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Consultation response: Future of local energy institutions and governance

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Summary

Energy Systems Catapult (ESC) welcomes the opportunity to respond to Ofgem's consultation on future institutional and governance arrangements that should apply to local energy.

ESC was set up to accelerate the transformation of the UK's energy system and ensure UK businesses and consumers capture the opportunities of clean growth. ESC is an independent, not-for-profit centre of excellence that bridges the gap between industry, Government, academia, and research. We take a whole systems view of the energy sector, including in policy design and implementation, helping us to identify and address innovation priorities and market barriers, to decarbonise the energy system at the lowest cost.

We welcome Ofgem progressing the issues of local energy governance. We are pleased to note the influence of ESC's work on Ofgem's thinking – most notably the references made to our work in Ofgem's call for input on the topic in 2022.

With regard to the proposals made in the consultation paper, our main messages are:

1. Regional System Planners (RSPs)

We agree there is an appeal for a local coordinating role as articulated in the consultation. However, given the proliferation of entities in the energy and closely-related sectors, we think there should be a high threshold to adding another organisation. In essence, this is about articulating the "how" of RSPs as much as the "who":

- Understandably, given Ofgem's remit, the RSPs are characterised in terms of having energy-only responsibilities/focus, with an emphasis on their interaction with network operators and price control. While that may need to be the case, there should be a clearer articulation of the link between RSPs and the local authorities in their region. The disjoint between energy infrastructure planning and spatial planning is a weakness of current governance arrangements and a barrier to decarbonisation.

ESC developed Local Area Energy Plans (LAEP) specifically to address this barrier and facilitate effective coordination and collaboration between networks, local government and other stakeholders. LAEPs do so by exploring different pathways to decarbonising a local area whilst considering a range of technologies and scenarios, combined with stakeholder engagement to provide the most cost-effective pathway for that local area and identify

low-regret activity to progress in the short to medium term. **We think LAEP can have an important role in facilitating the function that the RSP are intended to deliver.**

- The consultation is clear that the three roles presented were developed primarily with the electricity sector in mind. This is logical when it comes to the roles of market facilitation and real-time operation (see our further comments on those roles below). However, we think the value of a strategic function relating purely to electricity is perhaps overstated in the consultation. In broad terms, the demand for electricity is expected to increase significantly over the coming decades – precisely when, where and by how much is uncertain, but there is little reason to think that an RSP would be able to make significantly more accurate forecasts than the DNOs. Moreover, if the RSP’s forecasts / plans are not binding on DNOs nor directly inform Ofgem’s price control decisions,¹ their added value appears limited compared to work Ofgem would be commissioning from consultants under current arrangements.

We think the more valuable strategic functions at a local level are (1) aligning spatial planning and energy infrastructure investment plans (see our preceding comment); and (2) cross-vector decisions, particularly if decisions about local investment in hydrogen, electrification of heat, etc. need to be made in the absence of clear national guidance.

- Related to our first bullet point, there is a question of how the RSP would help address some of the obstacles that local authorities themselves face. We appreciate that matters such as the funding and resourcing of local authorities sit clearly outside of Ofgem remit. Nevertheless, we would encourage Ofgem – perhaps in partnership with DESNZ and DLUHC – to consider options such as giving local authorities a role in the governance of RSPs, and whether RSPs could provide funding and/or facilitate sharing of expertise to support for local planning initiatives.

We appreciate that Ofgem is only at the starting gate for answering these and many other questions about how the RSP may work in practice. At ESC we have done a lot of thinking on these issues and would like to offer Ofgem our support in further developing the concept of the RSP.

2. Market facilitator role

We support the vision presented by Ofgem – specifically that there should be an entity responsible for devising the same market rules across local electricity / flexibility markets.

Ofgem proposes that the market facilitation role should sit with the FSO, notwithstanding concerns about a potential conflict of interest. We do not think that an outright conflict of interest is likely to be a problem; however, there may be cultural issues – given the FSO’s centralised, transmission-focused role – that could make the FSO less effective in characterising the most efficient market designs at distribution level.

We also note that the consultation focused on electricity flexibility. We note that gas currently provides a considerably larger share of energy system flexibility than electricity and that, over time, cross-vector flexibility will become increasingly important. These considerations should be taken into account when designing the role of the market facilitator.

¹ Subject to a cost efficiency / consumer interest test.

3. Real-time system operation role

We agree that DNOs currently provide high levels of reliability, and that the risks of restructure are likely to outweigh the risks of mitigating challenges to the current design. However, we would question whether the proposed structure is ambitious enough in the scope of responsibilities and whether this arrangement is flexible enough to manage evolutions in technology and business models that are outside of the control of DNOs.

The complexity of interaction between power systems, gas/hydrogen systems, industry, large scale heat networks, transport systems and individual behaviours requires DNOs to become better equipped to support the opportunities of the energy transition. This is likely to be underpinned by the ongoing work on data transparency, but we consider that more tools will be needed to ensure the best outcomes for the system.

We provide a response to the detailed consultation questions in the annex. We would be happy to further discuss our response further with you.

Sincerely,
Ben Shafran

Annex: Response to detailed consultation questions

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?

We agree there is an appeal for a local coordinating role as articulated in the consultation, and the desire to ensure the role of 'local' and 'place' is at the heart of a whole systems approach. However, the extent to which the RSP enables more effective coordination of spatial and network planning, addressing the barriers which exist today and inhibit this, relies on the detail and extent of its role, influence, resources, and interface with network operators and local government.

Understandably the role and function of the RSP as described in the consultation is most detailed with respect to its possible interactions with electricity network operators and influence on the price control process. However, it is less clear how the RSP would create significant additionality in creating a mutually informing process between electricity network operators, local government, and gas network operators, or ensure that spatial planning considerations are robustly incorporated into a true regional system plan.

Without supporting clarity, or policy intervention, on a consistent methodology to achieve this, or further resources to support local government's role in regional planning exercises, it is not clear that the RSP would address these existing barriers.

ESC developed Local Area Energy Plans (LAEP) specifically to address this and provide a consistent methodology for effective coordination and collaboration between networks, local government and other stakeholders. LAEPs do so by exploring different pathways to decarbonising a local area whilst considering a range of technologies and scenarios, combined with stakeholder engagement to provide the most cost-effective pathway for that local area taking both spatial and network planning considerations into account.

We think LAEP can have an important role in facilitating the function that the RSP are intended to deliver. LAEP can provide a consistent methodological framework to structure engagement across all stakeholders. It can also provide the framework to ensure consistent inputs and flows of information from all stakeholders, including local government which is currently less clear in the RSP proposal, as part of shared planning process.

While LAEP is a master-planning exercise, and it would not be expected that a LAEP itself be fully adopted or endorsed by the RSP with respect to materially informing price control, components of it could be such as near term and low regret projects which receive the backing of all primary stakeholders.

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

We agree with the need to ensure clear accountability for place based whole systems planning, and with the need for this to be clearly independent with an impartial view of the optimum pathway across the whole system.

Thought will also be needed on how 'low regret' decisions can be enabled or supported by the RSP. A key aspect of Local Area Energy Planning is to identify 'low regret' activity as well as identifying a multi time horizon pathway. By 'low regret' we mean making some of the challenging net zero decisions where there is evidence that specific place-based interventions have a strong case across multiple futures.

The ability to take a view across the whole system should inherently include the spatial aspects of the system, this definition should not just be considered to include the energy networks. The FSO could theoretically perform a function, but it is by nature mandated to consider primarily the energy networks with no formal remit, power, or particular expertise, with respect to inclusion of spatial planning.

The involvement of local government within the governance arrangements of the RSP could be considered to balance this and provide certainty of material inclusion of spatial planning. ESC's LAEP guidance makes the case for local government leadership of LAEP, primarily due to their independence. More work is needed that sets out how place-based approaches such as LAEP can inform energy network planning including an appropriate 'feedback loop'. Existing entities such as the Net Zero Hubs, which involve local government, could also potentially be leveraged in a similar way with respect to providing this balance.

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

It would inherently make sense for any future whole systems coordination function to consider the existing geographies of the primary stakeholders it is seeking to align.

Through our work on LAEP we have found that engaging with regional government, and also other existing regional bodies such as the Net Zero Hubs - which share similar geographies to network operators - creates efficiency in scale. This can include overseeing a programme of multiple connected LAEP exercises within one wider geography. ESC is supporting Welsh Government to deliver such an approach, which connects the national to the regional and the local in Wales. We would be happy to discuss and share learning from this experience with Ofgem.

The role of regional government, such as combined authorities, can be critical in enabling effective whole systems planning at scale, enabling local government to interact with cross sector stakeholders effectively, and potentially providing supportive resources and capacity to constituent local authorities. The scale and geography of these existing 'regional' bodies, is also where strategic decision making powers, devolved resources, etc. also commonly sit; and these organisations have the experience in making strategic regional decisions (e.g. on transport). Aligning these geographies as much as possible would create an opportunity to align investment, strategy and policy, and agree delivery priorities and allocation of resources in a coordinated manner.

Building on the above, this could involve establishing sub-regional boundaries within an overarching regional boundary; with the sub-regional boundary aligning with existing local and regional relationships - e.g. a combined authority, city/growth deal region etc. Whilst these boundaries are place-defined and not energy network specific, we believe it is essential that places are involved with decision making. Work would be required to define an appropriate hub (regional) to spoke (sub-regional) alignment approach; with the RSP supporting this function.

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

We recognise that any option for who acts as the RSP (the FSO, DNOs, GDNs, a grouping of local authorities, or an entirely new organisation) carries with it some drawbacks. No one option stands out in our mind as clearly preferable.

With regard to Ofgem's specific proposal, since the FSO is not yet operational, it is difficult to say with confidence whether it is likely to have the characteristics that would enable it to be effective as the RSP. Should the FSO be given the role, two things that would require particularly close attention are resourcing and culture.

The FSO would need to be sufficiently resourced – above and beyond any current plans for the resourcing required to deliver its transmission-level role – to undertake the role of RSP(s) effectively. If operating effectively, the system savings that the RSP could deliver should dwarf the resource cost by several orders of magnitude – Ofgem should bear that in mind when developing the regulatory model that applies to the FSO/RSPs.

The FSO is expected to be resourced from staff who currently are part of National Grid ESO. Understandably, at least initially, this could result in the FSO having a tendency to favour large discreet infrastructure. It may also mean that the FSO is used to working with stakeholders that are well-resourced and well-informed (e.g. TOs, generation developers, Ofgem, etc.). Neither of these are likely to be features of the local environment within which the RSP would operate: electricity distribution networks will increasingly be characterised by large numbers of small, flexible assets; while many local authorities lack both the resource and expertise to engage on technical energy system matters. Organisational culture is notoriously difficult to change, so particular care should be taken to enable the FSO to deliver the function of RSPs effectively.

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?

We agree that current distribution flexibility market arrangements are not fit for purpose and that more attention is needed to facilitate more efficient arrangements for entry and participation. Ideally, the regulatory framework placed on DNOs should be sufficient to incentivise them to efficiently procure flexibility and optimise the role of flexibility markets in delivering the outcomes required by customers (and society more broadly) within their licensed areas. However, this does not address the risk of variation emerging between DNOs, which makes market entry at a national scale more difficult from aggregators and flexibility providers (see our response to Ofgem’s call for input on enabling distributed flexibility for further detail on our views).

In a sense, the proposal is to pass some of this active market development role to the neutral central market facilitator. In this context it is important to note that Ofgem itself will still retain a key role in specifying the broader price control framework applying to DNOs, which will drive the strength of their incentives to innovate and optimise the role of flexibility markets within distribution networks. Ofgem should consider that fully in its approach to the design of future price controls and the specification of outputs.

A more co-ordinated approach to market facilitation is indeed likely to reduce friction costs and make market participation across different DNO regions easier. But is also possible and likely that the precise role of flexibility will vary at regional level, and it may well make sense for there to be a degree of variation and innovation between DNOs in how they seek to specify and procure flexibility and to integrate it with both their real time operation of networks and their approach to managing and phasing network enhancements.

Therefore, we agree that there is a strong case for a neutral body to oversee standards around market facilitation, collaboration on product or contract standardisation and questions around the alignment of distribution and transmission markets. However, there is a risk that too much standardisation would dampen innovation and competition between DNOs (and potentially other parties such as heat networks) in how they use flexibility to manage and operate their networks. So a balance must be struck, and the role of the market facilitator should not be overbearing or overly prescriptive in specifying the structure and precise role of flexibility markets at local level. We would prefer, for example, to see a framework which allowed DNOs to innovate in product

specification and procurement strategies, reflecting their particular circumstances and resource endowments.

There is also a case to require the neutral market facilitator to ensure clear representation and participation from DNOs and a range of market participants.

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

We broadly agree with the allocation in table 2 – although as noted in our answer to question 5, we have some reservations around the potential for a neutral market facilitator to require adherence to nationwide standardised flexibility product definitions. This could have the effect of freezing innovation, and indeed place a barrier between efficient integration of flexibility product specifications and real time network operational procedures for which DNOs would remain responsible.

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

We have no identified specific current roles that are missing from table 2.

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

Another option for the market facilitator role would be to place a requirement collectively on DNOs and probably GDNs to collaborate in forming and hosting a more formal market facilitation function. There are a range of ways this could be specified and hosted – perhaps sitting within the FSO, but with its own governance overlay to address the potential conflict of interest issue identified in the consultation. It is important that DNOs, in particular, retain ownership and responsibility for resolving questions around how best to harness flexibility within distribution networks to deliver best value for customers. Arrangements must not act to create a perception that this key element of business strategy for the design and operation of distribution networks is in some way 'outsourced' to a neutral market facilitation entity over which they have no influence.

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?

See response to question 8.

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

We agree that DNOs currently provide high levels of reliability, and that the risks of restructure are likely to outweigh the risks of mitigating challenges to the current design. However, we would question whether the proposed structure is ambitious enough in the scope of responsibilities and whether this arrangement is flexible enough to manage evolutions in technology and business models that are outside of the control of DNOs.

Looking purely at the electricity networks, we consider that the operation of the distribution system should be carried out as it is today by the DSO function of the DNO, who will operate the networks as a strategic function to ensure the system is operated in a safe, secure, reliable and efficient manner. The DSO should enhance its capabilities to ensure it is ready to operate a power system of the future by acquiring capabilities such as forecasting of generation and demand, being able to provide signals and to play a neutral market facilitator role due to the increased prospect on a growing number of localised energy markets.

Acting as a neutral market facilitator can also aid in the development of a regulatory framework / mechanism to facilitate settlement of trade at the local level and enhance coordination with the FSO in areas such as ensuring availability of generating assets and improving primacy rules i.e. how generators navigate offering services to both the DSO and ESO/FSO. The key recommendation here is the DSOs should retain responsibility but actively look to enhance capabilities going forward. This enhancement in capability also includes developing greater coordination with the FSO to facilitate and anticipate upcoming disruptive technology and markets.

However, the consultation lacks sufficient consideration or vision for closely related assets. For example, paragraph 5.4 makes clear that the real time operations of behind the meter assets are out of scope, quite rightly, but as our markets and associated disruptive business models evolve, we need to make sure that the behaviour of these assets and the individuals/actors behind those behaviours is not being driven by a distribution system that is not keeping up with the needs of the wider energy system.

Paragraph 5.12 recognises one aspect of increasing complexity in operation across different actors in a more integrated energy system, but it is our belief that this coordination is both underrepresented and too narrow in scope in the consultation. The complexity of interaction between power systems, gas/hydrogen systems, industry, large scale heat networks, transport systems and individual behaviours requires the DNO to become more equipped to support the opportunities of a future transition, rather than risk constraining them. This is likely to be underpinned by the ongoing work on data transparency, but we consider that more tools will be needed to ensure the best outcomes for the system. The answer to the discussed question would depend on the further system development and design.

Questions not answered:

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?

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.