ERSG Report Annex-

ERSG Meeting Minutes

Electricity System Operator RIIO-2 Stakeholder Group (ERSG)

Meeting 1 - 25th July 2018

National Grid System Operator Offices, Wokingham

Minutes and Action Log

Attendees

Stuart Cotten Group Head of Regulation and Compliance, Drax

Toby Ferenczi Director of Strategy, Ovo

Seamus Gallagher Electricity System Operator - Observer Stew Horne Principal Policy Manager, Citizens Advice

Rupika Madhura Senior Advisor, Ofgem – Observer

Catherine Mitchell Professor of Energy Policy, University of Exeter

Charlotte Morgan Chairperson

Nick Molho Executive Director, Aldersgate Group

Kayte O'Neill Future Head of SO Strategy and Regulation, National Grid – Company rep.

Eddie Proffitt Technical Director of the Major Energy Users Council (MUEC)
Ro Quinn Head of SO Strategy & Regulation, National Grid – Company rep.
Charlotte Ramsay Future of SO Programme Director, National Grid - Presenter

Louise van Rensburg Interim Deputy Director, Ofgem – Observer Simon Roberts Chief Executive, Centre for Sustainable Energy

Fintan Slye Director of UK System Operator, National Grid – Company rep.

Jamie Stewart Energy Policy Officer, Citizens Advice Scotland

Barbara Vest Special Advisor, Energy UK

Adelle Wainwright Technical Secretary

1. Welcome (Fintan Slye, Director of the UK System Operator)

Fintan welcomed Panel members to the inaugural ERSG. He explained the importance of the group in providing challenge to the ESO during the development of its RIIO-2 business plan. This is the first stand-alone business plan that the ESO will deliver following legal separation, and one that is set against a backdrop of increasingly fast paced change in the energy market. It is vital that the submission delivers the right solution for customers and GB end consumers. The ERSG will shape this by helping the ESO to understand key drivers for value and how they can best set up to deliver it.

2. Introducing the Chairperson (Charlotte Morgan)

The Chair welcomed ERSG members and thanked the ESO for their preparation in bringing the group together. She gave an overview of the wealth of experience she had acquired across a range of areas within the energy market.

The Chair reiterated the importance of the group's role in providing independent and robust challenge to the ESO's business plans, particularly in bringing in voices of consumers, customers and network users to the fore.

Finally, the Chair noted the engagement that she will continue having with the Chairs of other RIIO-2 Stakeholder Groups at Ofgem-facilitated best practice sharing sessions.

3. Member introductions

Each member introduced themselves both in terms of their current role and their background. It was noted that members were there in their capacity as individuals rather than representing any particular organisation or industry sector on the group.

Members also gave their views on their hopes for the group. These included:

- Facilitating fair and equitable change across social groups and GB regions
- Driving efficiency in costs
- Supporting the ESO in adapting to a changing environment
- Holding the ESO to account to enable the right answer for the GB end consumer
- Empowering the ESO to think long term to enable the transition to a smart, flexible, energy system
- Helping the SO play their part in the achieving the "decarbonisation prize".
- Ensuring the ESO is able to attract investment to deliver benefits in both this and future price controls.
- Creating a business model that allows the ESO a role in thought leadership.

Conflicts and perceptions of conflicts of interest were discussed.

With regards to the Chair, it was confirmed that she would be working in a personal capacity as an outside interest not as a Linklaters partner. The Chair confirmed that she had not worked previously for the SO but only for National Grid Ventures, part of the unregulated business. It was not anticipated that any conflicts with regards to her work for National Grid Ventures should arise. However, if such an occasion were to arise and there was any perceived conflict in any part of the discussion an alternate Chair would take over. It was agreed that a process for determining an alternate Chair would be decided after the meeting.

Action: Chair to contact ERSG members regarding alternate Chair arrangements.

4. Legal separation (Charlotte Ramsay, Future of SO Programme Director)

The presenter highlighted the importance of ensuring the right regulatory model is in place. Whilst the ESO is a financially small component within the wider National Grid group, it processes money flows 20 times the value of its asset base, and is an increasingly visible and high-profile part of the organisation.

The presenter explained the regulatory journey from 2012 to 2018 in moving from prescriptive to principle based regulatory models. This covered three broad areas.

RIIO-1 performance. National Grid have performed well on balance in terms of how we were incentivised. However, the pace and scale of change means that these regulatory boundaries are unlikely to be fit-for-purpose for the ESO as it moves into the future.

Legal separation. National Grid see that the legal separation model is the best way to realise consumer value. It gives the ESO a neutral platform which can demonstrate transparency in decision making.

Incentive framework. The ESO's previous incentive scheme (Balancing Services Incentive Scheme – BSIS) was perceived as not driving right behaviours due to being a mechanistic tool on one component part. Our new principle based scheme is an evaluative model which is already driving different behaviours in the business.

One ERSG member stated their previous preference for a fully separate SO. There was some discussion around how much effort has been made delivering Legal Separation and that this model should be given an opportunity to deliver.

Members were keen to see evidence on how the ESO was performing against the specific deliverables outlined in the Forward Plan to ensure targets were met. It was confirmed that the current incentive structure was based on RIIO-1 arrangements, and it was highlighted that the Performance Panel would how the principles based structure was working.

5. Introduction to RIIO-2 (Ofgem)

Ofgem presented on the transition to RIIO-2 and the importance of responding to changes in the market and driving innovation. As the ESO is a new type of organisation and an asset light company it will require a tailored price control that may be different to previous TO models. Ofgem are holding a workshop on August 6th as the next step in their RIIO-2 engagement which all are welcome to attend.

Ofgem stated the importance of the ERSG in providing expert challenge and helping the ESO to check assumptions, look at scenarios, and how innovation can be brought into the core of the business. Ofgem will be meeting Chairs of different RIIO-2 stakeholder groups. Whilst they are happy to be contacted by individuals in the group to provide guidance, they are not planning to attend as they wish the groups to be independent of Ofgem and the companies.

Ofgem were asked to clarify their position on the RIIO-2 Challenge Groups and Open Hearings. Regarding the former, the Challenge Group is likely to run across all areas of RIIO-2. A position on Open Hearings is due to be published on July 30th. The TORs and on-day slides have been updated to reflect this clarification.

ERSG members questioned Ofgem on how they would address interests within Challenge Groups as there may be representatives with an interest in saying the ESO is not independent. Ofgem plan to offset any issues in this area through transparency which they believe will bring legitimacy of decision making.

6. Enhanced engagement models (Ro Quinn)

Throughout the RIIO-2 process the ESO want to gain rich stakeholder feedback. This will be done through "thinking in public" topic by topic. The report from the ERSG will form part of the ESO's demonstrable stakeholder engagement. However, this is not a one-off programme and the ESO recognises that stakeholder engagement is a vital part of ensuring that the ESO continues to be responsive, agile, and realising customer benefits.

The Company rep. talked through the meeting plan for the ERSG with an aim to submit the ESO business plan in Q4 2019. By this point the group should have had the opportunity to review the proposed ESO business plan at least twice.

7. Terms of Reference and ways of working (Charlotte Morgan)

It was agreed that the Terms of Reference would be updated as follows:

Section	Change	
Purpose	Include adequacy of resourcing	
Roles and responsibilities	Add in the role of "critical friend" to Observers	
Chair	Add responsibility to coordinate with other Chairs in the RIIO-	
	2 Stakeholder Group programme	
	Chair to be able to recruit new members if found a	
	stakeholder group is not represented	
Role of Stakeholder	Expected to input into the final report	
Group members		
Outputs	Confidential information should be clearly marked	

The group discussed changes to the Non-Disclosure Agreements. New versions would be prepared for the group for signing. It was confirmed that if there was any uncertainty about what could be disclosed from discussions these should discussed with the Chair in the first instance.

Action: Technical Secretary to circulate updated Non-Disclosure Agreements to members.

The ERSG deferred discussion on quoracy and conflicts of interest to the closed session at the end of the meeting.

8. Laying the foundations of our plan (Ro Quinn)

The Company rep. explained that in order to create an ambitious, meaningful and robust plan for the ESO which would serve the needs of the industry and consumers, there is a need to have as clear as possible understanding of the Future Energy Landscape. The ESO looked at whether to use Future Energy Scenarios (FES) or Scenarios developed by another Industry party.

Initial conclusions were that FES 2018 provided the right starting point particularly due to level of stakeholder engagement. However, as FES has a number of scenarios this raised the question

around whether a best or multiple views should be formed. The ESO proposed looking at commonalities then doing further analysis on areas of change and uncertainty which would have a bigger impact. This analysis would be taken to future workshops and webinars to be tested and for feedback to be sought.

Some ESRG members felt that whatever scenario was used, it was important that there was sufficient flexibility in the models used for the ESO to be able to grow with the pace of change.

Another ERSG member questioned whether all four FES scenarios should feed into the baseline or just those that met the government's carbon emissions. However, another member challenged that this may be costly for the consumer. It was suggested that the scenarios could be differently weighted so that scenarios which met targets were given higher priority, possibly with the non-compliant scenarios as the counterfactual.

The Company rep. presented the list of current areas of uncertainty which the group discussed. ERSG feedback indicated it would be good to add in to the list options for decarbonisation of heat, Storage and Demand Side Response.

Decision: ERSG broadly agreed with the ESO's recommendations and next steps, however asked for more information.

Action: ESO to provide information on the following for the next meeting:

- Description the commonalities across the scenarios
- Description of the underlying analysis undertaken to this point and how it will be developed
- Description of key dependencies (with a focus on those areas that the ESO is able to influence)
- Updated list of areas of change and uncertainty

9. From vision to outputs (Ro Quinn).

The Company rep. presented the current roles and principles, which have been defined as part of the ESO's Forward Plan. These will be built upon as part of the journey into RIIO-2 to ensure consistency in conversation. However, the ESO wanted to understand how fit consumer priorities, stakeholder priorities, principles and roles together to produce outputs.

Overall the ERSG agreed with the proposed ordering of the priorities with a strong consumer focus, and how the company was planning to progress this issue. It was suggested that "we" might be more appropriate than "I" when discussing consumer priorities, as well as using energy when we "need" rather than when we "want". The ERSG also asked for further clarification on the definition of consumers, noting that this may not just be end users, and stakeholders. There was discussion around the importance of the ESO's role in providing thought leadership around the trade-offs between the priorities of these groups.

Ofgem confirmed that the roles and principles would also be considered at their 6th August workshop.

Decision: Noting that the points above should be considered, the ESRG agreed with the proposed approach and next steps.

10. Developing our work plan (Ro Quinn)

The Company rep. presented the proposed work plan for the ERSG and how different principles would be discussed at each session. A new potential principle (principle 0) was noted to capture baseline activities.

The Company rep. explained that the ESO would be using a number of different routes for engagement on issues such as webinars, workshops, bilateral meetings, and sharing documentation to refine thinking before being shared with ERSG.

Decision: The ERSG were supportive overall of the plan. However, some concern was expressed around principle 7 not being discussed until later in the programme, which the ESO agreed to review.

Action: ESO to review where principle 7 is discussed on ERSG Agenda plan.

There was some concern about the volume of topics on future agenda items and that full day meetings should be considered.

Action: Chair/Technical Secretary to review the need for full day meetings in future.

11. Regulatory mechanisms (Ro Quinn)

The ESO will have its own regulatory structure, and due to its unique role in industry a new model is likely required. Five potential funding models have been explored with stakeholders and of these "Performance" and "Layered" were favoured.

The ESO are now thinking about the core characteristics of these models in more detail and will publish a thought piece in the Autumn on how appropriate characteristics could be reflected in the ESO's framework. Members will be asked to input into this thought piece ahead of its publication.

ERSG members were interested in what these models might mean for the financeability of the organisation, particularly due to its large cashflows in relation to a small asset base. The ERSG also noted that it would be hard to calibrate a completely performance based structure without understanding the baseline and the potential for risk of unintended consequences. Feedback from ERSG members in the room and in written correspondence prior to the meeting indicated

that a layered model may be appropriate to start but with a view to move to performance in the longer term once baseline expectations are established. It was suggested by one member that a mix of models may be appropriate as in some parts of the US.

The Chair summarised the discussions of the ERSG as being around the need for a robustness for change in whatever model was selected, as no one is sure what the future energy market will look like. It may change again before, or even during the next price control period.

Some ERSG members challenged Ofgem to ensure that they provided sufficient guidance to the ERSG to enable them to help the ESO. As this is an innovative piece of work to shape an organisation's future their view was that industry the ESO and the regulator need to work together to move forward.

Decision: Noting that the points above should be considered the ERSG agreed with the proposed approach overall.

Action: ESO to consider how to further engage with the group in advance of publishing the thought piece on regulatory mechanisms.

12. Feedback on form and content of sessions (Charlotte Morgan)

The Chair thanked the ESO team for their work in preparing the session and asked for feedback on this first session:

Positives: Pre-read material was of high quality and accessible, format of papers worked well. **Could be improved:** Meeting length (1 day rather than half), more time to digest pre-reading, key questions could be more clearly identified ahead of the meeting.

The importance of sharing information across the group was noted. It was agreed that the Technical Secretary would provide a conduit for circulating relevant information.

13. Closed session

The Chair ran a brief closed session for ERSG without ESO representation.

Meeting 2 - 14th November 2018

Amba hotel, Charing Cross, London

Minutes

Attendees

ERSG members

Angelita Bradney ESO – Company rep Peter Emery Electricity North West

Alan Kelly Scottish Power Transmission

Andy Manning Centrica

Catherine Mitchell University of Exeter

Charlotte Morgan Chairperson
Nick Molho Aldersgate Group
Kayte O'Neill ESO – Company rep

Eddie Proffitt Major Energy Users Council (MUEC)
Simon Roberts Centre for Sustainable Energy
Nina Skorupska Renewable Energy Association

Fintan Slye ESO - Company rep
Jamie Stewart Citizens Advice Scotland
Nigel Turvey Western Power Distribution
Chris Veal Transmission Investment

Adelle Wainwright Technical Secretary

Matthew Wright Orsted

ESO Support

Kashia Anderson
Katharine Clench
Alice Etheridge
Seamus Gallagher
Mark Herring
Cathy McClay
Andy Wainwright
ESO - Observer
ESO - Observer
ESO - part meeting
ESO - part meeting
ESO - part meeting
ESO - part meeting

14. Conflicts of Interest (all)

The Chair invited feedback on whether members had identified potential Conflicts of Interest relating to the proposed agenda. A number of members, particularly network company representatives noted business interests in relation to the afternoon's agenda discussions. This was noted and the group agreed that as this was an anticipated conflict arising from the party's substantive roles which the group were all aware of, these could be borne in mind as discussions progressed.

15. SO Mission and Customer & Stakeholder priorities (Kayte O'Neill)

The presenter introduced the new SO mission which is shared across Gas and Electricity to capture whole system benefits. This has been informed by stakeholder engagement and was launched at the 28th September SO ambition workshop.

The presenter also shared the ESO Customer and Stakeholder Priorities which had been updated following discussions at previous ERSG meetings. The ESRG reacted positively to the update and felt that these were an improvement. However, there was some discussion around whether an additional stakeholder priority should be added around being flexible and adaptive, driving innovation and through that improving competition.

Action: ESO to draft an additional stakeholder priority to include flexibility, innovation and competition.

16. Using scenarios (Kayte O'Neill, Angelita Bradney)

The presenter explained the importance of having scenarios to understand what the future energy landscape might look like, against which the ESO would test the robustness of the Business Plan (2021-2026). At ERSG1 the group had agreed that the FES scenarios appeared to be the most robust to use but had requested the ESO provide further information on areas of uncertainty. The key areas of uncertainty were identified in a commonality scorecard developed and an eight-step approach to develop options and manage uncertainty.

The group discussed that Ofgem was considering the use of a single scenario across all RIIO-2 business plans, and how these pieces of work may interact. This is being considered by the challenge group. An ESO representative clarified that if Ofgem do look to use a single baseline view of the future, the ESO's work could still be used to test where potential reopener situations may occur.

An ERSG member asked for clarification regarding the anticipated regulatory duration for the ESO price control. It was fed back that was still considering this and would set out its thinking in the sector strategy consultation in December. From an ESO perspective, it was felt that a price control should be long enough to enable stability of resourcing and appropriate IT investment to take place, and that if a shorter price control was set (for example 1-2 years) that there should be some way to enable commitments to be taken forward across price controls.

The group fed back views on the scenarios posed, and some members felt that the ESO was being more passive than directive in terms of picking preferences. Some members suggested that for example the ESO should favour scenarios that met decarbonisation targets. Some members also pointed to the 1.5 degrees targets currently being considered and asked whether the ESO should consider scenarios that would meet that target.

The use of scenarios was also discussed in terms of regional differences and whether it was appropriate to feed this in. The DNO representatives from the group described some of the work that was being done to develop regional FES-like scenarios using similar methodologies which in the longer term could enhance the ESO's work in this space. The ESO representative confirmed that at this stage the ESO has taken a national view as it operates across the whole GB synchronous area.

Some ERSG members also sought clarification around whether the ESO was positioning itself as a top-down (command and control, national markets) or bottom-up (leave to markets, regional focus) organisation in terms of how it interacts with wider industry, and how this might affect consumer costs. The ESO representative explained that the key difference between these models was complexity and in some cases it made sense for consumers to have national, centralised markets, and other more regional versions driven by system needs.

Action: ESO to report back to group

- Outcome of challenge group discussions around use of scenarios
- Any future views on how we work with DSOs around regional scenarios.
- Interplay between managing longer term-costs and length of price control
- Potential impact of 1.5 degrees target on scenarios and ESO plans
- Views on ESO role as top down vs. bottom up.

17. ESO ambition and strategy workshop (Kayte O'Neill, Mark Herring)

The purpose of this workshop session was to test the key enablers underlying the seven principles.

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Principle	Enablers	Discussion points
Principle 1: Support	A1 - A market place for energy	- Need to consider public interest and value in
market participants to	data that enables innovation	data collection and analysis
make informed	and unlocks value for	- Data – who should own this and to what extent
decision s by	consumers	should it be centralised and made publicly
providing user	A2 - Operational system	available.
friendly	analysis and insights that are	- Risks identified around usability if it is not
comprehensive and	shared across industry to	presented in disaggregated format.
accurate information	support efficient markets	- Data directories viewed as more robust than
	A3 - A national register for	single source.
	energy assets that reduces	- Data hub run by Energienet in Denmark viewed
	complexity and lowers barriers	as good example.
	to entry for all markets	- If a register of assets is created could this be
	A4 - A whole-energy industry	used to form bases for investment decisions
	strategy and pathway for	across network companies? Should this include
	innovation	behind the meter rather than just
		transmission?
		- Could registers be used to understand where
		flexibility capabilities exist on the system?

Principle	Enablers	Discussion points
Principle 2: Drive overall efficiency and transparency in balancing services, taking into account impacts of ESO actions across time horizons	B1 - Optimal allocation of balancing and operability actions on the system B2 - Reimagining tools for the 21st Century Electricity Control Room for a low carbon, decentralised and digital world B3 - Transparency in balancing and operability processes and decisions	 Query if we are coming out and saying which of the "3-Ds" are the most important in our view? Need to consider adding reference to genuine innovation and consider whether the ESO should become a 'digital' company One member suggested more could be learnt from companies outside the energy industry that used automation platforms (e.g. Uber). Some discussion around how transparency is delivered where it is unclear around local vs. national markets however recognising there is uncertainty in this space whilst Open Networks work continues.
Principle 3: Ensure the rules and processes for procuring balancing services maximises competition where possible and are simple, fair and transparent. Principle 4: Promote competition in the wholesale and capacity markets.	C1 - short-term, liquid balancing services markets which deliver investor confidence and work with the wider set of markets. C2 - An agile governance model which serves large numbers of market participants, and supports a fast pace of change whilst maintaining investor confidence C3 - An infrastructure that supports parties to make efficient decisions across a range of markets.	 Some members raised concerns around the transition to short term markets in terms of technology changes and investor confidence. View raised that as most code changes are incremental there is a perception that there is little strategic sense of direction. ESO's role in market design questioned and suggested there could be an additional enabler C4 around enabling more active engagement in markets.
Principle 5: Coordinate across system boundaries to deliver efficient network planning and development Principle 6: Coordinate effectively to ensure efficient whole system operation and optimal use of resource Principle 7: Facilitate timely, efficient and competitive network investments	D1 - Aligned commercial, technical and regulatory arrangements across transmission and distribution D2 - Provision of information and tools to enable efficient whole system decisions across operational and investment timescales D3 - Driving competition so that all parties can offer solutions and participate.	 The ESO rep confirmed that the intention was not to advantage or disadvantage parties based on where they connected to the network. Some ERSG members felt that more clarity could be given around to what extent network charging reflects system physics and long term investment vs. short term constraint costs. Role of competition - work done so far under RIIO-1 discussed. Some members felt that where appropriate the ESO should extend competition as far as possible into the network. A group member suggested rewording "driving competition" to phrases like "in order to ensure competitive markets" or "in order to enhance competition".

Following specific discussions on the enablers there was a broader discussion around how the Principles might develop further as the ESO's role becomes more defined. The ESO's role in articulating, informing and implementing policy outcomes was discussed and it was suggested that this could be brought out more. The question around how these align with the vision of the SO across gas and electricity was raised and the ESO agreed to provide more clarity on this when discussing principles in future.

Actions: ESO to

- Follow up with Greg Jackson as to how the ESO could learn from other companies that use automated platforms. Articulate three models of data management (slider on controlling/not, what regulatory framework might be, segment customers, range of information, etc.)
- Consider how innovation and digitisation captured in Principle 2 ambition
- Consider drafting an addition enabler C4 (Principles 3&4) around market design
- Reword enabler D3 (Principles 5,6 &7) to replace "driving competition" with phrases like "in order to ensure competitive markets" or "in order to enhance competition".
- Consider how the link with gas articulated fully when discussing principles

18. Whole electricity system (Kayte O'Neill, Andy Wainwright)

The ESO presented a paper identifying six key topics around driving efficient whole system outcomes. A set of sliders on where the ESO's thinking was were produced and the group debated these. These were:

- 1) Market and information provision Discussion in this area focused around how data should be provided and how it could be used. The predominant view was that although data granularity was important, some analysis may also be useful for the market so the ESO may want to consider a move towards B on the slider.
- 2) Governance framework accessibility and alignment It was felt that the ESO's positioning in this area was about right. ERSG members expressed views about the importance of working with other code administrators and DSOs. One member felt that open code governance should be replaced with direct ESO changes as directed by government policy.
- 3) Technology facilitating new routes to market

 It was felt that the ESO's positioning in this area was about right and that the ESO are
 well placed to set out views on what platforms for facilitating routes to markets could
 be. However, a member expressed a view that the ESO is not currently doing this now
 and questioned whether the capability existed within the ESO. The ESO agreed to come
 back to the group on examples of the types of platforms it was considering would fall
 into this space.

4) Options development – clarifying responsibilities across the T-D interface ERSG were split about the positions in this space and recognised that there was a broader debate taking place around the T-D interface including ongoing work with Open Networks. There was debate around local vs. national markets, and the role for regional congestion markets managed by DSOs.

ERSG members fed back on the importance of making it clear to stakeholders how these markets interacted and opportunities to participate.

- 5) In a highly distributed world, what is the ESO's role in system event preparedness and response?

 EBSC agreed that the ESO's positioning more to A (working with DSOs) would halp
 - ERSG agreed that the ESO's positioning more to A (working with DSOs) would help manage security of supply better.
- 6) To what extent should the ESO tailor its approaches to regional differences in innovation and framework development? The group were broadly aligned in a view that there is some value in consistency and common approaches but recognising that regional differences may need to be

Action: ESO to provide information on the types of platforms that would be covered under topic 3 (Whole system – technology – facilitating new routes to market).

19. Network planning (Kayte O'Neill, Alice Etheridge)

recognised in some cases.

The NOA process has driven considerable consumer value in RIIO-1 and a number of developments to drive further value have been set out in the Network Development Roadmap. Further work is taking place as to how this could drive more value in RIIO-2. The following options were presented to the group:

- 1) Expand the NOA to include a wider range of transmission network needs It was felt that the NOA giving visibility to reinforcements that might be needed was useful but it was questioned whether it would be suitable to fit alongside the connection offers process. NOA providing views on alternatives to end of life asset replacement was also seen to be positive.
- 2) Expand the NOA to assess more voltage levels
 There was some surprise that this had been discounted as an option by the ESO,
 particularly due to the fact that the ESO were independent in this space. There was
 broad agreement that more engagement should take place with stakeholders to
 consider this option.

- 3) Fundamentally review the SQSS ERSG felt that the ESO's position that a fundamental review was likely to be required was sensible given that it has been updated an improved on an incremental basis over the year.
- 4) Define the role of the ESO in facilitating competition in the build of onshore transmission networks

There were some strong views expressed that this was an area which the ESO should pursue vigorously.

Action: ESO to undertake further engagement on expanding the NOA to assess more voltage levels

20. Codes (Kayte O'Neill)

Simon Roberts was appointed Alternate Chair following a vote for this item onwards as Charlotte Morgan had to leave the meeting.

Four options had been considered by the ESO in this space. The ESO representative shared that the ESO were moving in the direction of option 2 and sought feedback from ERSG on this.

- 1) Continue as Code Administrator for the codes we administer today
- 2) Step up to a new role as Code Manager for the codes we administer today

 There was a broad conversation around this topic, and in particular what the group felt
 the role of Code Manager should entail, with some participants feeling it was unclear
 how Code Manager was different to Code Administrator
- 3) Step away from our current Code Administration role
 This was not seen to be a credible option given the ESO's role in delivering a number of the codes.
- 4) Grow our Code Administration role, actively seeking codes to manage

 Some members felt this to be a risky prospect, given sensitivities that there are a
 number of existing Code Administrators.

A number of members expressed views that current code governance arrangements were not fit for purpose as changes to codes were becoming lengthy and sometimes changes were blocked by industry participants. However, there were different views on how these issues could be addressed, ranging from Ofgem taking a stronger position in directing modifications that should be taken forwards to having a designated code body (which may or may not be the ESO) to make changes directed by policy.

Some ERSG members felt there was some mileage and potential efficiency to be gained in bringing some of the network codes and associated work together.

Funding of the Code Administration function was also discussed, and whether this should be pulled out as a separate layer in the regulatory settlement. Some felt that this would be useful for benchmarking purposes, but others warned that even if costs differed it may be more efficient for the current Code Administration function to sit within the ESO due to their central role. Others felt that a layer could be pulled out whilst transformative work is done then brought back into BAU once this is delivered.

There was broad agreement that changes were needed in this space, and the transition to Code Manager was welcomed, with some members feeding back that this was required now rather than in RIIO-2, particularly due to scores that could have been improved at the last Code Administrators survey.

21. Forward Look (Angelita Bradney)

The ESO representative presented a forward look up to the final submission, including ERSG meetings and business plan milestones. The group felt that there was a great deal of material to cover in the meetings and debated whether any of the meetings should be either lengthened or additional dates added. It was decided to add an additional February meeting.

A member who sat on another RIIO-2 group suggested there might be more focus on challenging the stakeholder engagement that had been undertaken, as this will need to be covered in the final report.

The group also suggested some ways in which the agenda could be improved to ensure that more material could be covered, and this was also picked up in the closed session. Suggestions raised in the open session included, ensuring key asks were highlighted in the paper along with stakeholder engagement and holding pre-meet webinars.

In terms of future content a member suggested that they would like more information on workforce capability, and another asked to see more information on ESO costs.

Actions: ESO to

- Communicate future additional ERSG dates asap so that the group can add to diaries.
- Consider improvements suggested in terms of how the meeting is run.

22. Closed session (Simon Roberts).

The Chair ran a brief closed session for ERSG without ESO representation

Electricity System Operator RIIO-2 Stakeholder Group (ERSG)

Meeting 3 - 30th January 2019

Amba hotel, Charing Cross, London

Minutes

Attendees

ERSG members

Angelita Bradney ESO – Company rep

Peter Emery Electricity North West (interim Chairperson)

Toby Ferenzci Ovo Energy

Sophie Hind Technical Secretary
Stew Horne Citizens Advice

Alan Kelly Scottish Power Transmission

Andy Manning Centrica

Catherine Mitchell University of Exeter

Charlotte Morgan Chairperson

Kayte O'Neill ESO – Company rep

Eddie Proffitt Major Energy Users Council (MUEC)
Simon Roberts Centre for Sustainable Energy

Fintan Slye ESO - Company rep
Jamie Stewart Citizens Advice Scotland

Nigel Turvey Western Power Distribution
Chris Veal Transmission Investment

Barbara Vest Energy UK Matthew Wright Orsted

ESO Support

Kashia Anderson ESO - Observer Louise Cark ESO-Observer Alice Etheridge ESO - Presenter

Charlotte sent apologies that she would arrive late to the meeting. Peter Emery was elected as interim chair.

23. Conflicts of Interest (all)

The Chair invited feedback on whether members had identified potential Conflicts of Interest relating to the proposed agenda. No potential conflicts were raised.

24. Introduction, Minutes and Actions (Kayte O'Neil, Peter Emery, Sophie Hind)

Open actions were reviewed and updates were given. Details included in updated Action Log.

On action 1.7 (Using Scenarios) ESO fed back that they had general support from Ofgem on approach for use of scenarios. The Challenge group have said they need to see what is being proposed with more granularity. A letter has been issued from challenge group to the scenarios group requesting single scenario.

ERSG questioned why Challenge group want to go back to using a single scenario as this seems to be a change in viewpoint

The chair of ERSG has been asked if the group can review the work of the scenarios group. It was felt that this could be a significant burden on group.

Action: ESO to discuss input of ERSG into scenarios work and what might be required with chair.

25. Forward Look (Kayte O'Neill)

The presenter talked through the schedule of future ERSG meetings and the planned content for each of these meetings. The content of future meetings will involve more technical discussion. Other members of the ESO leadership team will be joining the group to discuss each principle area in some more detail.

The presenter highlighted ESO's decision to publish ESO document in March to give stakeholders an early view. It was also highlighted that there are 4 weeks between Ofgem's sector specific decision and the publication of the ESO business plan. These timelines are tight. The group asked how they can help to ensure that these timelines are not squeezed further, and ESO responded that it's important to communicate to Ofgem any areas of concern in the consultation during the session today.

The group noticed that principle 7 was absent from the content of future meetings, and it was concluded that it needs to be added for discussion on a future date to demonstrate that it will be discussed.

Action: ESO to include Principle 7 for discussion at a future meeting on forward look slide.

26. ESO RIIO-2 Ambition (Kayte O'Neil)

The presenter talked through the ESO's emerging thoughts on the ambitions ahead of the March document. The group were invited to give feedback on the following areas:

- Have we covered the right areas?
- Do you agree with the role we want to play?
- Is the level of ambition right?
- Does the ERSG have views on the kinds of activities we've proposed to deliver this ambition?

It was recognised by members of the group that the presentation by ESO was a good framework, which needs to be developed with further detail in the publication in March.

The group felt that the ambitions need to reflect ESO taking more of a leadership role, particularly in transition of energy. The statements lack goals which are measurable and performance related. It needs to be much clearer what the ESO should achieve.

It needs to be visible that the ESO are making progress in the areas of ambition and so benchmarking is needed (e.g. how reliable, affordable and sustainable are ESO now compared to 5 years' time)?

The group struggled to differentiate what the ESO were doing already compared to what is stated in the ambitions. General feeling that the ESO must be more ambitious. It was questioned whether affordability should be explicit in the Mission statement.

A concern was raised about the more powerful role that the ESO would need to play in the future, and the fact that ESO is still part of the National Grid group. This means its important to ensure that the ambitions are convincing, focussed, transparent and being executed in the right way.

There are parts of the ambitions (for example a "one stop data shop") that would require support from Ofgem, in ensuring that the appropriate legal obligations exist which allow this to happen. It would be of tremendous benefit to the market.

The statements in the ambition could be more goal oriented by linking them to the Future Energy Scenarios. The Climate Change Act is an existing piece of legislation with legally binding carbon targets which provides a mandate for change. ESO could take a stronger role in this and be more goal-oriented. Within the four energy scenarios it could be recognised which would be a failure and which a success; which is the ESO supporting and how are they helping to achieve this outcome?

With the Energy Transition ambition, ESO could go one step further and engage directly with consumers. No one is currently having this debate directly with consumers. Concerning the data ambition, the ESO could be more specific in articulating how the data would be published, what it could be used for and how you would ensure that people are able to use it. For the codes ambition, they need to be faster and serve consumers and so ESO need to drive transition through the codes, and go beyond just stepping up to the code manager role. It is felt that someone needs to step up and lead the industry in energy transition, and some of the group felt that this should be the role of the ESO. However, it also needs to be demonstrated that this is what the stakeholders (& consumers) want.

The tone of voice and style of the ambitions could be worked on to reinforce the independence and transparency of the ESO. This would also help to clarify which parts of the ambitions are different and new.

Fintan Slye took the opportunity to summarise what he had heard from the group. ESO need to increase the ambition and work on the style and tone of the ambitions document. On energy transition, how do we take and articulate more of a leadership role and be more concrete about the outcomes that we are trying to achieve. The document should use collaborative words but be more specific. On independence, we can articulate how we are sufficiently independent, and the onus is on the ESO to demonstrate how we are doing this. The suggestion on consumer engagement is an excellent one, and it seems that there is general agreement in the room that this is a good idea.

27. Stakeholder Engagement across the piece (Alice Etheridge)

The presenter explained the purpose of this item; to help with writing the stakeholder report. What have ESO done on stakeholder engagement to date plus what they will be doing going forward.

ERSG were asked to advise of their expectations for stakeholder engagement and whether ESO are meeting them, and where improvements might be made.

There was strong agreement that a lot of engagement had been done so far by ESO. It feels as though engagement activities have been quite ad-hoc, and there is a lack of evidence of a programme with a clear structure. It's difficult to comment on how well the engagement has been executed. For example, have ESO reached all stakeholder groups?

Examples of strong stakeholder engagement from other sectors / industries were shared. For example, similar activities in the water sector have evolved to show thread of engagement throughout. It's clear that a solid process has existed all the way through where you know that the business plan has been demonstrated. Another idea is engagement logs which detail strategy and process. Which stakeholders are targeted and why, and what methods have been chosen because of this. An independent body could be involved in this. A stakeholder engagement presentation by the Financial Conduct Authority (FCA) recognised that a lot of people who are interested won't necessarily take time to respond to surveys, and that they needed to go and see them and ask what their issues were. For ESO, its about what will enable them to meet societal needs. What is going on in the wider eco-system that ESO has a key role in? It was recognised that it is important for ESO to look at leaders in this area; both internal and external to the energy industry.

It must be evident that the ESO are addressing different categories of stakeholders. Due to the amount of change in the industry smaller organisations are stretched, so there's a risk of receiving biased information from large organisations that can resource more engagement. Identify stakeholder groups and think about it from their perspective. Make sure that they're aware of the impacts of RIIO-2 on them as a stakeholder group. A pie chart summarising who has been consulted would be a good start for demonstrating this. It is also important for the ESO to consolidate engagement where possible, to reduce the burden on smaller organisations.

28. Ofgem's sector specific consultation (Kayte O'Neil)

Charlotte Morgan joined the meeting during this item and resumed the role of chair

ESO's initial assessment of Ofgem's consultation proposals was presented. The presenter summarised where further clarification is needed as well as the two main areas of concern for ESO. These are:

- Length of price control
- Funding model and incentives.

ESO sought the group's views on Ofgem's proposals, ESO assessment and alternative proposals:

- As a customer to the ESO, how would you be affected by Ofgem's / ESO's proposals?
- How would consumers be affected by them?
- In your view, what additional arguments are there for / against Ofgem's proposals?

The group asked ESO to summarise the current process:

- ESO write the forward plan and set out specific actions (baseline vs above and beyond).
 Where they have over-delivered and consumer value has been generated, the importance of this is assessed.
- ESO have an opportunity to present their progress at the half-year stage.
- There's a panel that reviews the work (this panel have not been involved throughout the vear)
- There's a scoring system on a scale of 1 to 5 (for scoring 3 you wouldn't earn anything). The panel give their score and Ofgem review this.

ESOs concern is that they don't have any visibility of this process until the end, and it's extremely resource intensive. The group feel that this is an odd process which doesn't feel like it's based on any evidence. ESO confirmed that they don't really have the opportunity to challenge during the process.

ESO were asked why they don't feel that they should play a more supportive role in competition. The concern is where the line is drawn in competition for network solutions. Where the ESO has completed all the consenting work and then hand over to build to another company. ESO don't have the skills to do the engagement and consenting work. It's also then in the public's minds that it is an ESO project, when ESO wouldn't have any control over it. The reputation of the company would rest on something that they don't control. ERSG questioned if another entity performing the same role would have similar problems, and if not ESO then who could fill this role?

Feedback on length of price control

Agreement that ESO concerns around a 2-year price control are valid

There must be some fundamental issues that lead Ofgem to believe that a 2-year price control is the best way forward. ESO believe that the reasons for this are:

- The world is changing quickly. Locking in a 5-year price control might restrain ability of ESO to response to change
- This is the first separate price control for the ESO. They don't want to get it wrong and so there is a degree of caution and risk aversion in the approach.

ESOs response to these concerns is:

- Yes, the world is changing, but broadly the responsibilities of the ESO will remain the same over the next few years. When ESO reviewed their cost base, the core role accounts for 85% of these costs.
- A 5-year control could make sense. However, Ofgem's proposal is 2+2+1 years, to be synchronised with the TO price control.

The chair added that similar concerns around the length of price control came up during the Challenge Group, and the risk associated with not giving the ESO enough stability.

ESO should be performing as though they have a future despite the 2-year price control.

ERSG asked if it is important for the ESO price control to be linked to other controls in NG. ESO confirmed that this was not important. The group discussed that it perhaps made more sense to have the control aligned with other SOs than to be aligned with the TOs. The link between capital costs and constraint costs was raised.

Feedback on Funding model

The presenter explained Ofgem's preference for splitting the model into funding for activities (layered model) and having different margins for different activities depending on level of risk. With the cost pass-through model, Ofgem believe that this will allow the ESO to be flexible and agile. The issue is that this would be combined with cost disallowance, and the potential for incentive downsides could drive risk averse behaviour from the ESO.

ERSG felt that the 2-year price control period along with justification that would be required for cost pass through would create a huge burden for ESO. Ofgem believe that the cost pass through will help with getting around some of the issues associated with a 2-year price control, but the issue for ESO is the architecture that you're putting around that. ESO would feel the need for Ofgem sign off on every penny that is spent.

ERSG agree if Ofgem were able to dis-allow spend ex-post, it would make a company risk averse and focus would shift to avoiding disallowance.

The chair asked ESO what the impact would be if they were exposed to a £30m downside on incentives. ESO returns recently have been around £30m through incentives and totex efficiencies. Therefore, this would create a very risk averse enterprise.

ESO and ERSG believe that Ofgem don't intend to create a very risk averse ESO, but that this isn't consistent with their price control proposals.

The chair asked about potential impact of this on the ESO credit rating, as credit agencies are currently very nervous about regulatory risk. ESO have not yet had conversations with credit agencies about a 2-year price control, but feel nervous about the impact it could have.

ERSG feel that ESO need to become more of a tech company that can efficiently operate markets. Investments like these aren't one off, and ESO will need to build in-house capability. These will be long-term investments and the company will need to be confident in building up this cost base, and so you need a mechanism that allows them to do this.

The chair asked ERSG to keep an open mind when hearing from Ofgem in the afternoon

7. Ofgem sector specific consultation – Ofgem closed session Grendon Thompson and Barry Coughlan from Ofgem presented an overview of the proposed ESO price control in a closed session without ESO representatives.

8. Ofgem's sector specific consultation- ESO questions and answers (All)

The chair summarised the key points from the closed session with Ofgem, for the benefit of ESO representatives. Discrepancies between ESOs concerns and how Ofgem had summarised their proposals were highlighted around the length of the price control and the funding model.

Ofgem had previously made it clear to ESO that what they were proposing was a 2-year price control. However, ERSG concluded that Ofgem had described a 5-year price control with two year "resets" during the closed session. There was consensus that this is now what had been written in Ofgem's consultation document. During the closed session Ofgem acknowledged that they may have got their messaging wrong in the document.

During the closed session Ofgem had explained that disallowance of costs would only be used in extreme circumstances. ESO explained that Ofgem have disallowed very large costs in the past which is a concern.

Action on ERSG to produce a summary of what has been heard from ESO and Ofgem and identify where there are differences. To be written up by the Chair and shared with ERSG, ESO and Ofgem.

9. Closed Session – (Charlotte Morgan)

The Chair facilitated a closed session without ESO representatives, where ERSG members summarised what they had heard throughout the day.

Electricity System Operator RIIO-2 Stakeholder Group (ERSG)

Meeting 4 – 3rd April 2019

Amba hotel, Charing Cross, London

Minutes

Attendees

ERSG members

Angelita Bradney ESO – Company rep

Stuart Cotten Drax

Peter Emery Electricity North West
Sophie Hind Technical Secretary
Stew Horne Citizens Advice
Greg Jackson Octopus Energy

And Magnine Contriler

Andy Manning Centrica
Charlotte Morgan Chairperson

Kayte O'Neill ESO – Company rep

Eddie Proffitt Major Energy Users Council (MUEC)
Simon Roberts Centre for Sustainable Energy

Nina Skorupska Renewable Energy Association

Fintan Slye ESO - Company rep
Jamie Stewart Citizens Advice Scotland
Nigel Turvey Western Power Distribution
Chris Veal Transmission Investment

Barbara Vest Energy UK Matthew Wright Orsted

ESO Support

Alice Etheridge ESO - Observer
Nikki Jamieson ESO-Presenter
Julian Leslie ESO - Presenter
Matt Magill ESO- Presenter
Cathy McClay ESO- Presenter
Gary White ESO - Presenter

29. Conflicts of Interest (all)

The Chair invited feedback on whether members had identified potential Conflicts of Interest relating to the proposed agenda. No potential conflicts were raised.

30. Introduction, Minutes and Actions (Kayte O'Neil, Peter Emery, Sophie Hind)

Open actions were reviewed and updates were given. Details included in updated Action Log.

31. Towards 2030: Our RIIO-2 Ambition - Fintan Slye

The presenter introduced the updated Ambition document and explained that changes have been made in reaction to the feedback that it was not previously ambitious enough, particularly highlighting the commitment to be able to run the system carbon free by 2025. For years, the system has been seen as a barrier to energy transition, and the ESO wants to change this. It is a very challenging ambition, but one which is thought to be achievable. The presenter asked for feedback from the group.

General feedback from ERSG was that the Ambition document is greatly improved and has captured the level of ambition that the ESO has been urged towards. Questions were raised as to whether the ESO have the capabilities and understanding to achieve these ambitions, although it was recognised that it's fairly early in the process and the detail of this should come out in business plan. It feels as though a lot of resource will be required to achieve these ambitions (from the ESO and the rest of the industry).

Some feel that the ambitions are a bit light in the area of ESO – DSO relationship, possibly one of the key dimensions. How willing are the DNOs to embrace the ESO ambition within their own ambition?

It was noted that the wording around being able to operate a carbon free system was clever, but that there is a danger of people reading it as though we will have a carbon free system by 2025.

One member had questions about the order in which things need to be delivered. For instance, you can't deliver the overarching ambitions without a codes review, and is this all really possible by 2025? Which areas will be delivered first and what's the test for success? One test might be that a developer is able to connect to the network smoothly with no issues.

There was some confusion about the range of documents being published by the ESO and how they all fit together. Further information can be found here and the ESO clarified that there are three key documents being published:

- Towards 2030 Sets out the mission and what success looks like for the System Operator. A "North star" for the business
- 2. Our RIIO-2 Ambition Sets out what we need to achieve during RIIO-2 to be on track to achieve our mission for 2030
- 3. <u>Forward Plan 2019- 2021</u> Shorter term action and criteria for performance to be measured against.

The ESO took an action to share chart from Forward plan which shows all deliverables in one place.

A question was raised on whether consumer engagement can be more of a feature in the ambition, as discussed at previous meetings. The ESO confirmed that they are getting an

external company to help review their approach to stakeholder engagement in developing the RIIO-2 business plan. The ERSG was asked how important it is to have a consumer focus in developing the business plan, or whether it needs to be more of a focus in everything that we do as we go into the RIIO-2 period. The group confirmed that a consumer focus throughout everything is more important. As interaction with consumers increases the ability to thread the understanding of the consumer throughout the business it will be more important. It was acknowledged by the group that consumer engagement will be a journey and it will take time. The ESO confirmed that they have not yet fully developed their plans on engaging with consumers and an action was taken to ensure that an item on consumer engagement plans to be added to future agenda.

The ESO to add stakeholder and consumer engagement plans to the agenda for the next meeting

Fintan Slye gave a summary of the feedback he'd heard during this session, and responded to some of the questions raised. In terms of resource implications preliminary estimates show that scope of ESO RIIO-2 costs will move to £300m per year. More detail will be provided on these figures when discussing the business plan at future meetings, and the ESO will try to draw out where they expect industry engagement to change. The ESO believes that by 2025 they will be operating with zero carbon for periods of time, where the energy mix allows. There is more work to be done around consumer engagement and this will be discussed during a future meeting. The ESO are currently partnering with people who know consumers better, such as Octopus energy.

Discussion moved to the costs included in the ambitions document. The group noted that the increased costs proposed will require a lot of justification as the regulator is likely to be looking for savings rather than increased costs. The ESO explained that the indirect impact of this cost will be positive (i.e. overall benefit to the industry). One member of the group asked what the company ambition is in driving costs down. New technology and implementation of new systems may allow to see savings if building incrementally. The ESO confirmed that over time they want to see costs come down but this will require some upfront investment. ERSG feel that the cost benefit demonstrated throughout the document could be strengthened, and it would be useful to see expected benefits alongside cost figures. The ESO will be developing this more in the Business Plan.

32. Network Competition- Julian Leslie

The presenter gave a summary of the paper which was shared as part of the pre-read. NGESO are a strong believer in competition in all its forms. They have been actively supporting Ofgem with the

work on CATOs, but is there more that could be done? Should we be resourcing in T2 to help launch the regime, and should the ESO be putting their name forward to run the tender process?

The presenter also asked the group how the ESO can broaden their approach on stakeholder engagement, and reach those who have an interest in this topic.

The group fed back that it would be difficult to reach the impacted stakeholders through generic consultations. The ESO would need to approach parties directly. They could begin by looking at who responded to Ofgem's consultation on CATOs. It's really important to engage with these parties directly.

One member of the group felt that Ofgem is better placed to run the tenders due to their experience with OFTO tenders, and the fact that they are fully independent. The ESO is still part of a group where another company of the same group is likely to take part in the tender. However, others in the group argued that it's a natural fit for the ESO to be involved in these tenders, but stakeholders would need to feel happy that conflicts of interest are being managed. Whoever runs the tender needs to have a sense of responsibility for the results, and NGESO would have this as they would be living with the results. There are real potential benefits in having someone from the private sector running these tenders, and the ESO already has the expertise. A question was raised as to whether these conflicts of interest could be managed and it was agreed that companies likely to tender in this process would need to be asked for their opinion.

The ESO was asked what they would be doing under this proposal, at what cost? The first thing needed is further development of the different possible models. NGESO have laid out high level options, but they are currently quite superficial. These needs to be built on, and the pros and cons understood. Late model Vs early model (at what point do the company that win the contract get involved).

Further context was given on the different consent models available. NGESO believes that the consenting process needs to be carried out by the company building the asset. NGESO could do the detailed design on need and capability but the rest of the process should sit with the company responsible for constructing the project. This is the early CATO model.

One member of the group explained that its typical in other industries for projects to be sold just before construction (late model) and that there is value in this. Others in the group discussed that in an environment where the community didn't ask for what is being built, it's more appropriate for the people building it to engage with the community on it. Ofgem has not given a view on whether they think an early or late model is most appropriate.

The chair summarised that the group would broadly support the ESO performing this role. However, the ESO needs to speak to stakeholders directly. The chair expressed an interest in having an update on this topic once NGESO has engaged with the right parties.

33. Improved System Access Planning and transforming the connection process – Julian Leslie The Connection process

The presenter gave a summary of the paper which was shared as part of the pre-read. There is now a need for visibility across the whole system (transmission and distribution). This process needs to be improved to provide greater transparency. NGESO propose to keep existing stakeholder engagement events in place, but acknowledged that it also needs to be made easier for smaller developers who don't have the resource to keep up with the usual process.

Engagement so far has shown that customers are confused with the requirements for connecting to transmission vs. connecting to distribution. NGESO would like have a standard process in order to make an application, and a decision can be made on a whole system basis on where is best to connect; A central connections hub for all of GB.

ERSG asked if DNOs are also willing to adopt this "central hub" approach. It was agreed that there shouldn't be a big pushback but it depends on the detail and how it is implemented, as smaller connections can already be turned around in a few days. It was acknowledged that the current issues are more on the generation side than the demand side. The ESO confirmed that they have already consulted with DNOs on this and they are supportive.

There were questions around the scope of this proposal. Is the plan to move to a single process, or rather a single point of contact / interface for the customer with ESOs / DNOs still performing their own parts of the process? The ESO confirmed that it's the latter.

One member highlighted that having a single hub would be less useful than having open protocols for interfacing, with straightforward APIs.

ERSG would like to see more details on this including an order of magnitude of costs for implementation. Questions were raised about how much value this would generate. However, making it easier to connect to the system would be attractive for things like large data centres, and there is currently a large surge in these requests. If data centres aren't getting answers then they will move outside of the UK, so there is huge value in having a system that can deal with these needs.

The ESO was challenged on who should be paying the brunt of the costs for this change, and are asked to better articulate the value. An update is to be provided when item returns to ERSG.

System Access Planning

The presenter summarised that the nature of the system is changing and more time needs to be spent on the impacts of outages across the system. This will require more resource than we currently have today. Proposals include increased transparency and immediacy of information, and working with TOs and DNOs on system access requirements. For instance, incentives for outages to end on time and avoid short notice outages where possible. The cost to consumers for system access is approx. £300m per year and there is a lot of potential for cost savings in this area with

things like 24/7 working and working offline. This would be achieved through expansion of the Network Access Policy.

The chair asked how costs are assessed, just for the ESO or across the whole system? NGESO confirmed that they are looking to minimise costs from a whole system perspective.

The group asked if this was just at transmission level. To start with it will be but possibility to expand to Distribution level too.

There was general support for this proposal.

34. Innovation – Joshua Visser

The presenter summarised the paper that was shared as part of the pre-read materials. Funding available for innovation as part of business as usual vs the ring-fenced innovation pot was discussed. The group asked for clarification of what would be BAU and what wouldn't. The presenter explained that stage of the project can be assessed using the Technology Readiness Level (TRL). Projects lower on this scale (high risk, less mature projects) would be classed as outside of BAU. BAU projects would include those that were more developed and closer to implementation. There is scope for projects to move between these two categories, and more researched based projects where the outcome is more knowledge are likely to stay outside of BAU.

The group commented that the outlined approach feels like a regulated approach to innovation and like its constrained. It was acknowledged that this paper was more about funding proposals than about innovation itself. The proposal doesn't feel like a company driven by innovation, and the group would like to see more about the strategy itself.

The group agreed that innovation is very important and stakeholders want the company to be innovative. Ofgem appears to be putting access to funds for innovation at risk, and so it's important that they hear the message that the industry needs innovation. It's really important that they allow access to funds like this because by nature some innovation projects are too high risk to be funded any other way.

The ESO was asked how they ensure that innovation is fostered at Board level. With the creation of the new ESO board, everything built into the ambition is around the recognition that the ESO won't be able to deliver this if it doesn't think from an innovative perspective. It is central to the thinking. Innovation is discussed at board meetings, in the performance objectives of board members, and there are regular check-ins with the innovation team.

How does the ESO ensure that "disruptive innovation" is allowed to happen? The ESO reps explained that the culture needs to be open to change. For disruptive innovation, you need to

bring external forces in such as academics and other industries. We are building the new company so that the dynamic allows this.

It was discussed that it is about more than just saying "we are going to innovate". An organisation needs to live and breathe it, and it needs to become a routine and part of the culture. The group want to hear more about the innovation strategy, what are the company actually going to do? It was suggested that as part of this there needs to be a chapter on company culture and how this kind of organisation is created.

The chair asked that the ESO comes back to a later session with more information on the strategy and examples of innovation work underway or planned, to demonstrate what funding will go towards.

Action on the ESO to bring an item on innovation strategy back to the group, including examples of existing and planned innovation work.

Working Lunch and Closed session (Notes circulated separately)

35. Reliable and Secure System Operation – Matt Magill

The presenter summarised the paper which was circulated as part of the pre-read. Option 1 in the paper is to operate the system in a very different way to how its currently done. With system development, the proposal is to start again rather than building on top of what we already have. This will mean more flexible control systems to deal with TSO / DSO interaction. This proposal was presented at the most recent Operational Forum and it received good feedback but there needs to be evidence that this proposal can be achieved. The ESO also needs to make sure that they collaborate with the industry and don't lock themselves away in a room to develop the systems.

The chair asked what the difference in cost is between the two options set out in the paper. There are no precise figures yet but given the impact that this development would have on supporting systems there may not be as much difference in cost between the two options as the ESO had thought. The ESO confirmed that a cost-benefit analysis on both options will be completed, ready for sharing around July.

The group asked the ESO how they intend to involve stakeholders in the development of the new system, and how the cost impact on users will be assessed. The ESO is currently considering this, and considering establishing a cross-industry design authority.

Challenge: How will the ESO involve stakeholders in the development of new system(s)?

They also asked which one of these options best deliver the ambition of being able to operate a carbon free system, re-emphasising the importance of demonstrating these proposals directly deliver the ambitions that have been set out. The ESO believes that both options would allow them to achieve this ambition, but that option 1 may be the most straightforward in this respect.

ERSG asked some further questions about how the systems would be developed; Are you planning to develop a modular system, will there be any splitting of liquidity and how do you make sure that all the systems being developed use the same / consistent technology? The ESO confirmed that at no point will the markets be segregated, and that the new systems would be developed as a central business architecture with modules.

Concerns were expressed that it isn't clear from this paper what will be developed and what the proposed money will actually be spent on. Also, that the ESO is not (yet) a tech company and recent history has suggested systems such as this are not easy to deliver. One member of the ERSG advised that the ESO should be looking to the tech industry to input into these plans, not just the electricity industry. It will require openness around specifications and plans. Resource and expertise required to deliver this was also highlighted as a concern. Both engineering and tech expertise is required, and it's quite rare to have these in the same place. Do you have this expertise now, if not where will you find these people? The ESO will need expertise in technology at the top of the company. The ESO confirmed that National Grid's Chief Information Officer is also its chief digital officer.

This led to a conversation about whether the ESO intend to do this work using contractors or whether it's going to be "ESO people". The group feel that it's very important that this expertise is built in house, and not in an external company. The ESO should be building a company with expertise in this area, even to the point where it could be provided as a service to other companies. Where will your workforce stop and the contractors start? The ERSG would like a better view of this resourcing strategy.

Challenge: How will the ESO build required expertise into the company? ESO to provide view of resourcing strategy to ERSG.

The chair summarised that the group feel that this as a real challenge for the company. It is important that the ESO involve the tech industry as well as the energy industry in these plans, and it is key to ensure that you have the right people in the company to manage such large transformational change. The chair asked that this item is brought back to a later meeting with some more detailed information in these areas.

Action: ESO to include Reliable and secure system operation as an item at a future meeting, and ensure that there is more detail included.

36. IT Strategy and Cyber - Nikki Jamieson, Gary White

The presenters introduced the paper which was included as part of the pre-read material. Proposals include enhancements in a more modular way, and increased collaboration with stakeholders. A clearer way to communicate and a "one stop shop" for market participants to access data, policies and codes. Other key points include facilitation of a level playing field, and investment in response to cyber threats.

ERSG expressed concern that throughout all other papers IT and development of new systems is a key theme, yet this paper lacked detail of change. It is more focussed on engagement than the specifics of how technology will be used. This is one of the first and most fundamental areas that the ESO should be thinking about. NGESO must become a tech company, or at least acknowledge that they are heavily

driven by tech. There is no clear, over-arching strategy setting out what will be done. Consensus that much more detail is required here. It was highlighted that at the beginning of day that additional cost will result from these plans, but the group are no further in understanding where or how this will actually be spent.

Given that the ESO is a newly separated company, is the spend on new technology proportionately a lot higher than it was, and if so do you think that the company structures reflect this move from an asset heavy to a tech heavy company? The ESO responded that they aren't there yet, but they have the structures in place to get them there. There is still work to be done to ensure that they have the right people. They acknowledged that they must do a better job of telling the story that if they deliver a system-heavy plan, they will need to invest in the capability and people to do this. One of the presenters explained that the future is not separate IT and business teams, they must combine. This will be a disruptive change to the current organisational structure.

The chair summarised that many areas in the ambition will require more sophisticated functioning and new platforms and systems (running competitive tenders, opening markets etc.). the challenge is that the ESO are not there yet. How can you ensure you get the cultural change required for the future? This needs to be properly addressed in the business plan, and the culture point is important. The paper currently reads as something that we want to hear, but is not grounded in authenticity.

Challenge: How will the ESO ensure they achieve the cultural change required for the future, to deliver IT proposals and wider ambitions? To be addressed in the Business Plan

Action: for ESO to include IT strategy and cyber as an item at a future meeting, and ensure that there is more detail included.

37. Open and Transparent Markets – Cathy McClay

The presenter briefly summarised the paper and asked a series of questions to ERSG.

- What do you think of the minimum 1 MW value?
 - First reaction was why 1MW, what is the reasoning behind this? What are the trade-offs
 that led to 1MW? What are the IT implications and impact of cost on going down to 1MW?
 ESO will need to give some thought to consumer protection as aggregators are unregulated
 businesses.
 - Web-based interfaces will be an important part of this; ensuring that they are open APIs.
 - One member of ERSG asked why you would define a clip size at all. If you work out what your "atoms" are, it shouldn't matter how they are bundled up.
 - The ESO committed to test how small the ESO should go at a planned Power Responsive engagement event.
- Data issues in the industry: ESO think everything that can be made available to the industry should be made available. The smaller we go the more important the data is. Do we rely on everyone to have the capabilities to provide this data?

- It would be useful to understand what level of asset information is needed vs. what's available. What's a nice to have?
- Crowding out (of smaller innovative companies) could be an issue in this area. Markets
 themselves should be encouraged to provide the solutions rather than embed a solution
 that becomes out of date quickly. Data is an opportunity for small companies to innovate for
 everyone's benefit.
- In a world with more low carbon and flexible generation, what's the right design for the balancing market? Should we have continuous markets, more incentives for fast dynamics?
 - This discussion comes up every so often in the industry and the answer always comes down to the cost of IT systems which appears to be high. Given all the planned system changes already, why look at it again, what's the cost-benefit of this?
- But will a market design from 20 years ago, be appropriate for a low carbon future? Do we have a role in changing this for the future?
 - o Yes, it's one of the most important roles that the ESO have.
- In our proposals, we suggest designing a market in the next RIIO period, but not implementing a new market. Is this ambitious enough?
 - The rate of change at the moment is phenomenal. Caution should be taken in doing things too fast. It makes sense to take some time and look at how things are implemented for the future. The pressure on retailers from the price cap also needs to be considered.
 - On the other hand, because everything is changing so fast you need to get ahead of the curve.
 - EBS as an example, look how hard it has been to implement and that's a drop in the ocean compared to complete re-design of the market.
 - It is important to articulate the trade-offs. How much better would the changes be than what we currently have? How much of a compromise between the commercial and the engineering is there?
- Industry codes- ESO have decided to be bolder in this area. We don't believe it's enough to merge code bodies. We need to change what's in the codes and the way that they're governed. Do you think major reform is required? Are we starting in the right place?
 - Won't your business plan be driven by the Ofgem and BEIS code review? Presenter explained that we think we need to influence what will happen and what Ofgem and BEIS will decide.
 - Ambition to simplify codes is supported by the group, but complication is how this sits with the code review. Having said this, it has gone quiet and so it's good for someone to drive it.
- Presenter explained that codes are prescriptive and only concerned with what happens now. This
 needs to be changed so that they are more flexible for the future. ESO also question whether open
 governance is the right way forward, as tactical mods can be raised particularly around charging.

38. Forward Look – Alice Etheridge

The forward look slide was reviewed by the group. It was acknowledged that there is a lot to get through in the next meeting given the actions that were taken today.

The ESO confirmed that they will circulate the draft business plan as pre-read and use the session to deep-dive on specific areas, particularly those which have been highlighted during this meeting.

39. Closed session – Notes circulated separately

Electricity System Operator RIIO-2 Stakeholder Group (ERSG)

Meeting 5 - 4th June 2019

Amba hotel, Marble Arch, London

Minutes

Attendees

ERSG members

Angelita Bradney ESO – Company rep
Peter Emery Electricity North West
Sophie Hind Technical Secretary

Jo-jo Hubbard Electron

Alan Kelly SP Energy Networks

Andy Manning Centrica

Catherine Mitchell Exeter University
Charlotte Morgan Chairperson

Kayte O'Neill ESO – Company rep

Eddie Proffitt Major Energy Users Council (MUEC)

Simon Roberts Centre for Sustainable Energy

Fintan Slye ESO - Company rep
Jamie Stewart Citizens Advice Scotland
Chris Veal Transmission Investment

Barbara Vest Energy UK
Matthew Wright Orsted

ESO Support

Kashia Anderson ESO- Observer Pirvinder Bansel ESO – Presenter Alice Etheridge ESO- Presenter Nikki Jamieson **ESO-Presenter Emily Leadbetter ESO- Observer** Julian Leslie ESO - Presenter Cecile Marion **ESO- Presenter** Cathy McClay **ESO-** Presenter Richard Smith **ESO- Presenter** Carolina Tortora **ESO-** Presenter Gary White ESO - Presenter

1. Conflicts of Interest (all)

The Chair invited feedback on whether members had identified potential Conflicts of Interest relating to the proposed agenda. It was confirmed that Stew Horne was not attending the meeting due to potential conflicts of interest as a member of the Challenge Group.

2. Introduction, Minutes and Actions (Sophie Hind)

Open actions were reviewed and updates were given. The majority of open actions were met by the content of the meeting.

3. Stakeholder and Consumer engagement – Alice Etheridge

The presenter outlined the enhancements which had been made to the stakeholder strategy since the January meeting following internal and external reviews (slides 8-12). ERSG were asked for their views on whether the company have stepped up sufficiently in this area, as well as for opinions on the proposals.

Some members felt there was evidence of a culture change, which needs to continue to be built on. Continuing with themes of increased transparency and inclusivity. The ideas and aspirations presented are heading in the right direction, but they need to become the norm. All stakeholders need to be included at key points rather than as an exception. This will help to build trust.

Other members felt that the evidence was all anecdotal, and that the Marketing Pod report was weak in terms of highlighting what is best practice. It was highlighted that slide 12 says that NGESO will be "Championing the priorities of the consumer internally through our Customer and Stakeholder team". It was questioned whether stakeholders have been asked about this and whether they want the company to do this? There is still a lack of structure and ongoing strategy. These things would provide greater ability to push back on what Ofgem are saying, as they don't appear to be listening and their changes don't seem to reflect stakeholder feedback.

It was noted that while all monopolies in the industry were being encouraged to increase stakeholder engagement, there is a limit to how responsive you should be to this. The company should have a clear sense of what needs to be achieved, and in some cases this may mean pushing back on stakeholder feedback. Its important to be clear on what you are taking from stakeholders in the strategy that is set out. The example of promoting competition was used to demonstrate that not all stakeholders are going to be supportive of everything. The key is how you demonstrate the balance. Having different voices in the conversation is where you will get support for competition.

From a consumer perspective, there is quite a lot of evidence already available, such as academic work. Consumers don't necessarily need to be asked if they like the Business Plan because they won't care, but this information should be used to inform the wider public and cultural setting within which the business is operating.

Some felt that the "light-touch" approach for consumer engagement is the right one. It was questioned whether the role of consumer champion is Ofgem's role rather than the ESO's. It was suggested that ESO should not be a champion for consumers as such, but evidently responding to consumers' needs.

The fact that consideration of stakeholder views is very present throughout the plan. But where stakeholder feedback is mentioned it would be better to provide more detail. For example, was the feedback from one stakeholder or a group? Was it a survey?

Some specific examples of recent stakeholder engagement were discussed. Despite best efforts the webinar on competition through transmission was not well attended and very limited feedback was given. Power Responsive was mentioned as an example of great stakeholder engagement, although it had become more dominated by storage which has meant consumer providers are less engaged.

The example of Anglian Water's stakeholder engagement approach was discussed, and the importance of control that was demonstrated throughout their strategy (plan, do, check, act), as well as the multiple channels that they used. The ESOs Future Energy Scenarios (FES) document was used as a good example of where agreements and disagreements are clearly represented.

Summary

The chair summarised that the ESO have taken positive steps to address feedback from stakeholders and consumers. But that greater clarity is needed on the source of feedback in the main body of the report. More evidence of where academic work has been consulted and incorporated into the plan and how it has informed your understanding. It would also be good to have further clarity what feedback you are and aren't taking on board, and being clear when feedback is not agreed with.

The ESO responded that for the October version of the Business Plan they will be taking a further look at academic reports and how they can engage with academics. From reports they have already referenced such as the Green Alliance consumer energy report, they will be aiming to pick out key stakeholder groups mentioned and engaging with them directly. The company also confirmed that further detail on the stakeholder engagement strategy could be found in the annex to the main document, which aims to provide further robustness to the overall strategy, but that it was perhaps still lacking the context of some of the options that were discussed with stakeholders throughout the process.

The chair suggested that groups of stakeholders could be referenced more specifically in the main body of the report. set out an action for the ERSG to read the Stakeholder Engagement annex and then take a view on whether some of the feedback is still relevant.

Action for ERSG to read the stakeholder engagement annex and provide a view on whether feedback given during this session still stands.

Action for the ESO to provide more detail in the Annex about options presented to stakeholders at the different events and provide a better breakdown of stakeholders that attended/provided feedback.

4. Ofgem's sector specific strategy decision (Angelita Bradney)

The presenter gave an overview of Ofgem's decision for the ESO, as well as the funding model options that they have proposed (slides 13- 18). ERSG were asked to give their views on these options as the ESO prepares their consultation response.

Ofgem are consulting on two models, neither of which provide a layered model with a risk based margin that has been discussed previously. The first model is a return to RAV / WCC like in T1, and the other is based on 100% cost pass through which will be reimbursed throughout the year.

One member asked if it was still possible to disagree with both models that Ofgem had set out, or whether these were now finalised as the only possible options. The ESO confirmed that their response will set out that neither models are appropriate. Ofgem believe that a cost pass through means zero risk for the ESO so no margin will be allowed. They don't recognise a risk associated with running the business. The ESO fundamentally disagree and believe that Ofgem are taking an overly simplified view.

Some members of ERSG agreed that this seemed like an oversimplification and that a margin for risk should be allowed. One member commented that by looking at the difference in prices of IT projects that have a fixed price vs variable price, it would be clear why it's better to hold margin.

It was questioned whether Ofgem were trying to push the ESO towards something other than what has been set out in the business plan. At a senior level Ofgem have suggested to the ESO that they are in line with our ambitions, but on other levels they seem more concerned with minimising costs and risks. In the ESO's opinion these don't fit together.

The group discussed what behaviours this would result in. The key question is from a consumer perspective, does the model of cost pass through drive a better result?

If the company does not have any risk margin then how would it absorb a shock? It was discussed that if the company doesn't have equity or "skin in the game" its very difficult to drive down the cost of delivery. The Crossrail project was given as an example, where the company spends more to ensure that risk doesn't happen and this doesn't push prices down.

Without certainty on the funding model its difficult to judge the finance-ability of the business plan. The ESO raised a concern that there will not be clarity on this before the October business plan.

The chair asked why Ofgem felt it was appropriate to move away from a layered model, and the ESO confirmed that Ofgem felt that there was no risk left in the business due to legal separation and that they could not justify margins. The Chair raised her concerns about a lack of clear communication on this point between the company and Ofgem.

The group questioned the ESO, about how a funding model like this would impact the business plan. If the outcome was one of the options set out by Ofgem, what would you need to pull back on, or if there's a way to achieve these things with this structure.

ESO to set out what the two options mean for the business plan, and what impacts they have for consumers for the July meeting.

The group discussed that the proposals are more like a not for profit structure. The ESO would need assurance / approval from Ofgem on each project if this was the structure. It was questioned whether Ofgem have the authority to convert a commercial business into a not for profit.

5. Business Plan Overview - Kayte O'Neil.

The presenter gave an overview of the Business Plan (slides 19-25). An overview of the type of company that ESO are trying to become, with an emphasis that the Business Plan is not a "shopping list", but a coherent plan which will deliver the ambition and key outcomes.

One member commented that one thing missing from business plan was the ESO interaction with National Grid Group. Interconnectors seemed to be highlighted as a special group throughout the plan.

Slides 23 and 24 summarised overall costs and benefits. The group commented that it was quite difficult to see what the overall value is, and that it would be helpful to have a summary table bringing all of this together. The ESO confirmed they are working on articulation of the CBA and diving down into the detail of how the plan will be delivered. Further work will be done on ensuring that costs are easier to understand. It was questioned how useful this information was in the context of a 100% pass through model, and that it would be better to focus on risks. It was also noted that it isn't clear how the incurring of new costs would impact existing costs (and whether these should go down as a result).

ESO to include summary table of costs and benefits in October Business plan, and to provide a demonstration of impacts to existing costs.

Some of the group felt that the benefits were subjective and fluffy, and more info was needed on how these figures were arrived at. If the regulators decide on a cost pass-through model, then it would be more appropriate to focus more on the benefits in the plan. The ESO noted that more detail on the Cost Benefit Analysis could be found in the annex of the business plan.

6. Ensure reliable, secure system operation to deliver energy when consumers need it – Richard Smith

The presenter summarised to theme 1 of the Business Plan (slides 26-33).

There were some questions from the group about the Digital Twin concept included in this section of the plan. The ESO confirmed that the twin would look like a test and simulation environment. It will allow the proposal of changes that can be sandboxed in a more open environment, and allow the exploration of market rules. This would be more interactive and allow market participants to try things out. It is a more modular approach currently being trialled by the Platform for Ancillary Services (PAS) project.

The Chair asked if this proposal was the most cost effective solution. The ESO confirmed that this option comes out around 5% more expensive, but carries less risk as doing things in the current way will not deliver what is needed.

A member of the group highlighted the challenge that market participants are going to have different ways in which they wish to interact, how can the ESO strive to ensure that what's being delivered is fit for purpose for as many people as possible, which may entail more traditional providers needing to

change their ways. The importance of including elements such as secondments to other companies was highlighted as mitigating this issue. The ESO added that establishing a Design Authority should also help with this. It was also noted that a better understanding of how the ESO and DSOs will work together in this area would be useful.

The ESO took an action to arrange a follow up session with Alan Kelly to discuss the finer details of the Digital twin proposal.

There was general consensus from the group that this seemed like the right solution given the small additional cost vs large potential consumer and security benefit. Although, some needed further clarity on what the digital twin solution involves, including to what level will be twinned (every asset etc?)

The presenter asked for some further feedback on the People and Capability aspect of this section. Scarce engineering resource will be a key challenge and additional skills will be needed such as economic and data science combined with power system engineering. The group were asked about the best way to pursue this.

The importance of work life balance was noted. Some of the group felt that this is the biggest delivery challenge facing the ESO. It will be necessary to partner with universities, the ENA, and campaigning is needed to ensure that it's seen as an attractive career path. People with relevant skills are being attracted to industries such as gaming. Work will also need to be done with younger people to influence their choices.

The ESO has proposed the creation of an academy, and the group asked how much this would cost to establish. This will depend on exactly what form it takes. It seems that universities are already doing things in this space so it would be most efficient to work with what's already there, and the ESO don't have to be the sole driving force.

7. IT Strategy and Cyber – Nikki Jamieson, Gary White & Pirvinder Bansel

The presenters gave an overview of the IT strategy section of the business plan, along with how feedback from previous meetings had been incorporated.

The presenters were asked where the Design Authority would sit – would it be a senior, budget level group or more detailed? The ESO responded that it would most likely be a combination of the two – a group empowered to make decisions plus people with a more detailed knowledge. It will most likely be an overarching steering group with smaller groups per project. ESO would have overall decision making authority.

A concern was raised about the resource implications that this could put on market participants. The kind of resources needed by these groups is very expensive, and small businesses may not be able to spare this. The ESO confirmed that they would need to find a balance to ensure that it isn't just larger parties participating.

At the previous ERSG meeting the presenters were asked about the capability at board level to deliver this scale of change and expertise; they were asked to provide a further update on this. The ESO

confirmed that a Chief Information and Digital Officer had been appointed, and agreed that more information could be added on the cultural shift and the people that are being brought in to allow this. It was noted that the culture change needs to be across the company and not just the IT department, so that the entire company is focussed more on IT.

The chair summarised that there had been a major step forward in this area since previous discussions, but more depth is needed in terms of demonstrating understanding of the cultural and operational change required.

8. Transforming participation in smart and sustainable markets – Cathy McClay

The presenter gave an overview of Theme 2 in the business plan (slides 46 - 56).

One member commented that they didn't get the sense that much would be changed through the Ofgem codes review, more just a case of digitising the codes. The ESO confirmed that they believe more needs to be done, and the content needs to be reviewed too. The company are currently working on an example of what this might look like. It was questioned whether this approach needs to be more industry led and whether its in the ESO's gift to transform the codes. The presenter confirmed it would require collaborative working with other parties such as distribution companies.

The costs and benefits relating to this section were discussed. The group felt that the accuracy in the figures was not helpful and that it would better to have a range. The ESO were asked whether there are other places where markets are close to real time where an idea of the value can be drawn from. The presenter explained that other markets are looking to us for market design.

There is a real opportunity in this area to demonstrate the benefit, and so it needs to be well supported and move Ofgem's focus from the cost to the magnitude of benefits that can be achieved. If this is not achieved, then it limits the benefits that can be realised throughout the market. The presenter agreed that markets are a key enabler to unlock the value because it is what attracts new participants, and agreed that this could be emphasised much more here. The ESO were asked whether they could take this further and create closer to real-time markets. The ESO are focusing on getting the day ahead market working first, and intraday will be further down the line. The ESO agreed that they could to change the wording in relation to this so that it says "at least day ahead".

Another member was pleased about the information on long term markets, because this is important for new businesses that need investment to have some longer-term certainty. The ESO agreed with this, but added that there is an important balance between long term and short term markets. If you lock flexible assets into long term contracts, you remove the value of the flexibility, and if we only had long term contracts then consumers would overpay. However, it may also be that for long term contracts you can get a better price. Anyone investing will need a balance of long-term, they can't handle everything short term. It was agreed by the group that these kinds of issues need to be set out against the five-year control period.

The ESO were asked if this change was realistic in two years. The presenter explained that it is doable in the timescales, and all the thinking and direction of travel is already happening now.

9. Open Data and unlocking zero-carbon system operation and markets - Richard Smith

The presenter gave an overview of ESO proposals to make our data open and accessible and provide a clear route to services. Overall principles of share quick and share simply.

The group asked who will have access to the data and whether this approach would cause any security issues. The ESO are thinking about providing open access to data where possible. Its important to really understand the categorisation of data in terms of commercial confidentiality and CNI. There is plenty that could be shared and not misused. The point is that you don't try to pre-empt what people will do with the data but ask people to let you know what uses they find for it. It's a very different way for the ESO to think about data but could bring lots of value, by letting the industry go ahead and use it.

The chair asked what kind of data the ESO will need to hold back. Anything categorised as CNI, for example details around black start capability which is important for national security infrastructure.

The ESO are hoping to start sharing some of this data before 2021 and will be prioritising by what's most likely to be most useful.

10. Unlocking consumer value through competition in networks- Julian Leslie

The presenter gave an overview of theme 3 of the business plan.

In reviewing the costs and benefits for this section, the ESO were asked where the capex cost comes from. They confirmed that it related to additional computing power required. The estimated benefit is derived from a combination of investments and when they need to happen and finding lower cost ways to achieve solutions, for example an intertrip scheme vs asset build can be a large saving. The calculation of benefit includes the scenario where a solution may be put in place by someone other than the ESO.

The ESO explained that the NOA is an annual process which flows through to TOs and can trigger them to make a request. It needs to be considered how it will work if the most cost effective solution changes from one year and the next, and how this will feed into funding models for the ESO and TOs. One member noted that the base case for these assessments will be just as important as the model.

The chair summarised that the group are broadly in favour of the proposals, although there are details to be worked out around how the funding works when plans change. There are impacts on the business plans of other entities that need to be considered here. Concerning the CATO regime, it was noted that the ESO have moved from reluctant to active participant in the proposals. The group are broadly in favour of the expansion of the NOA.

11. Driving towards a sustainable whole energy future - Julian Leslie

The presenter gave an overview of theme 4 in the business plan (slides 62 – 66). Proposals involve ensuring that decisions taken will optimise outcomes for consumers across transmission and distribution, and taking Future Energy Scenarios (FES) work a step further to develop policy recommendations.

The group asked for some further clarity on what the company is proposing to do here, particularly around the connections portal which was discussed at the previous meeting. The presenter explained the Network Access Policy, where they work with TOs to see if they can shorten expensive outages to reduce cost. The ESO believe there is significant value to be unlocked by rolling this approach out across GB and working with DNOs.

One member asked if legal separation had any impact on costs, revenue and benefits from a whole system perspective. The ESO explained that they still operate a "one SO" model in order to maintain benefits of thinking across two fuels. FES is an example where employees are able to work across two fuel types, although there are a limited number of people in the business that can do this.

The group felt that the Capex cost figure in this section (£70m) was quite high compared to what is being proposed. The presenter explained that this cost was due to the system development required to facilitate model sharing, which is currently only done annually but will move to a monthly process and this will require a huge amount of data transfer and tool development to better understand the performance of the system. The savings in this area are being driven by the whole system solution and enabling distributed energy to contribute to the solution. Interfacing with DNOs in real-time will create new opportunities for connection, therefore creating additional capacity based on data without needing to invest in physical assets.

The group commented that they would like to see more clarity between the BAU and the transformational activities in the report. The BAU should not be exactly what is done now because there is no future world which allow operating like this. The ESO confirmed that the BAU in the paper involved what would need to be done to continue to operate in the same way as today. It was suggested that a new phrase be used to summarise this, similar to "the new normal".

It was also mentioned that TOs are putting very similar proposals in their business plan, so it is important to ensure that it all fits together correctly, and that the regulators incentivise it as a whole. Collaboration needs to be brought out as a key theme in this section.

Some of the group still felt uncomfortable about the figures in this section and felt that the cost was very high. It was also discussed that from the information given it was difficult to judge if the proposed solution was good value or not. It needs to be clear where spend is enabling benefit through other areas and that in some cases the spend will not automatically lead to benefit, other action needs to be taken off the back of this. The danger of double counting benefits is significant and needs to be highlighted to Ofgem.

In summary, the group felt that the proposed costs feel too high, and need to be revisited or further justification needs to be provided.

12. Innovation: Carolina Tortora

The presenter built the innovation presentation from the previous meeting (slides 67 - 74), including the development of the ESO innovation strategy and the prioritisation of issues. An example of a recent innovation project was discussed which enabled the correction of a generation forecasting error. The presenter clarified that the £100m impact came from the fact that the policy on how much reserve needs to be held could be adjusted and less reserve was procured as a result. This saving flowed through to consumers. The presenter confirmed that information on the ESO innovation projects can be found on online here.

There was a conversation around at what point does an innovation project become business as usual. The presenter explained that innovation does not deliver the final product. A project will be handed over to business as usual once it has been successfully tested.

The chair clarified that the NIA allowance is currently a percentage of overall revenue, and asked whether this will continue to be the right model for the ESO now that it's a legally separate company. The ESO do not believe that this will be an appropriate model going forward, and that Ofgem will be consulting on this. Ofgem have previously proposed the figure being a percentage of BSUoS but stakeholders did not agree with this.

One member felt that innovation is presented in the Business Plan as a standalone element, and it needs to be demonstrated that it is integrated into the culture of the business. The presenter confirmed that the innovation team do not run the projects, and that this is built into the core teams. Another member suggested that innovation should be paid according to success of projects, but the presenter highlighted that if this was the case the innovation strategy would need to be much more risk averse. In some cases it can be difficult to track progress of day to day innovation. The group thought that the fact that the innovation team don't deliver the projects was positive in demonstrating that innovation is being built into the business. Most other companies have a different structure where the innovation team do deliver the change, and its harder to embed as BAU in this way.

13. Building our capability for the future: Cecile Marion

The presenter gave an overview of the ESO's strategy for resourcing effectively across the 4 themes in the Business plan (slides 79- 84). The people and capabilities that the ESO have today can not deliver the full ambition. The ESO are currently working on detailed quantitative analysis looking at the number of FTEs required and cross checking with supply, identifying gaps and exploring how to deal with this. Current estimates suggest that the ESO will be looking to recruit a further 200 people and this is not as a result of legal separation. The ESO are exploring partnerships with universities as well as how to pitch recruitment campaigns. The group asked whether there's potential for competition for resource between the ESO and DNOs who will be looking for similar people. The ESO can see that this may be an issue and thinking about how they can collaborate with the other companies to tackle the problem. The group highlighted the importance of flexible working and other benefits in attracting a good workforce.

They also highlighted a moral responsibility of how you behave in this space, in attracting people from other countries etc.

14. July Meeting plan: Alice Etheridge

The presenter proposed that the next meeting is used to have a more detailed discussion on the regulatory framework. The remainder of the meeting can then be used by the ERSG to focus on production of the group report. The group agreed.

The ESO confirmed that they were immediately working on an updated version of the plan based on the feedback. One member highlighted that Ofgem are still consulting on the funding model, and asked how the business plan would reflect this. Will the plan be changed to reflect the two year plan rather than 5 for example. The ESO will still need to develop 5 years of costs but it will only be approved two years at a time. The Business Plan submission to Ofgem in July will respect the decisions that have already been made. Where things are still open, the plan will be based on assumptions that are within the envelope of the options.

The group discussed the option of submitting a group response to Ofgem's consultation. It was concluded that responses should be submitted on an individual basis. Instead it was suggested that the chair have a meeting with Ofgem to discuss their concerns about the proposals.

The Chair to arrange a meeting with Ofgem to discuss the ERSG concerns on funding model proposals, and seek clarification on the intention.

ESO representatives left the room for a closed discussion.

Electricity System Operator RIIO-2 Stakeholder Group (ERSG)

Meeting 6 - 31st July 2019

Amba hotel, Marble Arch, London

Minutes

Attendees

ERSG members

Toby Ferenczi Ovo Energy

Sophie Hind Technical Secretary

Jo-jo Hubbard Electron
Andy Manning Centrica

Catherine Mitchell Exeter University
Nick Molho Aldersgate Group
Charlotte Morgan Chairperson

Kayte O'Neill ESO – Company rep

Eddie Proffitt Major Energy Users Council (MUEC)
Simon Roberts Centre for Sustainable Energy
Nina Skorupska Renewable Energy Association
Nigel Turvey Western Power Distribution
Chris Veal Transmission Investment

Barbara Vest Energy UK
Matthew Wright Orsted

ESO Support

Louise Clark ESO- Presenter Alice Etheridge ESO- Presenter

40. Conflicts of Interest (all)

The Chair invited feedback on whether members had identified potential Conflicts of Interest relating to the proposed agenda. Now new conflicts of interest were declared.

41. Introduction, Minutes and Actions (Sophie Hind)

Open actions were reviewed and updates were given.

42. Regulatory Framework– Louise Clark

A paper summarising the ESOs proposed regulatory framework for RIIO-2 was shared with ERSG ahead of the meeting. The presenter explained that in recent meeting with Ofgem they have indicated that they are no longer considering the 100% fast money model and are focussing on the RAV*WACC model. They are still open to considering the case for margins.

The group asked if there has been adequate time allowed in the timelines to update the Business Plan for final submission in December based on Ofgem's final decision. The ESO confirmed they are doing everything that they can to hit the December deadline, but if there are any unexpected decisions taken by Ofgem then it's possible that timelines would need to be re-planned. The ESO also confirmed that they would not publish a plan which is not financeable.

The ESO have performed some analysis on the RAV*WACC model proposed by Ofgem and found that it isn't financeable. Ofgem will be performing their own analysis in this respect. There was concern from the group that Ofgem will not make the right decision with respect to the final funding model for the ESO. The impact of the nationalisation debate on Ofgem's decisions was discussed.

The group asked the ESO to confirm the financing plan for the ESO. Is the money expected to come from external sources of debt, loans from the group etc? The Business Plan is silent on this.

The ESO to confirm the financing plan for the business

Concerns were raised on the decision to approve business plans in 2 year cycles. The industry can't transform during this time, and it will require the ESO to start projects and make investments at risk.

The content of the performance report was discussed. Members of ERSG were surprised at the wide-ranging views included within it. No framework has been created meaning that the performance panel have all brought their own assumptions, and there is no benchmark. The report had not been moderated into a single consolidated answer.

43. Ofgem RIIO-2 Challenge Group feedback – Kayte O'Neil

Challenge Group meeting took place 30th July 2019, where the latest version of the Business Plan was discussed. ESO gave a 10 min presentation and took questions. The outcome of the group will be a written report which will be publicly available.

The presenter felt that the Challenge Group had read and understood the plan. They didn't agree with everything but could see what the ESO want to achieve and gave helpful advice on how to provide better justification.

During the meeting the main areas of focus were:

- Planning assumptions
- ESO Vs DSO relationship
- Assumption about the role of NOA. Will assumptions be consistent throughout the TO plans as well?
- Challenge on cost profile from T1 into T2

The ESO recognised that they have not classified BAU and new costs well, and in the October version of the plan they will be articulating three categories of costs:

- 1. Things done today where there will be efficiencies
- 2. Things done today which are getting more complex or costly
- 3. New transformational activities.

The group were supportive of seeing the next level of granularity.

There were further questions from the challenge group around the shared services model, on cost level and organisational structure.

Some of the Challenge Group were unsure on the value and necessity of the digital twin model, and that costs were high compared to what they could be.

The ERSG chair summarised that the Challenge Group were broadly supportive of the direction of travel of the business plan, which is aligned with the feelings of the ERSG.

44. Business Plan Q and A – All

- At a previous meeting a consultation for the CATO model was discussed. Is there any update on this?
 - esso are planning a meeting in September for relevant stakeholders to discuss the CATO regime. We are currently scoping out what Ofgem want us to do and how far they want us to go in the timeframe that they have set out. Not currently clear whether they want a "plan for a plan" or a full detailed plan. Eso have asked Ofgem to write an open letter clarifying this. Eso should have some more answers on this by December. The Eso will seek advice from Chris Veal on who should be invited to the September meeting.
- What assumptions have you made on the performance levels of FTEs as you are going through the change process? What are current staff engagement levels in terms of their sentiment towards the transition? What will the impact of change be on the performance of your FTEs?
 - The efficiency programme run throughout National grid last years had an impact on the engagement and enablement scores of employees. Culture and capability will be a big focus area in the next version of the Business Plan.
- On BAU costs vs transformational costs, it should not be the case that there are no benefits
 associated with BAU activities. It is important that these activities are not treated as a fixed
 thing with no potential benefits.
 - ESO are working on this point for the next version of the business plan. Trying to show that in some areas BAU costs will go down as transformational costs go up.
- The plan says that ESO have used status quo as simplified approach and will do a deeper dive based on the Ofgem outcome. Will this address broad brush assumptions around benefits? Ofgem may be more open to investments provided that they are comfortable that benefits will follow. At the moment they are too vague and not convincing. Will there be a more granular CBA?

- ESO had similar feedback from the Challenge group on this point and are trying to address it. It is hard to quantify where value is being created through unlocking processes and allowing more flexibility. It is proving to be a real challenge.
- Is there a way to present the figures in a way that demonstrates confidence level of benefits being realised, and also where there are dependencies elsewhere in order for the value to be unlocked?
 - To be considered by the ESO
- It is unclear what kind of organisation ESO are aiming to build longer term. Will you be a procurement organisation or a software company? Where will it be in 10 years, will it predominantly be a software company? There is an opportunity to become a world class infrastructure and software business
 - The ESO are currently more of a procurement business. Today we would describe ourselves as an engineering company with commercial expertise. This question will somewhat be covered in the culture and capability piece that is being prepared for the next version of the plan. The challenge that ESO took from the group was whether they are being too narrow minded about what the company is today. In the next plan ESO hope to show that they are thinking differently about what the company needs to be.

45. ERSG REPORT PREPARATION.

The remainder of the meeting was a closed session for the ERSG to plan the report.

Electricity System Operator RIIO-2 Stakeholder Group (ERSG)

Meeting 7 – 12th September 2019

Amba hotel, Charing Cross, London

Minutes

Attendees

ERSG members

Angelita Bradney ESO- Company Rep

Stuart Cotten Drax

Peter Emery Electricity Northwest Sophie Hind Technical Secretary

Jo-jo Hubbard Electron

Alan Kelly Scottish power Transmission

Andy Manning Centrica

Nick Molho Aldersgate Group Charlotte Morgan Chairperson

Kayte O'Neill ESO – Company rep

Eddie Proffitt Major Energy Users Council (MUEC)
Simon Roberts Centre for Sustainable Energy
Nina Skorupska Renewable Energy Association

Transmission Investment

Fintan Slye ESO – Company rep
Jamie Stewart Citizens Advice Scotland
Nigel Turvey Western Power Distribution

ESO Support

Chris Veal

Kashia Anderson ESO- Observer
Pirvinder Bansel ESO- Presenter
Louise Clark ESO- Presenter
Alice Etheridge ESO- Presenter
Nikki Jamieson ESO- Presenter

46. Conflicts of Interest (all)

No new conflicts of interest were raised

47. Introduction, Minutes and Actions (Sophie Hind)

Open actions were reviewed and updates were given. For Action 5.5, NGESO confirmed that they will be extending an invite to all ERSG members for a webinar on the Digital Twin. For Action 6.1 ("ESO to confirm financing plan for ESO...") the following response has been shared by the company:

We continue to assume that the ESO will be financed through a mixture of equity, term debt and working capital funding. Through the process to legally separate the ESO from NGET, we have put in place fairly flexible debt arrangements to allow for future changes in our regulatory arrangements with a separate ESO price control.

We anticipate that the ESO will use an external working capital facility to support liquidity volatility in light of our Industry Revenue Management role. Term debt is expected to be placed in the form of bank or intercompany term loans due to the expected size and tenor of its requirements; however, we continue to investigate the benefits of other sources of term debt. As a wholly owned subsidiary of National Grid Group, it is expected that equity investments will be made via our Parent Company.

48. Regulatory Framework– Louise Clark

The presenter confirmed that the company has not yet received a finance model from ofgem, and that the October business plan will be based on the ESO's internal model which has been based on feedback from Ofgem so far.

The deadline date for submission of the business plan of 9th December will still stand but there may be an interim point where we revise financeability before June 2020 if needed (at this point there should be more information available from Ofgem).

In some areas, they have used SONI as a comparison starting point (for cost of equity etc). They have acknowledged that the ESO are different from other network companies which is a positive starting point. However, the ESO still has concerns with the RAV-WAAC model. The company will need to raise equity and the ability to do this will be limited.

Ofgem have confirmed that they will provide more clarity on incentives.

Ofgem are considering how the role of revenue collection could be performed by the TOs rather than the ESO. This idea has been raised in a consultation response but has not yet been fully considered. Ofgem have an understanding of the large risks involved with revenue collectyion and as a consequence they are giving some thought about how this risk is best dealt with. The idea raised in the consultation is that the ESO continue to perform the task of revenue collection, but rather than guaranteeing what is given to the TOs it would be a straight pass through to them, so the ESO would not bear the risk.

One member asked that more information on raising of debt and where this will come from be included in the business plan, and the ESO confirmed that this will be included in the next version.

The ESO were asked if they are still concerned about the cost disallowance aspect of Ofgem's proposal. The company are still concerned about this. Ofgem have added into the consultation material that there may be a possibility for a cap on disallowance risk, which would be welcome. However, the ESO are still very concerned about the downside only nature of this risk. In other models, there is still a sharing mechanism but in the ESO model this doesn't exist.

The chair provided a summary of a meeting with Ofgem to discuss concerns around the funding model. In terms of rationale for various elements, there has been a concern in ofgem that the RIIO-1 process meant that there was a lot of risk premium and higher incentives than envisaged. Because the ESO is a new standalone company there isn't much understanding of what the costs are, and Ofgem want a 2 year "bedding in period" to understand this.

Ofgem are also concerned about the level of change in the industry and the ESO's ability to respond to this change, which is why they have decided on the RAV-WAAV model. They feel that in recent years companies have not put as much money into carrying out works as they should, becausr they can benefit from over-performance. Because there is so much that the ESO needs to achieve, they believe that a cost pass-through model is in the interests of the insutry and the ESO.

Ofgem believe that cost disallowance risk is something that can be managed through greater transparency of the business plan. If you have maximum transparency then the risks should be manageable. They recognise that cost disallowance may have a restraining effect on the ESO. A cap was mentioned, which they believe would also help the risk to be more manageable and understood. They will need to look at the structure of this. Because of the 2 year time period, as long as the near term plans are really clear and costed up then the risk of disallowance is low and therefore this is the best way to manage it.

On incentives, Ofgem have taken on board the concerns arising from if these are completely subject to review by a performance panel. In the near term incentives should be clearer. If clearer then it would be easier to set a regime around clear deliverables and clear costs. Risks should be manageable and there should be incentives on out-performance.

Overall Ofgem feel that they have listened and responded to concerns, and they have included a risk matrix based on what they have heard from the company in the consultation materials. They are interested in ERSG's view of these risks and whether they are real and evident. In terms of additional costs associated with this, they are looking at giving company specific adjustments to the ESO. They are very keen that both sides are given time in the 2 year period to understand what costs look like and hence have the flexibility in the regulatory regime.

The ESO were asked if this aligns with what they have heard from Ofgem. Perspectives of how the risk will impact on behaviours differ from that of Ofgem's the ESO are concerned that these arrangements will drive risk aversion.

The chair confirmed that Ofgem hope to get a greater understanding of the risks from their consultation, particularly from wider industry.

One member suggested that it seems there is an assumption that funding will come through incentives as well as the funing model rather than just the funding model. It is important that ESO are accountable and equipped to handle some risk on behalf of the industry, and we don't want them to be afraid of risk. They need to drive the market forward and be ambitious. The chair raised this with ofgem who said that there are two funding pools; BAU and pay as you go. They are still allowing innovation funding so that the ESO aren't frightened of taking the next steps. The ESO countered that the innovation part doesn't deal with the IT investments that we need to deliver by 2025 as these are all in the BAU pot, where there is a real risk of cost disallowance. There is a clear

disconnect between the fact that everyone wants an ambitious ESO and the funding model that is proposed by ofgem.

Another member asked if the incentive performance panel would still exist and would it still be comprised of the same members. The ESO confirmed that it would still exist with the same members.

The ERSG asked the ESO if they think they can use this two year probationary period to change Ofgem's view for the next 10 years. If not then an environment is not going to be created where you can take risks. Could the ESO perhaps carve out some projects acknowledging that they are more risky and have some additional flexibility on these?

If Ofgem don't make any changes to the proposed funding mode, how will this impact the business plan? What changes would need to be made? The ESO confirmed that they are proceeding with the business plan based on decisions that have been made, but there is still a great deal of uncertainty. They are proceeding on the assumption / basis that is financeable. There won't be any further clarity until November and even then there won't be sufficient clarity on everything. It won't be possible to turn the business plan around in these timescales so the ESO will continue with the current level of ambition for the December submission.

The chair asked when the ESO will have clarity on detail that is needed from ofgem. The draft determination consultation will take place in June next year. The ESO are expecting some further information on the funding model next week. This won[t be in time for the October draft but may be incorporated into the December version. However, this information will still not fully resolve whether there is additional remuneration.

The chair asked if the ESO will be able to identify what would be removed from the plan because of lack of certainty, or whether the plan will be delivered regardless and adjustments will be made to financial metrics instead. The ESO confirmed that both financeability and scope discussions will need to take place. If the financial model doesn't support the investment plans (and at the moment it doesn't), then investment will have to be removed from the plan.

The group raised the concern that theme 1 is all about investment, and you can't put forward a comprehensive business plan without having all of the financial information. There also seems to be an issue with Ofgem's capability to make it work in terms of resource (performance panels etc); making sure it works consistently and neutrally etc.

The first stages of delivery of the business plan will be about scoping and R&D. In the first two year period are we really saying that these kinds of activities couldn't be delivered on this pay as you go type mechanism? The Business plan needs more information on interdependencies in the first two years. If this detail is right then the ESO should be able to lock in what they need.

The ESO explained that the problem is that Ofgem have said that if costs are inefficient then they will be disallowed. The smallest disallowance could potentially bankrupt the company.

The group asked that, if the cost disallowance is the key problem, can we take this part back to Ofgem to negotiate on?

The IT annex is still relatively light. If that's where the main spend is going to be then more information is needed. Ofgem understand that IT projects are challenging and there is a such a history of these projects going wrong. Perhaps the best way to deal with it is to increase the specificity on what will be spent and what the deliverables are which will minimise risk, because Ofgem will need to sign off on this. If everyone can see what would be spent it will be much harder to disallow.

The ESO have asked Ofgem to give more clarity on disallowance and their response is that it's in the license. However, the license is very vague and the ESO need more detail to understand the risks.

The group made the point that incentives are there to drive behaviour, and if the ESO are doing something wrong then it should be picked up here rather than in the funding model. Initial steps of the business plan are very important and hard to separate out, because it involves building a platform to facilitate the future modular system. It's the foundation of the rest of the plans. The rest of the business plan rests on this. So it's the incentives that should reward of penalise for performance.

The chair summarised that ofgem see the cost pass through mechanism as beneficial because it allows the company to do what they need to do. The rest of the group were asked for their views.

One member argued that everyone knows that IT projects always require more money and more time than expected. There should be a third party arbiter. Agreement that the ESO need to protect themselves because the disallowance could put the company out of business. The chair asked if this could be dealt with through the cap. The group were unsure about this.

The group discussed that innovation projects are often inefficient. On cost disallowance, if Ofgem are just saying that its in the license, are there any past examples of this? Have any precedents been set? The ESO have looked into this and found that typical disallowance on major IT projects has been 15-20% which would equate to 6% of the ESO RAV.

The impact of cost disallowance is completely dependent on how Ofgem enforce it.

The ESO's main issue are the elements added to the funding model which restrict the flexibility that is intended by the cost pass through itself. If there is a cost pass through and the company must prove that costs are efficient, a lot of money will be spent proving that its efficient. The company will be in a position where moving and committing to projects is such a risky thing that behaviours will not make the most of the cost pass through. When the package proposed by Ofgem is considered as a whole, it will not drive the behaviours that have been agreed are needed.

The group suggested that someone from Ofgem could be dedicated to look at costs as the projects are in progress. This is done in other industries such as rail and water. From a consumer perspective increased scrutiny on large projects is not necessarily a bad thing.

The group speculated on what might be driving Ofgem to lock this kind of arrangement in. There is increased scrutiny from the NAO. Although it might be more that they are concerned about the company's ability to deal with big IT projects and therefore cost pass through is a good way to handle this.

The ESO clarified that they see the benefits of implementing a cost pass-through, but the accompanying details of the package don't drive the right behaviours. The ESO are not suggesting that they should have free reign to spend money. Ofgem should and will always set an efficiency bar at some level. But at the moment its an uncapped, unspecified disallowance risk which is downside only. The ESO believe this will encourage risk averse behaviour.

An ERSG member pointed out that from the bar chart on page 28 of the business plan, it looks as though the risk is only on 20% of total costs, as the rest is BAU. This might mean that the risk is manageable. The question is how you carve out IT risks as a special case. The ERSG could help Ofgem to understand where the risk really lies as it isn't on the whole portfolio.

The chair asked the ESO to explain which risks cannot be mitigated in their opinion. The key risk outlined by the ESO is the revenue management role, where they handle funds much larger than the size of the ESO. There is a need for additional remuneration for this, and there is no compensation available in what Ofgem have set out. Other risks include cost disallowance 9which could be mitigated to a certain extend but will always be there), incentives downside and reputational/political/ regulatory risks (for example the introduction of new roles such as EMR). It is much more difficult to quantify these latter risks.

The chair asked whether, on the revenue management model, have Ofgem agreed to fund a working capital facility? The ESO confirmed that they have not. Although, there is one currently in place which came from legal separation. Do the ESO want to continue to have this role, or do they believe that it should change? The ESO made the point that by moving the role elsewhere the risk would not disappear, it would just be moved / spread around. It could go the the TOs who are larger and may be able to manage it better, but they have no leverage to manage the risk because they are not a counterparty. The question is what this would do to capital on their balance sheet. It isn't out of the question but the ESO want to be clear that the risk does not dissipate if you put it on the TO balance sheet, which seems to be the assumption in some cases.

The chair asked what the most essificnet way to manage this risk would be. The ESO replied that it depends on how the TO would view it as a risk on their balance sheet. TO representatives in the room confirmed that more thought would have to be given to this. There could be benefits through the TOs ability to secure the capital.

The chair asked the group if everyone was in agreement that there is additional risk from the revenue role which should be remunerated. The group were unsure on whether it is a risk or a cost. The ESO explained that even considering a working capital facility, handling £4bn of someone elses money still involves risk which needs to be remunerated.

Some in the group felt that this role should be taken wherever the risk is lowest. Others argued that the ESO is in the middle and this means that you only pay for the risk once rather than spreading it and having it in different places.

The chair asked about the other risks that were mentioned. How does one quantify them and think through how you'd remunerate what is a reputational risk? The ESO replied that it is very difficult to quantify this, and any approach would be imperfect. There is no direct comparator. Ofgem have published three tests on how you would measure risk. The best comparators are SONi and Eirgris as

they are the only two SOs that have a similar model. They typically have have a layered approach with an upside only incentives layer.

There is upside potential to things like reputational risk as well, but its about how you put the overall package together. The ESO aren't trying to put a pound sign against everything. But how the overall package is put together depends on how we want to treat these.

The ESO needs to be financeable as a standalone business. The business plan and funding model need to lead to a proposition which remnunerates both equity and debt. The ESo should not rely on the rest of the NG group. It needs to be a standalone business which a rational investor would put money into.

The ERSG thought that Ofgem should recognise that there is a different effect of ESO reputation as opposed to group reputation. Is there some quantification on what impacts are on the group as opposed to the ESO. Are ESO looking at share price of group etc? ESO confirmed that Ofgem aren't comfortable with this approach so it will kept purely to ESO risk.

The fact that the labour party is pushing for normalisation hasn't been mentioned. The process of this agreement will be scrutinised from the outside. So reputational risk is really high. What the ESO has been doing to gather feedback has been a good way to manage this but people are to be looking at the reaction to what ofgem says. The media are putting a lot of pressure on Ofgem at the moment. The ESO confirmed that they are consciously trying to manage this.

49. Business Plan – Changes since July, Ofgem RIIO-2 Challenge group written feedback and Q&A-Angelita Bradney

The presenter talked through the changes since the last version of the business plan, which had been grouped into 7 categories.

- ESO role achieving net zero emissions by 2050

The group felt that the changes made to this section were very good. They asked whether there is a broader role of ensuring that other infrastructure industries (i.e. transport) are able to respond to power outages given recent events. The ESO replied that joining the dots between CNI networks is something that the government need to do. ESO need to play their part in helping others to understand what needs to be responded to.

As the ESO are currently technology neutral, will any recommendations to government be made on this point? The ESO feel that this is a policy decision for government. General perspective is that we have not yet moved from converting a legislative targert into a policy and regulatory framework and this needs to be done.

When asked if the policy outstanding policy issues required are sufficiently articulated in the business plan, the ESO confirmed that there isn't much detail in there at the moment, but a new section is in development which will be part of FES 19. This will be more specific on what is required from policy makers and regulators. There are also plans to update the CBA and highlight more clearly where benefits are dependent on policy decisions.

Reform of heat was highlighted as an interesting part of the proposals., and the ESO were asked how they would facilitate policy on something like this. The ESO will be doing this through FES. They will be setting out what is needed in order to achieve the scenarios articulated in FES> Hopefully it is clear that the leadership of these aspects have been dialled up in the business plan. The objective is to lead and shape but not to dominate with an ESO answer.

The group feel it is important that the ESO are clear about policy decision dependencies and timelines because otherwise they will get kicked into the long grass. The ESO is a key advisor in this regard. Government will be distracted with other priorities and so the more you proactively inform and advise the better. There will be some good opportunity over the next two years for the ESO to advise.

- Challenge of cost proposals

With regard to IT cost proposals, the ESO have removed £53 million from the plan. The plan now looks at where platforms can be merged and leveraged across more than one investment. 84% of the plan has been benchmarked. 33 investment cases will be include in the next version of the plan.

The group feel that theme 1 is much improved. Efficiencies from RIIO 1 were better explained, a better breakdown year on year has been included. The investment tables are useful and there is good cost justification. A lot of narrative is focussed on the increased FTE. The evolution of capex is less well explained. It would be useful to have the same level of explanation for the capex evolution as for the FTE increase. Where does the evolution of capex come from, which items?

A summary sheet of investment cases that will be provided would be useful. This area needs to be as clear as possible on cost because of the high risks associated with it.

Other members echoed the positive comments on this chapter. Clearer and more organised, and governance, people and capabilities were all included. There is a much better understanding demonstrated of the nature and type of people that need to be brought in.

It is still not clear how the ESO will work with contractors vs permanent staff, and ensure that there is complete control. How will you eventually bring the work in house? How are you building and retaining your own capability?

The chair echoed the positive comments and found the timetables of what will be done where helpful. There are still some questions around how the shared services model will work. It is now clear that there will be an ESO dedicated team as part of shared services, but there will be pushback on why that team can't just be part of the ESO. The sharing of costs for shared services needs to be understood to ensure that it isn't being subsidised in any way. How has this cost been calculated and why it's the right proportion. This applies to all shared services, not just IT. The ESO confirmed that there is an Ofgem approved methodology for this so it will be made very clear in the next business plan.

It was emphasised that for the 33 investment cases the interdependencies need to be really clear. This could be shown by a critical path and how investments will be sequences.

A webinar will be scheduled to go into more detail on these proposals.

ESO to propose some dates for the webinar on IT aspects of the business plan.

Deliverability

The updated plan has a smoother cost profile and a more gradual ramp up of investment. This also applies to people. The cost has reduced since the July version as more work has been done on deliverability.

The group agreed that these are good updates. The smoothing is much better and the FTE info was really useful. They asked if it's possible to have a more collated view of what will be delivered when, particularly over the next 2 years. A milestone chart would be really helpful and should assist with the incentive discussion.

As there will be so much change, it would also be useful to have further information on change management / transformation plan. This may help to give confidence in the deliverability of the plan.

Deliverability risk and mitigation

The overarching risks have been identified and there is more detail in the people culture and capability chapter. The group feel that the people, culture and capabilities section is a much stronger chapter. However, it still needs something additional around transition and the confidence in achieving the change. Rate and nature of change is described well but more is needed on why we should have confidence in this. E.g. The example of women in engineering is used, how has that changed and what has been done recently to get there?

More information is also required on where the DNOs sit in the process, particularly for connections. Also, more information on the NOA expansion and how this fits with DNO plans and direction. Reading the connections chapter (p. 109-113) as a DNO, it doesn't really suggest that the industry will work together to come up with the best cost solution.

The ESO confirmed that the stakeholder annex will include detail of feedback received from DNOs and how this feedback has been incorporated.

- Efficiency work from RIIO-1 through to RIIO-2

All costs included in the plan have been tested for efficiency. The chair asked the group whether they are comfortable with the level of increase in the costs, given what has been proposed. Some felt that it is still not completely clear what is driving the cost increase for BAU. The company are working on better demonstrating this for the next version oof the plan. Generally, they are facing a more challenging operational environment which is driving cost. It was suggested by the group that this additional cost due to increased challenges is neither BAU nor transformational but somewhere in between and could be represented differently on the graph on slide 19.

The chair summarised that the increase in the BAU costs on this graph does jump out, and it would be helpful to have an explanation of why this is.

ERSG discussed that the proposed £50m in the first two years will be challenging to achieve. The ESO have worked through this and are comfortable that it is deliverable, and can provide more information on the transition. More information on the control around this will give more confidence in what the ESO are proposing.

The group asked whether the benchmarking used has a forward-looking element, assuming that it would go down over time. The ESO are going to check if this is the case or whether it just looks at comparators.

ESO to confirm whether the benchmarking used in the business plan has a forward-looking element.

The CBA contains better information on what default counterfactuals are being used. Counterfactuals tend to be current BAU, but is this always an appropriate counterfactual to use? Within the CBA narrative for each theme it would be useful if the ESO could add information about testing against alternative options as well as the existing solution. This would help to strengthen the proposed cost for investments.

It could be clearer in the executive summary that the cost increases that you will see will achieve benefit elsewhere in the industry. The impact of net reduction in the bills should be brought out more. This is an important part of justifying the additional costs.

- Revising proposals based on stakeholder feedback

The ESO explained that they are yet to test the business plan in its entirety with stakeholders, but an event is planned for the 2nd of October to do this.

The chair thanked the ESO for the way that they have clearly shown the feedback that has been received and how it has been acted on. The way that the company has responded has been impressive. The Challenge group have also been impressed with this. The level of detail included is high compared to other companies, and the way that feedback has been reflected throughout the report has been good. Section on consumer views is limited but better.

- Revision of theme narrative and ongoing vs transformational costs

The group thought that this was greatly improved in the business plan, and there were no additional suggestions. The delivery roadmaps are particularly useful.

Metrics

In Aigust Ofgem confirmed that metrics need to be included in the business plan. The ESO have proposed some in the October draft, and these will be consulted on during the October events, followed by more detailed discussion at the ERSG meeting scheduled for November.

The group asked about a metric included in theme 1; around dispatch in merit order. Why is this a good or bad thing? It is a good track that the ESO are correctly dispatching smaller units along with larger players in an appropriate cost order. This is something that has been included as a result of feedback from market participants.

The group suggested that a metric is included for measuring carbon. Difficult to know exactly what this metric should look like. A metric like this will tell us whether clean energy is most economic and will give transparency to the issue.

There was some confusion around the metrics for theme 3 and what they mean.

Metrics around data wuality and availability can be included in theme 1 and 2 in terms of why certain decisions were taken.

People, culture and capability

The group agreed that this chapter of the business plan has much improved. It was noted that the Change management aspects should be highlighted more in the slides for future as this is such an important topic.

The chair asked whether the growth of headcount over time will reduce reliance on Shared Services. The ESO explained that there will be dedicated ESO teams within Shared Services, and that in some cases the growth of capabilities will be within shared services itself, rather than through a separate IT team. The majority of these people will be dedicated to the ESO. Shared services numbers are included in the overall FTE increases and costs in the business plan.

A slide showing the ESO leadership organisation was presented. The group felt that it was getting harder to justify the shared services model and why HR and IT aren't directly part of the ESO. More clarity needs to be given on where the buck stops with making decisions. What is the control mechanism for guaranteeing that the ESO get what it needs? The ESO explained that there are different types of IT delivered to the ESO and there are different levels of oversight required for each.

At the time of legal separation, agreements were made with Ofgem on how the Shared Services model should work. Some aspects were taken out of shared services (e.g. regulation) and others were left in. This approach was approved by Ofgem.

The group agreed that this model needs to be fully transparent, and assurance needs to be given that there are no "leakage points". It was also asked whether the lead ESO IT business partner and CIO should sit directly within the ESO.

Electricity System Operator RIIO-2 Stakeholder Group (ERSG)

Meeting 8 - 7th November 2019

Royal Horseguards Hotel, London

Minutes

Attendees

ERSG members

Angelita Bradney ESO- Company Rep

Stuart Cotten Drax Toby Ferenczi Ovo

Sophie Hind Technical Secretary

Alan Kelly Scottish power Transmission

Andy Manning Centrica

Nick Molho Aldersgate Group Charlotte Morgan Chairperson

Kayte O'Neill ESO – Company rep

Nina Skorupska Renewable Energy Association

Fintan Slye ESO – Company rep
Chris Veal Transmission Investment

Matthew Wright Orsted

ESO Support

Louise Clark ESO- Observer
Alice Etheridge ESO- Presenter
Craig Dyke ESO- Presenter
Nikki Jamieson ESO- Presenter
Gavin Lochead ESO-Presenter
Jason Mann TFI Consulting
Sally Thatcher ESO-Presenter

50. Conflicts of Interest (all)

No new conflicts of interest were raised

51. Introduction, Minutes and Actions (Sophie Hind)

Open actions were reviewed and updates were given.

52. Regulatory Framework - Ofgem (Closed session)

Notes in separate document

53. Regulatory Framework (ESO and Ofgem)

The ESO re-joined the group and the chair gave an overview of things that required discussion in the wider forum. Ofgem were asked to give their view on where things lie with the shared services model.

Ofgem want to ensure that there is complete transparency over cots and where they are allocated to. This was also feedback from the Challenge group.

The chair explained that there are obviously benefits around the shared services model in terms of economies of scale, and asked whether it is a case of benchmarking and transparency of costs.

Ofgem think there are efficiencies to be gained from shared services. But benchmarking is crucial in order to understand the justification of these, as well as transparency. The ESO might look to explore how these services are procured.

The ESO asked how this differs to the current model. Shared Services arrangements were agreed through legal separation, and the price control does not provide an opportunity to unpick this. ESO are not aware that re-visiting how shared services were procured was an option.

Ofgem replied that the license does not specify what is included in shared services one of the areas they had questions around is IT, as this can cover such a large range of activities; from day to day support to the development of new systems.

The ESO explained their understanding that the documentation around legal separation specifically states how these things should be organised and that they don't interpret it as something that could be changed. Therefore, it is not an option to explore how the ESO might do things differently.

The ERSG asked if costs for information on how costs for Shared Services were allocated. The ESO explained that there are different arrangements for each service based on what is most appropriate. These arrangements are approved by Ofgem. There is a financial model which shows how this is allocated and the business plan has an annex which explains how this works. The group asked Ofgem if there was anything additional that they were looking for.

Ofgem's opinion was that the model was created for a different world, and they have questions around where projects, systems and assets are predominantly ESO assets and how appropriate it is to still have the shared services model. The chair added that the concern from the Challenge Group was around the IT.

One group member raised concern if these arrangements were to be revisited annually, as this is not consistent with the price control setting.

The ESO summarised that there is potentially a serious difference in opinion on the shared services model. If there is potential to re-visit this model, then there could be implications for the ESO business plan and also other business plans in the NG Group.

Ofgem left the meeting

The ERSG summarised the key issues discussed with Ofgem for the ESO. The majority of the discussion was around risk in the company and how the finance and funding worked, and whether that gives enough flexibility for innovation. In terms of risk and risk structure, Ofgem explained that discussions were ongoing, and that they have asked for further justification on this from the ESO.

There was also an open conversation on cost disallowance. Ofgem see this as a small, unusual risk. The ERSG advised Ofgem that they give further guidance on disallowance. IT projects were discussed, and the group expressed the view that that the funding structure could make the company risk averse. The idea of a risk contingency pot was discussed, which Ofgem seemed relatively open to on the basis that they understood the point that the group were making. Ofgem are going to take this away.

Incentives were then discussed and where upsides might be. Ofgem want to ensure that they are rewarding out-performance as opposed to BAU performance. Ofgem questioned whether there was enough specificity in the business plan to allow for assessment of this. Existing incentives were also discussed, and how they may be made to work.

ERSG explained that Ofgem seem more concerned with over-recovery than they are with closing the risks. Attempts to deal with the risk by allowing bigger profit seem to go nowhere. It may be more productive to work on how the risk can be mitigated. If the ESO were to divorce this from the reward, then discussions may progress further. Ofgem were questioning whether the ESO wanted to see the risks removed or whether they wanted the potential to earn a higher reward.

The ESO replied that this captures the difference in opinion between the two parties. The ESO feel that they are being pushed towards charity / not for profit by Ofgem. They are not looking for a large reward to cater for risk / disallowance. They want a framework which reflects the business and activities that they undertake. There is a significant amount of activity performed by the company which is not remunerated

While the ERSG felt that Ofgem accepted the decisions and outcomes of the SONI CMA case, the ESO felt that this was the opposite of what they had previously heard from Ofgem. Ofgem have created the potential for additional remuneration, but they still believe that this should be set at 0. This was different to what the ERSG felt they had heard, as they felt Ofgem were open to the company presenting more evidence on what the risks were. They had accepted that there is risk in dealing with other people's money.

The ESO pointed out that they have asked the ESO to quantify the risk, but even in the SONI CMO case they were unable to quantify this risk.

ERSG continued to summarise that they had conveyed very strongly the desire for the ESO to be able to take risk and be allowed to do so. Ofgem's requirement for proof of risk is understandable but they need to accept that risk is inherent and difficult to quantify. The question is how to meet them in the middle. The group advised that the ESO need to avoid spurious accuracy, and that the benchmark should be a range.

The ESO asked if there was any appetite from the group to send a note to Ofgem which summarises what was discussed and what was suggested.

54. Business Plan- Summary of changes since October (Angelita Bradney)

The presenter gave an overview of what had been updated in the business plan in the previous meeting. They also went through the feedback letter from the Challenge group which was shared with all ERSG members during the meeting. The group asked for some clarification on why the RAG status on Stakeholder Engagement was amber/red. The company explained that there is some concern on who has been engaged and how widely stakeholders have been engaged. Also, uncertainty on how engagement relates to buy-in. The ESO plan to provide more evidence on this around the Design Authority in the next verison. Further Challenge group feedback was that the content in the plan focuses on stakeholder engagement around the plan itself, rather than wider engagement. The ESO are also looking to address this.

The ERSG asked the company to expand on the IT strategy. There's a large up-skilling planned but also a reliance on framework providers. How the split work across in house vs external? The ESO are trying to use a flexible model. ERSG feedback was that the end goal in this area still wasn't clear. The ESO agreed that they would work to clarify this further.

In the Challenge Group feedback on theme 2 they question whether the ESO is the right organisation to deliver the new IT system. The group asked if any more detail was given on this feedback. The ESO weren't aware of any information and don't believe that this had been discussed at any of the meetings.

Further feedback stated that interdependencies on delivery with other market parties still need to be addressed in the business plan, and the ERSG agreed with this feedback. The ESO explained that the Design Authority is the main way that they will address interdependencies and they also understand that they need to further demonstrate their connections with DNOs and other network companies. The chair asked if there were any views in the room on the ESO's relationship with network companies. It was acknowledged that DNOs are a challenging relationship. The ESO is a new organisation and so there is tension between how far they go and how restricted they become. For this reason, they can be perceived as stepping on toes and crossing their boundaries of roles and responsibilities. If the ESO help the industry to recognise that this is the case, then it might help with these relationships.

ESO confirmed that they would send an updated digitalisation strategy document to the group in the following week.

55. Metrics (Gavin Lochead)

The presenter gave an overview of the metrics proposed by the ESO.

Theme 1

Ofgem proposed the idea of having core metrics, and the ESO would consider metrics in this sections to be core.

The ERSG asked how the metrics in this theme interplayed with the ambition for net zero. It is such a large aspect of the transition that you would expect to see it here. It was also questioned whether having a satisfaction survey on the Design Authority was the right way to understand whether it was working or not. The innovation is also not represented as part of these metrics. There needs to be focus on how the company are getting to the future and this will be done by measuring innovation. The ESO remarked that this was useful feedback and they will give it some consideration.

The group asked whether the intention of the metrics was for performance or reporting, or both. The ESO see them as reporting metrics, although recognise that they will probably need to link into incentives in some way. They are also a way of measuring ESO investments. They would assess what each investment is trying to do and have a metric linked to them so that each investment would have a metric linked to them. There is a real possibility that some of them would end up in the incentives framework. The issue today is that delivery against a metric does not ultimately result in a reward. A question to Ofgem is if the ESO are going to have metrics then what purpose will they be for?

With regard to metrics, the group asked how the company would deal with the fact that investment would be upfront and benefits may not be until further down the line. The ESO explained that this has been built into the current incentive scheme. However, the outcome of the first year of the scheme suggests that this has not worked well. Suggests that stakeholders' mindsets is not clear on the idea of future rewards.

The company were asked about proposed metrics on system reliability. The idea would be to measure unplanned outages on CNI systems. There was some confusion whether system reliability referred to IT systems or the network. The ESO confirmed that this was referring to IT systems and that they would make this clearer in the metrics. The company also agreed that they would also include a metric on security of supply which does not overlap with TO responsibilities/

One member raised a frustration that their company had repeatedly raised feedback around the Demand Forecasting metrics which has not been addressed. They believe that accuracy should be measured as a percentage rather than an absolute value. The ESO agreed to arrange a call with relevant people to make sure that this feedback was addressed.

ESO to arrange a call with Demand forecasting team to address the above feedback.

Further feedback in this theme was that the ESO could include a measure of diversity of ancillary service providers which would also be a good indication of progress in innovation. Ofgem and BEIS are looking at the BlackStart standard. If there is something like this that the ES) are able to attach a hard metric to then they will but they need to wait for information on this standard to be released. The ESO will also consider if there is a way to include a specific innovation metric.

Theme 2

The group referred to the metric which states "Proportion of balancing services procured competitively". What is the proportion currently? The ESO agreed to take this question away.

ESO to confirm current proportion of balancing services that is procured competitively.

There was discussion around the "EMR decision quality" and whether this was appropriate. The group suggested that it would be good to have more pragmatism brought into the prequalification process. Equally the metric which proposes "consumer value savings from code modifications" was discussed, and the extent to which the ESO have control over this. It was concluded that this was more to ensure that value is being delivered by the process, and that its more of an industry measure than a measure on the ESO.

Theme 3

The presenter gave an overview of the metrics proposed for theme 3, which were all related to the NOA process. The group asked for clarification on the "NOA participant mix" metric. It was clarified that this refers to non-network solutions, and measuring the move away from solutions being provided purely by the three TO companies. Clarification was also required on whether these metrics were intended to measure end of life assets, which links back to the question of what is an ESO role and what is a TO role. The ESO agreed to clarify this. They were also asked whether the NOA is purely forward looking, as an important metric may be to look back and see how decisions have out-turned. This is unlikely to be included as a metric but the ESO will look at including this in the NOA process. It could perhaps fit into theme 1 as an aspect of regular reporting and could be helpful in engagement with Ofgem.

ESO to clarify theme 3 metrics and state whether they apply to end of life assets.

ESO to look at possibility of expanding NOA process to look back at previous year and determines if outturns were in line with assumptions.

Theme 4

For theme 4, the ESO were asked if something could be included on timelines and speediness of response. They confirmed that they were currently looking at a second metric on connections which

would be more process based, and suggested that they may also need a "right first time" metric. This has been looked at previously but there were concerns over the extent of control that the ESO had on this. They agreed to take it away and have another look.

ESO to consider whether a "right first metric" could be included relating to the connection process.

A member of a TO company mentioned that they were also planning to survey customers that they provide network access to, and that it may be appropriate to have a common metric between ESO and TO.

ESO and TOs to explore the possibility for a common metric around stakeholder satisfaction with connections.

The ESO had also been looking at the possibility of having a network compliance metric and the group were asked for their thoughts on this. It was suggested that this may be more of a question on for the customer.

The group felt that there was a gap in the metrics on this theme, as there are currently none which relate directly to the title of the theme. It may be helpful to have a metric around frequency that policy and energy solutions are being provided. It may also be a good place for the ESO to include some metrics which references progress made in achieving the overall business plan, for example achieving net zero. The ESO confirmed that they had discussed including metrics along these lines in theme 1. The issue is how they ensured that they do not overstep their responsibilities with a metrics such as this. The group felt that it was more about demonstrating progress in the ability to operate a zero-carbon system. Having something which measures contribution to decisions seems central to theme 4, and the ESO are in the unique position to be able to do this kind of work. The ESO suggested that they will look at a simple critical path with a RAG status as a metric. The ERSG agreed that this would be helpful.

ESO to consider a critical path of major milestones with a RAG status as a metric.

The group remarked that there is a clear and positive aspiration to increase access and flow onto network with the network access metrics. They questioned whether there's a risk that this isn't balanced by a metric which allows network access to be taken. The ESO agreed to consider this in coordination with TOs.

ESO to consider balance between aspiration to increase capacity of network and allowing access for outages in coordination with TOs.

Cross ESO Metrics

The ERSG warned that the metrics should ensure that they differentiate what is beyond the control of the ESO. The company confirmed that they need to avoid a set of rigid incentives which are set 3 years out when they are proposing an agile delivery model. The performance structure needs to support agile delivery. Regarding the proposed metric on data shared, it was asked whether this is regular data or whether it also includes outcomes of studies, findings etc. The ESO intend to create a prioritised list of data so that they can transform it in a way that is more useable for the industry. The group asked that this is more explicit in the metric.

The ERSG reiterated the need for a metric on zero carbon. The ESO wouldn't necessarily need to be assessed against this, but it would indicate progress against the ambition. It is something that needs to be visible whether the company are judged on it or not. The ESO agreed that this is important, as it is the ambition which holds the business plan together. It's what consumers will care about and will be high profile politically.

ESO to include metric which measures progress against zero carbon ambition.

56. CATO Early Competition plan update (Craig Dyke and Sally Thatcher)

The presenters gave an update on ESO plans for the CATO early competition plan, given that there was concern around how this has been approached to date. They explained that Ofgem have now made a decision that this piece of work should be progressed independently from the business plan. The first delivery output Is required by the end of December this year, and the final plan is due February 2021. The ERSG asked what the output will look like at the end of Feb 2021; how mature will the proposals be and what further will need to be done in order to launch the model? Once the output is delivered by the ESO, it will then be handed back over to Ofgem and it isn't clear how they will manage it from there. Expectations for Feb 2021 will also clearly be set out in December this year. Legislative and license changes will most likely be required. It is expected that the final output will beyond the conceptual level, and will be specific in what needs to be done. This will include a rulebook and a blueprint for implementation. It is unlikely that there will be specific drafting for license changes at this point but there will be detail of the changes required.

The group asked whether the ESO will be exploring models other than the early model, or whether they will be continuing from where Ofgem have left off. It was highlighted that one of the ways which this could be implemented was by the ESO being the procurer rather than Ofgem. In other industries utilities are the procurer rather than the regulator. Ofgem have little experience of procurement which could be problematic. Work that the ESO will undertake includes looking at who is best placed to run the model and Ofgem have specifically asked what it would look like if the ESO were to take this role.

ERSG also asked if the scope of the work will include competition for non-network solutions. The ESO confirmed that this will be built into the plan, and that there are some challenges around how you compare network with non-network solutions. This has been achieved elsewhere and the ESO will be considering these instances. There were also questions around the ESO's involvement in DSO

level competition and how they see this working. Ofgem have asked this as an open question and the ESO are considering a range of options from running the competition to doing an audit of the competition, these considerations are still early in the process. The group felt that it's important to be clear that it is more about coordination than taking over the running of other people's networks, linking in to ESO's overarching role of efficient system operation. The group drew comparisons to the proposals around a connection hub, and that this is presented in a way which suggests that the ESO is looking to take over Distribution networks.

When asked whether the ESO are doing any work on the late model they explained that their focus is currently on the early mode as instructed by Ofgem. They would be Ofgem to exploring this If Ofgem went in this direction. The group asked where the push was coming rom to explore a design only competition format. The ESO weren't sure and thought perhaps the pool for competition was less limited because it's essentially a competition for ideas and could drive innovation. It would be a challenge to enforce credibility in this instance. It is possible that design could be extended to include consenting, which parties would not need a license for. The company clarified that the scope included onshore only, but that they are wary of making decisions which would close doors to an offshore rollout.

There is stakeholder frustration with the start stop nature of the process so far. Given that this is likely to involve license changes, the group urged the ESO to set out timelines for when updates will be given, to keep the momentum and pressure going.

57. Roundup by Fintan, including delivery confidence (Fintan Slye)

The presenter thanked group members for their ongoing input and explained that it was ERSG feedback which led to the decision to make the ambition of zero carbon operation by 2025 a central theme to the business plan. Two areas were highlighted:

- CATO model: The ESO hope it is now evident that they are actively progressing this work, and how they are doing so
- Shared Services model: The ESO have tried in the next iteration of plans to better articulate how this will work

The ERSG are very appreciative of how the company has responded to the multiple requests. They have been able to feedback positively on this to the Challenge Group and Ofgem. On the IT and Shared Service piece, the group asked who would own the IT relating to these projects. If consumers ultimately pay for these it is important that they also get any benefit arising from the IP. The ESO said that they would confirm this, but they think that it would sit with the ESO.

ESO to clarify who will own Intellectual property of IT projects in the business plan

The chair highlighted that IT projects do not have a good reputation or running smoothly, and asked to what extent the company learn from past projects, and take lessons learned into account in new proposals. The ESO explained that they do this, and that the way that the delivery model has changed is a result of reaction to lessons learned.

The company were asked how they see the split between staff and contractors. The ESO explained that there are targets set and in one area this will be 95% of NGESO employees across teams. There is a lot of work to be done to reach this. The ESO are building their own capability internally and will go to providers once the development capability is designed and fully understood. There are plans for a big recruitment drive over the next 18 months in order to recruit approximately 300 people.

The group fed back that they felt the progress made on CATO has been good. Previous points of concern from the group have been covered off well. Time will tell as to how progress is made in this area and there was some support for an ongoing role for the ERSG in monitoring these plans. It would be good to see the ESO be more proactive than reactive in this area, it still seems that actions are in response to Ofgem's direction rather than the ESO taking initiative.

58. Future for ERSG (Alice Etheridge)

The presenter summarised the proposals to continue with the ERSG group and asked some questions to the group on whether they think it is appropriate. The ERSG responded that they will consider the questions in the closed session and come back to the ESO with some thoughts. The ESO also committed to sending a note around about the Open Hearings and what to expect.

Again, the group thanked the ESO for the information and the huge amount of work that has gone into the business plan. The test for the ERSG will be whether the business plan is different to what the result would have been without input of the group. It feels like a great amount of change has been achieved and therefore the group has been a success.

59. ERSG Report Preparation (Closed Session)

Notes in separate document