Welcome to the *ESO RIIO-2* webinar

- Thank you for joining us! You will be joined in listen only mode.
- Please do not unmute yourself or turn your camera on
- You can ask questions via the chat function
- The WebEx details are:

- 0800-376-8336 or 020-7108-6317
- Meeting number (access code): 599 638 803
- Meeting password: xJf7jFhJ

Please note we will be recording this webinar

For more information on the ESO's approach to RIIO-2 please visit http://yourenergyfuture.nationalgrid.com

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Welcome to the *ESO RIIO-2* webinar

Thursday 30 August 2018

Seamus Gallagher
Seamus.Gallagher@nationalgrid.com

Agenda

- Introduction
- Stakeholder Engagement
- Scenarios
- Codes and Charging
- Next Steps and close

How you can get involved today

Throughout the presentation please feel free to provide feedback or ask questions via the chat function and we will pause at points to respond

We will be using a poll at certain stages during the presentation to collect your feedback

We hope to have a question and answer session at the end of the webinar. Please press the ‘hand’ icon next to your name and we will unmute your line.

Key Updates

Kayte O’Neill
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Ofgem’s Framework Decision document

Ofgem released its Framework Decision Document on 30 July

	Ofgem Decision
ESO price control	Ofgem has confirmed that the ESO will have a separate price control in RIIO-2.
Timeline	The price control process for the ESO is currently expected to follow the same timeline as for the transmission companies – ultimately we will be expected to submit our well justified business plan in Q4 2019
Overarching approach	Default positions in the document should be assumed to apply to the ESO – for example relating to enhanced engagement, but Ofgem will be flexible in only applying these where appropriate and in consumers’ interests. More detail to follow in the sector strategy consultation.
Gas System Operator	Ofgem is not proposing a separate GSO control, although they may consider whether any proposals for the ESO are appropriate for the GSO
Regulatory Framework	As the ESO will have its own price control Ofgem is looking at how we will be funded; Ofgem engaged with industry on its vision for the ESO and potential regulatory models on 6th August

Stakeholder input through bilaterals, webinars and a workshop has shaped our thinking around regulatory models for the ESO

Q1-Q2
Bilaterals

Added principles on transparency and windfalls

22 June
ESO workshop

Performance & Layered voted top two models for the ESO

Broad agreement with principles

28 June
ESO webinar

Provided an overview of feedback received

Our thinking around regulatory models for the SO:

- Pull out key model features that have strong stakeholder support and develop bespoke model
- Test which ‘performance’ features stakeholders want us to prioritise
  - Identify outcomes stakeholders want us to deliver
  - Consider approaches to performance incentivisation
  - Evaluate and build on 18-21 work
- Evolve view of ESO’s activities and the risks that we manage

We will continue to evolve our thinking ahead of Ofgem's Sector Specific consultation at the end of the year

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6 Aug Ofgem workshop	Sept/Oct Stakeholder engagement on evolving model	Oct ESO thought piece on funding model	Dec Ofgem publishes Sector Strategy consultation	Q1 2019 ESO response to Sector Strategy consultation	Ofgem decision expected Q2 2019

Ofgem Workshop Summary

Ofgem asked attendees to consider:

- the accuracy of the ESO's roles and principles for RIIO-2 (default of 2021-2026);
- having one holistic scheme or separating out incentives;
- remuneration of the ESO including having a single funding approach or separate approaches for different services;
- how to incorporate comparative assessment and the role of stakeholders

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Stakeholder Engagement

Seamus Gallagher
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Phasing our engagement

Building our business plans with our stakeholders through enhanced engagement

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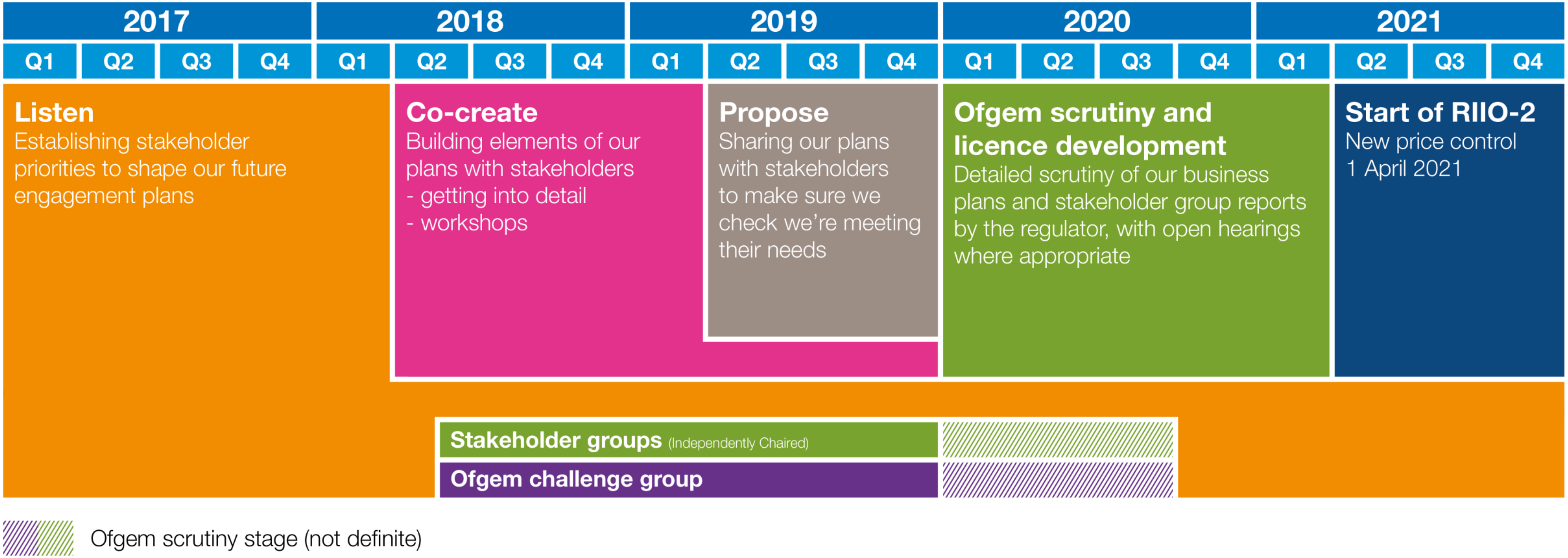
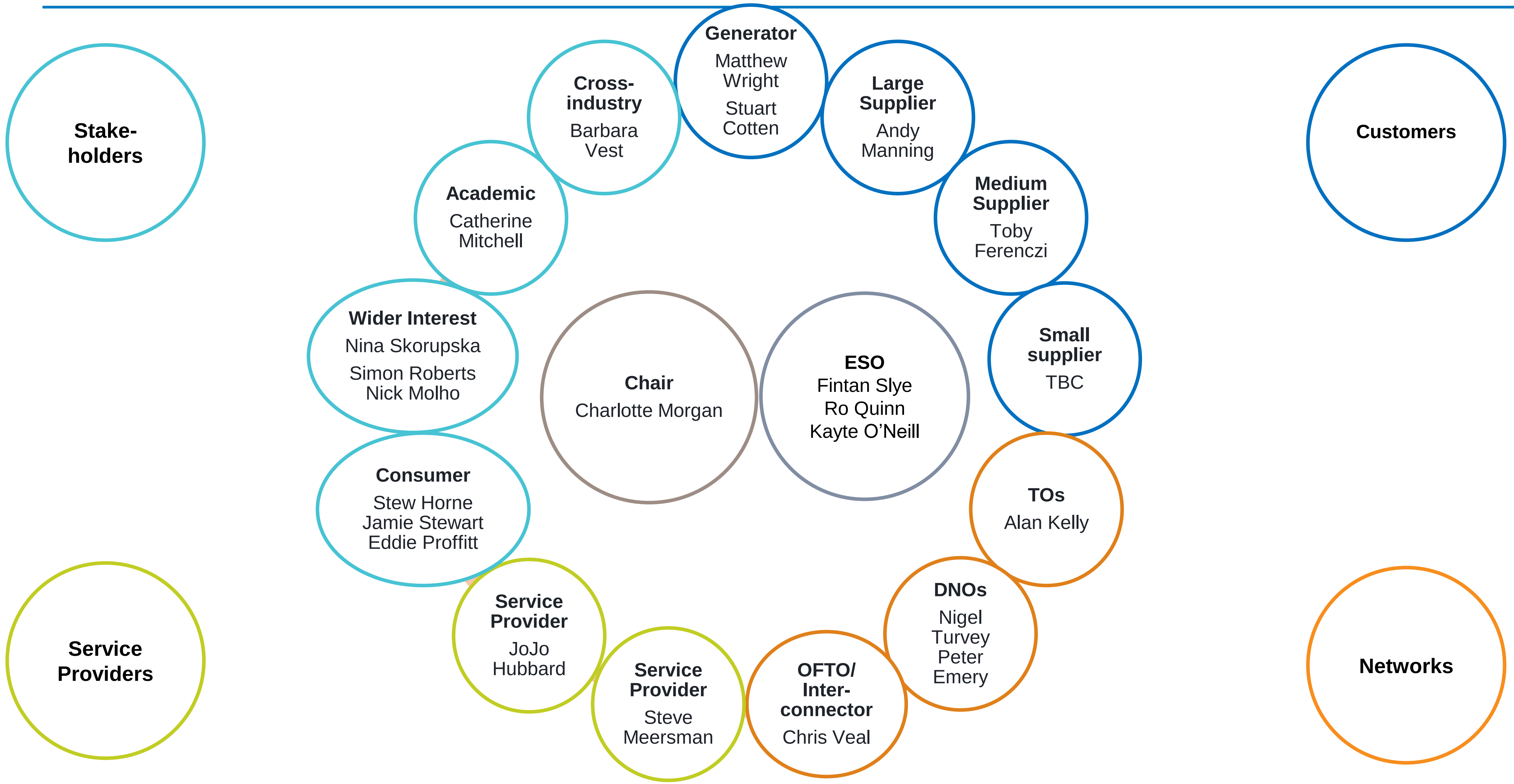
- Stakeholder engagement will take place in many forms, with bilaterals, webinars and tailored workshop sessions to build on our day-to-day contact and existing understanding.
- We have split our stakeholder engagement approach into three phases:



ESO RIIO-2 Stakeholder Group membership



We have mapped our Consumer and Stakeholder Priorities to our Roles and Principles

You asked us to consolidate our Forward Plan and RIIO-2 frameworks and engagement activities

Consumer priorities

- I want to use energy when I want
- I want a safe and secure energy system
- I want a decarbonised energy system, fit for the future
- I want an affordable energy bill

Principles

- **0: Operate the system in real-time, safely and securely**
- 1: Support market participants to make informed decisions by providing user-friendly, comprehensive and accurate information
- 2: Drive overall efficiency and transparency in balancing, taking into account impacts of ESO actions across time horizons
- 3: Ensure the rules and processes for procuring balancing services maximise competition where possible and are simple, fair and transparent
- 4: Promote competition in the wholesale and capacity markets
- 5: Coordinate across system boundaries to deliver efficient network planning and development
- 6: Coordinate effectively to ensure efficient whole system operation and optimal use of resources
- 7: Facilitate timely, efficient and competitive network investments

Stakeholder priorities

Our Consumer and Stakeholder Priorities

For reference with previous slide

Consumer priorities

- I want an affordable energy bill
- I want a decarbonised energy system, fit for the future
- I want to use energy when I want
- I want a safe and secure energy system

Stakeholder priorities

- I want transparent and stable charges
- I want to provide more balancing and ancillary services
- I want efficient whole energy system operation
- I want to connect to the electricity network in a timely manner
- I want you to enable the smart, flexible and low-carbon energy system of the future
- I want to engage in more active wholesale and capacity markets
- I want you to protect the system from cyber and external threats
- I want you to be open, engaging and easy to work with
- I want accurate and user-friendly information

Topics for ERSG meetings – an outline for future meetings (some topics will require consideration at multiple meetings)

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Framework decision

Sector Strategy consultation

***External* Publication of the draft BP**

Sector Strategy decision

***External* Submission of the BP**

ERSG Meetings

Jul. 2018

- ESO Vision (1)
- External Landscape
- Regulatory Mechanisms (1)

Oct. 2018

- Principle 0 (ESO Vision, incl. Information Systems and Innovation) (2)
- Principle 6 (LT system operability)
- Principle 5 (system access planning)
- Principle 4 (codes & charging)
- Principles 5&6 (whole elec. system) (1)

Jan. 2019

- Principle 2 (operating the system)
- Principle 3 (facilitating markets) (1)
- Principles 5&6 (whole elec. and energy system) (2)
- Regulatory Mechanisms (2)

Apr. 2019

- Principles 5&7 (network investment & competition)
- Principle 1 (producing scenarios)
- Draft submission feedback
- Draft stakeholder group report?

Jul. 2019

- ESO Vision, incl. IS and Innovation (3)
- Principle 3 (facilitating markets) (2)
- Update of draft submission

Oct. 2019

- Final review of submission
- Final review of stakeholder group report?

Using scenarios and the changing energy landscape

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David Bowman
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Playback of our previous engagement

At our June workshop and webinar, and in other engagement, stakeholders told us:

- They supported, in principle, the use of scenarios, our high level approach and using FES 2018 as our business plan foundation
- What they felt the top changes in the energy landscape would be
- That they wanted to see the development of commonalities

Ofgem have said scenarios should:

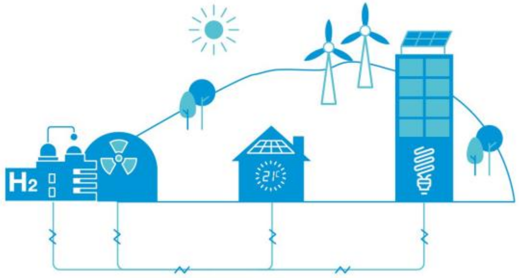
- Set a realistic baseline
- Be measurable
- Be independently verifiable
- Have the ability to be flexed

FES 2018 meets these

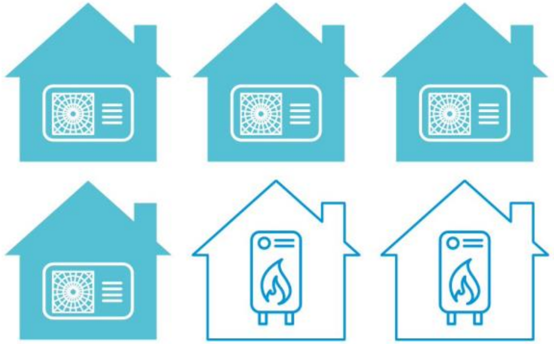
The upshot is:

- Now FES 2018 has been released, we can develop the commonalities using your thoughts and the FES data into a **scorecard**
- We can explain how we propose to use the data

Key messages from FES 2018

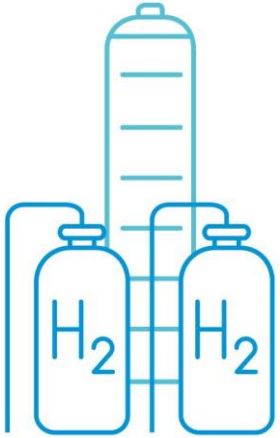


We are entering a new world of energy. The expected growth of **low carbon and decentralised generation** means the electricity system will need to change.



Action on heat is essential and needs to gather pace in the 2020s to meet low carbon heating solutions and better thermal efficiency of buildings is needed.

Electric vehicle growth goes hand-in-hand with electricity decarbonisation. Smart charging and vehicle-to-grid technology can actively support the decarbonisation of electricity.



Gas will play a role is providing reliable, flexible energy supplies for the foreseeable future. New technologies and sources of low carbon gas can decarbonise the whole energy sector.

At our previous engagement you told us what the top changes in the energy landscape might be

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Digitalisation and "big data"

Policy and governance

Electric vehicles and decarbonisation of transport

Storage

Decentralisation

Consumer behaviour

Decarbonisation of heat

Demand side response

Decarbonisation of electricity supply

We have developed a 2030 commonality "scorecard" and identified the top areas of change and uncertainty (1/2)

Level 1: clear enough future

Single view of the future

Area	Now	2030 commonality / uncertainty	Drivers
Installed coal capacity	12.7GW	All coal phased out	• Policy and governance • Decarbonisation of electricity supply
Peak demand	59.4GW	62-64GW in all scenarios	• Digitalisation • Policy and governance • Decentralisation • Consumer behaviour • Decarbonisation of heat • Demand side response • Decarbonisation of electricity supply • Storage • Electric vehicles

Level 2: alternative futures

Limited set of possible future outcomes, one of which will occur

Area	Now	2030 commonality / uncertainty	Drivers
Gas capacity	35GW	Two scenarios ~31GW, two scenarios 41-43GW	• Decarbonisation of electricity supply • Policy and governance • Decentralisation
Electric vehicles	~100,000	Two scenarios at 11m, two at 2.7m	• Policy and governance • Electric vehicles and decarbonisation of transport
Distributed generation capacity	28GW (27%)	Two scenarios at 70GW and 73GW (45%), two at 45GW and 47GW (35%)	• Decentralisation • Policy and governance • Decarbonisation of electricity supply
Smart meters	11m	All scenarios ~28.3m, peaking in 2019 or 2022	• Policy and governance • Consumer behaviour • Decentralisation

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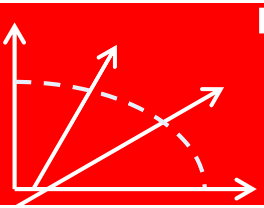
We have developed a 2030 commonality “scorecard” and identified the top areas of change and uncertainty (2/2)



Level 3: range of futures

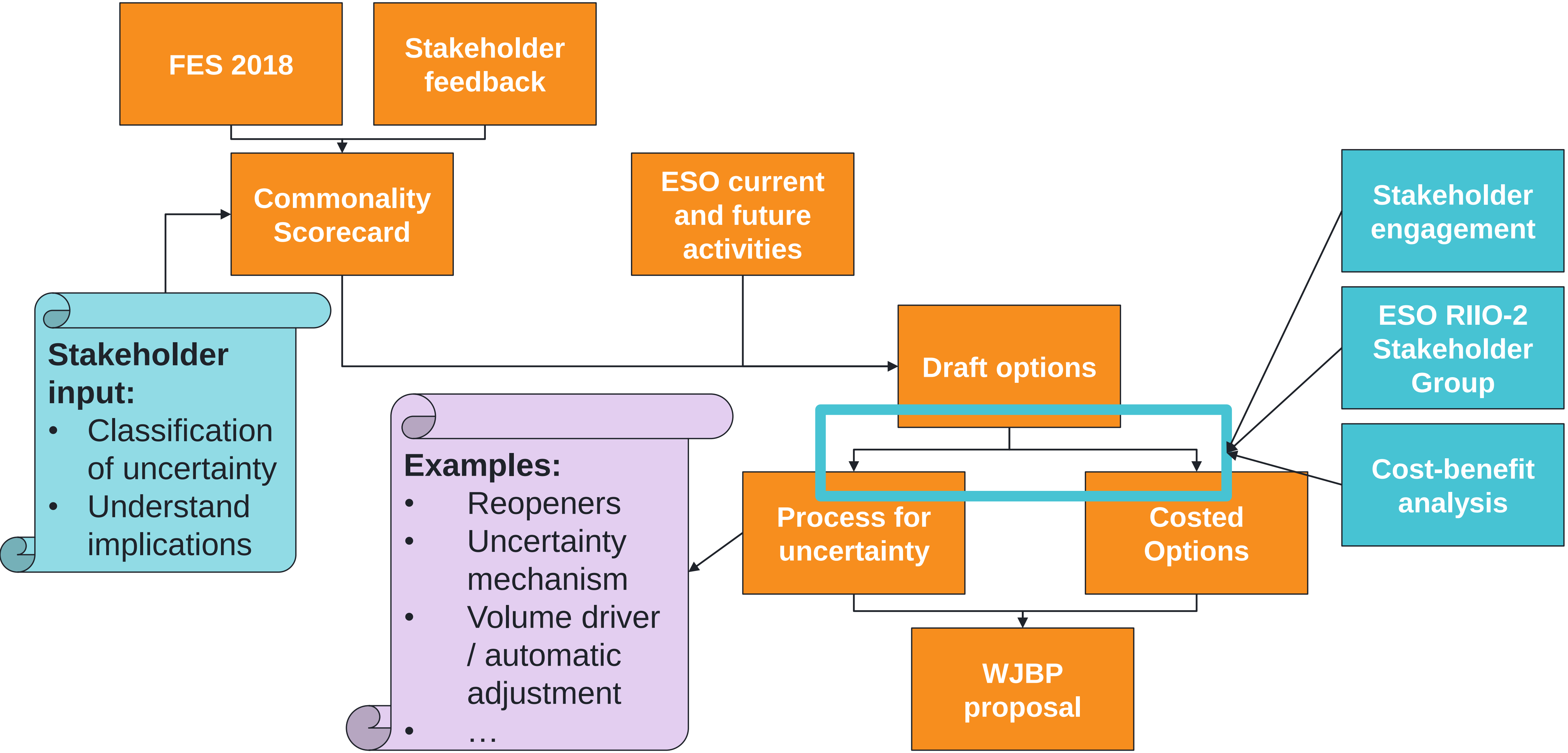
Range of possible future outcomes; outcome anywhere within range

Area	Now	2030 commonality / uncertainty	Drivers
Total wind capacity	17.6GW	Two scenarios ~48GW Others 32.5GW and 53.5 GW	• Decarbonisation of electricity supply • Policy and governance • Decentralisation
Interconnection capacity	4GW	Two scenarios 15-16GW, one at 10GW and 20GW. One scenario in net export	• Policy and governance
Solar capacity	12.5GW	Three spread at 16-24GW outlier at 33GW	• Decarbonisation of electricity supply • Policy and governance • Decentralisation • Consumer behaviour • Digitalisation
Storage capacity	3GW	Two scenarios at 9GW, others at 6GW and 7GW	• Policy and governance • Digitalisation • Consumer behaviour • Decarbonisation of electricity supply

Our upcoming engagement will focus on the implications of the uncertainty:

- Does the uncertainty matter?
- What might be the affects on industry and consumers?
- How might the ESO need to adapt?

How we plan to use our scorecard



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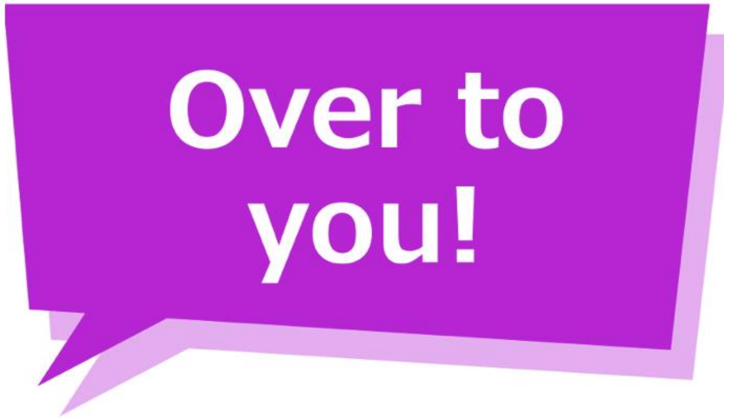
Get involved

- **Poll**: do you agree with our approach for using the commonality scorecard and understanding the uncertainty?
- We will engage further at the **FES workshops** in October
- We will then refine the scorecard and use it as the basis for our business plan, as detailed on the next slide



Q&A Session

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Charging

Network Charging

Our current role

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Transmission Network Use of System – TNUoS

Recovers the cost of shared transmission assets across all onshore and offshore Transmission Owners

£2.7bn

Balancing Services Use of System – BSUoS

Recovers the cost of operating the system

~£1bn

Connection Charges

Recovers the cost of single user assets

£230m

Values for 2017/18

Network Charging

Current reform

- Targeted Charging Review
- Access and forward looking charges
- Reform outside of Ofgem work

Residual charging

Access rights

Forward looking charges

Find out more at www.chargingfutures.com

Network Charging

Stakeholder views

There is too much **volatility** in my charges

I can’t **predict** what my charges will be

Network charging doesn’t reflect the cost and benefit I have on the **whole system**

I am not on a **level playing field** with other users

Consumer priorities

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Stakeholder priorities

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- I want accurate and user-friendly information

Network Charging

Next steps

- We will use your feedback to shape our views on how to reform network charging
- This will feed into:
    - Current industry change processes
    - Our RIIO-2 Business Plan

Future Engagement

Charging Futures Forum – 5th September

Transmission Charging Methodologies Forum

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Code Administration

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Our Role as a Code Administrator

- There are currently over 10 industry codes across gas and electricity with a further code in development due to the Faster Switching Significant Code Review. Each code has a Code Administrator whose role is to facilitate the code modification process and perform a secretariat function for the code.
- The Electricity System Operator has many diverse roles and responsibilities – one of those roles is being a Code Administrator. We are Code Administrator for the Connection and Use of System Code (CUSC), the Grid Code and the System Operator – Transmission Owner Code (STC).
- We recognise the need to step-up in our role as a Code Administrator - this view is driven by industry feedback on our performance and the direction of Ofgem Code Governance Reform so we want to further engage stakeholders on the evolution of our role as a Code Administrator.
- We would therefore welcome your feedback on this topic to help us develop our RIIO-2 Business Plan.

Code Administrators' Performance Survey 2017

In April 2017 Future Thinking published the results of their Code Administrators' Performance Survey. The overall satisfaction scores were as follows.

*"Thinking about all aspects of your dealings with the code administrator in relation to this / these codes, overall how satisfied are you with the service provided to your organisation?"	%	BSC	CUSC	DCODE	DCUSA	Grid Code	IGT UNC	MRA	SEC	SPAA	STC	UNC
Net Satisfied	%	82	47	77	83	59	62	70	71	73	45	77
Net Dissatisfied	%	0	11	0	10	7	3	8	12	7	0	5

We believe we need to improve the Code Administration service we provide to our customers.

Our key insights obtained through our ongoing Customer Journey are as follows.

Customer Research – Key Insights

NO TARGET TO AIM AT

Decisions are not guided by a vision of what the energy system should be in the future, so changes can often be tactical.

OPAQUE ON WHAT AND HOW

Awareness to engage among customers who are new entrants is low and happens by accident. For those who are aware, learning the process is by trial and error.

INDEPENDENCE QUESTION

Current representation as well as a lack of newer entrants and the voting rights of subsidiaries makes it hard for the process to be, or be seen to be, independent.

HIDDEN MOTIVES

A lack of work upfront means that proposals can be made that go through the process without participants being clear on the underlying motives / drivers behind them.

Customer Research – Key Insights

THE MISSING CONSUMER

The consumers' voice isn't heard or gets lost through the process. Many layers of impact to work out without the motivations there to encourage doing the work.

TRANSLATION-AS-A-SERVICE

It takes a lot of research to translate what a change will mean for all parties. Businesses can fund the work to do this, but 'findings' aren't always trusted.

EXPERTISE OBSTACLES

Technical depth of knowledge and language used in forums presents an obstacle of understanding for some. Content is there but users need to hunt for it.

HOW TO FIND THE TIME

All struggle with workload versus capacity. Small companies due to small teams; big companies due to multiple stakeholders. Macro trends suggest this will only get worse.

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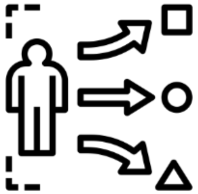
Customer Research – Key Insights

PICK AND CHOOSE

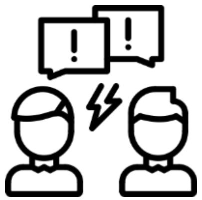


Everyone picks and chooses what changes to invest in, which is hard to get right. There is no space for ‘good ideas’ to make the system better to be made over and above the Modifications that are raised.

WITH NOT TO

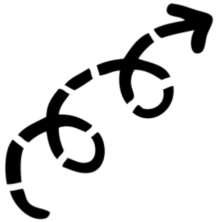
There is a need and a want to form ideas together, and have a ‘critical friend’ through the process. When this does happen it is fortuitous and not by design.

NUCLEAR OPTION ONLY



When things get less than ‘collegiate’ there aren’t many routes to go to resolve conflicts. It can feel adversarial or entrenched given how those involved think.

PACE AND DYNAMISM



There is a clear tension between the dynamism of the market and newer entrants with the appetite and ability of NGESO, Ofgem and established players to keep up with the pace.

Our Codes Role in RIIO-2

- Our 'Customer Journey' work should improve the current service we provide in RIIO-T1.
- There is an opportunity to further increase performance and unlock consumer value through Code Management – however the role of a Code Manager remains unclear at this point in time.
- We would welcome your views on our indicative views for the role of a Code Manager in RIIO-2.

Code Administration

CACoP Compliance
A Good Critical Friend
Limited scope to raise Modifications
Limited Strategic Code Change
Reactive Stakeholder Engagement
Limited Use of Tools and Technology
Limited Innovation
Limited Prioritisation Capability
Limited Consumer Value Objective

Code Management*

CACoP Compliance and Improvement
A Better Critical Friend
Wider scope to raise Modifications
More Strategic Code Change
Proactive Stakeholder Engagement
Greater Use of Tools and Technology
Driving Innovation e.g. Code Simplification
Greater Prioritisation Capability
Stronger Consumer Value Objective

**Code Manager responsibilities based on customer feedback and developments in Code Governance Reform and of the Retail Energy Code.*

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Q&A Session

Next Steps

Engagement Summary

We are now establishing a pattern of engagement

- ERSG meetings:
  - On a quarterly basis from July 2018
  - Last Wednesday of each quarter – early November, 30 Jan, 24 April, 31 July, 30 October
- ESO RIIO-2 Webinars
  - Bi-monthly from April 2018
  - Last Thursday of month – next webinar 25th October
- ESO RIIO-2 Bulletins
  - Bi-monthly from April 2018
  - Last published in early August, next due in October
- ESO RIIO-2 Workshops and Events
  - As required
  - First held June 2018 – stakeholder report now available online
  - Next due September 2018
- Bilateral meetings
  - Ongoing – let us know if you would like to talk to us directly
- Existing engagement
  - Use where possible to make best use of your time

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Timeline of activity

Our co-create phase

August

September

ofgem

- **6 August** ESO RIIO-2 Industry Workshop
- **August 28** Stakeholder Report Published
- **30 August** ESO RIIO-2 webinar
- **Mid September** ESO ERSG Reg Mech's Workshop
- **28 September** Forward Plan & RIIO-2 Workshop
- **Sept/ Oct** ESO RIIO-2 Bulletin
- **Early October** FES Workshops
- **Mid October** Reg Mech's thought-piece
- **25 October** ESO Webinar

Upcoming engagement topics:

- Codes and Charging
- Scenarios
- Innovation
- ESO Vision and Activities
- Regulatory Mechanisms

Thank you for attending!

You can get involved further:

Feedback Poll

http://yourenergyfuture.nationalgrid.com/

Box.ESO.RIIO2@nationalgrid.com