The voice of the energy industry

Energy UK response to National Grid System Needs and Product Strategy Consultation

July 2017

About Energy UK

Energy UK is the trade association for the GB energy industry with over 90 members comprising suppliers, generators, and associates with a business interest in the production and supply of electricity and gas for domestic and business consumers. Our membership encompasses the truly diverse nature of the UK's energy industry from established FTSE 100 companies' right through to new, growing suppliers and generators, which now make up over half of our membership.

Our members turn renewable energy sources as well as nuclear, gas and coal into electricity for over 26 million homes and every business in Britain. Over 619,000 people in every corner of the country rely on the sector for their jobs with many of our members providing lifelong employment as well as quality apprenticeships and training for those starting their careers. The energy industry adds £83bn to the British economy, equivalent to 5% of GDP, and pays over £6bn in tax annually to HMT.

Executive Summary

Energy UK welcomes the opportunity to respond to the National Grid System Needs and Product Strategy (SNAPS) consultation. Further increases in distributed generation, flexibility, smarter networks, and opportunities for Demand Side Response (DSR) and storage mean that a review of the future framework for an ancillary services market needs to reflect benefits captured by the changing energy mix and provide system stability at least cost to consumers.

We consider that the key issues to address are:

- **The Scope and governance of the review** - Energy UK considers that reforms to the ancillary services are urgently required. The SNAPS document provides the first step towards reforming the existing framework. At this stage it would have been helpful to see detail regarding the value of the different products as well as the supporting evidence to support reform of the ancillary services market. We assume this will be published before detailed discussions commence to allow market participants to constructively contribute to the design of the future balancing market. A clear and detailed timetable in which to address balancing market reform is required as a matter of urgency.

- **Design principles** – Energy UK considers that the future ancillary services market should be based on a competitive and wholly transparent market based procurement mechanism, allowing all technologies and services to be able to compete for ancillary services on a level

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playing field which should facilitate the evolution of the energy system. Full details of these principles can be found in Energy UK's Ancillary Services Report[1].

- **European Regulation** - National Grid should ensure that the future ancillary services market is compatible with the EU Electricity Codes and Guidelines released earlier this year such as Balancing Guidelines which sets out standardised products to be used in cross border balancing markets. These include Project Trans-European Replacement Reserve Exchange (TERRE) and Project Manually Activated Reserves Initiative (MARI).

Energy UK welcomes the opportunity to further discuss the points raised within this response. Should you require further information or clarity on the issues outlined in this paper then please contact:

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[1] http://www.energy-uk.org.uk/publication.html?task=file.download&id=6138

Response to consultation questions

1. **Do you agree with the summary of the issues identified around balancing services markets? If not, what additional concerns do you have?**

Energy UK broadly agrees with the summary of issues around clarity and transparency in the balancing market, but there are issues that we would also highlight. There is a pronounced gap between the services National Grid needs and the services it has available today. In order to fill this gap, there is a need for transparent access for all market actors, and for simplicity across all markets.

The ancillary services market is largely designed around the current plant mix and does not fully utilise the potential range of services available on the GB energy system today. These reforms should allow all services to compete equally, regardless of size or technology. The framework should deliver the service that is required at a competitive cost from both existing participants and new entrants. It will also be important to ensure the consistent treatment extends to contractual terms, market access etc.

It is vital to the success of the market that the changing role and incentive framework of the System Operator (SO) is integrated with an easily accessible, consumer facing source of information on the balancing market, in order to enhance transparency for market entrants. This should be coordinated with the changing role of local balancing services, given the emerging framework for local Distribution System Operators (DSO). There is a need for National Grid to look at more than just the Consumer Power scenario from the Future Energy Scenarios (FES) when outlining future system needs. A broader approach is needed as business cases may be built around such data.

Energy UK understand that there are a range of complexities in defining the direction of travel for balancing market reform. This being said, there is a need for National Grid to show leadership and give what clarity they can on timescales and intended processes in order to give market participants a better understanding of what changes to expect and when these will be implemented. This project is significant and considering the tight timelines and past experience of how long previous market changes of this size have taken, it is important to know that National Grid have grasped the size of the task ahead.

It is key for any reform of the UK ancillary services market that these reforms are compatible within the wider regulatory framework provided by Europe. National Grid should ensure that the standard products set out under the European balancing market guidelines seen in Project TERRE and Project MARI are compatible with the future GB system, and strive to keep the UK aligned with the European Balancing Market.

One of the issues that has not been identified or addressed by the SNAPs publication is the lack of ongoing communication from the SO regarding what the 'live' system needs are. To unlock more competitive liquid markets across all the ancillary services:

i) The SO needs to provide the market with detailed, transparent upfront information of the system's needs;
ii) The SO needs to indicate the value associated with committed vs flexible services; and
iii) The SO should inform the market of the output of procurement rounds. A good example of clear reporting of outputs today is the 'Short Term Operating Reserve (STOR) Market Information Report' and we would encourage the SO to adopt this format as the model for other services.

A further consideration for National Grid as it redesigns procurement is the impact of unpredictable pricing on suppliers and their customers. The new market design needs to be transparent upfront with system needs to enable better supplier forecasting. This is key to reducing risk premiums being passed on to consumers. National Grid needs to be mindful of limiting exposure of suppliers and consumers to the risks of Balancing Services Use of System (BSUoS) costs becoming too volatile and unpredictable.

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For more detailed information on the issues facing our members in regards to the ancillary services market, we refer National Grid to the Energy UK Ancillary Services Report[2].

2. **Do you agree with our approach to resolving the issues identified through simplification of the product suite? If not, what alternative approach should be taken?**

Energy UK broadly supports the proposed approach to simplification of the product suite.
Further information of what the principles of simplification will lead to in practice will be important. Industry should continue to be consulted as National Grid takes forward the simplification of the products.

All technologies and services should be able to compete for ancillary services on a level playing field, with consistent rewards and obligations for all providers to ensure the least cost options are developed and allow all technologies to compete, regardless of size or type. The framework should deliver the service that is required at a competitive cost from both existing participants and new entrants. The best value for the energy system overall needs to be borne in mind as do the costs and benefits for consumers of today and the future. National Grid should be mindful that greater transparency in terms of the future needs of service, volumes and requirements should be clear to the market.

The proposed options for changes to SO practices should be accompanied by robust cost-benefit analysis and there should be a clear mandate for monitoring and evaluating the success of the reforms. Without this it is difficult for stakeholders to determine what is in the interests of end consumers and overall energy system.

3. **What are your views on the possible approaches to standardisation of the existing markets?**

We support the standardisation of the existing markets and consider that rationalisation of the current products would be beneficial.

Aside from the reform of products and services, there is also scope for the terms and conditions across ancillary services contracts to be standardised and rationalised in future. The timing of ancillary services procurement should also be rationalised to improve efficiencies in the market.

Any new ancillary services framework should seek to capitalise on the value which all potential providers of services can bring, including new entrants, distributed plant, existing providers used in innovative ways, demand response providers and nascent technologies such as battery storage, as well as the benefits provided by existing assets. Importantly, the future framework should be built around system need – not technology capability.

4. **What effect will fixing product parameters have on transparency and competition in the markets?**

Energy UK considers that the effect of fixing product parameters has the potential to be broadly positive in terms of transparency and competition. In a standardised market with fixed product parameters, transparency is clear and it makes it easier for market participants to obtain the value of the service as well as the commercial utilisation. Once rationalised, a smaller number of products would provide a more liquid market which should drive competition. National Grid should take care in choosing parameters which do not overtly prioritise a technology type or size in order to ensure market entry from as wide a pool of participants as possible.

[2] http://www.energy-uk.org.uk/publication.html?task=file.download&id=6138

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National Grid should also remain open to reforming these parameters in future years should it become apparent that they are creating a barrier to entry for any one technology or group or technologies. This is particularly important given the rate of development of new technologies and business practices in the market today. Given the significant role of product parameters in enabling (or preventing) fair market access - the methodology for deciding these should be made fully transparent to stakeholders. This transparency should cover existing services as well as future ones including product parameters and location.

5. **What are the pros and cons of the two approaches to service improvement: single product and standardisation?**

Standardisation

Multiple products with a single variable create a transparent process which should create a liquid market. There should also be commercial visibility for market participants allowing value of ancillary services to be visible. Care must be taken to avoid an excessive proliferation of products which may be a consequence of the numerous bespoke needs of the SO.

Any Standardisation approach would need to remain compliant with the European level of regulation, with Project TERRE and Project MARI defining many attributes across European balancing markets.

Single Product

The single product approach could deliver better visibility of the current individual asset and system capabilities for the SO. However, we consider that while in theory the principles of a single market product could deliver improved efficiency from the procurement of ancillary services from current offerings, it does not facilitate the development of new and future offerings. However, as we consider that National Grid would not be able to provide the transparency in order for stakeholders to view the value of the market as well as the commercial visibility of actions. This model would also facilitate stacking of revenue.

The merits of the approach would have to be assessed via a transparent cost-benefit-analysis for each system need that National Grid is considering applying it to. There are also concerns around the single product approach in terms of whether certain requirements would mean service providers are unable to bid for a service in a product grouping if they do not meet the requirements in all product in that grouping

This model could therefore be a long term ambition of the SO once there is a comprehensive and transparent market architecture and underlying organisational system in place.

6. **Where do you see the optimum balance being between single product and standardisation?**

There is a need for standardisation of the GB ancillary services market to ensure a successful evolution to a balancing market fit for the current mix of service providers in the market today. This process should begin with the actions listed by National Grid: Rationalisation, Standardisation, and Contract Improvement.

The future design must minimise the costs of high risk premiums being passed on to consumers, transparency is important to enable better supplier forecasting of costs, and National Grid must remain mindful to ensure that suppliers and their customers are not exposed to overlay volatile and unpredictable BSUoS costs.

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It is also important that future product procurement is carried out in a competitive manner, although we do appreciate that there may still be the need to procure some services bilaterally in the short term these should kept to a minimum.

7. **What are your views on the benefits and disadvantages of secondary trading in balancing services, and how do single product and standardisation affect secondary trading?**

Energy UK does not see a significant benefit to the use of secondary trading where truly short-term liquid markets are created via reforms. For longer term products secondary trading has clear value. If secondary trading is to work within future long-term markets, then it is important for National Grid to examine principles for when and where secondary trading could and should take place. This includes outlining which potential products could be used in secondary trading and how they could be traded and corresponding non-delivery rules.

8. **How would the two approaches, single product or standardisation, affect the ability of providers to stack multiple services, and how important is this aspect when also considering short and long-term contracts?**

Regardless of which approach is taken, we consider that maximising the stackability of ancillary services should be taken forward. As National Grid develop design proposals it will need to consider the compatibility of different transmission system services and also optimise interactions with the emerging DSO framework.

Standardisation

With the right design, standard products can also be stacked effectively. Offering a range of contract lengths with transparency on what each product requires and the value of each is important to investor confidence across a range of technologies.

Single Product

The single product approach would also facilitate stacking of revenue. However, as we consider that National Grid would not be able to provide the transparency in order for stakeholders to view the value of the market as well as the commercial visibility of actions.

This model could therefore be a long term ambition of the SO once there is a comprehensive and transparent market architecture and underlying organisational system in place.

Short vs long term contracts

Long term contracts can be particularly beneficial in projects which require significant investment for construction, upgrade or maintenance. For example, black start stations may require long-term certainty to justify initial/additional capital costs. However, the case for long-term contracts is disputed as long term contracts for one product can impact shorter term markets for other products and create distortions.

Stacking products

National Grid should provide the following to allow stacking to take place:

i) Provide clear longer outlook timetables for procurement / tendering cycles;
ii) Coordinate of the timetables for tendering different services so that clashes are avoided; and

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iii) Set out how different products' contractual obligations/operational parameters interact and preclude each other.

9. What are the pros and cons of short- and long-term markets particularly in respect of existing and new-build assets?

Long-term markets can boost investor confidence and help to finance a project based on the point made above, wherein initial capital costs for new assets are justified by the long-term business case. These contracts do encounter issues for certain technologies given the incompatibility with certain flexible technologies.

Short-term markets can be beneficial to revenue stacking and also better suit certain technologies which don't have long term certainty of operation or plant that only know what its output will be close to real-time. It is also worth noting that there are conflicts apparent in ancillary services agreements in terms of retrieving information on what the terms of contract are for these, causing difficulties in stacking revenues. Sufficiently regular and predictable tendering are essential for future liquid market for the ancillary services market. New investments (new-build and retrofitting) can be encouraged based on short term markets but only if National Grid commits to a rolling schedule of regular tenders. This would help provide some investor certainty by providing a medium term outlook on the demand for flexibility services - given the often high upfront costs of investment in flexible technologies this is essential.

It is also vital that National Grid is able to adapt quickly to the change to a new market approach to allow for confidence for those bidding for multiple products. To this point, it is important that National Grid have an organisational system which can handle the larger number of contracts resultant from mixed lengths of contract.

Energy UK asks that National Grid work to understand what services it needs to procure, allowing for different contract lengths based on what is best suited to each scenario. By making this information clear and openly available, National Grid will enable a greater investment case for each bidder. This is important to the success of the new approach given the fact that no one size fits all.

It is important to note that Project TERRE is based in short term markets.

10. What do you consider to be the most appropriate route to support the delivery of new flexible capacity or capability?

National Grid must be technology neutral in delivering balancing services, therefore, the future ancillary services market should be based on a competitive and market based procurement mechanism, ensure that the market is transparent, allow all technologies and services to be able to compete for ancillary services on a level playing field.

The key driver for redesigning ancillary services markets must be delivering system operation at lowest possible cost. A long term, holistic view of optimal system flexibility for the GB energy system is required.

Ensuring that all market participants can compete for ancillary services and provide flexibility is important to creating an efficient market. We consider that key developments such as implementing Electricity Balancing System (EBS) as well as making the Balancing Market (BM) more accessible to a wider range of smaller providers is important. The BSC modification P355 'Introduction of a BM Lite Balancing Mechanism' aims to address the issue of access to the BM for smaller market participants.

It is key that investment is encouraged through certainty of direction and a continual process of consultation and adaptation in order to ensure that market changes are made to reflect changes in the range and traits of market actors.

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It is also important that different ancillary services are stackable with one another and also compatible with other market opportunities (such as the future DSO framework).

11. What are your views on the possibility of trialling different procurement approaches such as cleared price auctions and day-ahead markets?

Energy UK is supportive of trialling different procurement approaches, but ask that trials be performed with the intention of following through with adoption and that market distortion should be avoided. Trialling of a single section of the approach is only viable when it is part of a wider holistic view of the market. National Grid should certainly explore the details of approaches, but need to take real steps towards implementing an integrated approach whilst they learn.

12. What other changes need to be made to other markets, such as the Balancing Mechanism, wholesale market and capacity market?

The wholesale energy market should be capable of providing the bulk of energy balancing through forward trading ahead of gate closure with the SO only procuring ancillary services required within the settlement period. The SO should avoid procurement mechanisms that unnecessarily dampen or otherwise interfere with the efficient operation of the wholesale market.

Whilst it is important to ensure all flexibility has a route to market (include DSR) and it will be important to ensure that the costs and opportunities of doing so are applied equitably, this will need to include ensuring any imbalance costs are made transparent and the adjustments known and applied to the correct party.

The Capacity Market (CM) is yet to be active and therefore it is premature to comment on what changes may be needed to this mechanism. It would be appropriate for National Grid to review how the CM interacts with the ancillary services market following winter 2017/18.

Non-BM and aggregation will need the Standing Reserve Despatch (SRD) system to be reviewed along with BM Lite to be developed to ensure that services can be utilised allowing the maximum efficient to be derived from the market. Other areas such as boundary point metering also need to be reviewed to see whether the need for individual sub-site metering can be relaxed.

For BM units the onerous/costly grid code obligations are costly to meet with little reward for individual participants. Near term inability to change output unless under SO instruction is also discouraging BM flexibility but care should be taken to ensure the SO can manage this flexibility effectively.

13. What considerations should be made during this work to ensure that any future DSO developments (i.e. the procurement of balancing services by or from distribution networks) are coordinated?

Energy UK considers that the procurement of ancillary services by DNOs/DSOs should be consistent with how the SO procures services to simplify the procurement as much as possible.

Future DSOs will facilitate greater participation of distributed service providers in the ancillary services market which should create more competition and thus lower prices for consumers. DSOs should provide the framework to facilitate this and should not act as an aggregator whereby services are procured from network operators. There is a need for continued coordination with the Energy Networks Association (ENA), service providers, DNOs and National Grid to ensure a suitable framework is developed.

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Unlocking embedded flexibility provision needs to be considered further as well as how information is shared between DNOs and the SO. There are various technologies that can offer flexibility services to aid the SO when it comes to the cross-boundary issues experienced by the SO in terms of reduced predictability and system volatility. This must become one of the focuses for the ENAs Open Networks Project. Beyond the question of DNO/DSO-SO interaction, the SNAPs publication takes a relatively short term view. More efficient investment decisions could be made by all market participants if longer term clarity of the SO's strategy and the overall framework for procurement was provided. The FES should be used to demonstrate how the planned product strategy tools can easily be adapted to cope with the uncertainties of the energy system to 2030 and beyond.

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