FAO: Charlotte Ramsay, Program Director, FRSO, NG c/o box.soincentives.electricity@nationalgrid.com
RE: **FPSA Response: The Future of the Electricity System Operator – Forward Plan -** consultation

4th March 2018

Dear Charlotte,

Thank you for the opportunity to comment on your Future of the Electricity System Operator – Forward Plan consultation. Please find our response following this letter (below).

We hope this response, as well those to previous and future consultations will support and build our continuing and valued dialogue and shows our willingness to continue to engage and explore the emerging issues for the future Energy Sector. We believe the relationship we have built between the NG ESO and the FPSA team is valuable to both parties and we regard continued collaboration as essential to achieving our mutual objectives.

In addition to the work we are undertaking relating to future governance (FPSA3), we are also progressing key innovation areas (FPSA4). FPSA4 is assessing priorities for further RD&D and Innovations to deliver the required future power system functionality identified in FPSA1 and further refined in FPSA2. Constructive bilateral meetings have been held with each of the Network Companies and your SO organisation to identify synergies within their innovation strategies that might be helpful in finding technical solution options for delivering functionality. This approach has culminated in a very helpful workshop with these companies (21st Feb 2018) and representatives from the ENA. We look forward to sharing our findings from this activity with you in due course.

In the meantime, we will be delighted to elaborate on or explain any of our answers in our response to this consultation so please do not hesitate to contact me at the address on this letter.

Yours faithfully

Simon Harrison (FPSA Chairperson)

The FPSA Programme (funded by BEIS & Innovate UK) is delivered in collaboration by
The Energy Systems Catapult (ESC) and The Institution of Engineering and Technology (IET)
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FPSA Response to National Grid's Electricity System Operator Forward Plan

The ESO draft plan contains much which is sensible and necessary, and clearly informed by current issues and initiatives. We do not have any particular comments on what the plan includes; we believe our most helpful comments are on what to us seems to be missing. It is also our expectation that some or all of the issues we mention below will also be on the agenda of the proposed ESP Performance Panel.

Our key suggestions are that:

- Firstly the ESO needs to show more emphatically that it is aware of, and prepared for, transformational change in energy use and delivery, and in particular the importance of equipment and business activity on the consumer side of the electricity meter. The opportunity to unleash both consumer benefit and cost reduction through provision of an enabling platform in the form of network and related data services is, we believe, an essential part of unlocking the benefits and mitigating the risks of the transformation.
- Secondly the ESO is by definition a unique operator and should be using its position and responsibilities to aid the transformation, either by being a catalyst, enabler or even driver.

Our conception of the ESO's future roles is not far from that encapsulated by your vision and your four roles; however, your vision seemingly lacks the urgency of being prepared for the transformative change in energy delivery that can now be seen emerging.

It is probably worth emphasising too that we still see an energy landscape with multiple players with their own key responsibilities, and probably still a significant increase in their number and nature. We do not therefore see that the ESO's responsibilities or reach necessarily need any extension (or contraction). But we are suggesting that flexibility and agility will be key future attributes, and there is a clear opportunity for some thought leadership. Of course, thought leadership needs to be perceived as just that, and not a route for more centralization of powers and control etc.

The above paragraph is our vision, which can be recognized from our own published work on the future functionality of the electricity system. A key conclusion from FPSA's analysis is that today's governance mechanisms in the industry are inadequate in reach and scope, and also in terms of flexibility, speed and inclusiveness. We note that many commentators are now saying that the current arrangements are broken. The FPSA project has already proposed alternative thinking to governance process, and in our current work (FPSA3) are developing this in more detail.

We see challenges to the adequacy of today's governance and/or legitimacy in many areas of the detail of your plan. Nine of the twenty detailed components of your plan seem to us to be challenges that require governance change, either in the development of them, or in delivery:

- Commercial assessment transparency
- Information provision innovation
- Reform of balancing services market
- New provider onboarding
- BSUoS billing

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- Charging futures
- Whole system optionality and cross boundary solutions
- System access management
- Future system security

We therefore offer the observation that the FPSA's vision for functionality and governance should be a good match to the challenges that the ESO is facing. The original driver for FPSA is the challenge of overall interoperability of the future electricity system – but the FPSA solution to that necessarily encompasses the commercial frameworks that co-exist with technical governance. There appears to be a clear overlap of needs and objectives between the ESO and FPSA and we would be delighted to build on our existing engagement to help advance governance thinking and/or implementation in these important areas.

Another apparent omission from your vision is clarity on the term "whole system." It is clear that you mean at least the assets owned by licensed operators, and whilst this is necessary, we believe that the ESO vision needs to include much more clearly the system (from an engineering point of view) that is owned by customers. This is necessary to address the truly transformative changes now emerging: the flexibility and new autonomous behaviours of the demand side.

This question of the scope of your vision and thinking also extends to other energy vectors and transport. We note that you reference gas in a footnote on page 3. The current division between energy vectors can be seen as becoming increasingly irrelevant to customers. Energy is only a means to an end for customers and we need to ensure that energy provision is appropriately flexible and integrated to deliver the services and functionality that customers will need in the future.

We note that there is limited mention of the Open Networks project. We see this, pending any other governance or harmonization initiative, as a critical mechanism to ensure that system operational needs and functionality are developed appropriately between transmission and distribution for the whole system. And again here, by whole system, we include all the flexible demand side resources that both transmission and distribution will interact with.

Finally, we are surprised that a review of black start philosophy and capability, and the continuing challenges of managing declining inertia and RoCoF are not included in the deliverables.

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