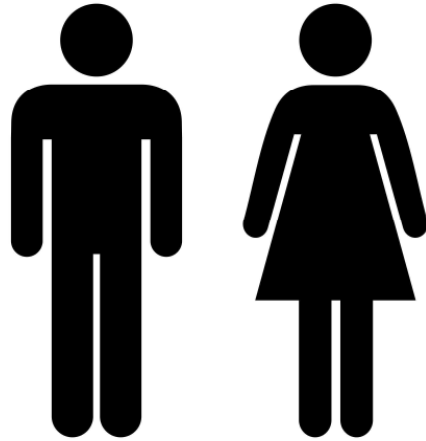


ESO RIIO-2 Stakeholder Group



Meeting 1
25 July 2018

Housekeeping



Meeting agenda

Item	Time	Description
	09:00 – 09:30	Arrival. Tea & Coffee available
1	09:30 – 09:45	Welcome from Fintan Slye – Director, UK System Operator
2	09:45 – 10:00	Welcome from Charlotte Morgan - Chairperson
3	10:00 – 11:00	Stakeholder Group member introductions
	11.00 – 11:30	Break – Electricity National Control Centre viewing gallery
4	11:30 – 12:00	An introduction to National Grid, RIIO-1, legal separation and the ESO Forward Plan
5	12:00 – 12:30	Introduction to RIIO-2 and enhanced engagement
6	12.30 – 13:15	Terms of reference and ways of working
	13:15 – 14:00	Lunch with the System Operator Leadership Team
7	14:00 – 14:30	Laying the foundations of our plan
8	14:30 - 15:00	From vision to outputs
	15:00 – 15:15	Break
9	15:15 – 15:45	Developing our work plan
10	15:45 – 16:15	Regulatory mechanisms
11	16:15 – 16:30	Feedback on format and content
	16:30 – 17:00	AOB – without ESO representatives if requested
	17:00	Depart

Item 1



Welcome from Fintan Slye – Director, UK System Operator

The changing energy landscape

The ESO is operating in an environment that has changed significantly since 2010...and will continue to change

+13 GW

Increase in installed solar capacity since 2010



+14 GW

Increase in installed wind generation capacity since 2010



+ 60%

Number of active BMUs from 2014 to 2017



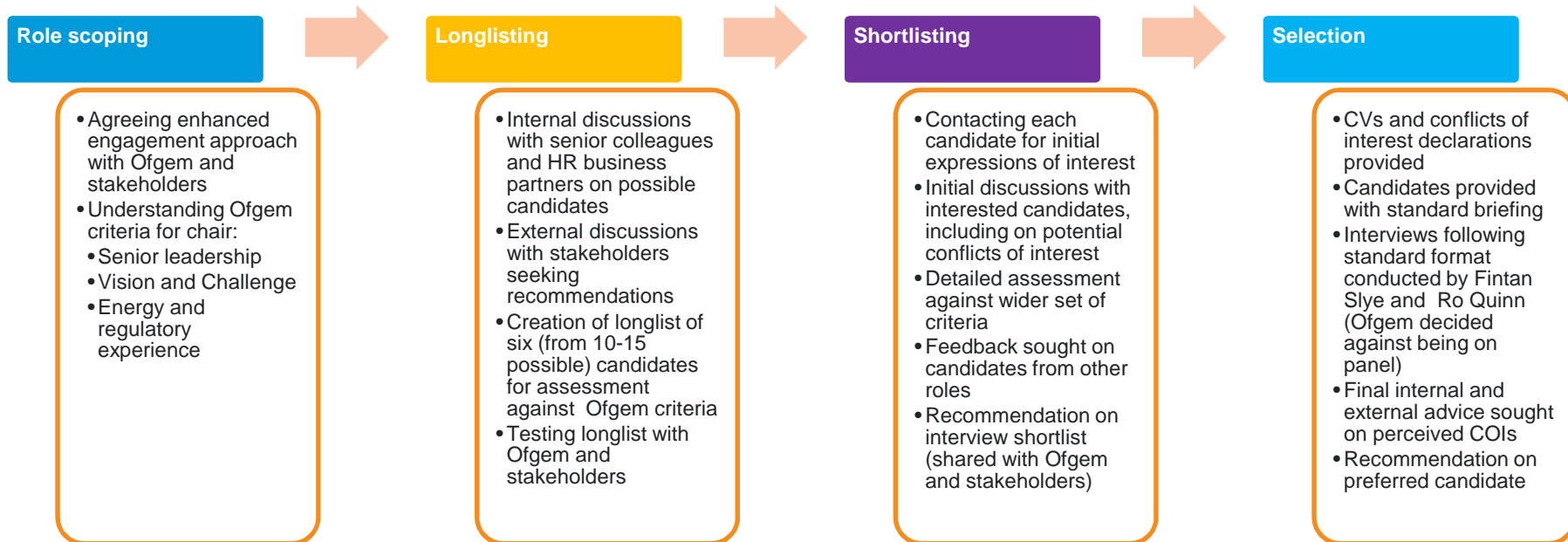
£8 billion

Consumer savings per year from embracing Smart Power



Selecting the independent Chair

We followed a rigorous process to appoint a chair for the group in consultation with Ofgem



Item 2



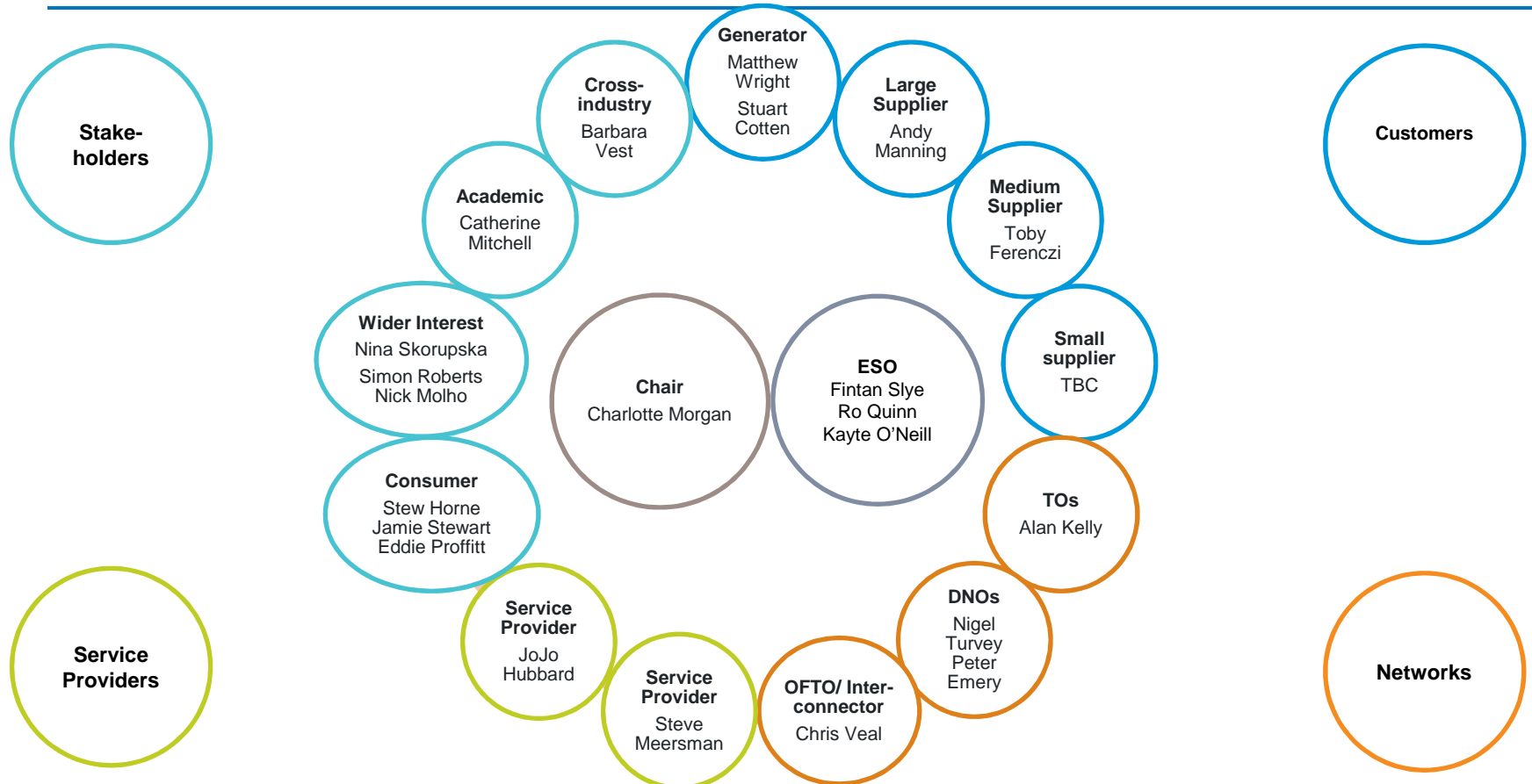
Introducing the Chair, Charlotte Morgan

Item 3



Member introductions

ESO RIIO-2 Stakeholder Group membership



Individual Biographies

Name: Barbara Vest

Barbara has a wealth of experience throughout the energy industry, having worked in the supply business of Northern Electric and Yorkshire Electricity. She is an elected industry representative on the Balancing and Settlement Code Panel and serves on the Executive Council of the House of Commons All Party Parliamentary Group for Energy Studies. Barbara is a Freeman of the City of London.

Current Role: Special Advisor, Energy UK**Name: Stuart Cotten**

Stuart has over 15 years' experience in the energy sector specialising in market frameworks, regulatory policy and business ethics. He is currently an industry elected member of the Balancing and Settlement Code (BSC) Panel and chairs Energy UK's Generation Committee. Stuart has previously served on DECC's Capacity Market Expert Group, Ofgem's Future Trading Arrangements Forum, APX's Market Development Advisory Board and the CUSC Governance Standing Group.

Current Role: Group Head of Regulation and Compliance, Drax

Individual Biographies

Name: Catherine Mitchell

Catherine has over 35 years experience working on energy issues. Previously, she has worked as an academic at the Centre for Management under Regulation at the University of Warwick, the Energy Group at the University of Sussex, and the Energy and Resources Group, University of California. Her research interest is on the transition from the current energy system to a sustainable system, with a focus on climate change and energy security.

Current Role: Professor of Energy Policy, University of Exeter

Name: Steven Meersman

Steven advised large funds and trading houses on energy trading and infrastructure topics while working at Oliver Wyman. He started his career in energy storage at AES Energy Storage during his MBA at Carnegie Mellon University. Steven is one of three founders of Zenobe Energy and prior to this, led a team responsible for hedging and supporting supply optimisation of Puma Energy's mid-and downstream assets.

Current Role: Founder, Zenobe Energy

Individual Biographies

Name: Simon Roberts

Simon has worked in sustainable energy for more than 30 years. Since 2002, he has been Chief Executive of the Centre for Sustainable Energy where he leads the charity's policy work. He is a specialist advisor to the government and various academic programmes and industry bodies. He currently sits on the BEIS/ Ofgem Smart Systems Forum and was a member of Ofgem's Consumer Challenge Group from 2008-15. He was awarded an OBE for his work in 2011.

Current Role: Chief Executive, Centre for Sustainable Energy**Name: Jamie Stewart**

Jamie has worked in energy since 2009 in a number of different sectors. His current work primarily focuses on consumer advocacy and he has specialist knowledge on fuel poverty, energy efficiency, behaviour change and energy networks. He sits on a number of stakeholder groups for energy network companies in Scotland and also sits on a Scottish Government advisory group for a fuel poverty pilot programme. Jamie completed a PhD in carbon capture and storage and has a wide range of knowledge on the energy sector in general.

Current Role: Energy policy officer, Citizens Advice Scotland

Individual Biographies

Name: Nick Molho

Nick has previously held roles as an energy lawyer at CMS Cameron McKenna and Head of Climate and Energy Policy at WWF-UK. In his current position he is responsible for overall management of the Aldersgate Group, including its relationships with key political and business stakeholders and its representation to government ministers and parliamentarians. He has a keen interest in climate change, energy, low-carbon growth and international development issues.

Current Role: Executive Director, Aldersgate Group**Name: Eddie Proffitt**

Eddie is a chartered engineer, with more than 30 years' experience working in various roles within the industry. Before joining MEUC, he was the UK Head of Procurement for Pilkington Gas Group, and has also served as a non-executive director of an NHS Trust as Chair of the Audit committee. He is currently the Ofgem nominated representative for Industrial and Commercial consumers on the gas Uniform Network Code modification panel.

Current Role: Technical Director of the Major Energy Users Council (MEUC)

Individual Biographies

Name: Toby Ferenczi

Toby has a PhD in solar energy from Imperial College London, and a BA and MSci in Physics from Cambridge University. His previous roles have included working as COO and MD of VCharge, and CEO of Hanergy Solar UK. During his time at Hanergy, Toby launched a partnership with IKEA, making it possible to buy PV through its stores in four countries. He also has experience in working for General Electric in renewable energy.

Current Role: Director of Strategy, Ovo

Name: Stew Horne

Stew started his career working on a number of high profile consumer-centred government projects, from restaurant food labelling to the digital television switchover. Following this, he led policy work at Ofgem with a focus on consumer empowerment, prepayment meters and the Confidence Code. In his current role, Stew leads the Energy Networks and Systems team at Citizens Advice where he represents consumers in network issues changes and ensures consumers' issues are considered in industry codes and governance.

Current Role: Principal Policy Manager, Citizens Advice

Individual Biographies (not included in pre-read)

Name: Alan Kelly

Alan has 30 years experience working across Scottish Power's distribution and transmission businesses – working as a senior control room engineer, construction project manager and ISO quality manager. More recently he has worked as Transmission Policy and Commercial Manager with responsibility for connection offers and onshore competition policy. Alan has sat on the Grid Code, STC and CHUG committees and the Network Access Policy (NAP) working group since its inception.

Current Role: Policy and Licence Manager, Scottish Power Transmission

Name: Nina Skorupska

Nina is a Board member of the European Renewable Energy Federation and Renewable Energy Assurance Limited and Deputy Chair of the Board of Women in Science and Engineering Campaign. She has over 30 years' experience in the energy industry and was the first female power station manager for RWE npower. Nina was CTO of RWE Group and executive Board Member of RWE's Dutch business, Essent. Nina has a BSc. in Chemistry, a Ph.D in Coal Combustion and is a Fellow of the Energy Institute. She was awarded a CBE for her contribution to Renewable Energy and championing diversity in the Energy Sector.

Current Role: Chief Executive, Renewable Energy Association

National Grid Representatives



Name: Fintan Slye

Current Role: Director of UK System Operator

Fintan is currently the Director of the UK System Operator at National Grid covering both gas and electricity. Prior to that he was Chief Executive of the EirGrid Group, the electricity system and market operator in Ireland and Northern Ireland. He also spent a number of years with McKinsey, supporting companies across Ireland and the UK and with ESB where he held a number of roles in Ireland and the United States.



Name: Roisin Quinn

Current Role: Head of SO Strategy & Regulation

Roisin joined National Grid in 2004 and leads the SO Strategy & Regulation Department. This team is responsible for leading the development of future energy supply and demand scenarios that take a holistic view of UK energy, and analysing strategic options for the optimisation of the energy. Looking to RIIO-2, SO Strategy is leading development of the submission and underpinning regulatory framework for the electricity system operator. Prior to this, Roisin held a number of engineering and commercial roles at National Grid, the most recent being Capacity Market Design Manager.

National Grid Representatives



Name: Kayte O'Neill

Future Role: Head of SO Strategy & Regulation

Kayte O'Neill is Vice President, Customer and Regulatory Strategy for National Grid USA. Accountable for developing National Grid USA's response to the changing energy landscape, Kayte leads a team whose focus is on the future of the distribution utility – orienting the company towards business models, policy and regulatory frameworks to deliver customer value and enable strategic growth. Prior to this, Kayte was Executive Advisor to John Pettigrew, working alongside the UK leadership team to guide the business through a period of significant change including design and implementation of the new UK Operating Model and the introduction of 'RIIO'.

Ofgem Representatives



Name: Rupika Madhura

Role: Senior Advisor

Rupika has worked in regulation for nearly 12 years in four different utility sectors in the UK (rail, water, electricity and most recently gas). She currently heads up the policy on RIIO-2 engagement portfolio at Ofgem. Her work experience includes setting price controls, designing and implementing regulatory policies, enforcement, monitoring company performances and large-scale infrastructure framework. Rupika also sits on the Customer Challenge Board of a water company in England, which shows her dedication to achieving right outcome for consumers. Rupika is an economist by training and started her career as an economist at the Mayor of London's office.



Name: Louise van Rensburg

Role: Interim Deputy Director

Louise is the Interim Deputy Director of the SO and Whole Systems portfolio at Ofgem. She is in charge of a number of Ofgem's work areas that support the evolution in the energy system, including system operator regulation, flexibility and whole system coordination issues. She is an economist with a Master's Degree in Agricultural Economics and her 13 years in energy regulation spans retail, smart metering, wholesale and network issues. Louise is dedicated to ensuring regulation does make a positive difference for consumers. She engages regularly in GB and European forums. This includes the drafting committee of the EU Commissions' working group on Demand Side Flexibility and the Council of European Energy Regulator's (CEER's) Distribution Systems Working group..

Item 4



RIIO-1, Legal Separation and the Forward Plan

The energy landscape is changing...

the role of the ESO is becoming more visible

<p>Relative to the E&W Electricity TO, the ESO is financially small: ~1% of NGET RAV</p> <p><30% of NGET OPEX</p> <p>But, reputationally significant ...</p>	<p>Target for 100% of Ofgem investigations and enforcement actions taken against NGET in the last 5 years</p>	<p>The driver of 70% of National Grid's media and corporate affairs activity</p>
	<p>Regulated through principles as well as license requirements</p>	<p>And, the subject of multiple policy interventions since 2012 ...</p>

Every year since RIIO-1 the ESO's role has evolved... nationalgrid

2012

RIIO-1 begins...

2013

Energy Act 2013 brings EMR to life

2014

EMR Delivery Body Roles begin...

2015

ITPR concludes & the "Energy Reset" Speech, proposes a more independent

2016

First Network Options Assessment Published

2017

NG, BEIS Ofgem sign the Tripartite Agreement, and legal separation begins

2018

New incentives scheme for the ESO

RIIO-1 performance so far:
We've learned lessons & are doing things differently

Legal Separation:
Policy intent – A shareholder owned, for-profit ESO
What is happening and what does success look like?

A new incentive framework:
Driving new behaviours with a Performance Panel

What might be the foundations of regulatory policy in RIIO-2?

- Delivering consumer value through our roles and operating in the public interest
 - Facilitating competition and markets
 - Whole (energy system) thinking
 - Accountable to customers and stakeholder
- A shift from “Prescription” to “Principles” based regulation
- Transparency in Governance and Decision Making

The ESO could be one of the facilitators of the sector transformation

Culture change for the regulator and regulated, building trust...

Reinforce trust with the regulator, customers and stakeholders

An opportunity to make regulatory history...
... with the risk of ISO keeping everyone focused.

Item 5

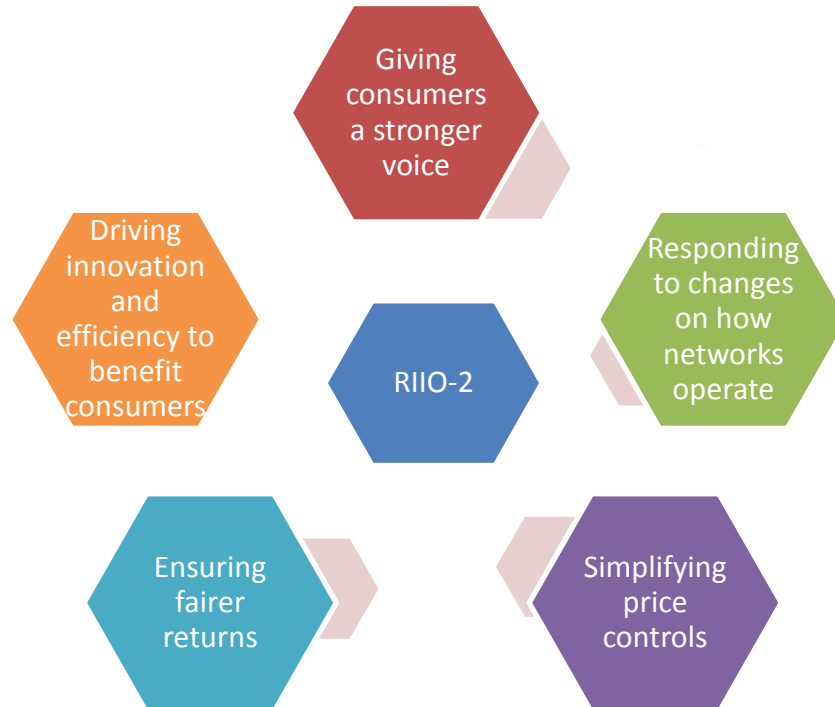


Introduction to RIIO-2 and enhanced engagement

RIIO-2- enhanced stakeholder engagement ESO User Group

ofgem

- Ofgem's network price controls support £bns of expenditure to ensure gas and electricity can be transported from point of generation to end user. 25% of the supply bill funds this investment
- Our approach to controlling the prices the network companies charges follows the RIIO model – where **R**evenue = **I**ncentives + **I**nnovation + **O**utputs
- The first round of RIIO price controls – gas distribution, gas transmission and electricity transmission (which includes the ESO) – end in 2021. Work on the next set of price controls (“RIIO-2”) has now begun.
- In March 2018 we issued a consultation on the framework for future price controls. In July 2018 we plan to publish our decision on the framework for the next round of controls commencing from 1 April 2021.



ESO Separation – a new opportunity

- From April 2019 the ESO will be a separate legal entity within the National Grid group. This greater independence will better position the ESO to facilitate the energy transition and realise benefits for consumers by enabling a more competitive and flexible system through a greater focus on transparency, markets and competition.
- We have already introduced a new ESO regulatory and incentives framework for the 2018-21 period. This is built on providing greater clarity regarding our expectations for the roles and behaviours we expect of the ESO when fulfilling its licence obligations. Financial incentives are calculated using an ex post evaluative assessment of the ESO's performance and demonstration of delivering value for consumers.
- In the first round of price controls, the ESO was subsumed with the NGET price control. ESO separation provides the opportunity for a dedicated ESO price control tailored to the unique characteristics of the ESO.
- We are holding an industry workshop on August 6th to share our initial views on possible approaches and discuss some of the important questions we must tackle

- The energy system is changing, but there is uncertainty on the nature, rate, timing and location of these changes.
- Despite this uncertainty, the ESO will need to anticipate, enable and respond to these changes and provide the system operation services to a more diverse range of customers
- Better insight into customer and stakeholder needs will enable the ESO to deliver the investment and services consumers want, at a price they are willing to pay. This insight will allow the ESO to understand and plan for how consumers might use the energy system in the future and put in place mechanisms to facilitate and react to changes.
- **The User Group will play a very important function of providing input and expert challenge to the ESO on its business plan.** We expect the user group to provide a counter balance and challenge ESO views, which should ultimately improve the quality of the business plan and make them consumer centric, ambitious, forward looking and innovative.



- We don't want to be prescriptive. We have issued a guidance on enhanced stakeholder engagement, which was published on 9 April 2018, which contains further details on roles and responsibilities.
- We will update the guidance from time to time to provide information to the groups for example on framework of the report we expect Groups to produce for us.
- We will keep the communication channels open throughout the process with the Chairs of the Groups, which will provide them (and the members of the Groups) with an opportunity to ask questions, seek and share information.

QUESTIONS?

Our stakeholder engagement approach



Our ambition:

We will work with stakeholders to understand how the ESO can best deliver customer and consumer value, promote a whole energy system approach and be adaptable to future market conditions.

Our approach:

We believe that enhanced stakeholder engagement will help us develop business plans that better reflect your needs, and will deliver greater consumer value

Phasing our engagement

Building our business plans with our stakeholders through enhanced engagement

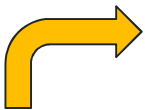
- Stakeholder engagement will take place in many forms, with bilaterals, webinars and tailored workshop sessions to build on our day-to-day contact and existing understanding.
- We have split our stakeholder engagement approach into three phases:

2017				2018				2019				2020				2021			
Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Listen Establishing stakeholder priorities to shape our future engagement plans				Co-create Building elements of our plans with stakeholders - getting into detail - workshops				Propose Sharing our plans with stakeholders to make sure we check we're meeting their needs				Ofgem scrutiny and licence development Detailed scrutiny of our business plans and stakeholder group reports by the regulator, with open hearings where appropriate				Start of RIIO-2 New price control 1 April 2021			
												Stakeholder groups (Independently Chaired)							
												Ofgem challenge group							

Engagement will help us understand the outputs and outcomes that stakeholders want in RIIO-2, and how we can best deliver these

1

Stakeholder engagement will enable us to understand the outcomes that customers, stakeholders and consumers want...



Consumer priorities

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

Stakeholder priorities

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



4

... stakeholder engagement will then enable us to test our proposals and seek endorsement of our recommendations

2

... we will examine how the ESO can deliver these outcomes through our roles and activities, given the external context and drivers of change...



3





... we will look at the most appropriate way to capture these outputs and consider how this should be captured within the regulatory framework ...



The ESO's Consumer and Stakeholder Priorities

These were developed based on our engagement during the 'listen' phase

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



Future Energy Scenarios

- 3000 stakeholders
- 4 workshops per year
- 1 annual conference
- Regular bilaterals

Customer Surveys

- 150 customers and stakeholders surveyed annually



Charging Futures

- 4 forums per year
- 100 attendees in February 2018



Industry Forums we attend

- Regional Development programmes
- Smart Power Industry Alliance
- ENA Open Networks Project



ESO Forward Plan

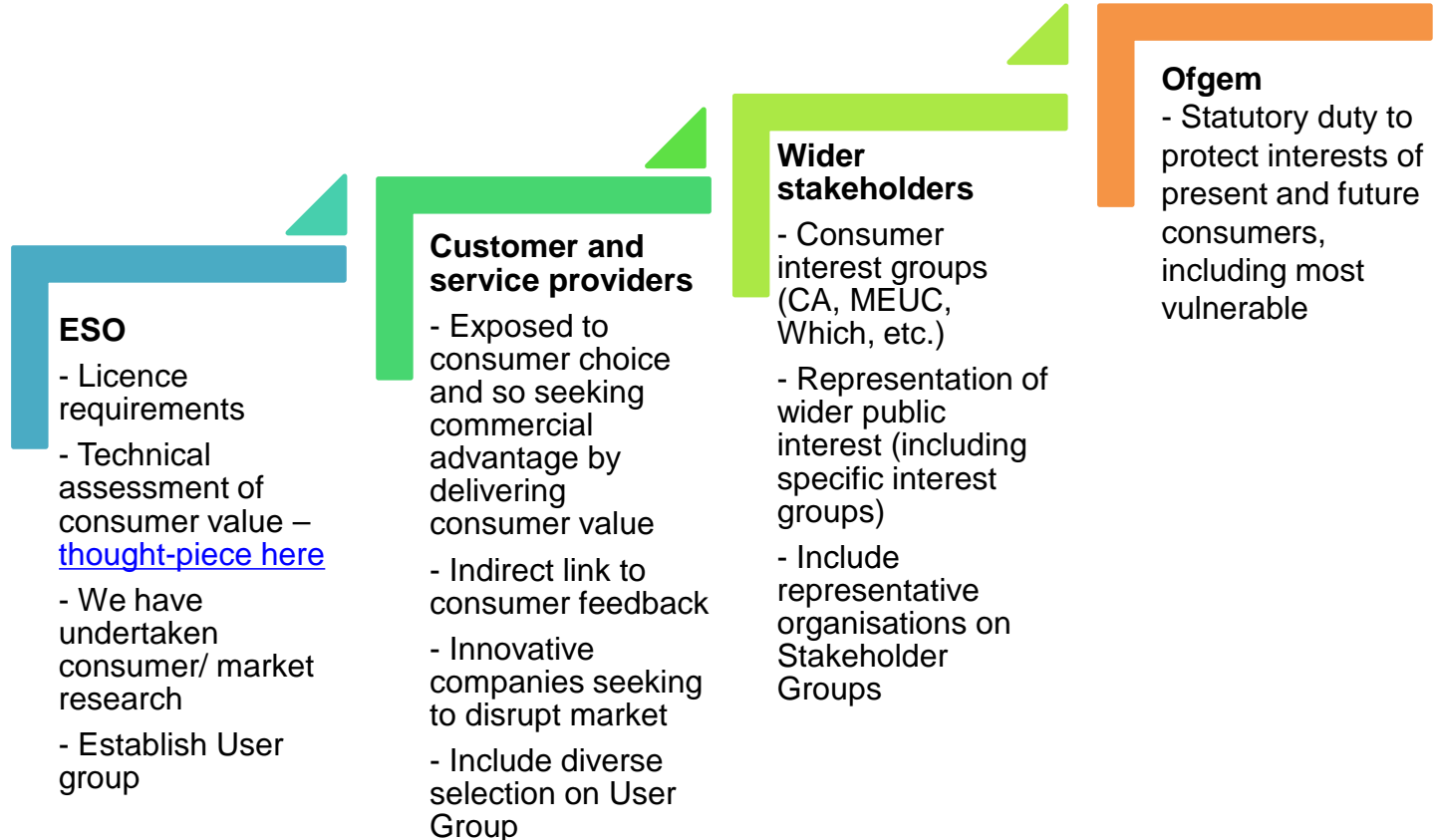
- 21 draft Forward Plan consultation responses
- 170 attendees at ESO hosted launch event, workshop and webinar
- 25 organisations engaged at industry association workshops
- 3 Ofgem workshops on Roles and Principles with 20 stakeholders

Forums we host

- Electricity Operational Forum
- Electricity Settlements Forum
- Transmission Charging Methodology Forum

Process for determining consumer priorities

Our customers and service providers are our best link to end-consumer priorities – open and transparent markets should drive competition and innovation towards lower cost or higher value products and services. However, our approach also needs to include the right checks and balances



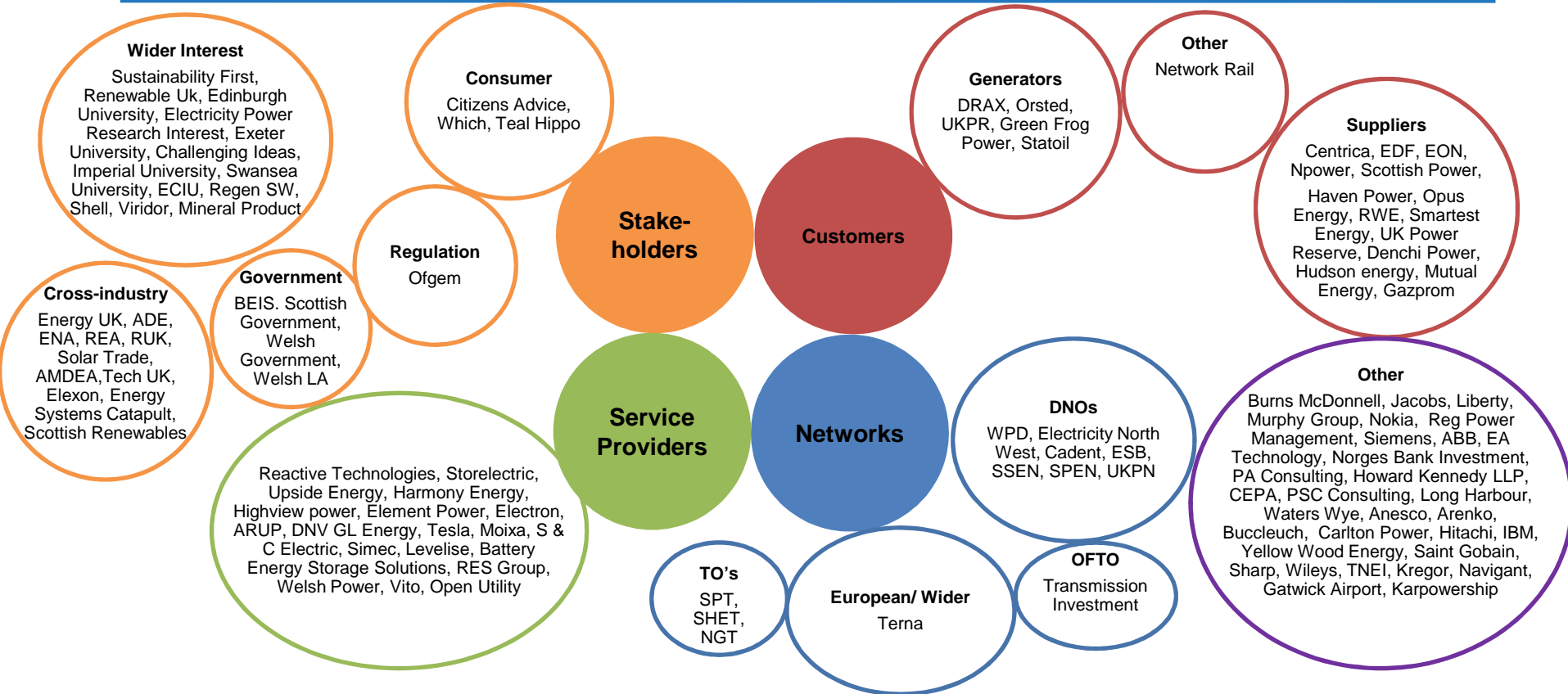
ESO Enhanced Engagement

We are implementing a bespoke model for the ESO – it is not the same as the mandatory process being implemented by the network companies.

Feature	Proposal
Wider engagement	The Enhanced Engagement approach will not replace wider engagement – the ESO will separately listen to customers, service providers and stakeholders priorities, co-create our business plans with clearly defined options and consult on our proposals.
Group remit	The group should test the company's overall priorities, totex budget and stakeholder engagement including on alternative options. The Chair will draft a report to be submitted to Ofgem describing the Group's views on the ESO's approach and business plan.
Challenge Group Remit	Now expect to apply to ESO but Ofgem notes that “given the potential shifts in the regulation/ remuneration framework [for the ESO], we will need to retain some flexibility in applying these [enhanced engagement arrangements] only where they are appropriate and in consumers' interests”
Chair	ESO to recruit chair , providing shortlist of preferred candidates to Ofgem. We have outlined the process for appointing the chair and establishing the Group.
Governance	ESO and Chair to report to Ofgem on governance features of Group and to review Ofgem/ Group recommendations following first meeting
Resourcing	ESO to source secretariat that reports to Chair. ESO representation to include senior leadership , with additional support from ESO RIIO-2 team
Membership	Membership agreed by ESO with Chair, in consultation with Ofgem , to represent customers, service providers and other stakeholders (including consumer interests).
Timing	First meeting in late July . Half-day quarterly meetings, with papers circulated well in advance

ESO Stakeholders

A segmented view of the stakeholders we have engaged with to date (NB stakeholders may sit across many categories, but we have displayed only once)



Engagement Summary

We are now establishing a pattern of engagement

- ERSG meetings:
 - On a quarterly basis from July 2018
 - Last Wednesday each quarter – 31 Oct, 30 Jan, 24 April, 31 July, 30 October
- ESO RIIO-2 Webinars
 - Bi-monthly from April 2018
 - Last Thursday of month
 - Next due 30 August
- ESO RIIO-2 Bulletins
 - Bi-monthly from April 2018
 - Next due early August
- ESO RIIO-2 Workshops and Events
 - As required
 - First held June 2018
 - Next due September 2018
- Bilateral meetings
 - Ongoing
- Existing engagement
 - Use where possible to reduce stakeholder fatigue

Item 6



Terms of Reference and Ways of Working

This section will be used to agree the group's Terms of Reference and ways of working.

- We have drafted the Terms of Reference (ToR) based around Ofgem's guidance on enhanced engagement. We have also provided templates for the papers we propose to provide to the group and the action log that will track group activity. These are subject to agreement by the group.
- The draft ToR, NDA, templates for ERSG papers and action log are on the table.
- For discussion:
 - Group charter – building on hopes raised in introductory section
 - Roles and responsibilities (including Chair and Technical Secretary)
 - Managing any conflicts of interest – NDA agreement drafting, selecting a deputy-Chair
 - Inputs and outputs (e.g. format of papers)
 - Decision making/ discussion template
 - Structure of meetings – standing items
 - Action log

Updating the NDA

We received the following feedback on our NDA and we propose to make the following changes

You said	We propose
Why do you need an NDA?	We do not intend that all of the content discussed at the group meetings will be restricted, in fact we want to be as transparent as possible in terms of the process and materials. We will publish papers and minutes where we can on an area dedicated to the ERSG on our website. However, we also want to explore options and information with the group as earlier as possible to help shape our thinking – sometimes this will mean that the information will be sensitive and so we will have to restrict its distribution.
Should the presumption be to transparency? How will I know what is restricted?	We agree that the presumption should be to transparency. We will only place restrictions on documents where necessary and will be clear on when and how this applies. We have amended the Definition of Confidential Information so that it now to information marked Confidential or where we otherwise confirm it is to be treated as such. We believe that this provides greater clarity for members and will help avoid any inadvertent misunderstandings.
Why is the agreement with me as an individual?	Members sit on the group as individuals rather than as representatives of the their companies, therefore this is reflected in the NDA
Why is the agreement with NGET rather than the ESO? Why does the agreement include other National Grid entities?	The ESO is not yet legally separate, we will update the NDA in April 2019 when we become legally separate. Although it is a standard clause for companies that are part of a wider group, we are happy to amend the NDA to remove reference to other entities. The definition of NG Group Company has been removed and third party rights clause amended so that no other company in the group has the right to enforce the agreement. NB: if information belonging to another group company needs to be disclosed we will need to look at a separate NDA between that entity and the panel members to ensure confidentiality is preserved
Will I be able to share papers with colleagues?	Yes, any information that is not marked as confidential can be shared with colleagues. Where possible we will look at options such as redaction to see if there is a form of the document with the particularly sensitive elements omitted, that could be shared. We would ask that you use discretion when discussing confidential information with colleagues and would expect that the information is not circulated any further or used for other purposes than intended for the Group, and for those colleagues to handle the information in a manner that is consistent with the terms set out in the NDA
Is it necessary to apply the restrictions for five years?	Clause 10.3 amended so duration is now three years rather than five for confidentiality obligations to apply.

Proposal for Managing Conflicts of Interest

Having robust and clear processes to manage COIs will help group members and give confidence to stakeholders not involved in the process

- Membership list will be publicly available and all members are required to complete NDA and declaration of business interests:
 - Key point – members are chosen for their individual expertise and information that is marked as restricted should not be further distributed or used for commercial purposes
 - Information shared with Chair and Tech Sec
- ESO to clearly mark documents where there are any restrictions on their use/ distribution
 - ESO to be as transparent as possible – we will only restrict materials where necessary
 - Complete or redacted materials posted online where possible
- Chair, Tech Sec and ESO to review materials before they are circulated to the group:
 - Review markings
 - Consider if distribution to specific group members should be restricted
 - Discuss restrictions with affected parties
- Standing agenda item at start of each meeting to:
 - Confirm any restrictions in place
 - Ask for members to raise/ declare any further COIs
 - Agree restrictions on/ abstentions from discussions as appropriate (**appoint deputy-chair for the group?**)
- Tech Sec to minute all restrictions/ abstentions

Template for ESO papers

We have proposed a structure for ESO papers – is this providing the information you need to have the right discussions

ESO R1102 STAKEHOLDER GROUP PAPER
DATE: 25 JULY 2018 AGENDA ITEM X.X

PAGE 1 OF 4

ESO R110-2 Stakeholder Group (Title)

Sponsor(s): Ro Quinn

EXECUTIVE SUMMARY [TARGET - KEEP TO ONE PAGE]

CONTEXT

[In no more than 2 to 3 sentences (there is space overleaf to expand on this) begin by explaining the scope and context for the position paper. Provide key background information and a description of why it is important for the ESO to be thinking about this issue]

OPTIONS

[Provide a summary of the main issues and options considered]

ENGAGEMENT AND ANALYSIS (YOU SAID, WE DID PROVIDED IN ANNEX)

*[What engagement have we undertaken
What feedback have we received]*

RECOMMENDATION

*[What are our conclusions/recommendations– what are the key arguments in support of our decision. What is the key evidence inputted into the decision making
What are our proposed next steps]*

ASK OF ERS G

What decision are we asking the group to take/what input are we asking for

Discussion template for ESO papers

The Chair will lead structured discussions on the papers submitted for ERSG consideration. Will this facilitate the right discussions?

- *Paper circulated in pre-read*
- Sponsor to introduce the paper (context, key options, key evidence, recommendation, ask of ERSG) – 5-10 minutes
- Chair to ask group for points of clarification
- Chair to ask group for detailed points/ feedback on:
 - Scope of paper
 - Options considered
 - Engagement activity
 - Analysis
 - Recommendations
 - Next Steps
- Chair to ask group for decisions on ‘asks to ERSG’
 - Consensus, majority/minority agreement, rejected - sectoral views captured
 - Any caveats or action points
 - Recommendation to the ESO

Proposal – unless otherwise stated, discussions should be subject to Chatham House rules, i.e. information disclosed during a meeting may be reported by those present, but the source of that information may not be explicitly or implicitly identified.

Action log template

Does the template capture the right information?

Action Ref	Date raised	Topic	Action/ Query/ Recommendation	Action/ Query/ Recommendation Description	Owner	Status (open/closed)	Comments

Item 7



Laying the foundations of our plan

Context

- In order to create an ambitious, meaningful and robust ESO business plan that will serve the needs of the industry and consumers, we need to have an understanding of the future energy landscape.
- This understanding should underpin the plan, not only helping to guide the investment decisions the ESO makes and advises on, but also the design of the decision making processes.
- For example, we may wish to consider the extent and timing of ESO investment activities now or the triggers that would allow or require us to do so within the price control period.

Options

- We first considered which scenarios to use as our starting point:
 - Future Energy Scenarios (FES) 2018
 - Scenarios developed by another industry party
- We then considered the following options:
 - Create a single ‘best view’ of the future energy landscape
 - Use multiple scenarios to develop multiple business plans
 - Understand the commonalities and uncertainties that exist across scenarios and then explore the further technical and policy changes that could significantly affect industry processes or consumer value.

The ask of ERSG is whether you agree with the recommendations below

- Using FES 2018 as the foundation of our business plan.
- Describing the commonalities across the four FES 2018 scenarios and exploring the further technical and policy changes that could significantly affect industry processes or consumer value
- Focusing our initial analysis on the following areas of change and uncertainty:
 - Digitalisation of the energy system
 - Increase in decarbonised and decentralised generation
 - Take-up of electric vehicles (EVs)
 - Government's position on:
 - Security of supply policy
 - Decarbonisation policy
 - Changing roles and governance of industry participants

Item 8



From Vision to outputs

Context

- As part of the ESO's 2018-19 Forward Plan, we set out a long-term vision for the ESO as an organisation that thinks across networks, plays a more active part in the energy system and helps to shape frameworks for markets.
- For the remainder of RIIO-1, the implementation of this vision will be governed by a framework of roles and principles.
- These set out what the ESO does today, and will be the basis for stakeholder and regulatory feedback on how the ESO has performed each year until the end of RIIO-1.
- We need to decide how to build on this framework and its use as we develop our outputs for RIIO-2.

Options

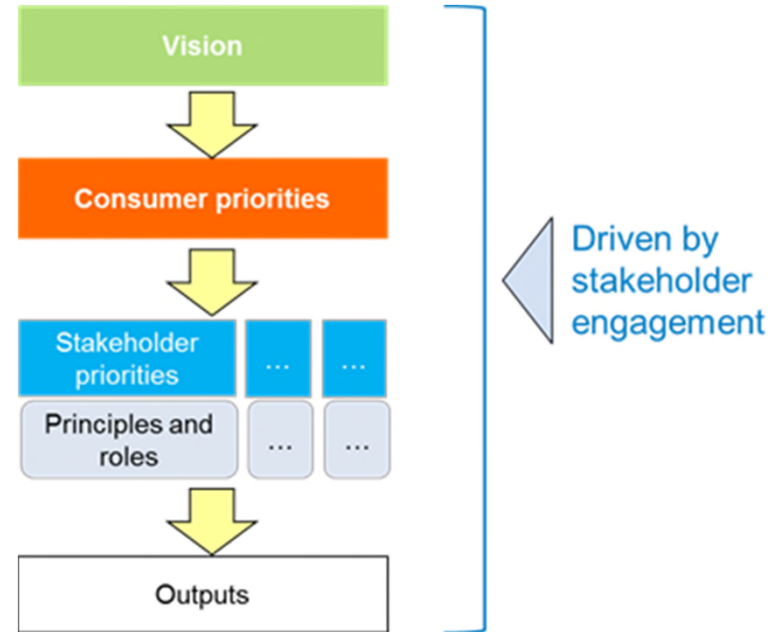
We considered the following options to set our direction for RIIO-2:

1. Use the current set of roles and principles, unchanged
2. Use the consumer and stakeholder priorities but not the roles and principles
3. Combine the consumer and stakeholder priorities and further develop the principles to better reflect stakeholder needs in RIIO-2.

The ask of ERSG is whether you agree with the recommendations below

We will further develop our long-term vision for the ESO in RIIO-2 and recommend using a framework to set our outputs that combines:

- The roles and principles used to describe the ESO's RIIO-1 role; and
- The consumer and stakeholder priorities we have identified for the ESO in RIIO-2



Item 9



Developing our work plan

This section will be used provide an overview of the process we will follow in producing papers for ERSG and provide an overview of future meeting content

- In Paper ERSG 1.8 we set our proposed approach to developing outputs under the principles framework and explained the phases of our engagement (listen co-create and propose) under agenda item 5.
- The following slides summarise:
 - The process of preparing materials for ERSG
 - The forward look for content to be discussed at ERSG meetings
- Ask of ERSG – do you agree with our approach and forward plan?

We have set out an indication of the RIIO-2 business topics, and the questions we need to answer for our submission, under the principles

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 & transparent

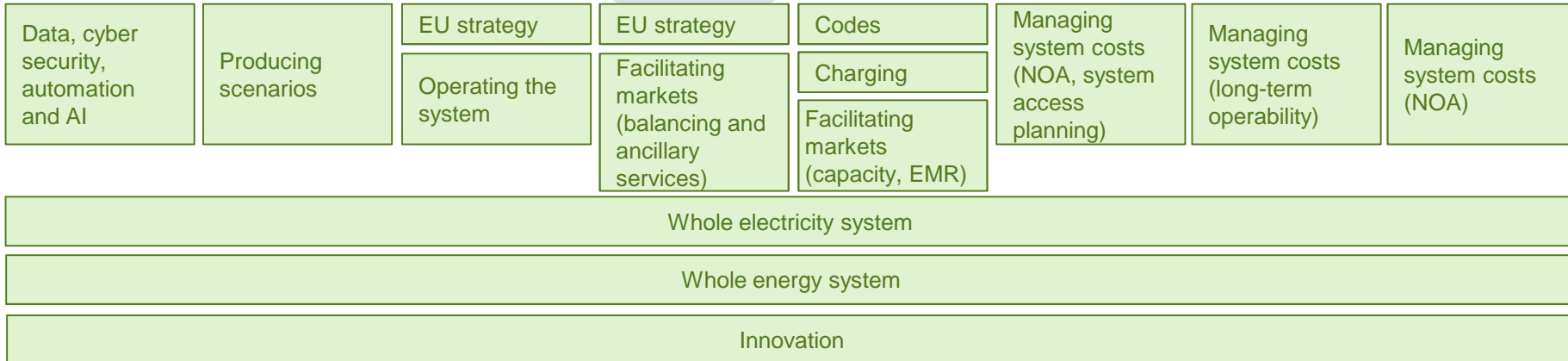
4: Promote competition in the wholesale and capacity markets

5: Coordinate across system boundaries to deliver efficient network planning and development

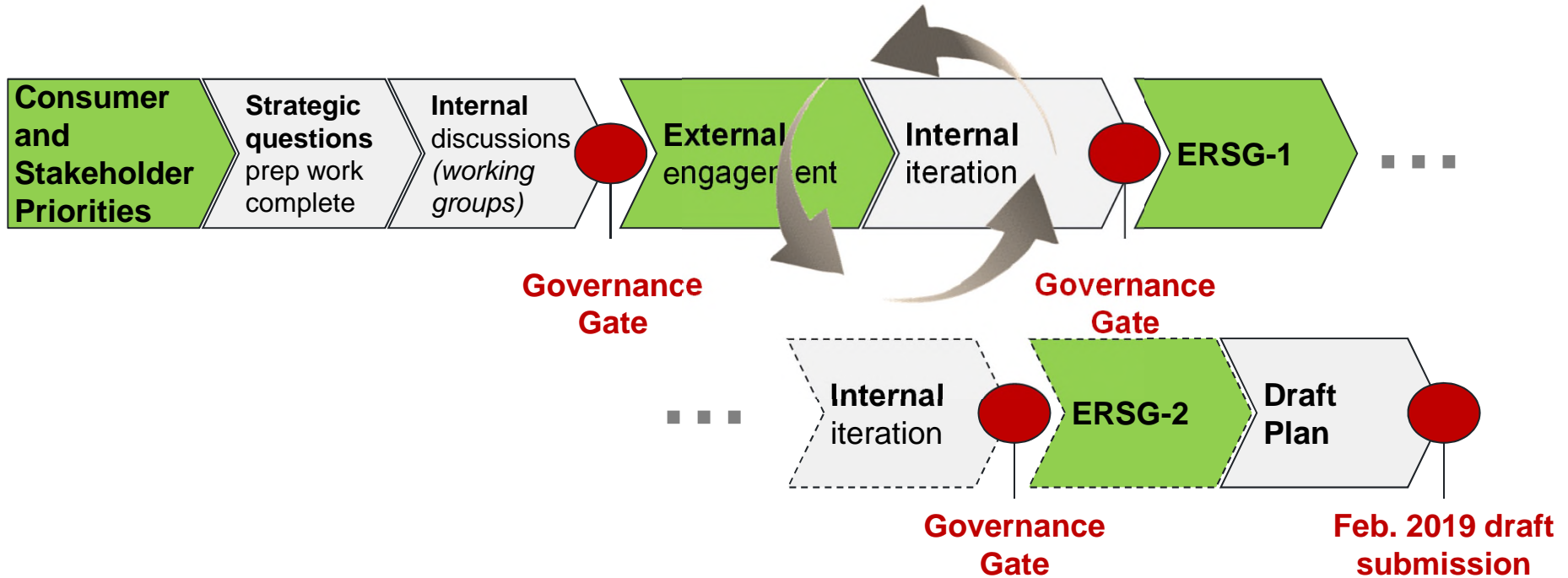
6: Coordinate effectively to ensure efficient whole system operation and optimal use of resources

7: Facilitate timely, efficient and competitive network investments

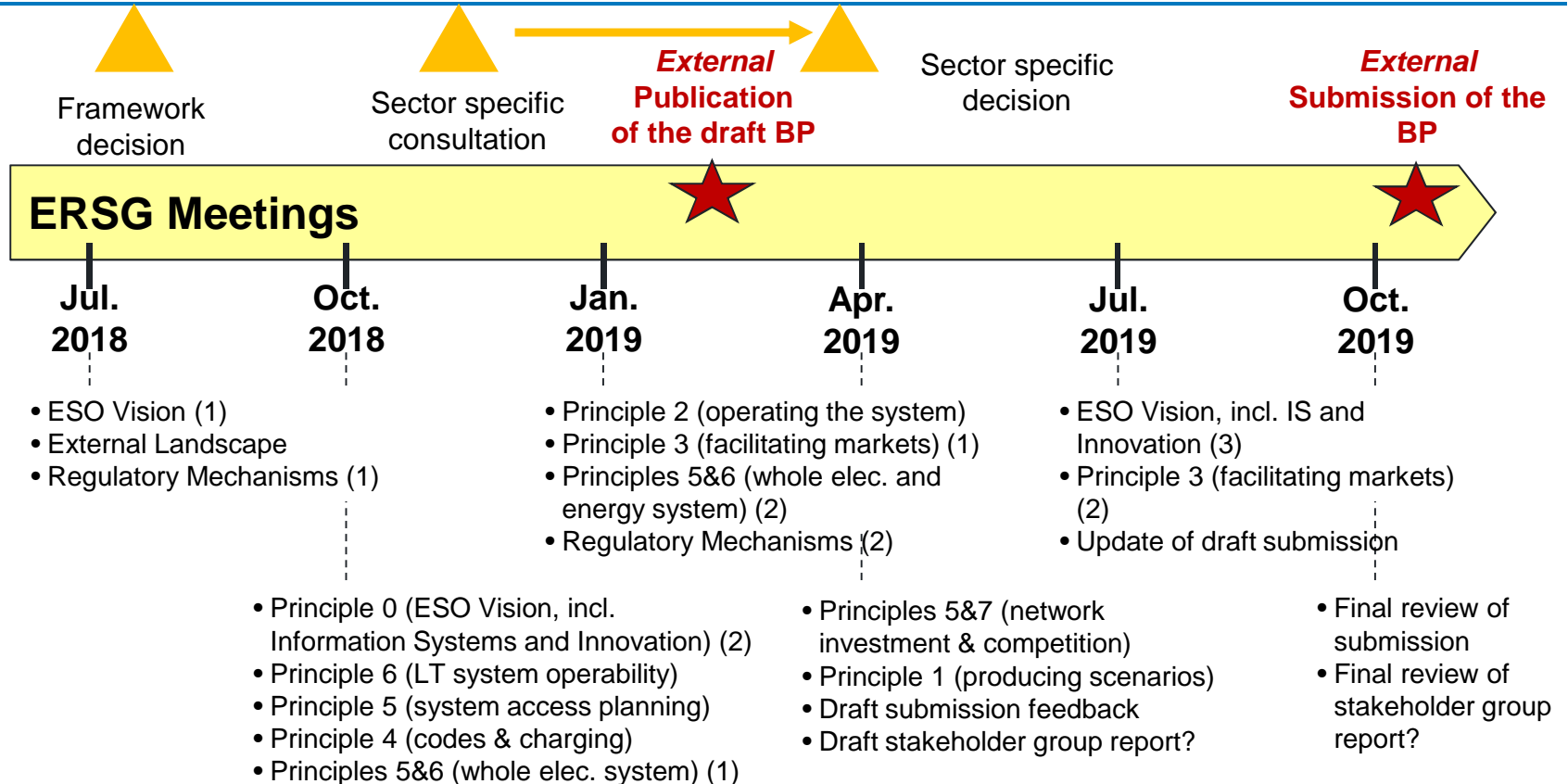
Business topics



High-level process for content that will go into the ESO RIIO-2 submission



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



Item 10



Regulatory mechanisms

Context

- The ESO will have a separate price control in RIIO-2 to reflect the fact that it is a different type of company
- Our current regulatory model is based on NGET's Regulatory Asset Value (RAV), with an additional SO-specific incentives package. We do not believe this model is suited to funding a separated ESO as an asset-light, services business.
- This is a unique opportunity to develop an appropriate model for the ESO to ensure that we can deliver for customer and consumer needs
- Ofgem will make the ultimate decision on the ESO's RIIO-2 framework, but we are undertaking our own work to explore what it should look like to inform this decision
- We have been engaging with stakeholders on what a successful ESO framework would look like, and on alternative funding models for the ESO

We have proposed a set of principles for a successful regulatory framework for the ESO, and have explored five alternative funding models

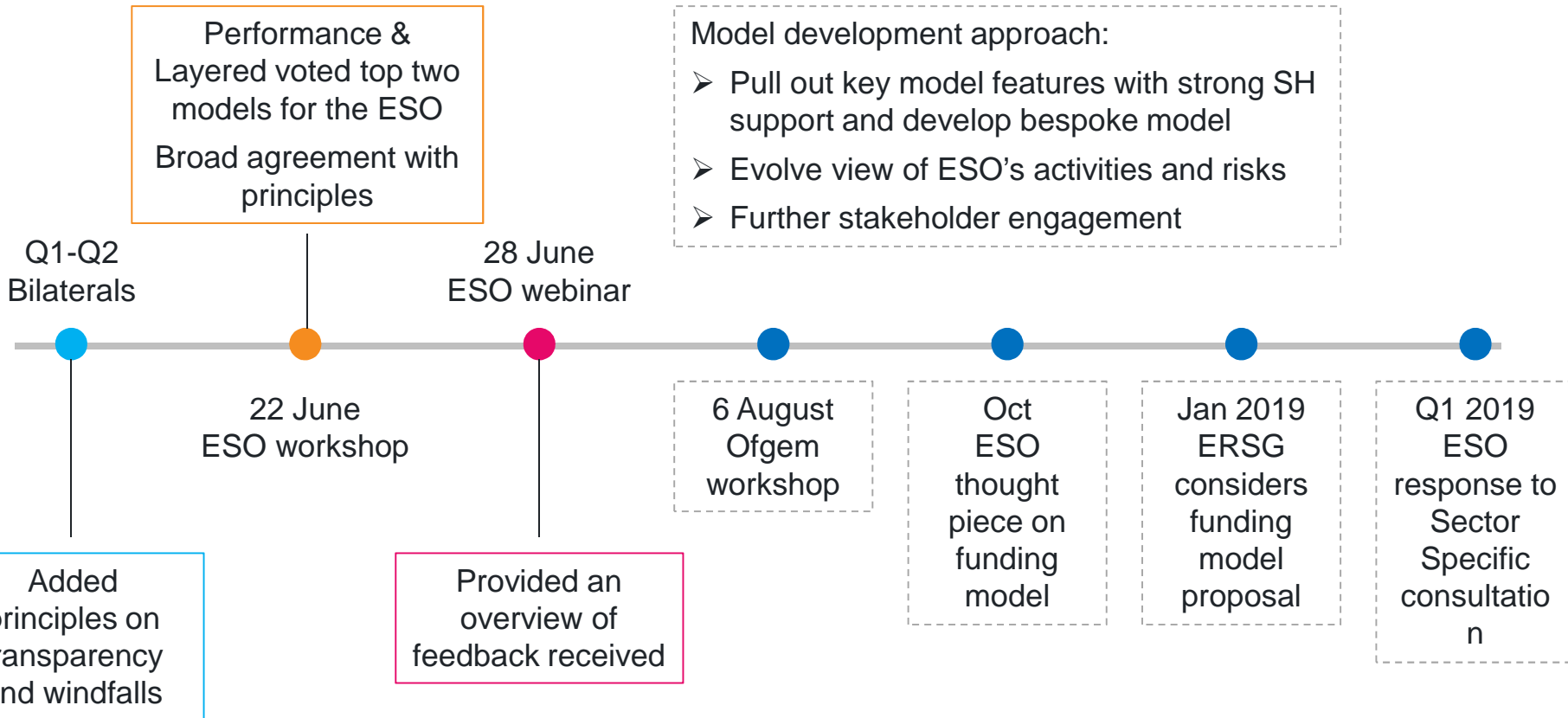
Framework Principles

- Supports delivery of long term value for customers and consumers, using appropriate incentives
- Provides an appropriate risk-reward framework
- Sets clear, manageable and measurable outputs, with flexibility to manage uncertainty
- Encourages whole energy system thinking and use of market-based solutions
- Promotes innovation within the SO and across the system and market
- Ensures the ESO is financeable and credit-worthy, and able to operate
- Prevents windfall gains and losses
- Sufficiently simple and transparent for stakeholders to understand

Potential funding models

RAV	Margin	Layered	Commitments	Performance
Links value to the RAV and provides a return on capital	Fixed percentage return on operational costs	Defines different layers of capital, business activities and risks and funds each of them separately	A contract between the ESO and customers. Prices set through constructive engagement	Returns purely linked to performance (100% incentives)

We have engaged with stakeholders across the industry and beyond through bilaterals, webinars and workshop. Their feedback has shaped our current position and planned next steps...



Ask of ERSG

Do you agree with:

- The proposed principles for the ESO's regulatory framework?
- The bespoke approach to further developing an ESO funding model?
- The next steps on engagement?

Item 11



Feedback on format and content

Context

- Discussion:
 - Quality and usefulness of pre-read
 - Quality and usefulness of on the day materials
 - Quality and usefulness of papers submitted
 - Structure of the meeting
- This feedback will be used by the Chair, Technical Secretary and ESO to improve subsequent meetings.

AOB – including session without ESO



national**grid**

ESO RII0-2 Stakeholder Group

Regulatory Mechanisms

Sponsor: Ro Quinn

EXECUTIVE SUMMARY

CONTEXT

The ESO will have its own separate price control in RII0-2 to reflect legal separation. Ofgem will make the ultimate decision on the framework, but we are exploring options, in consultation with our stakeholders, to inform this decision. We are considering potential funding models for the ESO to ensure that we are funded and incentivised to deliver long term value for consumers across the energy system.

OPTIONS

- We have proposed a set of principles for a successful regulatory framework for the ESO in RII0-2, which we intend to assess funding models and other elements of the framework against.
- We have developed five funding models that comprise sets of potential features of the regulatory framework: Regulatory Asset Value (current model), Margin, Layered, Commitments and Performance.

ENGAGEMENT AND ANALYSIS

We have discussed and received feedback on the principles and funding models through bilateral meetings, two ESO webinars and an ESO workshop, in which 43 stakeholders undertook an assessment of the models' strengths and weaknesses. Stakeholders have highlighted the importance of considering the activities the ESO will undertake and the risks we will hold in RII0-2 to inform the funding model. Strengths and weaknesses were found in all the models, with a strong focus on outcomes highlighted as critical. The Performance and Layered models were voted as the most potentially suited to the ESO.

RECOMMENDATION

Elements of different models have strong stakeholder support: we propose to pull out these key features of the different models to develop a bespoke funding model for the ESO. Feeding into this will be our stakeholder-informed view of the ESO's outputs, activities and risks in RII0-2.

We will engage with stakeholders through workshops, webinars and a thought piece on our funding model and other elements of the framework in the autumn. This will inform our response to Ofgem's Sector Specific consultation at the end of the year.

ASK OF ERSG

Do you agree:

- With the proposed principles for the ESO's regulatory framework?
- With the bespoke approach to further developing an ESO funding model?
- That we have listened to stakeholders and incorporated their feedback?
- With the next steps on engagement?

Author: Louise Clark – Strategy Manager

Date of this version: 25/07/2018 Version number: ERSG 1.10

THE REPORT

FURTHER CONTEXT

Ofgem has strongly indicated that the ESO will have its own separate price control in RIIO-2, to reflect legal separation and the ESO's nature as an asset-light, services business. We expect confirmation of this in its Framework Decision document, due to be published on 30 July.

Ofgem will make the ultimate decision on the ESO's framework. In order to inform this decision, we are undertaking our own work to explore what it should look like, engaging with stakeholders to incorporate their views as we develop options. We have proposed a set of principles for a successful regulatory framework for the ESO:

- Holistically supports and encourages the ESO to take the actions and investments needed to deliver long term value for customers¹ and consumers, using appropriate incentives to drive exceptional performance and value for consumers;
- Provides an appropriate risk-reward framework tailored to the ability to bear risk and the potential value delivered to consumers;
- Sets clear, manageable and measurable outputs, while building in flexibility to manage uncertainty and respond to changes in customer and consumer needs;
- Encourages whole energy system thinking and use of market-based solutions to support the continuing low-carbon transition of GB's energy system;
- Promotes innovation within the ESO and across the system and market;
- Ensures the ESO is financeable and credit-worthy, and able to operate;
- Prevents windfall gains and losses that are not justified by underlying performance;
- Is sufficiently simple and transparent for the ESO, Ofgem and industry stakeholders to understand.

These principles reflect our stakeholder priorities, the objectives Ofgem set out in its open letter on RIIO-2² in July 2012, and have evolved based on feedback from stakeholders³.

The ESO's funding model will be the foundation of this overall framework. Under RIIO-T1, the ESO has been funded as part of National Grid Electricity Transmission (NGET) using the traditional Regulatory Asset Value (RAV)-based model. This is typically used for companies that primarily invest in long-term assets, and is potentially not suited to the ESO's nature as an asset-light, services business. We therefore engaged KPMG at the

¹ 'Customers' refers to our customers and service providers who pay for the products and services they receive from us, and those we pay for providing services to us.

² <https://www.ofgem.gov.uk/publications-and-updates/open-letter-riio-2-framework>

³ More detail on the feedback is given later in this paper

end of last year to explore a range of potential funding models for the ESO, and we have built on that work with further analysis and stakeholder feedback.

In looking at different models we have considered how they will enable us to deliver the outcomes our customers and stakeholders want and add value for consumers, as well as ensuring the ESO is financeable. A mix of base funding and incentives can provide appropriate reward for the risks we hold such as operability risk, uncertainty of investment, cyber risk etc. Incentives can be an effective tool to drive delivery of customer and consumer value; in a monopoly business like the ESO, financial incentives mimic competitive pressures to drive innovation and improvements 'above and beyond' business as usual. For all of the models explored, we have assumed there will be incentives for the ESO, but we have not yet developed a detailed view of how incentives would be incorporated.

OPTIONS ANALYSIS

What options did we consider?

We commissioned KPMG to identify and recommend potential funding models for the ESO to provide a fresh perspective and independent expertise to build from.

We asked KPMG to undertake the following work, and worked with them to develop it.

- Define the key characteristics of the ESO and their implications for funding models;
- Identify a long list of funding models from across energy and other sectors, and regulated and non-regulated businesses;
- Refine the options to a shortlist by applying agreed criteria;
- Deliver a report that sets out the models considered, their risks and benefits, a recommendation of the most appropriate model for the ESO.

As set out in the executive summary of KPMG's report, we undertook an initial pre-selection and identified six funding models with the potential to be appropriate for the ESO. These are based on models seen in other regulated entities, including those with similar characteristics to the ESO. A brief description and an example of where each model is already used is below⁴.

- **RAV⁵** – Links the value of the business to the RAV and provides a return on capital. This is used by all network companies in RIIO-1.
- **Margin** – Links the value of the business to the scale of operations and provides a fixed percentage return on operational costs. The DCC is regulated under a Margin model.

⁴ A more detailed description can be found in the Executive Summary of KPMG's report.

⁵ The KPMG report refers to a Return on Capital Employed (and committed) (ROCE(C)) model, which is a variation of the current RAV model. In our engagement we have focused on the current RAV model as one that stakeholders are already familiar with and understand, in order to assess its potential to continue and provide a useful comparison point for other models. The findings of the ROCE(C) assessment in the report can largely be applied to the RAV model.

- **Layered**⁶ – Breaks down the business into different layers of capital, business activities and risks and considers corresponding layers of funding. This approach is used for the System Operator in Northern Ireland (SONI).
- **Commitments** – Essentially a contract between the ESO and customers, rather than between the ESO and Ofgem. The ESO would propose initial prices for delivery of commitments (outputs), within a price cap set by Ofgem, and would negotiate these with customers to come to an agreed price. Ofgem would conduct an ex-post review to ensure costs were efficiently incurred. Gatwick Airport uses a Commitments model.
- **Performance** – Essentially a 100% incentives model, with return only linked to performance against outputs and no return on total expenditure (totex).
- **Not for profit** – This model has not been explored in detail. It was considered as part of the discussions on the future of the SO: the agreement between Ofgem, Government and National Grid, reached following consultation, was to continue with a legally separate ESO within National Grid Group.

What are the strengths and weaknesses of each option (evidence base)?

The strengths and weaknesses that we identified are in the table below.

	Strengths	Weaknesses
RAV	<ul style="list-style-type: none"> • Familiar to stakeholders • Stable • Should avoid perverse incentives and conflicts between base returns and incentives • Would work as a layer for remuneration of capex in the Layered model 	<ul style="list-style-type: none"> • Not reflective of the scale of the ESO’s business or activities • Unlikely to provide a sufficient financial buffer to withstand downside shocks • Risk of encouraging the ESO to focus on capital expenditure (capex) solutions • Fails to drive investment by others • No incentive to be ambitious
Margin	<ul style="list-style-type: none"> • Clear and relatively simple to understand given it is one single mechanism • Returns derived from operations are likely to be more reflective of the characteristics of an asset-light business like the ESO 	<ul style="list-style-type: none"> • Relatively crude measure that doesn’t reflect the variety of ESO activities and risks • Risk of discouraging investment in capex solutions • No theory for determining the appropriate margin and no direct comparators for the ESO makes it challenging to benchmark • No incentive to innovate • Not used in comparable

⁶ This is also known as a Hybrid or Policy Instrument Targeted model

		industries
Layered	<ul style="list-style-type: none"> • Can be tailored to properly reflect and ensure funding for varied activities and risks • Can be designed to avoid abnormal profits • Can be tailored to focus on outcomes for industry and consumers • Flexible over the long term as layers can be adapted / added according to changing industry and consumer needs • Added transparency – clarity on where money is going 	<ul style="list-style-type: none"> • A relatively complicated model, and may not be easy for stakeholders to understand, although potentially more transparent than others • Complex to define business layers and avoid double counting • Potentially cost and time intensive for the ESO and Ofgem to implement
Commitments	<ul style="list-style-type: none"> • Flexible (within the constraint of the price cap) and could reflect changes in activities, risk and capital employed • Closely aligns to industry objectives with strong focus on outcomes • Avoids abnormal profits through a combination of constructive engagement and ex-post regulatory review 	<ul style="list-style-type: none"> • Risk that customer expectations may differ significantly from consumer and ESO expectations • Ex-post assessment could be resource-intensive for Ofgem • Risk of high burden of engagement for customers
Performance	<ul style="list-style-type: none"> • Most closely resembles an efficient market. Unlikely that the ESO would be able to achieve abnormal profits. • Attractive from an industry perspective as it focuses the ESO on outcomes • Relatively straightforward to understand, in that profit is related to a subjective view of performance • Can be transparent 	<ul style="list-style-type: none"> • Not suited to a provider of a critical service as the ESO cannot afford to fail • Limited margin of error could make the ESO risk-averse and limit innovation • ESO would likely struggle to be financeable as the incentives downside could impede the ability to access and repay debt • Difficult to define baseline and measure performance

STAKEHOLDER ENGAGEMENT

What engagement did we undertake (including Forward Plan)?

- Over the first half of the year we have discussed our proposed principles for the regulatory framework and our exploratory work on funding models in multiple bilateral

meetings with organisations including Ofgem, suppliers, generators, TOs, DNOs, service providers, consumer bodies, academics and wider public interest, as well as at working groups with a trade association.

- In our first ESO webinar on 26 April we gave a brief overview of our key points in response to Ofgem's Framework consultation, which included the need to explore alternative funding models. Over 100 people joined the webinar and we received a number of questions about the models.
- Based on the interest expressed and the importance of the topic for RIIO-2, the ESO's regulatory framework was the focus of one of two sessions in our first stakeholder workshop on 22 June, attended by 43 stakeholders. We shared our proposed framework principles and took a poll to get an indication of those that stakeholders prioritised, as well as asking if there were any we had missed. We gave a detailed explanation of the five funding models explored and an overview of our work so far, and then held a breakout session in which stakeholders undertook an assessment of the models and took part in a poll on the two funding models viewed as most suited to the ESO.
- We provided a brief explanation of the models and stakeholder feedback from the workshop at our webinar on 28 June, which had a largely different participant list.

What feedback did we receive?

On the principles, there is general agreement that we have identified the right elements of a successful regulatory framework for the ESO. Those highlighted as priorities have all focused on the ability of the ESO to deliver value for customers and consumers and provide services across the whole energy system. We added the principles on transparency and on avoiding windfalls in response to feedback from a consumer body and an industry trade body. An additional principle was suggested around delivering carbon and cost reductions: we consider that carbon reduction is included in the fourth principle. In addition, the first principle of encouraging the ESO to deliver value covers cost reduction as well as recognising the potential for short term cost increases to drive longer term savings, and the importance of meeting customer and consumer needs.

In the workshop, there was general consensus that we need to consider some overarching questions before we come to a position on the best funding model:

- What outcomes do stakeholders want from the ESO in RIIO-2?
- What activities should the ESO undertake in RIIO-2? What roles should the ESO play?
- What risks does the ESO hold, and why should the ESO earn a profit?
- What problems are there with the current funding model and how would these be addressed with any new proposed model?

Stakeholders agreed with many of the strengths and weaknesses of the models already identified, and highlighted a number of additional items for each model, which are included in the table above. Stakeholders supported strong incentivisation, as shown by

the poll results⁷ in which the Performance and Layered models were voted as the two models most suited to the ESO. There was very little support for the RAV and Margin models or the ESO/customer contract approach in the Commitments model. It was also suggested that we look at National Air Traffic Services (NATS) as a model with a performance focus, and ISOs such as those in the USA.

ESO RECOMMENDATION

What is the ESO's position?

Stakeholders have endorsed the view that a funding model purely linked to the RAV is not suitable for the ESO, which supports the need for an alternative approach. Stakeholders have shown support for features of different models; for example, a strong focus on outcomes, which is found in the Performance and Commitments models and can be built into the Layered model.

We are pulling out the key features of the models that stakeholders have supported and that meet our proposed framework principles, and will build on the models we have described to develop a bespoke funding model that incorporates these. One key message we have heard is that stakeholders want transparency but not excess complexity, so we will look to make our approach as simple and accessible as possible; while recognising that a model that reflects all that the ESO does, and the different activities we undertake, brings some complexity.

We agree with stakeholders that the activities the ESO undertakes and the risks we hold must inform the ESO's final funding model. We will be engaging over the next few months to understand what outcomes stakeholders want from us in order to identify how best to deliver these, and we will build this into our development of a funding model. As part of this we will aim to provide a clearer explanation of the risks the ESO holds, given feedback that many stakeholders do not understand this.

How has stakeholder feedback shaped our thinking?

This is set out in the table at Annex A.

What level of risk and uncertainty applies to the position?

The timetable Ofgem has set out for consulting on a preferred framework for the ESO in the Sector Specific consultation at the end of the year is very tight. There is a risk that this does not give enough time to develop a bespoke funding model that will both meet stakeholders' needs and expectations and ensure that the ESO will be financeable as a legally separate company. We also recognise that any new framework and funding model carries risk and uncertainty. We will continue to engage with stakeholders to evolve our position, and to share analysis and feedback with Ofgem to inform their options.

NEXT STEPS

⁷ A screenshot of the poll results is at Annex B

Our aim is to have an evidenced position on the best funding model for the ESO and other relevant elements of the ESO's regulatory framework in order to respond to Ofgem's Sector Specific consultation. Our high level engagement plan to deliver this is below (timings indicative).

Attend and feed into Ofgem workshop on ESO RIIO-2 framework	6 August
Hold stakeholder engagement activities on evolving model	September/October
Publish ESO thoughtpiece on proposed model	October/November
Ofgem publishes Sector Specific consultation	December
Bring funding model proposal to Stakeholder Group	January
Respond to Ofgem's Sector Specific consultation	February/March

In January, we will bring draft key messages for the ESO's response to Ofgem's Sector Specific consultation to this Group. This will include a proposal for a bespoke funding model, a view of how incentives could be incorporated to drive the required outcomes from the ESO and a clear explanation of how stakeholder feedback has shaped our proposal.

ASK OF ERSG

Do you agree:

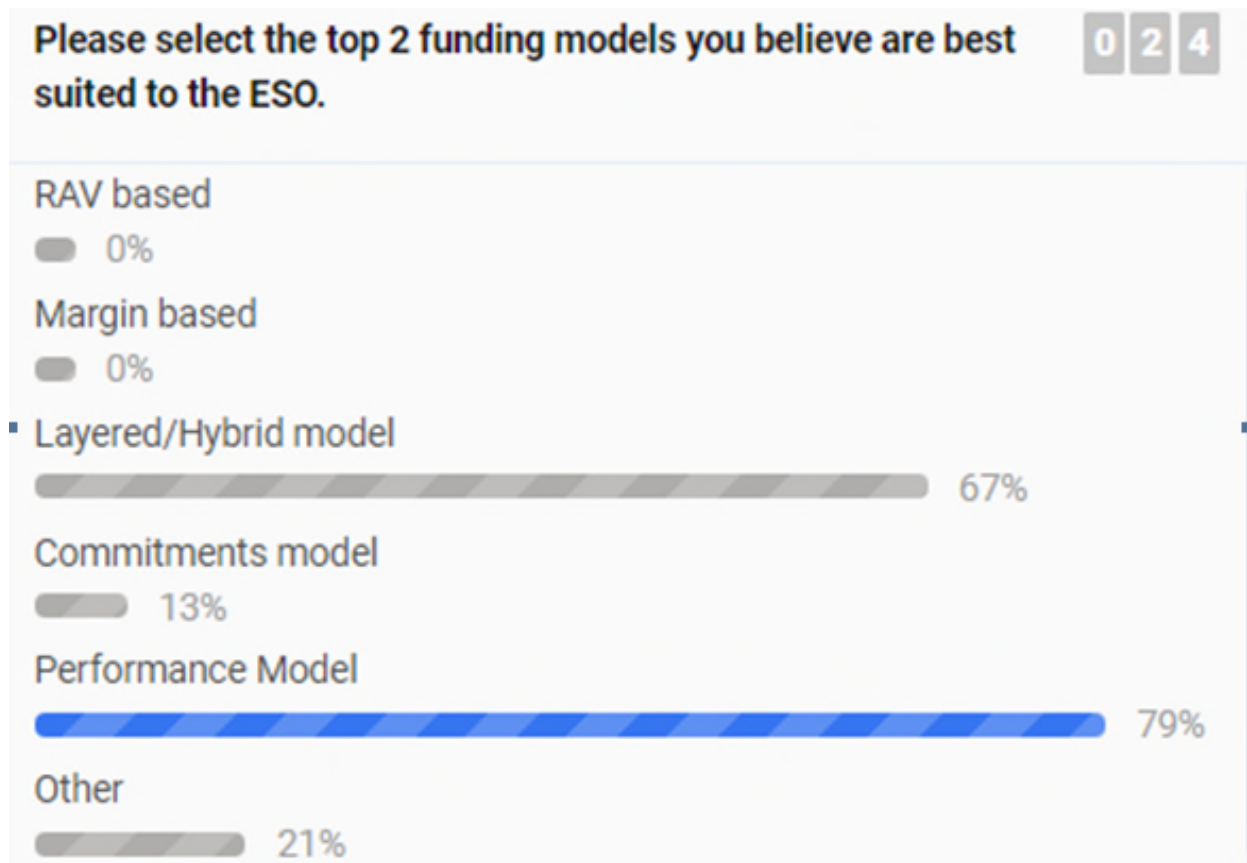
- With the proposed principles for the ESO's regulatory framework?
- With the bespoke approach to further developing an ESO funding model?
- That we have listened to stakeholders and incorporated their feedback?
- With the next steps on engagement?

ANNEX A: HOW STAKEHOLDER FEEDBACK HAS SHAPED OUR THINKING

Issue	You Said	We Did
<p>Principles for the ESO’s regulatory framework</p>	<p>An industry trade body pointed out the importance of avoiding windfall profits</p>	<p>We added the principle that the framework ‘prevents windfall gains and losses that are not justified by underlying performance’</p>
	<p>A consumer body suggested that transparency would be important to include in the principles</p>	<p>We added the principle that the framework ‘is sufficiently simple and transparent for the ESO, Ofgem and industry stakeholders to understand.’</p>
	<p>In our stakeholder workshop, an additional principle was suggested around delivering carbon and cost reductions</p>	<p>We have not included an additional principle. We consider that carbon reduction is included in the fourth principle; and that the first principle of encouraging the ESO to deliver value covers cost reduction as well as recognising the potential for necessary short term cost increases to drive longer term savings, and the importance of meeting customer and consumer needs.</p>
	<p>We tested our principles in multiple bilateral meetings with organisations including Ofgem, suppliers, generators, TOs, DNOs, service providers, consumer bodies, academics and wider public interest, as well as at working groups with a trade association. We also tested them with 43 stakeholders in our workshop on 22 June. We have received broad consensus that these principles reflect a successful regulatory framework for the ESO.</p>	
<p>Funding models</p>	<p>In our workshop, 43 stakeholders from Ofgem, suppliers, generators, TOs, DNOs, service providers, consumer bodies, academics and wider public interest undertook a breakout assessment of the strengths and weaknesses of five funding models. 48% of them responded to a poll on which two were best suited to the ESO. The poll results</p>	<p>We are pulling out the key features of the models that stakeholders have supported and that meet our proposed framework principles, and will build on the models we have described to develop a bespoke funding model that incorporates these. One key message we have heard is that stakeholders want transparency but not excess complexity, so we</p>

	<p>and qualitative feedback clearly showed strong support for both the Performance and Layered models.</p>	<p>will look to make our approach as simple and accessible as possible; while recognising that a model that reflects all that the ESO does, and the different activities we undertake, brings some complexity.</p>
	<p>There was very little or no qualitative or poll support for the RAV and Margin models or the ESO/customer contract approach in the Commitments model</p>	<p>In the workshop, we had originally proposed the Commitments model as one of the models we would continue to develop. We will continue to focus on understanding the outcomes stakeholder want and will develop a strong focus on outcomes in the funding model, but we do not plan to pursue the ESO/customer contract approach any further due to concerns around this.</p>
	<p>Some stakeholders also suggested looking elsewhere for examples of models:</p> <ul style="list-style-type: none"> • National Air Traffic Services for an example of a Performance model • ISOs, such as those in the USA 	<p>We are looking at the funding models for these suggested organisations to identify where we can pull out features that meet what we have heard from stakeholders far and our regulatory principles</p>
	<p>In our workshop, stakeholders pointed that the activities the ESO undertakes and the risks we hold must inform the ESO’s final funding model</p>	<p>We agree with stakeholders that the activities the ESO undertakes and the risks we hold must inform the ESO’s final funding model. We will be engaging over the next few months to understand what outcomes stakeholders want from us in order to identify how to deliver these, and we will build this into our development of a funding model. As part of this we will aim to provide a clearer explanation of the risks the ESO holds, given feedback that many stakeholders do not understand this.</p>

ANNEX B: WORKSHOP POLL RESULTS ON FUNDING MODELS



ESO RII0-2 Stakeholder Group

Laying the foundations of our plan

Sponsor(s): Ro Quinn

EXECUTIVE SUMMARY

CONTEXT

In order to create an ambitious, meaningful and robust ESO business plan that will serve the needs of the industry and consumers, we need to have an understanding of the future energy landscape. This understanding should underpin the plan, not only helping to guide the investment decisions the ESO makes and advises on, but also the design of the decision making processes. For example, we may wish to consider the extent and timing of ESO investment activities now or the triggers that would allow or require us to do so within the price control period.

OPTIONS

We first considered which scenarios to use as our starting point:

- A. Future Energy Scenarios (FES) 2018
- B. Scenarios developed by another industry party

We then considered the following options:

1. Create a single 'best view' of the future energy landscape
2. Use multiple scenarios to develop multiple business plans
3. Understand the commonalities and uncertainties that exist across scenarios and then explore the further technical and policy changes that could significantly affect industry processes or consumer value.

ENGAGEMENT AND ANALYSIS (“YOU SAID, WE DID” PROVIDED IN ANNEX)

The options above were tested with stakeholders through bilateral meetings, at a workshop, in a webinar and at the annual FES conference. There was a high level of support for using FES 2018 with stakeholders, who noted the rigorous engagement and analysis that is undertaken as part of the FES annual cycle¹.

Stakeholders did not see the creation of a single 'best view' of the future energy landscape as credible due to the level of change and uncertainty facing the industry. Most stakeholders agreed that we should seek to understand the commonalities across the four FES 2018 scenarios and asked that we provide more detail on these as we develop our thinking. They also agreed that we should focus further analysis on the possible technical and policy changes that could significantly affect industry processes or consumer value. This was seen as the best way to inform the creation of a meaningful business plan against the backdrop of uncertainty across the industry.

Stakeholders felt that the list of possible changes that we initially proposed (see annex B) was too technocratic and that digitalisation and “big data” needed to be considered. We amended and consolidated our list to reflect stakeholder feedback.

¹ <http://fes.nationalgrid.com/feedback/>

RECOMMENDATION

We recommend:

1. Using FES 2018 as the foundation of our business plan.
2. Describing the commonalities across the four FES 2018 scenarios and exploring the further technical and policy changes that could significantly affect industry processes or consumer value
3. Focussing our initial analysis on the following areas of change and uncertainty:
 - Digitalisation of the energy system
 - Increase in decarbonised and decentralised generation
 - Take-up of electric vehicles (EVs)
 - Government's position on:
 - Security of supply policy
 - Decarbonisation policy
 - Changing roles and governance of industry participants

ASK OF ERSG

Does the group agree with our recommendations?

THE REPORT

FURTHER CONTEXT

In order to create a well justified business plan we first need a view of how the energy landscape will change over the RIIO-2 period and beyond to 2030. Without an understanding of the future energy landscape it will be difficult to develop a plan that will serve the needs of the industry or to focus on those areas that deliver the most value for consumers.

However, it is important to recognise the speed of change and level of uncertainty across the energy industry. For example, there has been a significant increase in the amount of intermittent and decentralised generation during RIIO-1 that was not anticipated at the beginning of the period, and this trend is expected to continue through RIIO-2. Therefore, we must acknowledge that it may not be appropriate to create a single long-term view of the future. Instead, we use scenarios to map out possible futures and the pathways to these.

The work that we do on these scenarios should underpin our plan, not only helping to guide investment decisions, but also the design of the decision making processes. For example, we may wish to consider the extent and timing of ESO investment activities now or the triggers that would allow or require us to do so within the price control period.

OPTIONS ANALYSIS

What options did we consider?

We first considered which scenarios to use as our starting point:

- A. Future Energy Scenarios (FES) 2018
- B. Scenarios developed by another industry party

We then considered the following options:

1. Create a single 'best view' of the future energy landscape
2. Use multiple scenarios to develop multiple business plans
3. Understand the commonalities that exist across scenarios and then explore the further technical and policy changes that could significantly affect industry processes and/ or consumer value.

For the areas of further technical and policy change we created a long list of topics to test with stakeholders (see annex B).

What are the strengths, weakness, opportunities and threats of each option

The strengths of FES are that it:

- **Considers the whole energy system in a holistic way;** across fuels (gas, electricity & hydrogen), networks (transmission & distribution) and sectors (power, heat & transport)
- **Is consulted and developed with stakeholders;** stakeholders should be at the heart of the process
- **Is evidence-based and uses high-quality analysis;** these support financial decisions across the energy industry, from network investment to security of supply recommendations

- **Is flexible enough to be used across the industry;** it is used independently by third parties

There was broad support from our stakeholders for using FES and there was no alternative set of scenarios suggested by stakeholders.

Scenarios are widely used and accepted as the best approach to manage uncertainty. They are naturally more flexible than any single view, and using a common set of scenarios that are recognised across the industry should help enable a more consistent, coordinated and easily comparable approach to our shared challenges, for example when considering the whole energy system or supporting the decarbonisation of transport.

As FES is a broad set of holistic scenarios covering both electricity and gas out to 2050, we will have to prioritise which potential changes and uncertainties in the energy industry we should consider in more detail in our business plan (we looked to 2030 as a reasonable time horizon to consider). In developing our thinking, we considered the level of uncertainty and the impact on consumers. We used our Consumer and Stakeholder priorities as a guide to create a list of potential topics, which we split between Technology changes and Policy and Market changes (see annex B). We tested these with over 100 stakeholders at three events.

STAKEHOLDER ENGAGEMENT

What engagement did we undertake (including Forward Plan)?

Three stakeholder events were targeted to test using FES as the foundation for our business plan and to test the big questions in the energy landscape:

- ESO Stakeholder Workshop June 22nd 2018 – 43 stakeholders. Using Q&A session for FES discussion and interactive session for areas of change and uncertainty.
- Webinar June 28th 2018 – 50 stakeholders, using online polling.
- FES conference July 12th 2018 – targeted stakeholders with a specific interest in energy scenarios; 30 took part in survey on the areas of change and uncertainty.

What feedback did we receive?

The following feedback was received from the above engagement:

- Broad support for using FES, no challenge received or alternative scenarios suggested by stakeholders. Some felt more detail on the new FES frameworks was required, which will be addressed in follow-up engagement.
- Stakeholders felt the area of digitalisation and big data had been overlooked
- Stakeholders would like to see more of a balance between the technical changes and the policy and market changes, with some saying the list was “too technocratic”
- Top areas of change and uncertainty highlighted by stakeholders:
 - Digitalisation of the energy system
 - Electrification and decarbonisation of transport
 - Change in Government energy policy
 - Local generation and storage

Details of the questions asked and answer received can be found in Annex C.

ESO RECOMMENDATION

What is the ESO's position?

We recommend:

1. Using FES 2018 as the foundation of our business plan.
2. Describing the commonalities across the four FES 2018 scenarios and exploring the further technical and policy changes that could significantly affect industry processes or consumer value
3. Focussing our initial analysis on the following areas of change and uncertainty:
 - Digitalisation of the energy system
 - Increase in decarbonised and decentralised generation
 - Take-up of electric vehicles (EVs)
 - Government's position on:
 - Security of supply policy
 - Decarbonisation policy
 - Changing roles and governance of industry participants

How has stakeholder feedback shaped our thinking?

This is set out in the table in Annex A

What level of risk and uncertainty applies to the position?

We feel there is small risk in using FES, as it is an established industry publication with wide stakeholder buy in. There is a risk that the areas which have been prioritised change over the RIIO-2 submission process. In order to mitigate this we will engage further on the detail of these areas and consider how uncertainty mechanisms and other methods can be used to build flexibility into our plan.

NEXT STEPS

We plan to engage stakeholders and then return to the October ERSG with descriptions of the:

- Commonalities across the four FES scenarios;
- Range and possible implications of the areas of change and uncertainty.

ASK OF ERSG

Does the group agree with our recommendations?

ANNEX A: HOW STAKEHOLDER FEEDBACK HAS SHAPED OUR THINKING

ISSUE	YOU SAID...	WE DID...
Using FES as the foundation of our business plan	At our workshop and webinar you supported using FES	Continue to use FES 2018 as the foundation of our plan; moving to more detailed analysis of the areas of change/ uncertainty
	At our workshop on 22 nd June you said more detailed information around the scenarios is required	FES 2018 has now been launched and more detailed information is available ² . We are also carrying our more detailed analysis on the areas of change and uncertainty and will share once complete.
Understanding the key drivers of change	At our workshop you said you would like to see more of a balance between the technical changes and the policy and market changes, with some saying the list was “too technocratic”	We reduced and consolidated some of the technology topics e.g. specific generation technologies into broad categories e.g. renewable technologies. We balanced the lists between the Technology and Policy and Market categories
	At our workshop you felt the area of digitalisation / big data had been overlooked	We refined our areas of change/ uncertainty to specifically include digitalisation, and will incorporate this into our work on IS as part of our business plan development.

² <http://fes.nationalgrid.com/fes-document/>

ANNEX B: ORIGINAL AREAS OF CHANGE/ UNCERTAINTY LIST

Policy and Market changes	Technical changes
Capacity Market review	Increasing offshore wind capacity
Contracts for difference review	Increasing onshore wind capacity
Increased peer-to-peer trading	Decommissioning coal power plants
CCUS policy	New gas power plants
Heat decarbonisation policy	Increased levels of interconnection
Real time procurement of balancing services	Changing electricity demand profiles
Electricity Charging review	Minimum electricity demand
Competition in networks	Increasing solar PV
UK's relationship with the Internal Energy Market	Increased peak distributed generation
	Increased (Battery) storage
	Increased electrification of transport
	Increased electrification of heat

ANNEX C: RESULTS FROM POLLING QUESTIONS

Webinar polling questions and results:

- Poll question “Do you agree with the ESO using FES 2018 as a basis for its business plan? – 28 June 2018 webinar”
 - Yes – 56%; No – 0%; Unsure – 44%
- Poll question “Top 3 changes in the energy landscape”:

Changes in the energy landscape	Percentage
Increasing renewable generation capacity	67%
Increasing digitisation across the energy sector	39%
Increased decarbonisation of transport	36%
Changing electricity demand profiles	33%
Electricity charging review	30%
Increased battery storage	24%
Competition in networks	24%
Capacity market review	12%
UK's relationship with the Internal Energy Market (IEM)	6%
<i>Other</i>	9%

FES Conference polling questions and results:

- Poll question “Top 3 changes in the energy landscape”:

Changes in the energy landscape	Percentage
Decarbonisation of transport	47%
Increasing renewable generation capacity	43%
Digitisation of the energy system	43%
Increased (battery) storage	37%
Increasing distributed generation	37%
Decarbonisation of heat	30%
Changing electricity demand profiles	20%
Electricity charging review	13%
Increased peer-to-peer trading	10%
Competition in networks	10%
UK's relationship with the Internal Energy Market (IEM)	7%
Capacity market review	3%

ESO RII0-2 Stakeholder Group

From vision to outputs

Sponsor(s): Ro Quinn

EXECUTIVE SUMMARY

CONTEXT

As part of the ESO's 2018-19 Forward Plan, we set out a long-term vision for the ESO as an organisation that thinks across networks, plays a more active part in the energy system and helps to shape frameworks for markets. For the remainder of RII0-1, the implementation of this vision will be governed by a framework of roles and principles. These set out what the ESO does today, and will be the basis for stakeholder and regulatory feedback on how the ESO has performed each year until the end of RII0-2. We need to decide whether and/or how this framework should be used to develop our outputs for RII0-2.

OPTIONS

We considered the following options to set our direction for RII0-2:

1. Use the current set of roles and principles, unchanged
2. Use the consumer and stakeholder priorities but not the roles and principles
3. Combine the consumer and stakeholder priorities and further develop the principles to better reflect stakeholder needs in RII0-2.

ENGAGEMENT AND ANALYSIS

Both our Forward Plan and Consumer and Stakeholder Priorities were developed following significant stakeholder engagement. This engagement, including how we responded to stakeholder feedback, is summarised in the following reports:

- ESO Forward Plan 2018/19 Stakeholder Engagement Report, March 2018: [here](#).
- ESO RII0-2 Stakeholder Engagement Report, June 2018: [here](#).

RECOMMENDATION

We will further develop our long-term vision for the ESO in RII0-2 and recommend using a framework to set our outputs that combines:

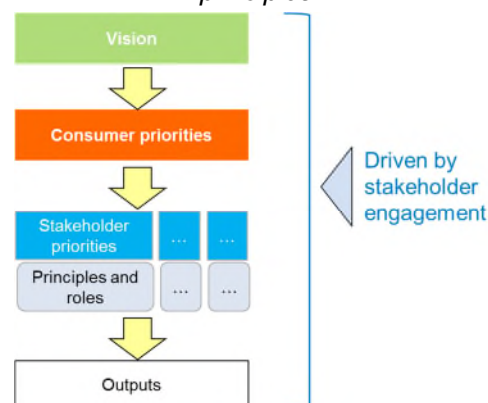
- the roles and principles used to describe the ESO's RII0-1 role; and
- the consumer and stakeholder priorities we have identified for the ESO in RII0-2

This is illustrated in Diagram 1.

ASK OF ERSG

Does the group agree with our proposal?

Diagram 1: Priorities, roles and principles



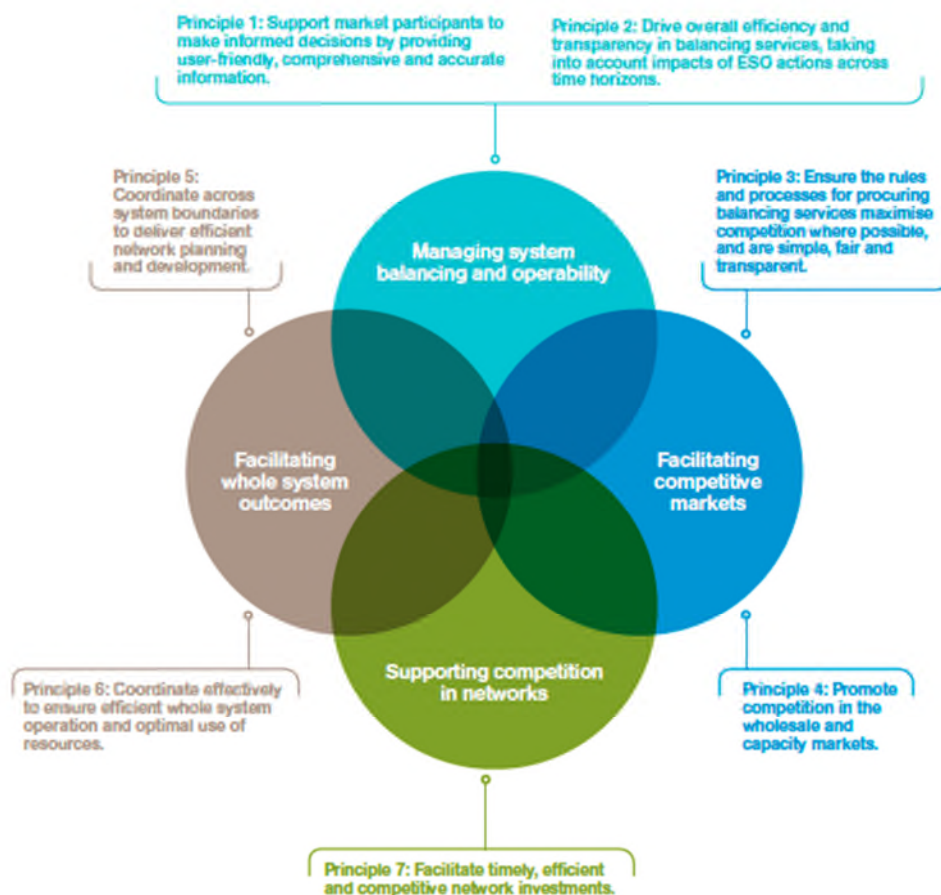
THE REPORT

FURTHER CONTEXT

In March 2018 the ESO published its first annual Forward Plan that stated: “Our long-term vision is for an Electricity System Operator (ESO) which thinks across networks, plays a more active part in the energy system and helps to shape frameworks for markets. In our own role, we will be transparent in our decisions and actions and promote increased use of markets in place of bespoke bilateral action. Alongside this, we will also continue to run the electricity system safely, securely, sustainably and efficiently.”

The activities in the Forward Plan are set out under four roles and seven principles. These are illustrated in Diagram 2 below.

Diagram 2: ESO roles and principles



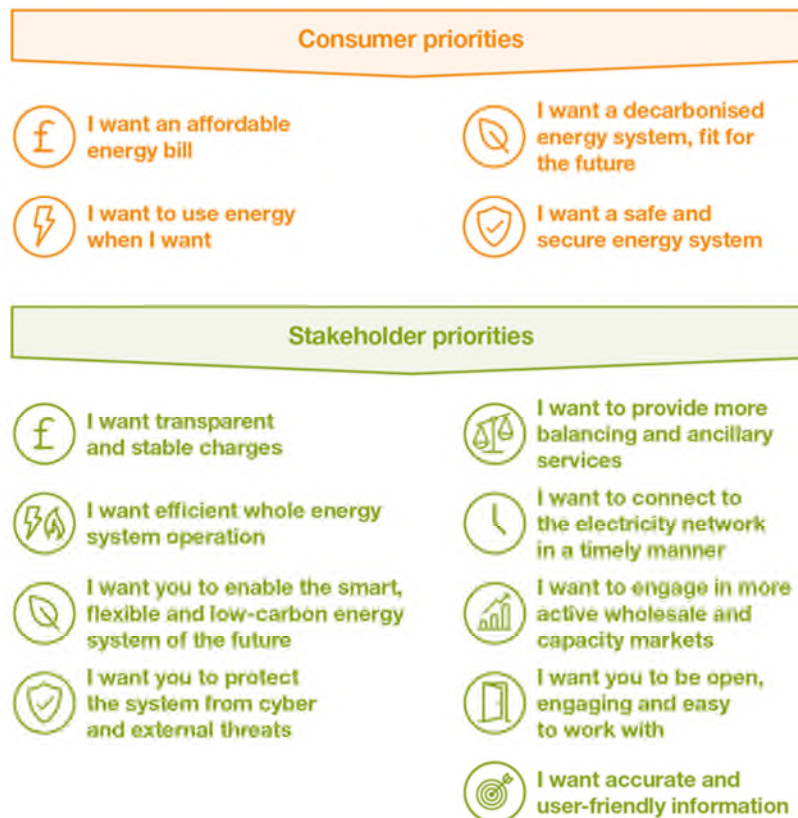
The outputs we produce are defined according to this framework, so it is clear how we are delivering against the expectations under each role and principle. Over 2018-19, we are responding to stakeholder feedback and, where necessary, updating our aim and proposed outputs under the principles.

While the roles and principles are adequate for the remaining RIIO-1 period, our work to develop our longer-term strategy, including for the RIIO-2 period, has highlighted the need for a framework that:

- Allows us to describe our core role of operating the system in real-time, safely and securely (“keeping the lights on”)
- Reflects the priorities of consumers and our stakeholders, as shown in Diagram 3
- Promotes the delivery of outputs that create value for consumers and meet our customers’ and stakeholders’ needs.

At the same time, we wish to be consistent in our approach and description of the ESO across RIIO-1 and RIIO-2 to avoid confusing stakeholders with multiple frameworks applied to the ESO.

Diagram 2: ESO RIIO-2 consumer and stakeholder priorities



OPTIONS ANALYSIS

We considered the following options to develop our outputs for RIIO-2:

1. Use the current set of roles and principles, unchanged
2. Use the RIIO-2 consumer and stakeholder priorities but not the roles and principles
3. Combine the consumer and stakeholder priorities and further develop the principles to better reflect stakeholder needs in RIIO-2.

STAKEHOLDER ENGAGEMENT

In developing our Forward Plan, we and Ofgem carried out extensive stakeholder engagement as set out in the diagram below. This engagement was not just about the principles, but about the activities and proposed metrics that would measure our performance under each principle.

Diagram 4: Stakeholder engagement on the principles and the Forward Plan



We have developed our consumer and stakeholder priorities over the last few months alongside our regular industry and bilateral engagement activities. In addition we have undertaken the following specific engagement for RIIO-2:

- A webinar with over 100 participants, and a workshop with 43 participants, where we sought feedback on the draft priorities we had identified, including a poll for participants to rank which was the most important to them
- A stand at an industry event to launch the Future Energy Scenarios in July 2018, with over 500 industry participants, where we discussed the priorities with stakeholders.

We will continue to engage stakeholders on our Forward Plan as well as our RIIO-2 preparations. This will include further engagement on our long-term vision, consumer and stakeholder priorities, and how these will help us develop our proposed outputs for RIIO-2 and the longer-term.

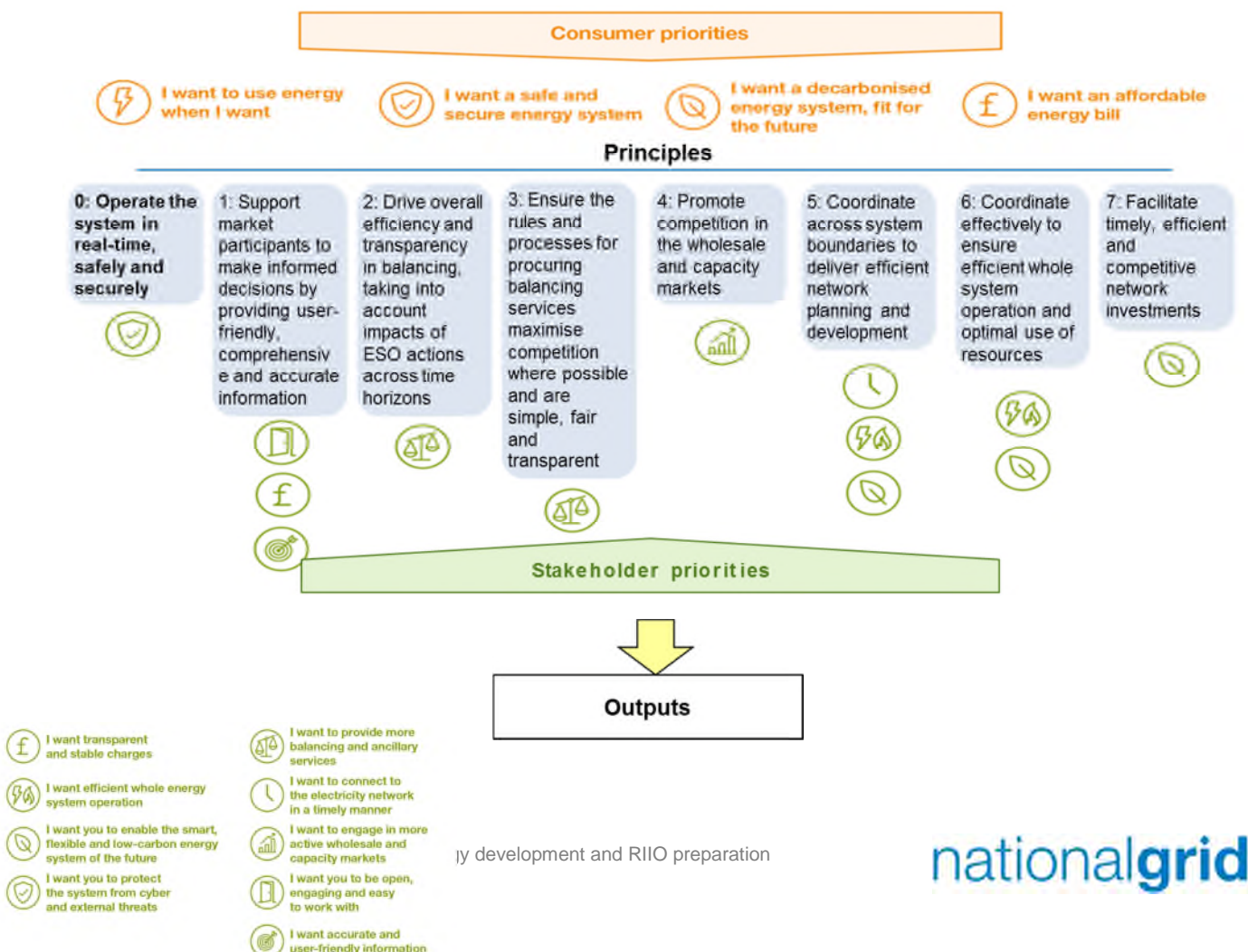
ESO RECOMMENDATION ON MOVING FROM VISION TO OUTPUTS

We propose to take forward the third option, whereby we use both the principles and our consumer and stakeholder priorities as a combined framework to develop our outputs. We will work with stakeholders and Ofgem to develop the principles to better reflect the full range of our roles, with changes to the principles being made in time for RIIO-2. In particular, we would like to explore the concept of a ‘principle zero’ that reflects our core role of operating the system. This new principle would enable us to better explain the full range of ESO costs, including the costs of IS that underpin the day-to-day operation of the system.

Our proposed approach is illustrated in Diagram 5 below. Here we align our stakeholder priorities to the seven principles, plus our proposed new principle. Consumer priorities sit above the framework and provide broader direction across the principles and stakeholder priorities. The framework will be used to develop our outputs for RIIO-2, for example:

- as the basis for work to examine the options for what we can deliver and how much this would cost
- as the framework for our business plan that will describe our recommended options
- to underpin our dialogue with consumers, customers and stakeholders how we propose to meet their needs through our outputs.

Diagram 5: Combined framework



NEXT STEPS

External engagement

We intend to engage stakeholders and Ofgem on our proposed mapping of priorities to the principles, as well as the concept of a Principle Zero. This will include putting this framework into practice in stakeholder workshops to explore specific questions to determine what outputs the ESO's should deliver in RIIO-2.

Internal engagement

We will use our proposed framework to work with teams across the ESO to develop our business plan for RIIO-2. This will help us focus on how our proposed outputs will deliver value to consumers and meet stakeholder priorities.

ASK OF ERSG

Does the ESO RIIO-2 Stakeholder Group agree with our proposed approach?