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14 February 2019.

Sent by email to: [box.soincentives.electricity@nationalgrid.com](mailto:box.soincentives.electricity@nationalgrid.com)

Dear Fintan,

## **ESO Draft Forward Plan for Consultation April 2019 – March 2021**

Thank you for the opportunity to respond to the above consultation. This is a non-confidential response on behalf of the Centrica Group.

Developing and implementing competitive market mechanisms and ensuring those markets operate efficiently and transparently is necessary to stimulate investment in the provision of system management services. We recognise efforts during the current year, which have contributed to creating the market signals necessary for investment in flexible resources needed to support the transition to a flexible, smart electricity system.

The 2019-21 proposals represent a further step in the right direction. Particularly, we welcome the commitment to deliver consumer benefit through your efforts to support new providers and technologies to enter and compete in the existing and new markets<sup>1</sup>. There are two main areas in which the proposed Plan can be further strengthened:

- Providing greater transparency about system needs, procurement processes and operational decision-making.
- Delivering further outputs to facilitate competitive procurement of system management services.

There are details on how we suggest the Plan can be further strengthened in the attached appendix.

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<sup>1</sup> Page 2 of the consultation.  
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### **Assessing the proposals:**

We have assessed the proposed Plan based on our opinion of the reasonable expectations of an efficient and competent system operator. This is according to our interpretation of the guidelines set out in the *Electricity System Operator Reporting and Incentive Arrangements: Guidance Document*. Particularly, we took account of:

*A key principle for the ESO being able to achieve an above average score is that it has clearly evidenced the delivery of consumer benefits that go beyond 'baseline expectations'. This means there is clear and tangible evidence of the ESO taking new steps within that year to deliver better practices, business models and technologies that would not normally be expected by an efficient and competent system operator. These steps should lead to material improvements in the ESO's performance and unlock additional consumer benefits<sup>2</sup>.*

AND

*It is important to note that in isolation, a new activity or improved performance in a particular area does not necessarily mean that the ESO has gone beyond baseline expectations. In some areas, the ESO may need to change or improve its performance in order to meet baseline expectations.<sup>3</sup>*

We recognise that the level of funding received to deliver outputs is a relevant consideration when considering aspects of the draft Plan, including how baseline activity should be defined. However, we do not believe it is possible to sensibly assess that level of funding. This is due to the current price control covering a combined ESO and Transmission Operator. We expect this to be resolved through RIIO-2 but, for the interim period, we will rely on our opinion of an efficient and competent system operator to define our baseline expectations.

In broad terms, we believe rewards should be earned where performance is both good and improving. Penalties should only be applied where performance is both poor and deteriorating. We note many of the deliverables are expressed as tasks, for example, the publication of the ESO-led Balancing Services Charges Task Forces final report. When considering performance, the assessment will need to consider the quality of what is delivered in addition to whether the task has been completed in a timely fashion.

By exception, we propose modifications, additions and removal of deliverables and metrics, denoted by red text or text that has been struck through, in the attached appendix.

### **General observations:**

Along with the specific recommendations in the attached appendix, we include some general observations, which were reflected in Ofgem's response to the consultation on the 2018-19 Plan<sup>4</sup>.

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<sup>2</sup> "Electricity System Operator Reporting and Incentive Arrangements: Guidance Document", page 18: [https://www.ofgem.gov.uk/system/files/docs/2018/03/esori\\_arrangements\\_guidance\\_document.pdf](https://www.ofgem.gov.uk/system/files/docs/2018/03/esori_arrangements_guidance_document.pdf)

<sup>3</sup> "Electricity System Operator Reporting and Incentive Arrangements: Guidance Document", page 18

<sup>4</sup> Ofgem response to National Grid Electricity Transmission plc's Electricity System Operator's Consultation on the Electricity System Operator Forward Plan 2018-19: [https://www.ofgem.gov.uk/system/files/docs/2018/03/ofgem\\_response\\_to\\_eso\\_forward\\_plan\\_2018-19\\_consultation.pdf](https://www.ofgem.gov.uk/system/files/docs/2018/03/ofgem_response_to_eso_forward_plan_2018-19_consultation.pdf)

- Historic and current performance has not been included in the proposed Plan. This would have helped us to understand the trends in performance and to form a view on the level of ambition of the proposed Plan.
- Explicit justification for how the proposed deliverables either meet or exceed baseline expectations of an efficient and competent system operator has not been included in the proposed Plan. This would have helped us to better understand the ESO's view of baseline performance according to the Guidance and to form a view on the level of ambition of the proposed Plan.
- Direct or indirect consumer benefits associated with each of the deliverables, and how those benefits have been estimated, have not been included in the proposed Plan. This would have helped us to better assess whether the proposals are focussed on the areas from which the greatest benefit could accrue the relative merits of the deliverables and the overall consumer value that could be delivered.
- Narrative on why performance benchmarks have been chosen according to historic and current performance and consumer benefit has not been included in the proposed Plan. This would have helped us to determine whether the proposed Plan represents levels of performance that are both good and improving.

In addition to the above, it would have been helpful if it was explained why some deliverables in the 2018-19 Plan are delayed and have been carried forward into the proposed 2019-21 Plan.

I hope you find these comments helpful. Please contact me if you would like to discuss any aspect of our response.

Yours sincerely,

Andy Manning  
Director - Network Regulation and Forecasting  
**Centrica Regulatory Affairs, UK & Ireland**

**APPENDIX – recommended changes to deliverables and metrics**

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**Principle 1**

**Support market participants to make informed decisions by providing user-friendly, comprehensive and accurate information**

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We support the vision and objectives. Ideally, we would like progress to be made at a faster pace and believe additional deliverables are needed to support continued investment in the provision of balancing services. The implementation of the ESO as a legally separate entity within the National Grid group as of April 2019 provides an opportunity to demonstrate a culture of transparency is embedded across the organisation.

**Insights documents:**

We welcome the continued publication of these documents. Enhancing the documents’ contents is a way of achieving greater transparency. For example, key generation assets are obligated to declare availability according to the REMIT obligations. If there are concerns about the potential impact on system operation because of those assets’ unavailability, the ESO should identify those assets and discuss the potential impacts in greater detail than is currently the case, e.g. in the Winter Outlook Report. As an example, generator outages are now public domain information because of REMIT.

We recognise that system operation during the summer period has become more challenging than during the winter period in recent years. The operationalisation of the NEMO interconnector is likely to increase that challenge. This means the approach to producing the Summer Outlook report needs to develop. The consultative approach to producing the Winter Outlook report should also be applied to the production of the Summer Outlook report, to allow the industry to propose solutions that may aid system management during periods of low demand. We suggest an additional deliverable below.

| <b>Deliverable</b>  | <b>Description</b>  | <b>Delivery Date</b> | <b>Meeting or Exceeding</b> |
|---|---|----------------------|-----------------------------|
| Implement a consultative approach for producing the Summer Outlook report | Implement an approach like that used for the production of the Winter Outlook report to involve industry contribution | Q2 2019              | Meeting                     |

**Operational Insights:**

We welcome the deliverables in this area. The insight will provide greater transparency about system needs and will better allow market participants to offer balancing services. This may result in reductions in system balancing expenditure. Similarly, we have welcomed the publication of the Daily Balancing Costs reports. However, the reports can be improved by:

- Identifying Balancing Mechanism (BM) units rather than simply tagging actions as 'BM actions' and similar. This would increase competition amongst service providers.
- Clearly identifying when generation units that have contracts to operate are requested to do so.

These reports should ideally be published within two business days. Currently, the delay in the publications, sometimes up to two weeks, reduces their usefulness to market participants. We propose an additional metric to measure this aspect of performance. This has been included in Metric 1.

The Monthly Balancing Services Summary (MBSS) reports can be improved by

- Ensuring each publication contains at least 12 months of rolling data.
- Including commentary explaining the expenditure in each category for that month and a qualitative analysis of the trends in each category.

These reports should be published by the end of the following month. We propose an additional metric to measure this aspect of performance. This has been included in Metric 1.

We believe such changes will improve the functioning of the market. Arrangements already exist that will ensure that improved information provision does not result in negative consequences<sup>5</sup>.

The ESO could provide additional operational insight relating to the procurement of Firm Frequency Response (FFR) volumes, which could enhance market efficiency. Currently, the ESO sets out the overall response requirement and the amount of FFR volumes it intends to procure via tender. In any period, the requirement gap depends on several factors, including:

- Response volumes procured via legacy contracts,
- The volume of Mandatory Frequency Response (MFR) the ESO intends to utilise,
- The volume of Enhanced Frequency Response (EFR) the ESO can utilise,
- The volume of FFR the ESO already procured.

We acknowledge the commitment to improve the information provided to market participants who participate in the long term FFR tender rounds to reduce the number of tenders received where there is no requirement and increase the liquidity in the periods when there is a requirement<sup>6</sup>. This can be achieved by providing forward views of the volumes in each response category. Doing so will signal future requirements, which will support market participants making efficient investment and operation decisions, as well as reducing the potential for mistrust around legacy contracts.

We recommend the ESO publishes information on non-BM Short-term operating reserve (STOR) actions in real time, as is done for BM STOR actions and other relevant actions. Currently, information on actions taken in the BM is published within minutes those actions being taken. Additionally, other actions that could affect the cash out price, such as trades or warning instructions, are reported ahead of the settlement period to which they apply. However, information on non-BM STOR actions is not published until 20 minutes after the settlement period to which they apply has ended. The delay in publishing information on non-BM STOR actions

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<sup>5</sup> For example, Transmission Constraint Licence Condition and REMIT market conduct obligations.

<sup>6</sup> Page 18 of the consultation.

acts to reduce transparency and can give some market participants an unfair competitive advantage. We recommend this issue is addressed as the dispatch systems for non-BM STOR are replaced.

We suggest additional deliverables below.

| Deliverable   | Description  | Delivery Date | Meeting or Exceeding |
|---|--|---------------|----------------------|
| Publication of Firm Frequency Response requirements         | <p>For each tender period for which there is a requirement for Firm Frequency Response, provide a forward view for each of the following:</p> <ul style="list-style-type: none"> <li>• Overall response requirement</li> <li>• Response volumes procured via legacy contracts</li> <li>• Volume of Mandatory Frequency Response the ESO intends to utilise</li> <li>• Volume of Enhanced Frequency Response the ESO can utilise</li> <li>• Volume of Firm Frequency Response already procured</li> </ul> | Q2 2019       | Meeting              |
| Real-time publication of information on non-BM STOR actions | Implement changes to allow the publication of information on non-BM STOR actions in real time.   | Q2 2019-20    | Exceeding            |

**Forecasting:**

The accuracy of information provided to market participants, such as forecasts, is a key factor that supports efficient investment and operational decision-making. As such, we have welcomed the improvement in the quality of the demand forecasts since the issues caused by the significant uptake of photo-voltaic (PV) generation.

However, we have concerns about some forecasts published by the ESO - in particular, the winter peak demand forecasts. This is potentially driven by difficulties in forecasting the level of 'embedded' generation output. We expect this will only worsen since the operation of those assets is expected to become more unpredictable because of the reduction of 'embedded' benefits. We recommend the ESO reviews its data collection and forecasting methodologies to ensure demand forecasts are fit-for-purpose. Additionally, we suggest the ESO publishes wind forecasts as frequently as it is proposed to publish PV forecasts. We do not believe additional day-ahead demand forecast will provide any value to us.

We welcome the introduction of an API for making forecasts more accessible to market participants. This, along with improved forecasts, will better allow market participants to make efficient investment and operation decisions. We suggest modifications to the proposed deliverables below and that the additional day-ahead forecast is removed.

| Deliverable   | Description  | Delivery Date         | Meeting or Exceeding          |
|---|--|-----------------------|-------------------------------|
| Publish Forecasting Strategy Project Roadmap                                  | High level plan of the new forecasting strategy project deliverables.  | Q1 2019-20            | Meeting                       |
| Publish four additional wind forecasts to the market                          | Increase the number of published wind forecasts from 4 to <b>24 times every day (an update every hour)</b> .     | Q2 2019-20            | Exceeding                     |
| <del>Publish an additional Day-Ahead demand update at 12:00pm every day</del> | <del>Provide an additional day ahead demand update at 12:00pm every day following the 9:15pm daily update.</del> | <del>Q2 2019-20</del> | <del>Exceeding baseline</del> |

**Information access:**

We welcome the Open Data initiative. We recommend market participants are further consulted on their data publication requirements as they now need to access data from a multitude of sources whereas, historically, BM Reports were sufficient. We suggest the interim step proposed should be reclassified since it does not materially remedy the problem the overall deliverable is meant to address. We suggest the deliverable is modified as shown below.

| Deliverable | Description  | Delivery Date                             | Meeting or Exceeding |
|-------------|--|---|----------------------|
| Open Data   | We will create a definition for shareable data. We are committed to a programme that delivers all of this shareable data to market participants using the right pathway. We want to make our channels for sharing data with market participants clearer and more accessible. As an interim stage, we will produce an explorer page to direct users to the locations of the data. We will then move our data from these locations to be shared using the right pathway. | Data explorer page on website: Q1 2019-20 | Meeting              |
|             |  | New data portal: Q3 2019-20               | Exceeding            |

**Metric 1:**

We support the publication of the relevant reports. However, we believe accuracy is more important than simply providing forecasts. This was reflected in Ofgem’s formal opinion on the 2018-19 Plan:

*We expect a competent system operator to publish accurate information on time as part of its baseline performance. Therefore, we consider the ESO should be delivering beyond this to be eligible for an incentive reward for this Principle. We encourage the ESO to look at the quality and the usefulness of the information it publishes alongside publishing accurate data on time as this provides a better measure of performance. This would tell us more about the positive outcomes delivered for stakeholders and consumers.<sup>7</sup>*

To drive the right behaviours that will deliver value, the ESO should be measured on forecasting accuracy. We propose forecasting accuracy benchmarks in Metric 3. We recommend the following benchmarks for the publication of reports:

Daily Balancing Costs reports:

|                                |   |
|--------------------------------|---|
| <b>In line with benchmark:</b> | 100% of the reports published within two business days after the relevant day (excluding exceptional events)  |
| <b>Below benchmark:</b>        | Number of reports published within two business days after the relevant day (excluding exceptional events) falls below a suitable ‘dead band’ e.g. 85%. |

MBSS reports:

|                                |   |
|--------------------------------|---|
| <b>In line with benchmark:</b> | Each monthly report is published by the end of the following month, for all 12 months (excluding exceptional events). |
| <b>Below benchmark:</b>        | Any report is published later than the end of the following month (excluding exceptional events).                     |

**Metric 2:**

We welcome the greater transparency afforded by the Firm Frequency Response (FFR) tender process and associated documents. However, we believe there is little value in measuring performance against this metric. Circumstances in which market participants submit tenders to provide services for periods when, in fact, the ESO does not have a requirement creates market inefficiency. To aid market efficiency, the ESO should clearly signal its requirements and the timing of those requirements so that market participants may tender accordingly. This is discussed in Principles 1 and 3.

<sup>7</sup> “Ofgem Formal Opinion on the Electricity System Operator (ESO) Forward Plan 2018-19”, page 5: [https://www.ofgem.gov.uk/system/files/docs/2018/05/ofgem\\_formal\\_opinion\\_on\\_eso\\_forward\\_plan\\_2018-19.pdf](https://www.ofgem.gov.uk/system/files/docs/2018/05/ofgem_formal_opinion_on_eso_forward_plan_2018-19.pdf)



**Metric 3:**

We welcome the ESO being measured on forecasting accuracy since market participants may respond to those forecasts. However, we do not believe the proposed performance benchmarks are appropriate<sup>8</sup>. It is proposed that performance is meeting baseline expectations if accuracy meets targets, set by historic averages, in five to seven months of the year. Across the year, this could represent a worsening in previous performance. We do not believe the proposed metric will necessarily be effective in encouraging focus across the entire year. For example, if forecasting accuracy is below the pre-defined threshold in the first eight months of the year, the metric is unlikely to encourage the ESO to improve performance over the remainder of the year since the baseline benchmark can never be met. We note that Ofgem commented on the transparency and accessibility of forecasting metric in the 2018-19 Plan that was similarly constructed<sup>9</sup>.

Our baseline expectation of an efficient system operator is out-turn performance that is both good and improves upon historic performance. We recommend forecasting accuracy is measured based on the mean absolute percentage error (MAPE) across the year. We also recommend forecasting accuracy for solar generation is measured. We propose the following performance benchmarks for demand, wind and solar generation forecasts:

|                                |  |
|--------------------------------|--|
| <b>Exceeds benchmark:</b>      | This should represent a significant step-change improvement (e.g. 25%) in benchmark performance      |
| <b>In line with benchmark:</b> | For each month, the MAPE over the past three years (with an appropriate 'dead band') should be used. |
| <b>Below benchmark:</b>        | This should represent a significant step-change worsening (e.g. 25%) in benchmark performance        |

Notwithstanding the above observations, we note historic performance, the proposed pre-defined accuracy targets and commentary on the appropriateness of the benchmarks have not been included in the draft Plan.

Daily BSUoS forecast:

We recognise this was first implemented in 2018-19 and, as such, sufficient historic data does not exist. The quality of month-ahead forecasts could be used as a proxy for the daily benchmark. We propose the following performance benchmarks:

|                                |   |
|--------------------------------|---|
| <b>Exceeds benchmark:</b>      | This should represent a significant step-change improvement (e.g. 25%) in benchmark performance                             |
| <b>In line with benchmark:</b> | For each month, the MAPE of the month-ahead forecast the past three years (with an appropriate 'dead band') should be used. |
| <b>Below benchmark:</b>        | This should represent a significant step-change worsening (e.g. 25%) in benchmark performance                               |

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<sup>8</sup> The benchmarks have been presented in the reverse order in the consultation.  
 "Ofgem Formal Opinion on the Electricity System Operator (ESO) Forward Plan 2018-19", page 6.  
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**Principle 2**

**Drive overall efficiency and transparency in balancing services, taking into account impacts across time horizons**

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We welcome the ESO's efforts to drive overall efficiency and transparency in balancing services. Both should deliver consumer value.

**Uninterrupted, safe, secure system operation:**

We recognise this reflects the core role of the ESO. In some instances, a more efficient balance between security of supply and expenditure could be achieved. It is important that there is transparency relating to the management of systems events, which would allow the industry to assess whether the relevant actions were economic and efficient. We recommend the ESO describes the circumstances of each major system event and explains why the associated actions were pursued. We propose an additional deliverable below.

| <b>Deliverable</b>           | <b>Description</b>   | <b>Delivery Date</b> | <b>Meeting or Exceeding</b> |
|------------------------------|--|----------------------|-----------------------------|
| Major system event reporting | Report on major system events, such as through the Operational Forum, so that the industry can constructively reflect on short- and long-term actions taken by the ESO | Ongoing              | Meeting                     |

**Addressing operational issues:**

We believe an area in which the ESO has made good progress in recent years is its pragmatic approach to system faults that could give rise to vector shift protection operation. We welcome the revised methodology for tackling vector shift and rate of change of frequency (RoCoF) issues, though progress on resolving RoCoF issues has been slower that we would have liked.

The ESO should take a broader approach to resolving these and other system operation issues. For example, whilst trading on interconnectors is a means of managing RoCoF issues, it also provides the secondary benefit of managing other system issues such as voltage and inertia issues. Once an enduring solution to managing RoCoF issues has been implemented, this will reduce the need for trading on interconnectors to the same degree. In these circumstances, the ESO will need to consider what will be the most effective means to address these other system issues. We encourage the ESO to recognise these types of trends earlier ESO and to proactively consider how other system issues can be managed in the future.

**Metric 4 (Balancing cost management):**

We agree the ESO should be measured on system balancing expenditure. It is proposed the 2019-20 cost benchmark is mechanistically derived from five year moving averages of historic balancing cost (excluding Black Start), beginning with the rolling mean for 2009-2013 to 2013-17. We do not believe the proposed approach is necessary or appropriate. We note the indicative

cost benchmark is higher than that in the 2018-19 draft Plan (£1018.7m compared to £ 998.6m). It has not been explained whether there are any technical or operational reasons why the 2019-20 cost benchmark should be higher than that for 2018-19, given the approach is meant to reflect a broad range of operational situations and adjustments to the benchmark are proposed. Further, the data used to produce the linear trend is dominated by the years with the highest observed costs. In its Formal Opinion on the 2018-19 Plan, Ofgem stated greater detail on steps being taken to drive down balancing costs over the coming year and into the future would aid its assessment of performance<sup>10</sup>. We do not think the level of information in the proposed Plan meets that recommendation.

We recommend the cost benchmark is a simple average of expenditure over the past five years. We expect this approach will also capture a broad range of operating situations but without placing disproportionate weight on any set of circumstances. Adjustments to the cost benchmark have been included “...in recognition that there are a number of foreseeable fundamental drivers that might impact balancing costs but which historical costs might not reflect...”<sup>11</sup>. As such, we do not believe it is appropriate to include adjustments for the South-East reinforcement project and RoCoF issues since neither seems to represent a need for a step-change in expenditure. RoCoF was highlighted in the 2018-19 Plan as a factor for which increasing costs were observed. Similarly, network reinforcement is a continual activity and its impact on expenditure will be captured in the historic average.

Generator outages in Scotland and the suspension of the Capacity Market have also been identified as factors that could affect the cost benchmark. It has not been made clear how any such adjustment will be quantified and the what the governance arrangements for changing the cost benchmark are. These issues should be addressed in the final Plan.

We propose the following performance benchmarks:

|                                |  |
|--------------------------------|--|
| <b>Exceeds benchmark:</b>      | Out-turn cost lower than the benchmark   |
| <b>In line with benchmark:</b> | Cost benchmark this is revised according to our above recommendations, with an appropriate 'dead band' |
| <b>Below benchmark:</b>        | Out-turn cost above than the benchmark   |

<sup>10</sup> “Ofgem Formal Opinion on the Electricity System Operator (ESO) Forward Plan 2018-19”, page 6.

<sup>11</sup> “Electricity System Operator Forward Plan 2018/19”, page 11.

### **Principle 3**

#### **Ensure the rules and processes for procuring balancing services maximise competition where possible, and are simple, fair and transparent**

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We support the aim and objectives of this principle. We agree focus should be placed on increasing transparency and competition, to deliver consumer value. Indeed, the observed reductions in price for tendered ancillary services demonstrates how competition may deliver consumer benefits. As such, we welcome the ESO's intention to allow a diversity of resources to provide balancing services and to maximise competition where possible. Diversity should contribute to achieving better reliability and that services are provided by lower carbon sources. Moving away from procuring service bilaterally to procuring services through competitive means should place downward pressure on system balancing costs.

We also welcome the ESO's intention to support the transition to a distributed, smart, flexible electricity system, in line with overarching policy goals. Smaller, distributed and flexible assets are playing an increasing role in providing system balancing services, especially given increasing levels of renewable generation. The ESO should be mindful of the significance of developing competitive markets for balancing services in supporting the transition to a flexible system. Developing and implementing competitive market mechanisms and ensuring those markets are operating efficiently by, for example, appropriate signalling of system requirements is likely to stimulate investment and the commercial viability of service providers. Additionally, in line with the moving towards procurement in closer to real time markets for balancing and operability, the ESO should ensure all assets are able to participate in these markets.

Given the above, it is crucial the ESO provides clarity on the future of balancing services. The ESO should set out ambitious but realistic timescales, with the required level of resource to ensure that these timescales can be met. If any delays are anticipated, the ESO should communicate with the industry as early as possible and in a transparent manner.

#### **Review of progress against the System Needs and Product Strategy (SNAPS):**

We have supported the SNAPS and welcomed the roadmaps that outlined the upcoming balancing services reforms. Our reflections on progress to date are:

- The ESO has not yet delivered some of the improvements detailed in the roadmaps relating to 'Product Strategy'. We now expect much of the improvement of the ESO's products as detailed in SNAPS should be delivered in 2019-20. Some flexibility service providers will have committed investment and incurred costs according to the initial delivery schedule; these investments could have been delayed given the delay in delivering the improvements. As such, we believe these deliverables should now form part of baseline expectations.
- It is necessary for the ESO to better signal long term needs for the various balancing services. The ESO should be more transparent in detailing system needs and how it intends to satisfy those needs with the various balancing products. As an example, in the FFR Market Information Reports (MIR) and the Operability Strategy Reports, it is simply stated whether there will be a need rather than the quantities required to satisfy the system needs. We accept the signals will be indicative, especially relating to longer-term needs. However, this will provide broad investment signals to service providers.

**Product roadmaps for response and reserve implementation:**

We fully support the 'Rollout of full functionality in frequency response auction trial' deliverable and welcome the move to shorter-term timescales for procurement. This activity has been rolled over from the 2018-19 Plan and will be delivered at least six months late, thereby delaying competitively procuring response from all service providers (notably including some renewables and demand side response). This has also resulted in a delay in the ESO being able to quantify response requirements more accurately. However, we accept this is genuinely innovative.

The 'Report on development of new frequency response product suite' deliverable, which was included as a 2018-19 deliverable, has also been delayed. Further, communication regarding this deliverable has, in some areas, been below our expectations:

- the decision to delay the rollout of these products was only communicated to the industry a month before the expected rollout, and
- information regarding delivery remains outdated.

Some service providers committed investment and incurred costs according to the initial delivery schedule but have had to consider different, less-suited revenue streams. As such, this deliverable should be reclassified as a baseline expectation.

We believe the frequency response weekly auction, as set out in the 'Report on auction trial' deliverable, is just the first step in ensuring all assets can participate in frequency response markets. We believe it is unlikely weekly auctions will attract significant participation from DSR or renewable providers; this will require daily auctions, which the ESO has indicated is the end goal. Additionally, the ESO should clarify whether the volumes for the weekly auction will be from tendered FFR or MFR volumes. We recommend the report itself is considered a baseline expectation. An additional deliverable relating specifically to the implementation of daily auctions should be included.

We accept the ESO should review reserve services, to ensure they complement the new TERRE and MARI projects. However, at this stage there is little information available on the potential make up of these projects, other than the information published in the December 2017 Response and Reserve roadmap. We agree the design of new reserve products should be treated as exceeding baseline expectations; the description of the deliverable does not reflect this. We suggest below how the description may be revised.

In the December 2017 roadmap, the ESO committed to delivering the 'Decision on wider use of auctions in reserve markets following FFR trial' in the second half of the 2019 calendar year. We encourage the ESO to ensure this is completed within the prescribed timescale given the importance for developing competitive markets for balancing services. Further, we suggest competition could be further stimulated by developing an approach to allow BM and non-BM aggregation into a single portfolio for both response and reserve products.

We suggest modifications to the proposed deliverables and additions below.

| Deliverable   | Description   | Delivery Date               | Meeting or Exceeding |
|---|---|-----------------------------|----------------------|
| Report on auction trial   | Status update on the success of trial, learnings from the first six months and how these are informing future developments  | Q1 2020-21                  | Meeting              |
| Develop plan for daily auction rollout  | In parallel to the weekly auction trial, produce a scoping plan with timelines and technical requirements for full auction rollout Q2 2020-21. This is dependent on success criteria being met for the weekly auction trial   | Q4 2019-20                  | Exceeding            |
| Market design for reformed reserve products   | Communicate and fully engage with industry on proposal for reformed reserve products. These proposals must demonstrate value added compared to the current suite and how these will complement the new European Standard products. These proposals should demonstrate that auctions for these products have been considered | H1 2019-20                  | Exceeding            |
|   | Implementation plan for the new reserve product suite published   | Q3 2019-20                  |                      |
| Implementation of Pan-European replacement reserve standard products                    | Support development and implementation of Pan-European standard products, including TERRE and MARI, to allow GB parties to participate  | Delivery throughout 2019-21 | Meeting              |
| BM and non-BM aggregation into a single portfolio in both response and reserve roadmaps | Develop approach to allow BM and non-BM aggregation into a single portfolio for both response and reserve products  | Q4 2019-20                  | Exceeding            |

### Product roadmap for reactive implementation

We welcome the proposed deliverables but do not believe they have been appropriately classified. The 'Communicate reactive power requirements & historic spend' deliverable involves publishing historic costs and future requirements on a regional basis. We would expect an efficient system operator to be fully aware of the costs it incurs and to be able to specify regional requirements, to effectively manage the electricity system. As such, this should form part of baseline expectations.

We believe the methods developed by way of the ‘Power Potential’ project are innovative. However, the methods were established in and used to procure distributed energy resources (DER) during 2018/19. The embedding of these methods in normal system management should now be progressed. We suggest the ‘Power Potential trial with UK Power Networks (UKPN) deliverable should form part of baseline expectations. We suggest modifications to the proposed deliverables below.

| Deliverable  | Description  | Delivery Date   | Meeting or Exceeding |
|--|--|-----------------|----------------------|
| Communicate reactive power requirements & historic spend | Per region, to be clear about what we need in short, medium and long term and confidence levels of requirements, alongside historic voltage costs to increase transparency of spend on voltage actions | Q2 2019-20      | Meeting              |
| Power Potential trial with UK Power Networks (UKPN)      | Innovation project in partnership with UKPN aiming to create a new reactive power market for DER and generate additional capacity on the network.  | Q2 – Q4 2019-20 | Meeting              |

### Power Responsive

We welcome the continuation of the Power Responsive programme and that the ESO is committed to promoting industry development of demand side flexibility. We recommend the ESO publishes detailed information on the proposed innovation projects so that the industry may prepare according. We propose an additional deliverable below.

| Deliverable  | Description   | Delivery Date | Meeting or Exceeding |
|--|---|---------------|----------------------|
| Deliver innovation projects to unlock demand flexibility | Communicate detail of proposed innovation projects so that the industry can prepare accordingly | Q1            | Meeting              |

### Wider access to BM roadmap implementation

We support the initiatives to promote wider access to the BM. We believe the BM will become a key source of revenue for all forms of generation and demand side response (DSR) assets. We recommend additional deliverables which we believe are necessary for ensuring efficient operation:

- A deliverable should relate specifically to developing a web-based platform for access to the BM (and TERRE). This should be delivered no later than December 2019, in line with the ‘go-live’ date for Project TERRE set out in the European Balancing Guidelines, to ensure that all assets can access these markets. Without the web-based platforms, BM and TERRE access will be limited to larger assets that can justify the costs of EDL/EDT links, which would favour existing assets and act as a barrier to aggregator access to these markets.

- The existing system was designed, primarily, around centralised generation. There should be a deliverable that addresses the features of new decentralised technologies such as battery storage and DSR, to ensure system operation appropriately accommodates these assets. For example, operators of these types of assets may swiftly reduce maximum import limits (MIL) and maximum export limits (MEL) to zero at times of zero charge because of the duration characteristics of these asset types. We recommend the BM is improved to take account of the features of storage and DSR assets.

We propose additional deliverables below.

We welcome the ‘Support industry work on providing and delivering against Physical Notifications (ELEXON led) and also support on work on accurate settlement for behind the meter’ deliverable. We stress its importance since the participation of DSR in the BM and TERRE markets will be limited unless a solution to allow behind-the-meter assets to participate is developed. We accept this project is being led by Elexon. However, we encourage the ESO to proactively provide assistance to these modifications to ensure they are implemented as quickly as possible.

| <b>Deliverable</b>   | <b>Description</b>   | <b>Delivery Date</b> | <b>Meeting or Exceeding</b> |
|--|--|----------------------|-----------------------------|
| Web-based platform for access to the Balancing Mechanism (and TERRE)                         | Develop platform so that all types of assets can access these markets  | Q2 2019-20           | Meeting                     |
| Improve Balancing Mechanism to take account of the characteristics of storage and DSR assets | Improve the operation of the Balancing Mechanism to take account of the operating features of storage and DSR assets | Q4 2019-20           | Exceeding                   |

**Provider experience:**

We support the proposed deliverables in this area but believe they can be enhanced. It is essential the industry is kept abreast of progress in delivering the SNAPS reforms, given that communication has not met always expectations. We suggest regular updates are provided, which may provide investment signals to potential service providers.

We believe the provider experience can be greatly improved by increasing the transparency of the procurement of balancing services. The ESO could provide greater clarity by:

- Publishing the projected system need for at least the next two years for each service, as many of the balancing services tender out to this time period. Ideally, this should be on an EFA block, monthly or quarterly basis, as is set out in the FFR MIR. However, requirements are expressed in binary terms rather than estimates of volumes, which does not provide sufficient granularity. The ESO should specify its view of MW requirements according to the ‘overall ‘response requirement’ and, separately, the ‘FFR requirement’.
- Specifying in advance the procurement strategy it will adopt for each product. The information will enable participants to make more informed decisions e.g. by optimally bidding in to different balancing services markets. An example of good practice is the Capacity Market approach - the Government publishes its target capacity in advance of the auction and specifies how much more/less will be procured the clearing price is lower/higher.



We propose the additional deliverables below.

| Deliverable   | Description   | Delivery Date | Meeting or Exceeding |
|---|---|---------------|----------------------|
| Improved transparency around balancing services procurement | ESO to specify MW requirements for its overall requirements as well as for specific balancing services  | H1 2019-20    | Meeting              |
|   | ESO to publish its procurement strategy for each of its balancing services  | H1 2019-20    | Exceeding            |
| Progress updates  | Regular updates on the progress of the SNAPS reforms<br><br>A 'tracker' illustrating progress against the deliverables relating to Principle 3 should be included monthly 'Future of Balancing Services Newsletter' | Ongoing       | Meeting              |

**Metric 6 (Reform of balancing services markets):**

We welcome metrics to measure the ESO's performance in increasing competition and transparency of the procurement of balancing services and expenditure. This is a good example of the ESO being responsive to stakeholder feedback. We suggest the metrics can be improved by:

Part 1:

- The metric should be updated to include deliverables for Reserve and Black Start as soon as these timings are known.
- The differences between 'amber' and 'green' should be defined.

We are unable to comment on the appropriateness of the proposed performance benchmarks because it has not been explained how those benchmarks have been derived. We recommend this is explained in the final Plan.

Part 2:

- The ESO should report on expenditure on a more granular basis (e.g. the categories in the MBSS report) rather than the three categories proposed. Similarly, the ESO should report on volumes and numbers of contracts held.
- Commentary on the changes in expenditure, volumes and the number of contracts across the categories should be included.

## Principle 4

### Promote competition in the wholesale and capacity markets

We welcome the aim of improving the efficiency of market operations, which can facilitate competition.

#### Facilitating code change:

We acknowledge it is recognised more needs to be done to meet stakeholders' baseline expectations in this area<sup>12</sup>. Improvement becomes even more important when the scale of change across operation of the industry and, by extension, codes is considered. It is important the ESO provides an appropriate level of resources for this function to provide the industry with confidence that changes will be progressed effectively.

We believe there is limited value in the 'Historical timelines & horizon scanning: cross-code' deliverable and, as such, it should be removed. We expect the 'Horizon scanning: strategic' activity to be carried out in the normal course of operation by an efficient code administrator since this would help to identify future resource requirements and enable to plan accordingly. Further, we expect this activity to be of even greater important given the scale of change across the energy market and the current legislative environment. Changes to the proposed deliverables as shown below.

| Deliverable  | Description  | Delivery Date         | Meeting or Exceeding |
|--|--|-----------------------|----------------------|
| <del>Historical timelines &amp; horizon scanning: cross-code</del> | <del>Showcase all historical modifications and outcomes across Grid Code, CUSC and STC over last two years. Provide a view of all cross-code changes which impact codes we manage.</del> | <del>Q2 2019-20</del> | <del>Exceeding</del> |
| Horizon scanning: strategic  | Consideration of change congestion across the energy industry with legislative and regulatory changes considered in a three to five-year strategic view.                                 | Q1 2019-20            | Meeting              |

#### Transform industry frameworks to enable decentralised, decarbonised and digitalised energy markets:

We welcome the ESO's efforts in facilitating the reviews of network charging arrangements. However, we disagree that deliverables in this area as presented in the proposed Plan should be, by default, considered to be beyond baseline expectations. Whether delivery is deemed to be beyond stakeholders' baseline expectations depends on the quality of the delivery rather than just the delivery itself. We think metric 8 should be extended to measure the quality of the delivery in these areas. Assessing performance in this area should involve both the deliverables and the survey scores. As such, we recommend the deliverables are reclassified.

<sup>12</sup> Page 43 of the consultation.  
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We would naturally expect the ESO to provide leadership in the Codes review programme since it is a code administrator and will be able to provide perspectives that few other parties across the industry can. Also, Ofgem has recognised the unique perspective the ESO can provide:

*We expect the ESO to be thinking more holistically about the strategic role it has in developing and shaping the framework including through constructive participation across industry fora. The ESO is more than a code administrator and it is in a unique position to understand existing barriers to competition across different markets. We expect to see the ESO working with industry and ourselves to propose and/or support changes to codes where this can reduce barriers to competition and drive other benefits for consumers.<sup>13</sup>*

Changes to the proposed deliverables are shown below.

| Deliverable  | Description  | Delivery Date | Meeting or Exceeding |
|--|--|---------------|----------------------|
| Leadership in the successful transformation of electricity access and charging | Publication of ESO-led Balancing Services Charges Task Force final report.   | Q2 2019-20    | Meeting              |
|  | Leadership in network access and forward-looking charges review.   | Ongoing       |                      |
| Leadership in the Energy Codes Review  | Publish thought piece on potential future arrangements of the Energy Codes as part of the wider Energy Codes review programme. | Q1 2019-20    | Meeting              |

### **Facilitate electricity network charging reform through Charging Futures:**

As discussed above, we disagree that deliverables in this area as presented in the proposed Plan should be, by default, considered to be beyond baseline expectations. Whether delivery is deemed to be beyond stakeholders' baseline expectations depends on the quality of the delivery rather than just the delivery itself. We think metric 8 measures the quality of the delivery. Assessing performance in this area should involve both the deliverables and the survey scores. As such, we recommend the deliverable is reclassified.

<sup>13</sup> "Ofgem Formal Opinion on the Electricity System Operator (ESO) Forward Plan 2018-19", page 8.  
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| Deliverable   | Description  | Delivery Date   | Meeting or Exceeding |
|---|--|---|----------------------|
| Facilitate electricity network charging reform through Charging Futures | Facilitate reform of arrangements across the whole electricity system by communicating with all users of the electricity system and creating opportunities for all users to learn, ask and contribute to reform. This will include: <ul style="list-style-type: none"> <li>• Regular Forums,</li> <li>• Webinars,</li> <li>• Podcasts,</li> <li>• Emails,</li> <li>• Summary notes</li> <li>• Charging Futures website.</li> </ul> | Please see the Charging Futures website - <a href="http://www.chargingfutures.com/">http://www.chargingfutures.com/</a> | Meeting              |

**Metric 7 (Code administrator: stakeholder satisfaction)**

We believe the proposed baseline performance benchmarks for the Code Administration Code of Practice (CACoP) and stakeholder surveys are insufficiently challenging and risk embedding underperformance. The proposed baseline performance benchmarks for both surveys assumes no improvement in (or worsening of) performance despite the acknowledgement that current levels of performance fall below stakeholders' baseline expectations.

Given the acknowledgement that current levels of performance fall below stakeholders' baseline expectations, we baseline performance benchmark for the CACoP represents an improvement. We propose the following performance benchmarks:

|                                |   |
|--------------------------------|---|
| <b>Exceeds benchmark:</b>      | Upper-quartile score of the 2018-19 CACoP survey results across all three codes       |
| <b>In line with benchmark:</b> | An improvement in the ESOs' scores in the 2018-19 CACoP survey across all three codes |
| <b>Below benchmark:</b>        | No deterioration of the ESO's scores in the 2018-19 CACoP survey for any code         |

Similarly, for ESO surveys, we propose the following performance benchmarks:

|                                |  |
|--------------------------------|--|
| <b>Exceeds benchmark:</b>      | A significant step-change improvement in scores compared to performance in the previous survey, across all three codes |
| <b>In line with benchmark:</b> | An improvement in scores compared to performance in the previous survey, across all three codes                        |
| <b>Below benchmark:</b>        | No deterioration in scores compared to performance in the previous survey, across any codes                            |

### **Metric 8 (Charging Futures)**

As discussed above, we recommend this metric is extended to measure quality of the ESO's leadership in the review of balancing services charges and network access and forward-looking charges reviews. We are unable to comment on the appropriateness of the baseline score because it has not been explained how it has or will be derived have been derived. We recommend this is explained in the final Plan.

### **Metric 9 (Year ahead forecast vs outturn annual BSUoS):**

We believe the performance benchmarks are reasonable since the MAPE over the 2013-14 to 2017-18 period is about 21%<sup>14</sup>. While this is an annual target, there is no reason why performance against this metric cannot be reported monthly. We accept monthly updates will be indicative but will be useful to show the emerging performance trajectory.

### **Metric 10 (Month ahead forecast vs outturn monthly BSUoS):**

It is proposed performance is deemed to be meeting baseline expectations if accuracy is within 20% for no more than five months of the year. Across the year, this represents a worsening in previous performance since, between January and December 2018, the error exceeded 20% in four months. We do not believe the proposed metric can be effective in encouraging focus across the entire year. For example, if forecasting accuracy is worse than 20% in the first five months of the year, the metric is unlikely to encourage the ESO to improve performance over the remainder of the year since the baseline benchmark can never be met.

Our baseline expectation of an efficient system operator is out-turn performance is both good and improves upon historic performance. We recommend forecasting accuracy is measured based on the MAPE across the year. We propose the following performance benchmarks for demand, wind and solar generation forecasts:

|                                |   |
|--------------------------------|---|
| <b>Exceeds benchmark:</b>      | MAPE less than 12%  |
| <b>In line with benchmark:</b> | Within a 'dead band' (e.g. 5%) of the MAPE over the January to December 2018 period, which is 17% <sup>15</sup> |
| <b>Below benchmark:</b>        | MAPE above 22%  |

<sup>14</sup> Data from "BSUOS Report January 2019 Data" spreadsheet:

[https://www.nationalgrideso.com/sites/eso/files/documents/BSUoS\\_Report\\_January\\_19\\_data.xlsx](https://www.nationalgrideso.com/sites/eso/files/documents/BSUoS_Report_January_19_data.xlsx)

<sup>15</sup> Data from "BSUOS Report January 2019 Data" spreadsheet

## **Principle 5**

### **Coordinate across system boundaries to deliver efficient network planning and development**

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We welcome the ESO collaborating with DNOs through Regional Development Programmes (RDPs), which are a type of initiative that can support the whole systems approach. RDPs can enable the ESO to facilitate the connection of greater volumes of DER which, in turn, may be used to meet transmission system needs. We agree the RDPs should contribute to delivering ‘promoting competition in the provision of balancing services’ and ‘getting more out of existing network infrastructure’ consumer benefits. However, RDPs will be just one component of a broader range of activities and deliverables required to achieve those outcomes.

The activities in the ‘whole system data sharing’ workstream under Principle 6 are crucial to achieving the outcomes linked to this Principle. Improved data collection and sharing between the ESO and DNOs are essential to support efficient network planning decisions. Similarly, market participants also require access to better and more granular data about network/system needs.

#### **Ongoing Regional Development Programmes:**

It has not been explained why these deliverables are considered beyond baseline expectations given some of them will be carried forward from the 2018-19 Plan. As a result of the delay in delivery, we recommend these are reclassified as baseline expectations. Also, we suggest the ex-post narrative is treated as a deliverable rather than a metric. We suggest modifications to the proposed deliverables and additions below.

| Deliverable  | Description   | Delivery Date    | Meeting or Exceeding |
|--|---|------------------|----------------------|
| Commercial contracts for balancing services from DER                     | Implementation of new commercial contracts to allow DER to participate in the provision of transmission constraint management services in our in-flight RDP areas.  | Q4 2019-20       | Meeting              |
| Enhanced systems to facilitate balancing services from DER               | Implementation of enhanced systems and ways of working between transmission and distribution to support provision of transmission services by DER.  | Q2 20120/21      | Meeting              |
| Automated dispatch capability for generation in highly constrained areas | Development of Generation Export Management Scheme (GEMS) in South-West Scotland to manage transmission constraints using large volumes of additional transmission-connected renewable generation in an economic and efficient way.   | To be confirmed. | Meeting              |
|  | Implementation of GEMS in accordance with agreed plan.  |                  | Meeting              |
|  | Development of suitable interface with DNO Active Network Management scheme in South-West Scotland to incorporate efficient despatch of embedded generation for transmission constraint management.   |                  | Meeting              |
| In-flight RDPs narrative   | A narrative setting out how we have established the conditions under which DER MW that have signed contracts to connect to the distribution networks have been made possible. This should include all the deliverables and feedback from market participants' satisfaction with both the in-flight RDPs and the ESO's planned work to standardise RDPs. | Q4 2019-20       | Meeting              |

### Development of a proactive RDP identification process:

We agree that, beyond the short-term learning phase, there needs to be a consistent approach to RDPs. The ESO should ensure that the process for implementing future RDPs aligns with other work on consistent approaches in the Open Networks Project. The ESO should also proactively engage with stakeholders so that market participants are fully informed and can input into the design of the long-term solution (especially regarding commercial contracts for DER).

**Metric 11(Whole system, unlocking cross-boundary solutions):**

We agree a metric relate to the MW level of new DER connections. However, this metric should be expanded to include:

- Volumes that have been enabled by the RDPs.
- Volumes contracted to participate in transmission constrain management.

Further, the performance thresholds, against which performance will be measured, should be defined in the final Plan.



## Principle 6

### Coordinate effectively to ensure efficient whole system operation and optimal use of resources

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#### Whole system data exchange:

We support the proposed deliverables but suggest additional deliverables relating data exchange with the DNOs, linked to Workstream 1B of the Open Networks Project 2019 Work Plan, should be included. Also, we welcome the work the ESO has been doing to provide an alternative to the Statement of Works process and are keen to see the CUSC modification on this progressed so that there is long-term clarity on the process.

| Deliverable   | Description   | Delivery Date | Meeting or Exceeding |
|---|---|---------------|----------------------|
| Support for the Open Networks' workstream 1B deliverables | Continue to provide proactive support for this workstream | Ongoing       | Meeting              |

#### Whole system operability:

We welcome the proposed deliverables. We recommend more detail is included in the final Plan to explain why the 'Defining roles and responsibility for voltage management across the transmission-distribution interface' deliverable is considered beyond baseline expectations.

#### Whole electricity system thought leadership:

We acknowledge whole systems approach is an emerging area and we support the various industry initiatives dedicated to this area. However, we recognise the significant inter-relationships between the proposed deliverables and the development of the ESO's RIIO-2 business plan, which as a baseline activity. As such, the proposed deliverables should be reclassified, as shown below.

| Deliverable  | Description  | Delivery Date                 | Meeting or Exceeding |
|--|--|-------------------------------|----------------------|
| ESO thought leadership – how our role will evolve  | Describing how our role will change over the next decade to meet the challenges of whole electricity system.   | Q1 2019-20                    | Meeting              |
| Whole Electricity System learnings paper           | Describing how our initiatives and innovation projects are supporting Whole Electricity System thinking and identifying potential new areas of work. | Q2 2019-20, update Q2 2020-21 | Meeting              |
| ENA Open Networks project 2019 ESO input           | We will play a proactive role in the ENA Open Networks Project including leading the development of a number of products.                            | Q3 2019-20                    | Meeting              |
| ENA Open Networks project Whole Energy System lead | Leading the development of the Whole Energy System workstream of the Open Networks project.  | Q3 2019-20                    | Meeting              |

**Principle 7**

**Facilitate timely, efficient and competitive network investments**

We support the objectives associated with this principle. Particularly, we welcome the intention to expand the Network Options Assessment (NOA) process to include solutions to network development challenges from network and non-network providers across transmission and distribution.

**Pathfinder projects:**

The ‘South Wales and Mersey Voltage pathfinder’ project should be reclassified as ‘meeting expectations’ since it is likely the result will be existing BMUs will be contracted with to provide services, which has been done several times before.

| Deliverable                               | Description   | Delivery Date   | Meeting or Exceeding |
|---|---|---|----------------------|
| South Wales and Mersey Voltage pathfinder | <p>These will build on the 2018-19 deliverables to progress the consideration of broader options to meet transmission system needs. These focus on high voltage system needs, seeking solutions from transmission and distribution network owners in addition to market based solutions.</p> <p>We will further develop these projects following on from the initial RFI, determining whether there is value to run a commercial tender and, where relevant conducting post tender evaluation through NOA based criteria and assessment to determine the best combination of asset and commercial solutions for meeting these regional high voltage needs. This will develop the necessary contract arrangements to facilitate participation by new and existing providers.</p> | <p>Decision to seek market solutions:<br/>Q1 2019-20</p> <p>Project recommendations:<br/>Q2 2019-20</p> | Meeting              |