Resourcing internal work Digitilisation programme
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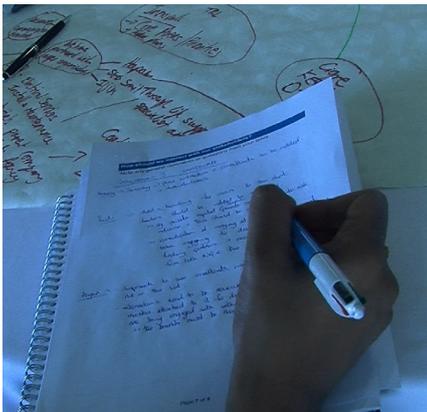
Innovation Rollout Mechanism

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What went well... <ul style="list-style-type: none"> Unsure (Used once by SPEN) 	What not so well... <ul style="list-style-type: none"> Only two re-openers Uncertainty over barriers to adoption
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We then introduced the RIIO-2 framework consultation.

We shared that there are seven key innovation focus areas for RIIO-2 and it may now be appropriate to re-focus support towards larger-scale, 'whole-system' orientated projects.



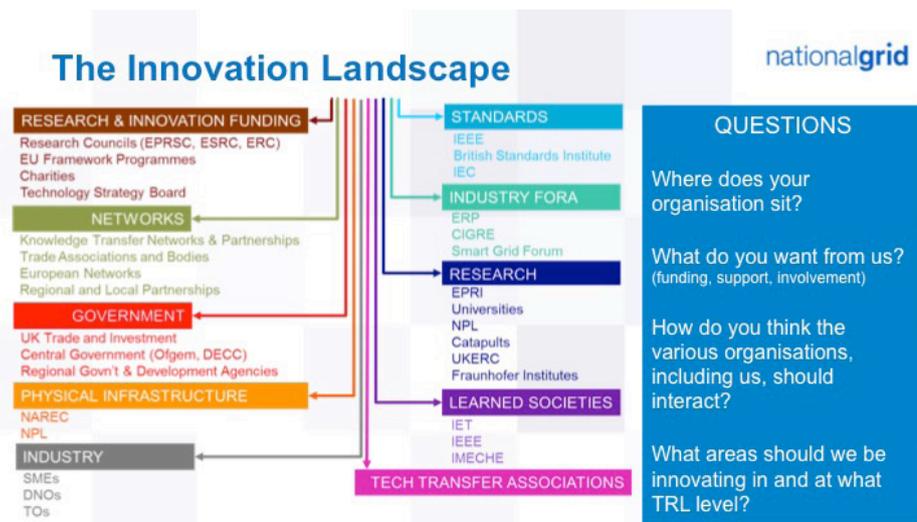
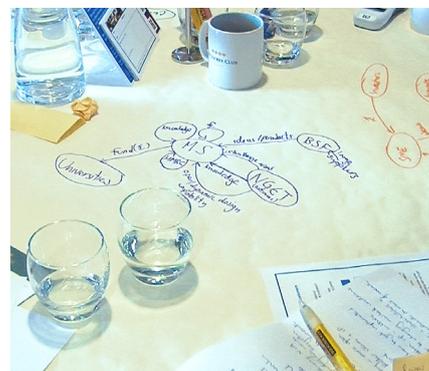
- 1 Companies will share more risk - The balance of risk should be more heavily weighted towards the company and not the consumer.
- 2 Stronger incentives in place- There should be stronger incentives on network companies to meet the future challenges.
- 3 Rewards good performance - Network companies should be rewarded for great innovation performance.
- 4 Demonstrate long-term value to consumers.
- 5 Enabling increased third party engagement.
- 6 Drive the transition to BAU using the incentives framework - Setting allowances for some activities over a longer timescale to enable greater flexibility.
- 7 There is a drive to get greater co-ordination with external funding streams.

You then voted on these and decided that the priority should be:

- Companies will share more risk - The balance of risk should be more heavily weighted towards the company and not the consumer.
- Stronger incentives in place- There should be stronger incentives on network companies to meet the future challenges.
- Rewards good performance - Network companies should be rewarded for great innovation performance.
- Demonstrate long-term value to consumers.
- Enabling increased third party engagement.
- Drive the transition to BAU using the incentives framework - setting allowances for some activities over a longer timescale to enable greater flexibility.
- There is a drive to get greater co-ordination with external funding streams.

Session 3: Delivering the future energy system in the UK

The remaining session was delivering the future energy system in the UK.



We asked you your organisation sits in the Innovation landscape, what would want from us such as funding, support and involvements and

how organisations, including us should interact as well as areas we should be innovating in.

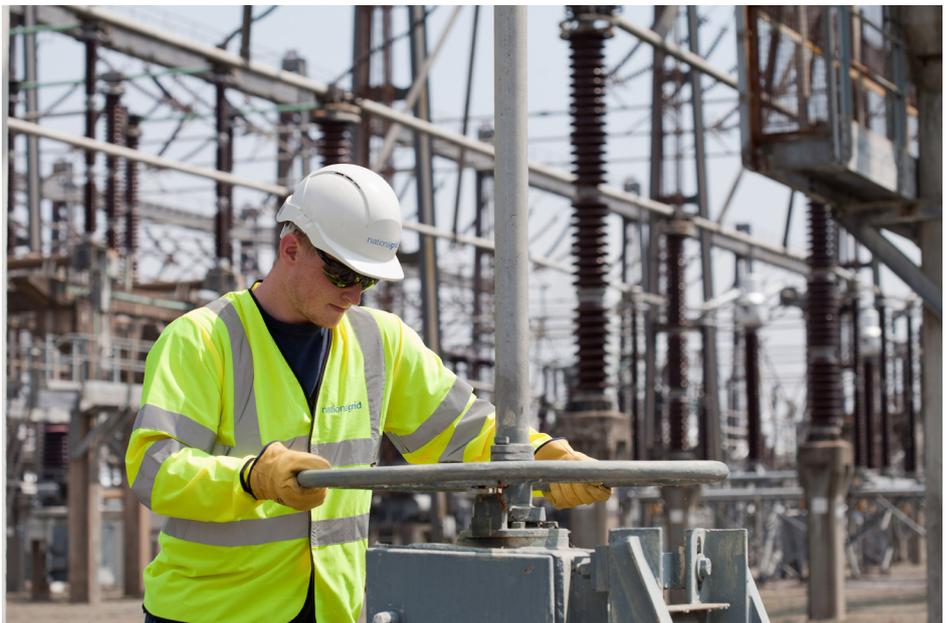
You told us

- National Grid should NG engage with SME and tell them the areas where innovation is required.
- NGET should provide a platform to discuss ideas.
- It can be difficult engaging with National Grid Engineers as they are focussed on their day job.
- You would like us to share information on the work we intend to do and you want to be involved early in the design.
- We need to collaborate more and that the mechanisms for collaboration are very important. Collaboration through workshops with dedicated theme/technical areas
- National Grid needs to educate the whole energy system on innovation and open dialogue to create collaborative inputs and ideas sharing.

Continued on next page

You told us, continued

- We need to improve in the way we communicate with our stakeholders – less reports and more diverse channels such as podcasts.
- We should be hosting least two face-to-face innovation events a year.
- We need to Invest in Energy Impact Partners (EIP) to understand future trends and industry direction.
- National Grid needs to be clear on speed and the timeline for implementation of projects.
- We need to build on relationship management not stakeholder engagement.
- We need a platform/forum for stakeholders to understand problems from NG and Ofgem requirements.
- You would like more transparency of innovation project application process.
- Access to test facility to improve TRL for new technologies.
- Collaboration through workshops with dedicated theme/ technical areas.



Next steps



We will incorporate what we have heard at the workshop into our engagement plan for 2018/2019.

We will seek further understanding on your comments and feedback to drive improvements and answer specific questions raised at the workshop with a direct response to attendees.

We will improve our communications and channel mix and produce a podcast as a first test in August and share. Please feedback your thoughts.

We will organise a second face to face meeting in early September.

We will share our Innovation Strategy with you by the end of August 2018.

We will continue to use Twitter and LinkedIn to share updates.

We will work with our Stakeholder Group and Ofgem's Consumer Challenge Group and use all our stakeholder feedback to develop our business plans for RIIO-2

We will publish the first draft of these plans in early 2019, so that stakeholders can review our proposals and let us know whether we've correctly interpreted their requirements.

We will continue to share updated plans with stakeholders before final submission to Ofgem in late 2019.

Contact us

Join us at the Low Carbon Networks & Innovation Conference (LCNI) 16 & 17 October, Telford

To find out more about National Grid's Electricity Transmission innovation team, check the Electricity transmission innovation pages on nationalgrid.com,

search LinkedIn for 'Innovation at National Grid' or search @nationalgriduk on Twitter.

If you like to speak to someone in the ETO Innovation team, email box.eto.innovationteam@nationalgrid.com

Access our Electricity Transmission Innovation website.

<https://ngrid.com/2upTO9M>



Access our RIIO-T2 website.

<https://ngrid.com/2LfB048>



Access our Deeside project website.

<https://bit.ly/2mdxBYT>



Access Ofgem's RIIO-T2 consultation document

<https://ngrid.com/2mdhoml>

