

# *Future Power System Architecture Group*

Ofgem DSO Governance Team

10th May 2023

Dear Colleagues,

## **Response to consultation on Future of local energy institutions and governance**

This response is provided by the Future Power System Architecture (FPSA) Group, an informal collaboration of experts from the Energy Systems Catapult and The Institution of Engineering and Technology, with wide experience across the whole energy system. The Group was formed around the Future Power System Architecture (FPSA) programme<sup>1</sup> and is now actively supporting energy system transformation in pursuit of Net Zero.

### **Our perspective**

In our view, a coordinated whole energy system approach is essential for achieving Net Zero targets in an affordable and resilient way. Local energy systems have an increasingly important role to play. In our prior response to you on this topic we set out our views that:

- Energy infrastructure for heat and transport will largely be developed at a local level.
- Local and regional area energy planning is needed to optimise the whole energy system.
- Agile and inclusive decision making is needed to optimise energy resources at a local level.
- Local governance and support structures, including information sharing are needed.
- Local capability and funding deficiencies must be addressed.

The current governance arrangements are not able to address these key drivers and constraints. The current arrangements may be characterised as top-down nationally led silos for specific sectors, with whole system co-ordination being mainly strategic, and not operational. In particular, local or regional input is informal, reactive and inconsistent.

All of these factors result in sub optimal energy transition operation and planning. In order to address these issues, we suggested that a regional system planner and operator (RSPO) model could be an effective way forward. We suggested such bodies should:

- Be independent but also accountable to give legitimacy.
- Have the relevant expertise and funding.
- Be licensed entities, with independent funding and obligations to deliver public service responsibilities consistent with the energy transition.
- Have obligations to interact and coordinate with other parties e.g., FSO, DNOs, GDNs, Local Authorities, etc,

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<sup>1</sup> The FPSA programme undertook the analysis needed to understand the functions that would be demanded of the future power system and considered the innovation, implementation and governance needs that would have to be addressed.

- Have their interactions with other bodies codified where appropriate to ensure effective interaction.
- Be established on appropriate regional boundaries e.g., DNO licensed company areas.

We suggested that these RSPO's should be responsible both for local planning and operation so that whole system optimisation could be performed at both a planning and operational level. They would be able to optimise whole energy infrastructure for the future, addressing:

- Local economic, environmental, and social plans
- Interaction across electricity, heat, and transport, and
- Interaction with other local industry and public bodies.

While we suggested that overall responsibilities for planning and operation should lie with RPSO's, we also recognised that day to day operational delivery functions such as electricity system control could be delegated to DNOs or other parties as appropriate.

#### **Ofgem's proposals for future local energy institutions and governance**

Ofgem's review of future local energy institutions and governance makes the following key reform proposals:

- **Energy system planning:** Introduce new Regional System Planners ("RSP(s)") to ensure there is accountability for regional energy system planning.
- **Market facilitation of flexible resources:** Assign a market facilitation function to a single entity with sufficient expertise and capability, to deliver more accessible, transparent, and coordinated flexibility markets.
- **Real time operations:** Keep real time operations within the distribution network operators (DNOs), ensuring clear accountability for network reliability and safety.

Ofgem considers that its proposed package of reform is proportional to the issues with current arrangements, achievable at pace, cross-vector, coherent with national governance and delivers the priority benefits. They are aimed at ensuring that future energy system planning must take a cross vector view and that future governance arrangements must go beyond considering roles and responsibilities for DNOs alone.

The reforms aim to ensure that there is clear accountability for the delivery of the key energy system functions necessary for a smart flexible energy system capable of achieving a low-cost net zero transition. The proposals are also considered to be adaptable to future change, which will be important given expected continued change in the energy system.

Ofgem propose the FSO as the lead option to take on the proposed RSP and market facilitation roles, via licence obligations. Both roles have strong synergies to the FSO's national functions and it would support greater local and national level consistency and coordination.

Ofgem consider that the case for change was strongly confirmed for energy system planning and market facilitation of flexible resources, with concerns centred on accountability, credibility and coordination. But the case for change was weaker for real time operations although a lack of transparency and potential for conflict of interest was clearly identified.

### **Our response**

Overall, we welcome the Ofgem proposals which closely mirror our prior suggestions. We believe that the proposals go a long way towards allocating clear responsibilities for whole system planning and operation at a local level, ensuring that there is good coordination at national and local levels.

We recognise the pragmatic approach that Ofgem has taken in allocating RSP responsibilities to the FSO, an existing organisation with necessary independence and the relevant capabilities that can start to address the local planning and coordination challenges without delay. While our previous response highlighted the benefits of combining planning and operational delivery activities, we also suggested that these could be delegated to DNOs.

Overall, we strongly support the proposed new governance approach you have outlined. It should provide a welcome pathway to greater local and national whole system coordination, helping to deliver Net Zero in a much more integrated way. As you mention, it does offer the opportunity for further development over time as experience and capabilities are built in RSPs. They may evolve to become standalone entities in the future.

However, there is a long way to go before these benefits may be realised – while the FSO may take on additional responsibilities and accountabilities, it is important that the valuable expertise within DNOs and emerging DSOs is not lost, and that wider cross vector skills are recruited and developed to contribute effectively to coordinated local energy strategy development.

It will be critical to define the roles and responsibilities of all parties in this transition more fully such that they can co-ordinate and engage effectively. Responsibilities for engaging between parties across the national and local whole energy systems will also need to be agreed. Interface agreements will need to be agreed and codified as necessary.

We trust these comments are helpful and we stand ready to assist you in further consideration of these issues as necessary.

Yours faithfully,

**Robert Hull**

**On behalf of the FPSA Group**

## Annex: Responses to questions

### Proposed governance reform: energy system planning

#### Roles and responsibilities

Q1. Do you agree with our proposal to introduce Regional System Planners as described, who would be accountable for regional energy system planning activities? If not, why not?

*Yes, we agree with this approach.*

#### Detailed design choices

Q2. What are your views on the detailed design choice considerations described?

*We consider the design choice considerations are appropriate and provide a good balance between the perfect but longer to implement solution, and the good but easier to implement.*

Q3. Do you have views on the appropriate regional boundaries for the RSPs?

*For practicality, we suggest that these should be fewer in number than the 14 DNO areas. Perhaps using around six GB geographic regions might provide an appropriate way of engaging with the relevant whole energy system resources and local governance authorities.*

Q4. Do you agree that the FSO has the characteristics to deliver the RSPs role? If not, what alternative entities would be suitable?

*Yes, the FSO has the necessary characteristics to address these issues but would need significant reinforcement in resources and its management in order to undertake these activities in the proactive way that will be necessary.*

*As far as alternatives are concerned, the obvious candidates are DNOs/DSOs – however, the FSO may be able to reach agreement with these parties and others to undertake certain local delivery activities on its behalf under suitable oversight.*

### Proposed governance reform: market facilitation of flexible resources

#### Roles and responsibilities

Q5. Do you agree with our proposal for a single, neutral expert entity to take on a central market facilitation role? If not, why not?

*Yes, we agree with this approach.*

Q6. Do you agree with the allocation of roles and responsibilities set out in Table 2? If not, why not?

*Yes, we agree with this approach.*

Q7. Are there other activities that are not listed in Table 2 that should be allocated to the market facilitator or other actors?

*This appears to be a sensible allocation of roles – however, it's difficult to see how this would work in practice and whether this might represent any barriers to the effective operation and growth of flexibility markets and local and national levels.*

*While flexibility first market policies would be expected to be applied, it will be important to understand how these might operate in relation to other investment decision making criteria.*

### **Detailed design choices**

Q8. What are your views on our options for allocating the market facilitator role?

*Yes, we agree with the approach to appoint the FSO as this can be integrated with national flexibility markets. But we suggest this should be kept under review as it is potentially a major increase in activity volumes that may overwhelm the ESO. Once established as an independent activity, it may be appropriate to outsource such market facilitation activities to a third-party provider.*

Q9. Are there other options for allocating the market facilitator role you think we should consider? If so, what advantages do they offer relative the options presented?

*Please see our comments above.*

### **Proposed governance reform: real time operations**

#### **Roles and responsibilities**

Q10. Do you agree that DNOs should retain responsibility for real time operations? If not, why not?

*Yes, we agree with this approach.*

#### **How we will assess impacts of reform**

Q11. What is your view on our proposed approach to the undertaking of an impact assessment as outlined in Appendix 1?

Q12. What is your view on the most appropriate measure of benefits against the counterfactual from the package of measures designed to enhanced flexibility, of which our governance proposals are a key enabler?

Q13. How should we attribute these benefits between the governance changes in the proposed option, and other changes required to achieve the benefits? We particularly welcome analysis from bodies that have undertaken an assessment of benefits, specifically how those benefits might be attributed to different policy reforms that are required to achieve those benefits.

Q14. What additional costs might arise from our governance proposals? We welcome views both on the activities that may arise and cause additional costs to be incurred, as well as the best way to estimate the size of the costs associated with those activities.

Q15. What additional costs may arise from sharing functions with several interacting organisations? We welcome views on set up cost, lost synergies, and implementation barriers.

*For questions 11-15: We are unable to provide detailed responses to these questions. Overall, we consider that the approach being taken is appropriate – ultimately the counterfactual may be represented by a failure to achieve Net Zero in cost-effective, resilient way, with the consequent negative impact on society that may be expected to run into many billions of pounds.*

## **Appendix:**

### **About the Institution of Engineering and Technology (IET)**

The IET is one of the world's largest engineering institutions with over 158,000 members in 150 countries. We are a diverse home across engineering and technology and share knowledge to engineer solutions to global challenges like climate change. With our roots in electrical engineering, we have been championing engineering solutions and the people who deliver them for 150 years. The IET provides independent, impartial, and expert advice, spanning multiple sectors including Energy, the Built Environment, Transport, Manufacturing and Digital. More details can be found: [Energy Panel \(theiet.org\)](https://theiet.org)

### **Future Power System Architecture (FPSA)**

For the UK to meet carbon reduction targets and achieve clean growth ambitions, the transformation of the energy system needs to consider the integration of physical, digital and market systems.

### **Why we need whole system engineering for economic and sustainable growth.**

The Future Power Systems Architecture (FPSA) programme takes a whole system approach – considering the traditional power system together with the installations, appliances, and devices on the customers' side of the meter – and how it interacts with other energy vectors such as transport and heat.

FPSA is delivered by an independent expert body with extensive technical, commercial, regulatory, digital expertise and experience. It has a strong customer perspective.

Transforming the UK energy system to be clean, secure, and affordable requires integrating and optimising solutions and innovations in a rapidly changing sector.

New assets, new services, new risks and most importantly new requirements from customers are all shaping a very different set of opportunities and challenges for the sector.

Decarbonisation is a primary driver of this change, but it is reinforced by the trend towards decentralised energy and the advance of digitalisation. The challenge is to facilitate the transformation of the power system in an efficient and timely way that delivers value to customers.

*Full details can be found [Future power system architecture \(theiet.org\)](https://theiet.org)*