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
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

1. **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.

2. **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.

3. **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 . The ESO clarified that there are three key documents being published:

1. 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. Forward Plan 2019- 2021 - 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.

4. 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.

5. 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.

6. 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)

7. 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.

8. 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.

9. 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?
    - 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.

10. 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.

11. Closed session – Notes circulated separately