P344 'Project TERRE implementation into GB market arrangements'

This Assessment Procedure Consultation was issued on 10 January 2018, with responses invited by 30 January 2018.

ELEXON

Phase

- Initial Written Assessment
- Definition Procedure
- Assessment Procedure
- Report Phase
- Implementation

Consultation Respondents

Respondent	No. of Parties/Non-Parties Represented	Role(s) Represented
Centrica	2/0	Generator, Supplier
Drax Group plc	2/0	Generator, Supplier
Dwr Cymru Cyfyngedig Welsh Water	0/1	Demand Side Response provider
EDF Energy	2/2	Generator, Supplier, ECVNA, MVRNA
Energy Networks Association (ENA)	2/0	Distributors, Transmission Operators
Engie	2/0	Generator, Supplier
Flexitricity Limited	0/1	Non-BM balancing services provider
IMServ Europe	0/1	HHDA
National Grid Interconnectors Ltd	2/0	Interconnector Administrator, Interconnector Error Administrator
Npower	3/1	Generator, Supplier, Non Physical Trader, HHDA
Quorum Development	0/1	Software supplier
RWE Supply and Trading GmbH	3/2	Generator, Interconnector User, Non Physical trader, ECVNA, MVRNA
ScottishPower	3/2	Generator, Supplier, Non Physical Trader, ECVNA, MVRNA
SmartestEnergy	1/0	Supplier
SSE plc	3/2	Generator, Supplier, Interconnector User, ECVNA, MVRNA

Respondent	No. of Parties/Non-Parties Represented	Role(s) Represented
The Association For Decentralised Energy (ADE)	0/1	Trade Association
The Renewable Energy Company (Ecotricity)	2/0	Generator, Supplier
TMA Data Management Ltd	0/4	HHDC, HHDA, NHHDC, NHHDA
UK Power Reserve Ltd	1/0	Generator
Uniper UK Ltd	3/0	Generator, Interconnector User, Non Physical Trader
Welsh Power Group Limited	0/1	Embedded generation company

Question 1: Do you agree with the Workgroup's initial view that P344 better facilitates the Applicable BSC Objectives compared to the baseline?

Summary

Yes	No	Neutral/No Comment	Other
20	0	1	0

Responses

Respondent	Response	Rationale
Centrica	Yes	We agree with the workgroup's view. Below are some specific comments around selected objectives: Objective b) and c): We believe the TERRE project should improve liquidity, and provide access to a wider range of providers than in the BM currently. The P344 modification will allow access to the BM and TERRE for technologies - including DSR, storage and decentralised assets - that struggle to access the BM. However, careful consideration should be taken about the interactions between TERRE, which operates on an hourly basis and the BM, which operates on a half-hourly basis. National Grid must ensure that liquidity is not affected by these different timescales. A European-wide scheme such as TERRE, will be affected by national policies, such as the UK's Carbon Price Floor. The System Operator and the Regulator must consider the impact of P344 on the amount of GB domestic capacity delivering security of supply and system resilience in Great Britain. Objective d): We accept that this modification may introduce complexity, however, in an increasingly decentralised electricity system, efficient arrangements must be in place to ensure that all assets can access balancing services and all market participants can be settled fairly.
Drax Group plc	Yes	(a) The efficient discharge by the Transmission Company of the obligations imposed upon it by the Transmission Licence. Neutral – No impact identified on this objective. (b) The efficient, economic and co-ordinated operation of the national electricity transmission system. Positive – Analysis suggests the TSO should be able to procure balancing services at a lower cost. Further, there will be increased competition in the market caused by wider access to balancing products for market participants. (c) Promoting effective competition in the generation and supply of electricity, and (so far as consistent therewith) promoting such competition in the sale and purchase of electricity. Positive - Broadening the provision of balancing services from a national to pan-European level is likely to promote increased competition between

Respondent	Response	Rationale
		Balancing Service Providers (BSPs) from different countries. (d) Promoting efficiency in the implementation and administration of the balancing and settlement arrangements. Neutral – Whist it's unclear if TERRE will promote efficiency in the implementation and administration of the balancing and settlement arrangements, we believe that a robust and through solution shouldn't place a burden on balancing and settlement arrangements. (e) Compliance with the Electricity Regulation and any relevant legally binding decision of the European Commission and/or the Agency. Positive - P344 will enable National Grid and BSPs to be compliant with incoming EU legislation through the European Balancing Guideline (EB GL). (f) Implementing and administrating the arrangements for the operation of contracts for difference and arrangements that facilitate the operation of a capacity market pursuant to EMR legislation Neutral - No impact identified on this objective. (g) Compliance with the Transmission Losses Principle Neutral – No impact identified on this objective.
Dwr Cymru Cyfyngedig Welsh Water	Yes	As a Demand Side Response participant of the P344 working group, Dwr Cymru Cyfyngedig were keen to open up balancing services they paid for through their energy bills but were not previously open to participation. Ideally we would like to reserve the right to choose whether to participate directly and through an aggregator. EB GL requiring that TSO's facilitate demand response participation in TERRE, including independent aggregation facilities and energy storage was a positive development, as was the working groups' decision that a new participation capacity was necessary to facilitate this. We agree that P344 does better help towards the BSC objectives, particularly in promoting effective competition in the generation and supply of electricity by allowing aggregators and demand service providers or small scale generators to participate. I believe there are still significant barriers to entry. The 'virtual lead party' and 'secondary BM unit' interface outlined in the P344 'Project TERRE implementation into GB market arrangements' business requirements document is more complex than a STOR like product, but an improvement over the existing situation where demand side response customers cannot participate in the market other than through their suppliers. Although outside the scope of this consultation we also hope that the industry will explore similar harmonisation across European TSOs and direct access in regards to other balancing products. This could potentially further assist with achieving effective competition in the generation and supply of electricity in the UK and abroad.
EDF Energy	Yes	Subject to caveats below, we agree that the broad approach would accommodate TERRE within the GB arrangements, and should better meet BSC Objectives overall compared to the baseline.

Respondent	Response	Rationale
		BSC objective (e), compliance with EU regulations, obviously drives the proposal. The fundamental aim of the EU regulations is to promote competition and liquidity in balancing at an EU level, expected to deliver efficiencies in balancing at an EU level. To the extent that GB is part of a wider EU market, the proposal should increase competition (BSC Objective (c)). Competition within Europe won't necessarily reduce the cost of balancing the GB system. If more expensive GB resources are used to meet external needs, the price in GB would be raised. However, cost benefit analysis for TERRE indicated potential lowering of annual balancing costs in GB, indicating displacement of some existing balancing source utilisation by cheaper external sources, with benefits for GB Balance Responsible Parties, ultimately consumers. On a simple measure of efficiency as cost, the proposal should therefore better meet BSC Objective (b) concerning efficient GB system operation. On a broader measure of economic benefit and diversity of resources, it should also better meet BSC Objective (b), even if GB costs were to be raised. There is a possibility of GB balancing resource utilisation being reduced in future as a result of competition with external providers, but TERRE only permits individual TSOs to satisfy internal need from external sources up to the level that internal resources exist, so there should always be security. ie. TSOs need to ensure national resources are available to meet national needs, even if they are not used except in case of loss of interconnection. P344 does not better meet BSC objective (d) relative to the baseline because it introduces considerable extra complexity to administration of the BSC, and there will be considerable implementation cost and some additional operational cost. There may be some small impacts in relation to BSC objectives (f) (EMR CFD and CM) and (g) (Transmission Losses Principle), but these are hopefully consequential and small. However, great complication is caused for GB by: 1. needing to operate two distinct but overlapping close-to-realtime balancing markets (BM and TERRE), with slightly different timeframes and delivery and settlement rules, at the same time and interacting with each other, including deemed ideal, hypothetical real, and actually deliverable time profiles for individual TERRE acceptances, 2. a desire to allow aggregators and customers to participate in those markets completely independently of the Supplier BSC Party who is responsible for their boundary energy and other charges. We acknowledge and agree that TERRE cannot replace the BM, which is required to manage balancing in real time, not only for national net energy balancing, but to help manage network constraints, maintain various levels

Respondent	Response	Rationale
		of reserve, and manage voltage. We also agree that participation in TERRE and the BM should not be mutually exclusive; it would not be efficient or secure to allow participation in TERRE to prevent participation in the BM, or vice versa (but note comments below on a possible transition stage). We support aspirations to increase the participation of customers in short term balancing. However, this creates fundamental difficulty if customers (or aggregators on their behalf) are permitted to transact energy directly with other BSC parties (in this case NGET) without knowledge of the Supplier who has responsibility for balancing and other electricity-related charges. We have concerns that the extreme complexity within the proposed solution developed to try to accommodate all these aspirations has not been comprehensively reviewed, and that considerable difficulty will be encountered in implementing such complex interacting processes in the timescales proposed. The harmonized rules for the RR product and international TERRE/LIBRA system have not yet been fully finalised, so changes to the GB design might be required for external reasons. The similarities and differences in approaches in different systems have not been considered, and these and other differences affecting bid prices across Europe will almost certainly lead to further changes for the central process and for GB. Note that development of centralised processes for procuring reserve closer to real time, as required by European Regulations, are already underway. Further development of within-day coupled markets and growth of short notice flexibility from consumers and batteries could reduce the need for Replacement Reserve as currently specified (many system operators across Europe claim not to use balancing equivalent to RR 15 minute blocks with notice period measured in many minutes, relying instead on markets and shorter notice response). Given the complexity and continuing uncertainty about some detailed features, we wonder if a staged implementation might be more practical and reduce the potential for expensive mistakes and delays. For example: • stage 1 to accommodate TERRE for ordinary BM Units which are not also participating in the BM (including Additional BM Units which can comprise aggregations of meters registered to the same party), allowing familiarisation with the processes associated with TERRE itself alone, • stage 2 to accommodate TERRE for ordinary BM Units participating in the BM, allowing familiarisation with the interaction between the BM and TERRE, • stage 3 to accommodate individual customers within and across Suppliers' BM Units in TERRE, allowing familiarisation of the impacts of Secondary BM Units, stage 4 to accommodate individual customers within a Supplier's BM Unit

Respondent	Response	Rationale
		in both TERRE and the BM (although experience of stage 2 might allow this to be bundled with stage 3).
Energy Networks Association (ENA)	Yes	The proposal has the potential to positively impact BSC objectives if steps are included to ensure that the wider impacts of scheduling further distributed resources for TERRE and other balancing market services are understood and mitigated. This is expanded in the response to the related Grid Code consultation.
Engie	No comment	We are unable to state whether the objectives are better facilitated as the solution is incomplete. Please see question 11 for further details. We have also provided comments in response to GC0097 consultation.
Flexitricity Limited	Yes	P344 facilitates project TERRE in GB, which by opening up a new market and allowing customers and independent aggregators access to this market, will better promote efficient and economic operation of the Transmission system, and will be a step towards EB GL compliance.
IMServ Europe	Yes	
National Grid Interconnectors Ltd	Yes	NGIC considers that there will be positive benefit against the objectives b, c, e. No negative effect is foreseen against any of the other objectives.
Npower	Yes	
Quorum Development	Yes	No views on this question.
RWE Supply and Trading GmbH	Yes	Implementation of P344 will ensure compliance with the Electricity Balancing Guidelines (Objective e) and enhance competition in balancing services (Objective c) through the facilitation of new procurement process for reserve and the enabling of participation of aggregators in the new balancing arrangements.
ScottishPower	Yes	ScottishPower believes that the proposed solution better facilitates BSC Objectives (b), (c) & (e). With regard to (b) & (c) it potentially widens the variety of service providers able offer economic balancing services to the TSO, facilitating greater competition and the opportunity for market participants to directly bid for energy currently contracted through TSO to TSO balancing trades. P344 seeks to comply at its highest level with the European Network Code on Balancing by promoting the full participation in the Replacement Reserve Initiative 'TERRE' (e).
SmartestEnergy	Yes (but)	Overall, we would say that P344 does facilitate the Applicable BSC Objectives compared with the baseline. Clearly, it facilitates compliance with the European objective (e) and by and large promotes competition in the generation and supply of electricity. Whether the proposal leads to an efficient operation of the system (b) or promotes efficiency in the BSC (d) is debatable due to the complexity it overlays onto the existing arrangements and the fact that Virtual Lead Parties are bypassing many

Respondent	Response	Rationale
		BSC obligations.
SSE plc	Yes	The P344 solution will support the introduction of cross-border Replacement Reserves for system balancing purposes, a requirement set out within the Electricity Balancing Guidelines (as established by European Law). Whilst National Grid could introduce an entirely new market mechanism to fulfil its obligations under the EBGL, this would be inefficient when compared with the introduction of the P344 solution which draws upon much of the existing BM and imbalance settlement processes and systems to discharge the obligation. Equally, the solution should support continuous participation in both TERRE and BM markets from a single balancing unit, thus aiding competition whilst retaining the availability to GBSO of as much flexibility as possible when balancing the system. Additionally, the solution will facilitate a route to market for balancing services providers currently unable to participate in the Balancing Mechanism, a key condition of the EBGL in providing non-discriminatory access. SSE therefore agree that the proposed modification better facilitates objectives b), c) and e) for the reasons set out by the workgroup within the Assessment Consultation report – primarily against objectives c) and e) as we note that the European CBA supporting the objective b) suggests the case is marginal. SSE remain neutral against all other objectives, including objective d) where the efficiency provided to the wider industry process offsets the additional costs imposed upon the BSC.
The Association For Decentralised Energy (ADE)	Yes	The ADE agrees that P344 better facilitates Applicable BSC Objectives B, C and E compared to the baseline.
The Renewable Energy Company (Ecotricity)	Yes	P344 better facilitates BSC Objective C by facilitating the expansion of competition for GB Balancing Service Providers from a national level to a pan-European level.
TMA Data Management Ltd	Yes	
UK Power Reserve Ltd	Yes	We agree with the Workgroup assessment that P344 better serves the BSC Objectives. In particular, allowing greater access to the BM through Virtual Lead Parties facilitates greater competition and access to market. P344 contributes to efficient, economic and co-ordinated operation of the national electricity transmission system, by allowing access and dispatch for existing Non-BM parties as Secondary BM Units.
Uniper UK Ltd	Yes	Primarily, this better facilitates objective e) as it puts in place requirements of the Electricity Balancing Guideline relating to cross border trading of

Respondent	Response	Rationale
		Replacement Reserves. However, by implementing a solution which also increases access to the Balancing Mechanism for parties who just undertaken the Balancing Services Provider (BSP) role, and adjusting the position of related Balancing Responsible Parties (BRPs), it also improves competition and so better meets objective c).
Welsh Power Group Limited	Yes	As this is implementing EU law it does not in itself fit well with the BSC objectives with the exception of objective e. However, allowing a new type of BSC party and encouraging more parties to enter the wholesale market should be good for competition and enhance the efficiency in the market in the longer term, in line with objectives c and b.

Question 2: Do you agree that the draft legal text delivers the intention of P344?

Summary

Yes	No	Neutral/No Comment	Other
13	0	8	0

Responses

Respondent	Response	Rationale
Centrica	No comment	We have not reviewed the draft legal text.
Drax Group plc	Yes	We agree with the proposed legal text and believe it coherently and concisely implements project TERRE into GB market arrangements through changes to the BSC.
Dwr Cymru Cyfyngedig Welsh Water	Yes	I believe the draft legal text delivers the intention of P344 but the intention could be challenged by others. I believe the opportunity exists for less costly and complex access to the TERRE marketplace for direct demand response providers in some other European TSO areas could open up a bit of a legal dilemma within the UK and possible litigation for perceived lost revenues through not being able to compete in the UK and in Europe on an equal footing with European competitors. I would recommend a less complex setup than the 'virtual lead party' and 'secondary BM unit' perhaps more similar to the existing setup for ancillary service STOR within the UK. However, I would prefer the virtual lead party option to no participation.
EDF Energy	Neutral	We have not been able to check the complex legal text in detail in the time available, but have concerns that further comprehensive review and refinement is required to ensure the detail is workable and consistent with the high level approach discussed in workgroup meetings. Section Q1.1.1: Should this include broad requirements for the Transmission Company to communicate information required for the purposes of settlement of Replacement Reserve? The specific items listed are not the only things required. Q5.3.1(d): Will non-BM STOR participants/meters be permitted to participate in TERRE? Q5A.2(b)(i): Subsequent calculation of RR Acceptance Volume from Acceptance Level (T3.9.5) requires Acceptance Level relative to FPN, not relative to zero. Where is conversion from absolute to relative performed? Similarly the Deemed Standard Product Volumes (from T3.17) calculated from spot values (T3.1.2(d)) need to be calculated relative to FPN? At various places in business requirements and legal text, it might be preferable, to avoid confusion with existing nomenclature, if subscript i1

Respondent	Response	Rationale
		were used for primary BM Units, and subscript i2, or preferably another character or symbol, were used for secondary BM Units, with another subscript in situations where it is explicitly necessary to include both primary and secondary BM Units (i1&i2?). Re proposed T1.13 'Replacement Reserve Schedule Methodology Document'; would prefer 'Replacement Reserve Schedule Calculation Method/Document/Statement' as a method is being described, not a methodology. T3.1.2(d)(i): no need to describe subscript J as an integer, could create confusion about the starting value; in text it is simply an identifier for successive volumes in time order, data type only matters in software.
Energy Networks Association (ENA)	No comment	Not answered
Engie	No comment	
Flexitricity Limited	Yes	The draft legal text delivers the intention of P344.
IMServ Europe	Yes	We would however have liked to have seen the proposed redline Code Subsidiary Documents and had these to review alongside the draft legal text.
National Grid Interconnectors Ltd	Neutral	NGIC is unclear of the impact on Interconnector Administrator, and Interconnector Administrator.
Npower	Yes	We believe the legal text delivers the intention of the modification.
Quorum Development	Yes	Some further observations in respect of the draft legal text are at Question 11
RWE Supply and Trading GmbH	Yes	We note that there are a wide range of changes in the BSC. We believe that the proposed drafting deliver the intent of P344 through we note that given the complexity of the change there may be scope for further amendments in future to address unforeseen circumstances (see for example the late change in the legal text and to accommodate MRVN arrangements).
ScottishPower	Yes	ScottishPower believes that the changes to the legal text will deliver, in the first instance, a pragmatic and workable solution for P344.
SmartestEnergy	No comment	
SSE plc	Yes	

Respondent	Response	Rationale
The Association For Decentralised Energy (ADE)	Yes	The ADE agrees that the draft legal text delivers the intention of P344.
The Renewable Energy Company (Ecotricity)	No comment	We have no comments to provide regarding the legal text.
TMA Data Management Ltd	Yes	
UK Power Reserve Ltd	No comment	We are not in the position to comment in detail on the legal text.
Uniper UK Ltd	Yes	It would appear to do so.
Welsh Power Group Limited	Yes	We have not checked the text in great detail. However it may need checking when the new charges are set. We are also concerned that the reporting of TERRE actions may need to occur on the BMRS in a different time depending on the system solutions. Details such as this need to be kept under review.

Question 3: Do you agree with the Workgroup's recommended implementation approach for P344?

Summary

Yes	No	Neutral/No Comment	Other
15	1	5	0

Responses

Respondent	Response	Rationale
Centrica	Yes	We acknowledge the good joint working between Elexon and National Grid and believe that this timeline is ambitious but achievable. We support the idea of parallel running; this plan must also include BM access for secondary BMUs. We would appreciate clarity on the progress of other TERRE participating countries and early indication of any delay would be welcome. Appropriate changes should be made to ensure that Secondary BMUs can access the Balancing Mechanism by April 2019. April 2019 should be the implementation date, as spill payments (an important revenue stream for assets that it is difficult to access the Balancing Mechanism) are expected to be removed at this date – as implemented through BSC modification P354. An additional benefit is that this allows a longer period for National Grid and Elexon to be ready for TERRE go-live. We believe that if there is any delay to the TERRE timelines, full access to the BM for secondary BMUs should still be in place by the implementation date.
Drax Group plc	Yes	The implementation timescales surrounding P344 are compliant with the legal obligations in the European Balancing Guideline which became law on the 18th December 2017. In particular, the implementation approach complies with articles 19, 5, and 7. If the process takes the maximum permitted time, go live should be 18-Dec-19, although the exact legal deadline is not known at this point. The proposed implementation will ensure the GB market is ready for parallel running during June – July 2019 with go-live scheduled for some point after this. We support the parallel running phase and end-to-end testing of the product without energy or payment being delivered. This will be an opportunity to identify and rectify any unforeseen issues that may arise.
Dwr Cymru Cyfyngedig Welsh Water	Yes	If a STOR like setup is possible that is our preference. However as Option B willing to proceed with this approach.
EDF Energy	Neutral	We support the broad approach to implementation, but consider the timescales to be too short for the necessary IT and process developments,

Respondent	Response	Rationale
		given that several features of the central TERRE/LIBRA solution, and several details of the GB solution, are still uncertain and untested. We wonder if a staged approach as described in response to question 1 might reduce the risk of delay of the whole project.
Energy Networks Association (ENA)	Yes	Implementation of TERRE through the extension of BM arrangements is a pragmatic approach to enabling a European market in replacement reserves. The timescales for TERRE implementation are ambitious and will require solutions for improved transmission-distribution data exchange to be developed through 2018 and deployed in 2019. As models for the management of DER services are further developed by the ENA's Open Networks project through 2018, detailed transmission-distribution processes and data exchanges to support these models are being developed. We would like to work closely with the TERRE working group and project team to ensure a consistency of approach for network operators and stakeholders.
Engie	No comment	
Flexitricity Limited	Yes	The recommended implementation approach will allow a full end to end test before go live in October-November 2019, in line with what is expected according to the central project.
IMServ Europe	Yes	
National Grid Interconnectors Ltd	Yes	In general Yes, although there should be more information on which parties are accountable for cross-border energy volume. For example is cross-border flow associated with RR instructions treated as system to system flow and hence allocated to transmission Company BM Unit, or allocated to Interconnector Users?
Npower	Yes	Whilst we provisionally agree with the implementation date of Q4 2019, we would like to note that there is likely to be a high cost of system changes to meet the challenging timescales, the costs of which will ultimately be socialised through a wider customer group (who may not be able to access TERRE themselves).
Quorum Development	Yes	No views on this question beyond stressing the need to provide Market Participants with full descriptions of interface requirements, RR Schedule methodology, confirmed revenue and trading charge calculations, and reporting flows as soon as possible to allow for the development of Participant processes and systems in what will be a limited time.
RWE Supply and Trading GmbH	Yes	The implementation process must meet the deadlines associated with the Electricity Balancing Guidelines
ScottishPower	Yes	ScottishPower agrees with the proposed implementation plan as it meets the requirements of the parallel running requested by Ofgem and the

Respondent	Response	Rationale
		TERRE go-live deadline.
SmartestEnergy	No comment	
SSE plc	No	The suggested approach is far from ideal, as it makes it difficult to justify, schedule and manage the changes required through our internal change control processes without a commitment to a firm target date for implementation. This may in turn impact the efficiency and expected benefits of parallel running if the uncertainty causes delays to participants change programmes. We are also not convinced that this approach is consistent with the BSC definition of Implementation Date, as set out in Annex X-1, which in our view implies the need to specify an exact date (it seems difficult for a Code modification to be given effect over an uncertain range of days). SSE would prefer therefore a firm target date to be established. However, notwithstanding our preference, should the date range approach be accepted as permissible and pragmatic, we would ask that the workgroup and/or the Code Administrators agree upon exactly how market participants will be kept up to date (on a regular basis) with ongoing discussions to fine tune the expected target dates for parallel running and live implementation.
The Association For Decentralised Energy (ADE)	Yes	The ADE agrees with the recommended implementation approach for P344.
The Renewable Energy Company (Ecotricity)	No comment	We have no comments to provide regarding the implementation approach.
TMA Data Management Ltd	Yes	
UK Power Reserve Ltd	Yes	The implementation approach in the GB is closely bound to the EU central Project TERRE timeline, therefore it seems there are no alternatives on the implementation. Yet, we would like to stress the need for GB to take into account the progress and alignment to Project TERRE of all signatories before enforcing the project at national level.
Uniper UK Ltd	Neutral	We note that the implementation timescales are largely driven by the Electricity Balancing Guideline. Meeting an implementation date of June/July 2019 will be challenging for parties, but at least there is no compulsion on potential BSPs to take part from the outset.
Welsh Power Group Limited	Yes	This does not seem to be optional and the mod seems to have addressed the key design criteria as set out at the current time.

Question 4: Do you agree with the Workgroup that there are no other suitable Alternative Modifications within the scope of P344 which would better facilitate the Applicable BSC Objectives?

Summary

Yes	No	Neutral/No Comment	Other
9	6	6	0

Responses

Respondent	Response	Rationale
Centrica	Yes	We do not have an Alternative Modification to propose.
Drax Group plc	Yes	The solution has been developed by industry experts over numerous meetings and provides a robust implementation of project TERRE into GB arrangements, whist there still may be some details that need to be determined through industry consultation, we do not believe an alternate modification would better facilitate the applicable BSC Objectives.
Dwr Cymru Cyfyngedig Welsh Water	No	I think a STOR like setup would encourage direct participation by end customers in these activities. I think the complexity of the virtual lead party system would dissuade many individual demand side response parties from direct participation but rather participation through aggregators. This could lead to more business being won by existing BM parties or DSM parties from mainland Europe. I don't think the case has been successfully put forward why we have to proceed with the BSC requirements route rather than setting up a STOR like ancillary product which has been in the market doing a similar thing and has been working fine to date.
EDF Energy	No	We think an alternative in which suppliers can, as a minimum requirement, independently verify participation of meters for which they are responsible, and, as a preference, be able to receive relevant meter balancing volumes at meter level for imbalance management purposes (as for related proposal P354), would better meet BSC objectives (b) and (c). For BSC objective (b) concerning efficient system operation, availability of this information to suppliers would allow them to manage their imbalance more effectively, by being able to distinguish those meters whose deviation from expectation creates imbalance (not participating in TERRE) from those whose deviation from expectation doesn't create imbalance (participating in TERRE). Better self-balancing should allow more efficient system operation. For BSC objective (c) concerning competition, availability of the information would: (i) Allow competing suppliers to better understand the costs and revenues associated with customer supply, removing

Respondent	Response	Rationale
		discrimination between suppliers with different levels of embedded NGET balancing participants. (ii) Avoid discrimination in cost-pass through between customers participating in TERRE and those not participating, particularly implicit subsidy of NGET balancing providers by other customers, and thereby reduce a potential advantage for secondary BM Units over standard BM Units. Having observed the complexity of the detailed solution being proposed, we wonder if a staged implementation of different features of the proposal might be preferable to ensure early delivery of key features of TERRE without risking delay of a comprehensive solution.
Energy Networks Association (ENA)	No comment	Not answered
Engie	No comment	
Flexitricity Limited	Yes	There are no suitable Alternative Modifications.
IMServ Europe	No comment	No view on this
National Grid Interconnectors Ltd	Yes	
Npower	Yes	
Quorum Development	Yes	The overlap between TERRE and BM timescales makes a bilateral contract-based solution for current BM participants infeasible, and the similarity of purpose between Replacement Reserve and BM energy actions supports an approach that attempts to merge the settlement of these different markets. The creation of the Virtual Lead Party participation capacity with the attendant Virtual Balancing Account and Secondary BM Unit resolves a deficiency in the BSC in respect of BM participation for demand-side aggregators.
RWE Supply and Trading GmbH	No	In the light of discussions that have taken place at P354 regarding the information provision to suppliers it may be appropriate to consider an original based on full disclosure of information on secondary BMUs to suppliers and an alternative based on a customer "opt in" arrangement for information disclosure to suppliers.
ScottishPower	Yes	No comment
SmartestEnergy	No	We believe that there should be an alternative which gives suppliers the information required to establish which customers have caused their imbalance. This would better facilitate the objectives of competition and

Respondent	Response	Rationale
		efficiency. This alternative is required so that P344 can be assessed on equal terms with P354; it would be absurd to present Ofgem with incompatible options.
SSE plc	No	To be consistent with the approach adopted for P354 modification (as set out in P354 2nd Assessment Consultation), SSE would suggest that an alternative solution ought to be developed that requires mandatory provision of MSID level data to Suppliers whose imbalance positions are being adjusted through provision of balancing services by a third party.
The Association For Decentralised Energy (ADE)	Neutral	The ADE agrees that are there are no suitable Alternative Modifications that are directly within the scope of P344 which would better facilitate the Applicable BSC Objectives. However, we believe that an Alternative Proposal under National Grid's GC0097 consultation would better facilitate the relevant Grid Code Objectives and, in turn, may have an impact upon the Applicable BSC Objectives. The ADE has raised an Alternative Proposal under the GC0097 consultation which would offer the option of a second option for notification, via a standard profile baseline methodology with adjustment on the day of an event. This Proposal better facilitates Applicable Grid Code Objective B - "To facilitate competition in the generation and supply of electricity" - under GC0097 and therefore may better facilitate Applicable BSC Objective C – "Promoting effective competition in the generation and supply of electricity, and promoting such competition in the sale and purchase of electricity" – under P344. The Alternative Proposal better facilitates the objectives mentioned by providing an alternative to submission of Physical Notifications (PNs) to nominate capacity. Submitting PNs would be unsuitable or administratively intensive for many potential market participants and could therefore act as a serious barrier to entry, limiting competition. Details of the proposed solution can be found in ADE's Alternative Proposal submission to the GC0097 Consultation.
The Renewable Energy Company (Ecotricity)	No comment	We have no comments to provide regarding alternative modifications.
TMA Data Management Ltd	No comment	
UK Power Reserve Ltd	Yes	We welcome the Workgroup's acknowledgement that there further modification proposals could be beneficial to improve and optimise the P344 solutions, once TERRE will be operational within the market.
Uniper UK Ltd	No	The solution has entailed a number of compromises being made, particularly given the tight timescales for implementing the requirements of the European Guideline on Electricity Balancing. The solution for TERRE puts a certain amount of onus on balancing service providers to ensure

Respondent	Response	Rationale
		that their bids will turn out to be feasible even though actions taken for other balancing services such as the Balancing Mechanism, and possibly in due course Project MARI, could result in original assumptions being incorrect. Therefore, TERRE is likely to be a higher risk solution to BSPs than the Balancing Mechanism, which may undermine its effectiveness if parties price in that risk into TERRE bids and/or opt to operate in the BM instead. However, it appears to be the best solution which could be implemented in the circumstances and there is scope for further improvements to be made when parties have greater experience and understanding of how it works.
Welsh Power Group Limited	Yes	We are unclear what information flows between the virtual lead party and the supplier will be. The is an issue that is also a concern under P354 and we believe needs more careful consideration. The report does not seem to suggest that the supplier who is the registered supplier to companies also in the portfolio of a virtual lead party will know either that this is the case, nor when that customer is delivering a TERRE product, unless the customer agrees. This seems likely to increase the supplier cost: · They may have purchased energy they can now not bill to a customer as it moves to NG's account; or · They were expecting energy delivered to their account from an embedded generator who instead delivers to NG's account leaving the supplier short and exposed to cash-out. While we welcome competition and see an important role for aggregators, we are concerned that these impacts have not been fully thought through and we can imagine the suppliers starting to not allow its customers to offer these services or only offer them through the supplier. This could increase costs and reduce competition. We would suggest that the group or Ofgem contact some suppliers directly, if they are not responding to consultations, to seek their views on this issue.

Question 5: Do you agree that the proposed Funding Share arrangements are acceptable?

Summary

Yes	No	Neutral/No Comment	Other
12	2	6	1

Responses

Respondent	Response	Rationale
Centrica	Yes	We agree that these arrangements are acceptable.
Drax Group plc	Yes	We agree that a TERRE participant should be required to complete the BSC Market Entry process and meet the Qualification requirements. The cost for acceding to the BSC arrangements is a one-off administration fee of £500, it seems appropriate that participants not already part of the BSC should be subject to this. The Virtual Lead Party will not hold an energy account and therefore shouldn't be subject to the BSC Base Monthly charge, although they should be subject to a charge proportionate to the participation capacity that a Virtual Lead Party has within the overall BSC arrangements, there should be no cross-subsidisation. The charge should be set by the panel and be based on analysis undertaken to assess the participation costs of a Virtual Lead Party. If Virtual Lead Parties are not subject to BSC cost recovery through the Funding Share allocation method, it seems appropriate that they are precluded from the panel election process.
Dwr Cymru Cyfyngedig Welsh Water	Yes	The funding arrangements look relatively fair. However everything depends on scale – if a customer owns only one site then the costs may be too great forcing them down the aggregator route.
EDF Energy	Yes	The allocation of BSC costs is to a large extent unreflective of the contribution of individual parties, BM Units or meters to total costs. The proposed arrangements seem an acceptable practical compromise for the immediate purposes of P344, noting that more fundamental changes to BSC funding could change this.
Energy Networks Association (ENA)	No comment	Not answered
Engie	No comment	
Flexitricity Limited	Yes	The proposed Funding Share arrangements are acceptable. These arrangements should be proportionate to the role that Virtual Lead Party participation has within the overall BSC arrangements. A Virtual Lead Party

Respondent	Response	Rationale
		will not have Funding Shares so should not be liable for any BSC cost recovery through the Funding Share allocation method.
IMServ Europe	No comment	No view
National Grid Interconnectors Ltd	No comment	
Npower	Yes	This will depend on whether we can ensure fairness of cost allocation.
Quorum Development	No comment	No views on this question.
RWE Supply and Trading GmbH	Yes	The Funding Arrangements for new BSC parties that are only participating in the provision of balancing services should be fair and proportionate.
ScottishPower	Yes	ScottishPower believes that the proposed funding share arrangements recognises and balances the cost of participation versus these costs acting as a barrier to entry for new entrants.
SmartestEnergy	No	The fact that there will be a Base Virtual Lead Party Monthly Charge set by the BSC Panel offers some consolation, although when assessing a level proportionate to the role of a Virtual Lead party consideration needs to be given to a contribution to the on-going IT cost and credit risk. Ideally, this should be done on a volumetric basis. Just because other non-Physical traders are not caught by the arrangements it does not mean that they do not present a risk. We also suspect that the administration fee will in no way cover the costs of the one-off costs associated with the facilitating arrangements. The unrecovered costs will fall on other BSC Parties and consequently their customers. This is inequitable.
SSE plc	Yes	SSE agree that Virtual Lead Parties and Virtual BM Units should contribute to BSCCo funding in a way that is proportionate to their use of the BSC and the Trading Arrangements. SSE agree that Virtual Lead Parties only utilise a limited subset of the BSC in this respect and that participation fees should recognise this. SSE would expect the BSC Panel to establish a price that is fair and transparent, and relating to the incremental cost of ongoing operation of the relevant services.
The Association For Decentralised Energy (ADE)	Yes	The ADE agrees that the proposed Funding Share arrangements are acceptable. These arrangements should be proportionate to the role that Virtual Lead Party participation has within the overall BSC arrangements. A Virtual Lead Party will not have Funding Shares so should not be liable for any BSC cost recovery through the Funding Share allocation method.
The Renewable Energy Company	No	We need to ensure that Virtual Lead Parties don't receive preferential treatment by having different funding contributions. While we appreciate that they will provide some form of funding, we are keen to ensure that

Respondent	Response	Rationale
(Ecotricity)		this doesn't give parties such as aggregators - who could become Virtual Lead Parties - an unfair advantage by virtue of a preferential funding arrangement.
TMA Data Management Ltd	No comment	
UK Power Reserve Ltd	Yes	The proposed funding share arrangements are acceptable because they reflect the different roles of participants in Project TERRE, while also taking stock of the current BSC arrangements.
Uniper UK Ltd	Yes	On balance yes. This appears to be equivalent to the treatment of non physical traders.
Welsh Power Group Limited	Unsure	We are not sure if they are appropriate as we are unclear what costs the virtual lead parties will actually cause. We suggest Elexon keeps this under review, but suspect the costs from small parties are low.

Question 6: Does any terminology used within the proposed arrangements create any contractual difficulties with the customer?

Summary

Yes	No	Neutral/No Comment	Other
1	10	10	0

Responses

Respondent	Response	Rationale
Centrica	No	We have not identified any issues with the terminology.
Drax Group plc	No	We are unable to identify any possible issues that may occur as a result of the terminology used.
Dwr Cymru Cyfyngedig Welsh Water	No	I am not aware of any contractual difficulties with the customer.
EDF Energy	Neutral	We expect co-operation with customers whom we supply who wish to transact balancing energy with other BSC Parties in their own right.
Energy Networks Association (ENA)	No comment	Not answered
Engie	No comment	
Flexitricity Limited	No	I do not believe that any of the terminology used within the proposed arrangements will create any contractual difficulties with Flexitricity's customers.
IMServ Europe	No comment	No view on this
National Grid Interconnectors Ltd	No comment	
Npower	Yes	"The terminology" used within the proposed arrangements may not create any contractual difficulties with the customer; however, we are concerned that customers on existing (non-pass through contracts) may subsequently (directly or through an aggregator) become part of a virtual BM, and whose current commercial terms do not provide the right to pass such costs or benefits through – unless resolved their commercial actions could result in unacceptable socialising of costs.
Quorum	No	No views on this question

Respondent	Response	Rationale
Development	comment	
RWE Supply and Trading GmbH	No Comment	We have no comment on this issue.
ScottishPower	No	No comment
SmartestEnergy	No	
SSE plc	No	
The Association For Decentralised Energy (ADE)	No	Member feedback indicates that the terminology within the proposed arrangements appears not to create any contractual difficulties at present. More details regarding the proposed arrangements would facilitate assessing whether any terminology creates difficulties, however.
The Renewable Energy Company (Ecotricity)	No comment	We have no comments to provide regarding customer contracts.
TMA Data Management Ltd	No comment	
UK Power Reserve Ltd	No	No, in principle we find that the terminology developed and proposed by the Workgroup properly reflect the different participation capacities and allow the participation of customers (without undue restrictions for either existing BM and Non-BM parties) and aggregators.
Uniper UK Ltd	No comment	We do not have any customer contracts so cannot comment.
Welsh Power Group Limited	No	n/a

Question 7: Do you agree that the sharing of HH delivered volumes with the customer's Supplier should only take place should the customer opt-in to such an arrangement?

Summary

Yes	No	Neutral/No Comment	Other
8	8	5	0

Responses

Respondent	Response	Rationale
Centrica	Yes	Half-hourly delivered volumes are needed for a Supplier to accurately bill a Customer; this can include passing on benefits as well as charges. These volumes are also needed to manage Suppliers' own accounts. However, a balance is needed between ensuring that customers are billed correctly and efficiently; and ensuring that Secondary BMUs are not disadvantaged compared to primary BMUs. Centrica believes that ultimately it is in the Customer and Supplier's best interest to ensure that the correct and timely information is shared. The onus is on the supplier to ask that the customer shares information with the supplier about balancing services that it may be providing to National Grid or DNOs (bilaterally or via an aggregator); we would expect this to be discussed when agreeing terms and conditions with most suppliers. We support Elexon's approach as it provides another route for a customer to share HH delivered volume data. As this is the customer's data, we agree that this should be on an opt-in basis. We support this approach in P354, as set out in the Alternative Modification; any solution introduced in P344 should be consistent with the solution within P354. Given the importance of being able to access this data for efficient operation of Customer accounts, we need to be able to confirm that a Customer has consented to "opt in". We would like visibility of the fact that the Customer has given consent to ensure efficient billing and account management from the start. We highlight Ofgem's open letter, which provides clarity on Ofgem's position on Independent Aggregators. We note that, and agree with, Ofgem's view that "independent aggregators' participation in energy markets should not build-in stages that require ex-ante consent of a customer's supplier". https://www.ofgem.gov.uk/system/files/docs/2017/07/ofgem_s_views_on_the_design_of_arrangements_to_accomodate_independent_aggregators_in_energy_markets.pdf
Drax Group plc	No	Whilst we appreciate the concern that aggregators may have, suppliers should have maximum transparency around the consumption of their

Respondent	Response	Rationale
		customers. Suppliers should have visibility of TERRE volumes for forecasting reasons, learning from the behaviour of customers participating in TERRE would allow suppliers to produce accurate and stable forecasts. Without this information forecasts will be more unpredictable. For the purpose of forecasting and efficient billing procedures, we believe that suppliers should have access to the HH delivered volumes from customers participating in TERRE through an aggregator. We therefore disagree with the proposed "opt-in" approach and believe HH delivered volumes should be made available to suppliers regardless.
Dwr Cymru Cyfyngedig Welsh Water	Yes	The preference is this step could be avoided altogether and the system be more like the STOR ancillary service. However as Option B this is acceptable.
EDF Energy	No	See also our response to question 4. Existing BM participants are responsible for their own imbalance, or can transfer responsibility to a subsidiary party by mutual agreement using Metered Volume Reallocations from BM Units. Instructed balancing volumes are treated as firm bilateral contracts for imbalance purposes, with all deviations from overall contracted position creating imbalance. The BM participant as Balancing Service Provider and the Balance Responsible Party (the party itself or often a BSC subsidiary party) manage imbalance by mutual agreement. The BRP will typically obligate the BSP to notify it of expected physical volumes, culminating in expected volume at gate closure, with both parties knowing the expected, instructed and delivered balancing volumes after the event. For Secondary BM Units registered to Virtual Lead Parties providing services to NGET as Balancing Service Provider under P344, the Secondary BM Unit is not required to provide information on expected reference level in advance to the host Supplier, is not subject to imbalance for uninstructed deviation from the reference level, and is not subject to imbalance for deviations outside a range between the reference level and the instructed level (eg. more than instructed, or in the opposite direction). The host supplier as Balance Responsible Party for the measured flow must manage these uncertainties, and there is no requirement for mutual agreement on the management of imbalances associated with the relevant meters. The host supplier furthermore might not, under current P344 proposals, even know how much of a given measured flow it is held responsible for in imbalance (although in aggregate it can subtract its total credited energy from the aggregate of BM Unit measured volumes). Without information on these uncertainties, the host Supplier must consolidate and share them with other customers. Customers participating in wholesale energy transactions, here meaning voluntary division of their energy costs and revenues between different BSC parties, in this case between their Supplier and NGET, should not expect to do so without visibility for their Supplier. Consider the extreme

Respondent	Response	Rationale
		of a customer who contracts with a supplier for an expected demand at an agreed price per unit: the supplier buys wholesale for the expected demand, the customer sells its expected demand to another party (in this case NGET) and takes the revenue for itself, while the supplier gets no compensation for the energy it bought (under P344/P354). In the short term, the supplier has a loss which it must try to recover from other customers. In the longer term it will modify the expected demand and/or agreed price per unit or other terms, but uncertainty will always remain relative to a customer (or group of customers) whose outturn flow better matches expected demand at gate closure. If a supplier cannot distinguish customers whose deviation from expectation at gate closure is subject to imbalance from those whose deviation is not subject to imbalance, it would have to recover the costs associated with uncertainty from all customers. For example, under P344 (and P354) generation or reduced demand by customers selling to NGET will not cause spill (or reduced shortfall) energy for the supplier, but it will for unexpected demand reduction by other customers. If the supplier cannot distinguish, the spill energy from the other customers will be shared between all customers, including those who did not contribute to it. This may be offset by unexpected energy in the opposite direction, and while participating balancing volumes are small, the materiality may be relatively small. But if relevant balancing volumes increase in future as expected, and customers' own response to time-of-use tariffs increases as expected, it will become increasingly important to distinguish, to avoid cross-subsidy and/or double counting of deviations from expectation, with impacts on: • Relative costs to supply different groups of customers • Relative costs for suppliers with different proportions of independent balancing provider within their portfolio. Costs relative to standard BM participants.
Energy Networks Association (ENA)	No comment	Not answered
Engie	No comment	
Flexitricity Limited	Yes	The initially proposed solution, which would have mandated disclosure of delivered volume data to Suppliers, would undermine commercial confidentiality and have a damaging effect upon competition. There is a significant risk that Suppliers could either require customers to provide balancing services through the Supplier or prevent them from providing balancing services through changes to their supply agreements. While Suppliers would be unlikely to break Competition Law requirements, it would be possible to heavily incentivise customers to provide Balancing Services through the Supplier, rather than other parties, through contract changes. This solution is therefore detrimental against BSC Objective C,

Respondent	Response	Rationale
		which concerns the promotion of effective competition, providing privileged information to Suppliers. Using the 'customer opt-in' approach, while not entirely eliminating the risk to competition, strikes a balance between allowing customers who would like the supplier to have access to the data to do so easily, while protecting those customers who would not. While such an approach is less likely to damage completion than the initially proposed solution, it is important that Regulatory Authorities monitor the situation closely for behaviour that impacts upon Competition Law requirements.
IMServ Europe	Yes	Although I agree, I am unsure how this would be achieved and maintained going forwards in practical terms.
National Grid Interconnectors Ltd	No comment	
Npower	No	No, we believe it is essential that suppliers have access to customer MPAN-specific data as part of this arrangement. We note the consultation states: *However, responses to the [first] consultation revealed some concern from independent aggregators that automatic disclosure of this information would provide a competitive advantage to Suppliers (who are in some cases the independent aggregators' direct competitors). Potential approaches to this problem would appear to include the following:* • *Disclosure of delivered volume data to Suppliers from BSC central systems, for all customers participating in TERRE (or the BM) through a Secondary BM Unit;* • *No disclosure of delivered volume data to Suppliers from BSC Central systems. If Suppliers require this data for billing purposes, they would need to agree a mechanism for providing it with customers; or* • *Disclosure of delivered volume to Suppliers from BSC central systems, only for those customers where the Virtual Lead Party registering the Secondary BM Unit has indicated that the customer has provided consent to the disclosure. If Suppliers require the data for billing purposes they would potentially need to agree with the customer that data can be disclosed, but the solution for providing the data would be provided centrally (by BSC Systems).* The Workgroup's proposal, subject to the results of this consultation, is to progress the third of these options. As we have noted in our response to P354 where the same issue was identified, we would note that the alleged competitive advantage claimed is false. Whilst we've not been able to participate in the TERRE working group, claims raised within the p354 working group alleged that suppliers

Respondent	Response	Rationale
		would use the provision of the MSID data from their customers as a form of soft power, to "encourage" those customers to take balancing service provision from them or risk less favourable commercial supply contracts or would provide information not available to other parties. During the P354 workgroup, much discussion of the alleged abuse of soft power suggested that suppliers would offer less competitive terms to their customer, if the customer did not agree to use the supplier as their future aggregator. Such alleged behaviour, as well as being illegal, completely misrepresents the status and reality of the competitive market. There are many (ca. 50 licenced non-domestic licenced electricity suppliers), most of whom are not active within the aggregation market, and therefore any customer who was concerned that they would not get a fair price from their existing supplier unless they took additional services from them, would be completely able to source an alternative supply contract elsewhere. Given that these customers are by their nature engaged within the energy market, responsible for the procurement of large quantities of power, we do not believe that the suggestion such companies or organisations would submit to any implicit or explicitly anticompetitive behaviour is realistic or credible. As was noted in the workgroup, particularly at this time of hostility to suppliers in the political and wider environment, no licenced energy supplier would risk their reputation or the legal ramifications of acting in such a way. Furthermore, and in conclusion the suggestion that the provision of the MSID data to the supplier would provide suppliers with commercially sensitive information (not available to other participants) that they didn't already have (i.e. that the customer was interested in and potentially providing balancing services) overlooks the reality that many suppliers, their customers and aggregators all attend the same industry events; such as those organised by National Grid under the Poweresponsive programme or other events hosted by the SO or DNOs in relation to the future opportunities relating to the provision of flexibility. Information regarding DSR providers / sites prequalifying or bidding into the capacity markets (both T-1 and T-4) is also publically available. To suggest that the provision of the MSID-delivered volume would provide suppliers with new opportunities to target those customers with offers of aggregation service overlooks this reality. Furthermore, we note the provision of the MSID data relating to delivered volumes would relate to ex post actions and that the management of settlement/billing and contractual pricing functions are distinct from the suppliers' DSR aggregation activity. We note that some non-BM providers of balancing services (directly or through an aggregator) are extremely active and may become more so

Respondent	Response	Rationale
		with the additional opportunities that access to TERRE will provide. This increase in the volume of MWs dynamically and unpredictably changing consumption behaviour will result in additional costs incurred by the supplier – as these events are unforecastable by nature and will occur beyond gate closure. These events (and impact on the supplier) are expected to grow in scale and frequency – it can only be appropriate to recover these costs from the commercial entity (MSID) whose commercial actions created the imbalance rather than recover these costs 'socially' at GSP level. Suppliers will need to receive customer-specific information notice (at MSID level) when a customer has been included in or removed from a vBMU. If this information is not available to the supplier then the costs associated with businesses that have benefited commercially from TERRE/DSR activity will be borne socially by the community, increasing their energy costs which is counter to the wider agenda seeking to ensure energy is charged cost-reflectively. Furthermore the specific costs associated with VBMU non-delivery charges for the relevant balancing service should be reflected on the Virtual Lead Party (VLP). Maintaining open and transparent communication on adjusted customer loads should not act as a barrier to customer and/or aggregator participation in TERRE and transparency at an MSID level of definition will ensure that all energy users within the GSP area affected by the TERRE participant are treated fairly and appropriately.
Quorum Development	Yes	Yes, given that a Supplier can negotiate this disclosure directly with the Customer.
RWE Supply and Trading GmbH	No	As noted above, in the light of discussions that have taken place at P354 regarding the information provision to suppliers it may be appropriate to consider an original based on full disclosure of information on secondary BMUs to suppliers and an alternative based on a customer "opt in" arrangement for information disclosure to suppliers.
ScottishPower	No	ScottishPower supports the disclosure of delivered volume data to Suppliers from the BSC central system for all customers participating in TERRE through a Secondary Balancing Mechanism Unit. ScottishPower believes that the Supplier should have access to the HH delivered volumes. Notwithstanding the Supplier's imbalance volumes being adjusted for TERRE actions performed by the customer, the Supplier has a requirement to understand and to be able to accurately forecast the demand from a site it supplies. The supplier may make different purchasing decisions if it had known that its customer is participating in TERRE. As such the Supplier may be 'in balance' in volume terms but may not be cost neutral by the actions undertaken by its customer as a result of being dispatched under TERRE.

Respondent	Response	Rationale
SmartestEnergy	No	The Workgroup's preferred option is for "Disclosure of delivered volume to Suppliers from BSC central systems, only for those customers where the Virtual Lead Party registering the Secondary BM Unit has indicated that the customer has provided consent to the disclosure." We believe this gives the Virtual Lead Party the opportunity to dissuade the customer from providing consent, even though it is perfectly reasonable for the supplier to understand which customers are creating an imbalance, because this will need to be reflected in their billing. Even if the customer gives consent there do not seem to be any firm arrangements in place to keep the Virtual Lead Party honest.
SSE plc	Yes	As a minimum, Suppliers should be provided with aggregate level data in order to understand the account level impact on their imbalance position. Aggregation should be at a minimum half-hourly granularity in alignment with the allocation of imbalance liabilities at a half-hourly level. SSE would prefer to receive HH delivered volumes for all balancing services customers that have impacted a Supplier's imbalance position, as this would provide a more efficient and transparent means of managing customer accounts, as well as allowing for a more thorough verification of settlement liabilities. However, we recognise that this may be difficult and/or inappropriate given the competition concerns raised by flexibility service providers and associated actors in the market. We agree that allowing the ability for customers to opt-in to providing this data directly to Suppliers would be helpful in this context, as such data can subsequently be relied upon to fulfil contractual conditions that are likely to arise between Suppliers and customers to ensure an efficient allocation of risk and costs. Notwithstanding the above, it is not clear that Suppliers would risk exercising soft market power and behaving in the way that is feared by flexibility providers. Wider Competition Law requirements, and the severe remedies available to Regulatory Authorities, would provide an effective deterrent against this type of behaviour in SSE's view. We therefore believe that P344 should look to consider an option that mandates the provision of data to Suppliers, in order to be consistent with options developed for P354.
The Association For Decentralised Energy (ADE)	Yes	The ADE agrees that the sharing of HH delivered volumes with the customer's Supplier should only take place should the customer opt-in to such an arrangement. The initially proposed solution, which would have mandated disclosure pf delivered volume data to Suppliers, would undermine commercial confidentiality and have a damaging effect upon competition. There is a significant risk that Suppliers could either require customers to provide balancing services through the Supplier or prevent them from providing balancing services through changes to their supply agreements. While Suppliers would be unlikely to break Competition Law requirements, it

Respondent	Response	Rationale
		would be possible to heavily incentivise customers to provide Balancing Services through the Supplier, rather than other parties, by offering differentiated prices for the supply of energy. This solution is therefore detrimental against BSC Objective C, which concerns the promotion of effective competition, providing privileged information to Suppliers. Using the 'customer opt-in' approach, while not entirely eliminating the risk to competition, significantly ameliorates this risk. While such an approach is less likely to damage competition than the initially proposed solution, it is important that Regulatory Authorities monitor the situation closely for behaviour that impacts upon Competition Law requirements.
The Renewable Energy Company (Ecotricity)	No	While we understand the confidential nature of this information, we feel that opt-in arrangements would prove a disadvantage to the customer's Supplier. Suppliers need to be aware of all variations in the expected volume usage of their customers so as to a) be able to plan their own energy positions and b) Have the information to be able to accurately calculate supply contract renewals. Without this information, Suppliers are exposed to unjust volatility. Opt-in arrangements in most cases will result in the default position being maintained as the aggregators in question aren't willingly going to opt-in to the provision of data which could prove disadvantageous to their business interests. As any opt-in data disclosure is going to be anonymised regardless, it makes most sense for the mandatory disclosure of this information to the customer's Supplier. We would therefore suggest that this data is disclosed to Suppliers mandatorily, but anonymised to maintain impartiality. This will ensure that these Suppliers aren't disadvantaged in the manner they are with the third option.
TMA Data Management Ltd	No comment	
UK Power Reserve Ltd	No comment	
Uniper UK Ltd	Yes	If a Balancing Responsible Party's (BRP) position is going to be affected by the actions of a Balancing Services Provider (BSP), it would seem sensible to allow that party to have the information to understand this. However, this could be dealt with through contractual means. We note the onus is on the BSP to provide the opt in information although it will be in all likelihood the BRP's contract with the customer which would seek to make it available, as the BSP doesn't have any incentive to cover this in its contract with the customer. This seems to be a shortcoming in the solution which presumably the BRP will have to get around by contractually requiring its customers to instruct their aggregator to opt in on their behalf.

Respondent	Response	Rationale
Welsh Power Group Limited	No	We have noted above that we are not convinced that this issue has been robustly addressed. If all customers (and impacted gencos) refuse to share data what will the suppliers do? We need to remember the suppliers will see the data, but will only be able to determine the likely cause on "vanishing" energy in the case of generators. Even then the genco may be offering ancillary services (after P354 is implemented) or TERRE. The SO is likely to find balancing difficult and expensive if all of these parties find their suppliers trying to prohibit their participation in those markets.

Question 8: Do you agree that retrospective amendments to MSID Pair information should be permissible? If so, please state and justify an appropriate deadline for such amendments.

Summary

Yes	No	Neutral/No Comment	Other
12	2	6	1

Responses

Respondent	Response	Rationale
Centrica	Yes	We believe that there should be an opportunity to rectify erroneous submissions. The deadline for this should be R1.
Drax Group plc	No	We agree with the Workgroup that the integrity of the P344 solution depends upon Virtual Lead Parties (VLPs) allocating delivered volumes using a fair and accurate process. Allowing retrospective amendment to MSID Pair information would increase the uncertainty in the consumption of supplier's customers should they be participating in TERRE through an aggregator, furthermore, there would be no incentive for aggregators/customers to submit accurate information.
Dwr Cymru Cyfyngedig Welsh Water	Yes	The preference is this step could be avoided altogether and the system be more like the STOR ancillary service. However as Option B this is acceptable.
EDF Energy	Yes	We assume this means amendment to delivery volume information or meter volume information. A deadline of changes in time for SF would be preferable, but since deadlines for some HH meter data are R1, a deadline of R1 initially should be acceptable.
Energy Networks Association (ENA)	No comment	Not answered
Engie	No comment	
Flexitricity Limited	Yes	As long as VLPs can only use site settlement boundary meters to participate in TERRE, retrospective amendments to MSID Pair information must permissible in order for the P344 solution to function. Virtual Lead Parties often do not have access to the site boundary metering data. Even when they do, it is through the customer, and thus the same access the customer has which can be a month or more behind real time. In the P344 solution the VLP will receive boundary meter data for the sites from the Settlement Volume Allocation Agent after the VLP has already submitted first-pass disaggregated delivery data. Therefore the VLP can only report accurate disaggregated delivery data once they receive

Respondent	Response	Rationale
		the boundary data from the SVAA. If a site has more than one incomer, the VLP has two options for pairing MSIDs. The first option would be to get the meter technical details from the Meter Operator, who is an agent of the supplier, and the VLP would often need to go through the supplier to access these details. In addition to creating a clear competition issue, this option only works in cases where meters record both import and export, which not all do. The second option is to examine all the boundary meter data for the period where there is a known DSR action, compare the data before the action and after, and assign the action to the correct MSID. This allows the VLP to pair the correct import and export MSIDs. The above solutions are possible when the boundary data is provided to the VLP after the event, i.e. at the information settlement run. The most appropriate deadline for the VLP to make amendments is likely to be R1, because it gives the opportunity for correction if a VLP spots errors in their statement from Elexon at SF. If a site's data collector is having trouble communicating with the meters, it is possible that SF will be the first time that the VLP will be able to spot the error.
IMServ Europe	Yes	Since the Settlement window is a 14 month period, why would it not be 14 months?
National Grid Interconnectors Ltd	No comment	
Npower	Yes	There should be retrospective amendments to MSID pair information as the Import and Export meter is at the same site. They should be corrected by SF or R1 at the latest.
Quorum Development	Yes	It seems sensible to have a mechanism to correct wrong MSID Pair information particularly during the early days of the RR market. I have no strong views on the appropriate timescales – however it seems sensible to ensure the mechanism for providing such corrections is worded in such a way that the timescales can be tightened if necessary without significant administrative effort.
RWE Supply and Trading GmbH	Yes	The retrospective amendment to MSID Pair data should be permissible under P344. However, the need for such amendments should be restricted to limited circumstances. In any event we would expect that the requirements for such amendments would reduce over time as the procurement processes for replacement reserve from secondary BMUs is improved (e.g. through Grid Code changes or changes to TERRE arrangements for aggregators). The deadline for submission of data should normally be the SF run in other to maintain the integrity of the settlement process. However, the central systems should facilitate the receipt of amended data up the RF, recognising the complexity of the arrangements associated with secondary

Respondent	Response	Rationale
		BMUs. Parties should have a "reasonable endeavours" incentive to deliver information by SF.
ScottishPower	Yes	ScottishPower is generally in favour of retrospective amendments to MSID Pair information being available where necessary but hopes the allocation process would be sufficient routinely and retrospective amendments the exception. ScottishPower believes a deadline is imperative and that changes should be submitted in time to be included in the SF run.
SmartestEnergy	No	
SSE	Maybe	In principle, SSE are averse to allowing retrospective changes, as it creates a greater potential for inaccuracy and inappropriate allocation of error and risk. However, we recognise, that equivalent processes do exist within the energy market to correct erroneous registration and/or metering data. It therefore seems reasonable to allow a degree of retrospective change to align with the energy market; however, any changes should be justified as to why they are required and limited to a short window of opportunity.
The Association For Decentralised Energy (ADE)	Yes	The ADE believes that it is crucial that retrospective amendments to MSID Pair information are permissible in order for the P344 solution to function. Most Virtual Lead Parties do not have access to the site boundary metering data. Even when they do, it is often the same access that the customer has, which is often a month or two out of date. Under P344, it is proposed that the VLP will receive boundary meter data for the sites from the Settlement Volume Allocation Agent after the VLP has already submitted disaggregated delivery data. This timeline creates a number of issues, one of which is outlined below and can only be solved by allowing retrospective amendments to MSID Pair information. If a site has more than one incomer, the VLP has two options for pairing MSIDs. The first option would be to get the meter technical details from the Meter Operator, who is an agent of the supplier, and the VLP would often need to go through the supplier to access these details. In addition to creating a clear competition issue, this option only works in cases where meters record both import and export, which not all do. The second option is to examine all the boundary meter data for the period where there is a known DSR action, compare the data before the action and after, and assign the action to the correct MSID. This allows the VLP to pair the correct import and export MSIDs. A further issue is that, if switching arrangements on the site change, this could change the MSID pair that the DSR action is shown on; the VLP will need to monitor this and, in some cases, amend the data. The above solutions are possible when the boundary data is provided to the VLP after the event, i.e. at the information settlement run. The most appropriate deadline is likely to be R1, because it gives the opportunity for correction if a VLP spots errors in their statement from Elexon at SF. If a site's data aggregator (for the meters) is having trouble contacting the

Respondent	Response	Rationale
		meters, it is possible that SF will be the first time that the VLP will be able to spot the error.
The Renewable Energy Company (Ecotricity)	No comment	We have no comments to provide regarding retrospective amendments to MSID Pair information.
TMA Data Management Ltd	No comment	
UK Power Reserve Ltd	No comment	
Uniper UK Ltd	Yes	The deadline should be consistent with the timescales expected for the majority of HH metered data to be correct in settlement. Consideration could be given to this being subject to the BSC's performance assurance regime should sufficiently high numbers of exceptions be experienced.
Welsh Power Group Limited	Yes	There has to be a means to correct data issues.

Question 9: Do you agree that the Secondary BM Unit shall be able to retrospectively submit amendments to records in the SVA Metering System Balancing Services Register? If so, please also state what you believe to be an appropriate timescale for doing so, e.g. R1.

Summary

Yes	No	Neutral/No Comment	Other
12	2	6	1

Responses

Respondent	Response	Rationale
Centrica	Yes	We are supportive that Secondary BMUs should be able to retrospectively submit amendments. We believe that this will ensure that there will be as many assets available to National Grid through the TERRE and BM products. National Grid will need to confirm that such an approach would not impact them operationally, but we believe that this should be acceptable. We believe the timescale should be R1.
Drax Group plc	Yes	Although, we believe this should be done as soon as feasibly possible and suppliers should have visibility of changes. The process should be accompanied by its own regulations in line with in line with general BSC contracting/terminations.
Dwr Cymru Cyfyngedig Welsh Water	Yes	The preference is this step could be avoided altogether and the system be more like the STOR ancillary service. However as Option B this is acceptable.
EDF Energy	No (except by dispute)	We assume this refers to notification by the registrant of a Secondary BM Unit of the MSID pairs associated with that Unit for a given settlement day. If it were only the registrant who faced the consequences of not making accurate notifications in advance, it wouldn't matter when they were made. However, other parties are affected: NGET as customer in the first instance for the balancing service, the host supplier whose imbalance may be affected, competing balancing providers whose own Secondary BM Units might be affected, and other parties through the consequential impacts on potential non-delivery and new deviation charges. Like other registrations under the BSC and MRA, and the submission of ECVNs and MVRNs and Bid-Offer data by gate closure, we think associations should be notified in advance, with retrospective changes only in exceptional circumstances where central systems have failed to correctly process valid notifications. There is a risk that notification errors by Secondary BM Unit registrants could lead to errors in allocation of balancing and or imbalance volumes between parties; if this proves to be a material issue then performance measures and incentives will be required.

Respondent	Response	Rationale
Energy Networks Association (ENA)	No comment	Not answered
Engie	No comment	
Flexitricity Limited	Yes	VLPs should be able to retrospectively submit amendments to records in the SVA Metering System Balancing Services Register in relation to Secondary BM Units as long as they are required to use only site settlement boundary meters to participate in TERRE. This is necessary in order for VLPs to identify the correct MSID. Most VLPs do not have access to ECOS, so the VLP is reliant on the site to provide them with the correct MSIDs. Erroneous information can be provided, either due to the site making a mistake or the site being provided incorrect MSID information by their supplier. This mismatch in which party has information, and which party is being asked to provide it has already caused issues for some providers in the Capacity Market. Once a VLP has access to site boundary data, they are able to verify that their actions have had the expected effect on the expected MSID. It is therefore essential that the VLP is allowed to retrospectively submit amendments to records up to R1. R1 is again a more appropriate deadline than SF because it gives the opportunity for correction if a VLP spots errors in their statement from Elexon at SF. If a site's data collector is having trouble communicating with the meters, it is possible that SF will be the first time that the VLP will be able to spot the error.
IMServ Europe	Yes	Since the Settlement window is a 14 month period, why would it not be 14 months?
National Grid Interconnectors Ltd	No comment	
Npower	Yes	As per Question 8
Quorum Development	Yes	It seems sensible to have a mechanism to correct wrong MSID – Secondary BM Unit associations particularly during the early days of the RR market. I have no strong views on the appropriate timescales – however it seems sensible to ensure the mechanism for providing such corrections is worded in such a way that the timescales can be tightened if necessary without significant administrative effort.
RWE Supply and Trading GmbH	Yes	The retrospective amendment to records in the SVA Metering System Balancing Services Register data should be permissible under P344. However, the need for such amendments should be restricted to limited circumstances. In any event we would expect that the requirements for such amendments would reduce over time as the procurement processes for replacement reserve from secondary BMUs is improved (e.g. through

Respondent	Response	Rationale
		Grid Code changes or changes to TERRE arrangements for aggregators).
ScottishPower	Yes	ScottishPower believes that data submitted should be correct and that amendments should only occur in exceptional circumstances. A Secondary BM Unit should be able to retrospectively submit amendments to records in the SVA Metering System Balancing Services Register in time to be included in the R1.
SmartestEnergy	No	
SSE plc	Maybe	Please see response to Question 8 above.
The Association For Decentralised Energy (ADE)	Yes	The ADE agrees that Secondary BM Units shall be able to retrospectively submit amendments to records in the SVA Metering System Balancing Services Register. This is necessary in order for VLPs to identify the correct MSID. Most VLPs do not have access to ECOS, so the VLP is reliant on the site to provide them with the correct MSIDs. Erroneous information can be provided, either due to the site making a mistake or the site being provided incorrect MSID information by their supplier. Once a VLP has access to site boundary data, they are able to verify that their actions have had the expected effect on the expected MSID. It is therefore essential that the VLP is allowed to retrospectively submit amendments to records up to R1. R1 is again a more appropriate deadline than SF because it gives the opportunity for correction if a VLP spots errors in their statement from Elexon at SF. If a site's data aggregator (for the meters) is having trouble contacting the meters, it is possible that SF will be the first time that the VLP will be able to spot the error.
The Renewable Energy Company (Ecotricity)	No comment	We have no comments to provide regarding retrospective amendments in the SVA Metering System Balancing Services Register.
TMA Data Management Ltd	No comment	
UK Power Reserve Ltd	No comment	
Uniper UK Ltd	Yes	Again, this should be consistent with processes for HH metered data settlement. It would be a concern if this process was being used often for a significant number of sites.
Welsh Power Group Limited	Yes	It should be hoped that with robust metering such redeclarations are rare. However, robust data is necessary to ensure that balancing is settled in such a way that it is cost reflective and where incorrect data is used the other parties may end up being incorrectly billed. R1, giving around a month, seems a reasonable time table, but parties need to be monitored to ensure that their updates are not creating wider data changes for the rest of the market.

Question 10: Do you agree that the provision of HHDA services to the market should be mandated and not optional for use with the TERRE product?

Summary

Yes	No	Neutral/No Comment	Other
14	4	3	0

Responses

Respondent	Response	Rationale
Centrica	Yes	We agree with the workgroup's rationale.
Drax Group plc	Yes	Project TERRE is designed to enable the Transmission System Operators (TSOs) to balance the system more efficiently at a lower cost to consumers. HHDAs should not be able to "opt-out" of providing services for the GB TERRE arrangements, such an approach would risk some customers being unable to participate in TERRE. Given the proposed "opt-in" approach for the sharing of HH delivered volumes with suppliers, it seems unfair that there would be an obligation on suppliers to ensure that HHDAs undertake this requirement.
Dwr Cymru Cyfyngedig Welsh Water	Yes	Validation through data collector provided data is the best method for confirming actual performance against requirements
EDF Energy	Yes	It seems unavoidable that all HHDAs should be able to provide the service required to support participation by customers in Secondary BM Units in TERRE and/or BM.
Energy Networks Association (ENA)	No comment	Not answered
Engie	No comment	
Flexitricity Limited	Yes	While the concerns around mandating services provision are valid, the provision of HHDA services to the market should be mandated, as allowing an opt-out of providing HHDA services would create significant risks that customers would be unable to participate in TERRE, or would only be able to if they could persuade their Supplier to appoint a different HHDA. This would have a detrimental impact upon competition and represent a significant barrier to entry for aggregators and small players. This is especially true as the HHDA is an agent of the Supplier, rather than providing services directly to the customer.

Respondent	Response	Rationale
IMServ Europe	No	We do not like the lack of transparency created by the requirement on the HHDA to not disclose MPANs being provided with this service to the Supplier. Since customers and aggregators will need to become Parties to the BSC, would a better approach not be for these Parties to contract directly with the HHDA via a normal commercial type discussion? After all, these Parties are going to be the ones benefitting from the service the HHDA is being asked to provide. Should this be the arrangement, such requirements would then better sit in a new Code Subsidiary Document. We do not think a framework where Suppliers contract with HHDAs to provide this service at a cost to the Supplier, for which the Supplier may gain no benefit, is equitable. If HHDA is a competitive service and if these requirements are under an umbrella that gives the right financial incentives / sensible commercial framework, HHDA parties would seek such work.
National Grid Interconnectors Ltd	No comment	
Npower	Yes (but)	Yes, although we would note that mandating the HHDA service is a further socialisation of the costs of using the suppliers' appointed agent. These changes could prevent a risk where a customer's contract with an aggregator changes after the signing of a contract. There is a high likelihood that many customers will already be supplied on a contract (however some may not) leading to contractual imbalance costs, leading to customer complaints etc.
Quorum Development	Yes	Re-use of an existing Agent Role seems the most efficient solution.
RWE Supply and Trading GmbH	Yes	The provision of data from the HHDA is integral to the P344 solution. It is difficult to envisage that the elements associated with secondary BMUs would be feasible without the mandatory provision of data from the HHDA. We note that this cause issues associated with the potential costs associated with such data provision since suppliers would effectively end up paying for this. This issue should be addressed through the ongoing discussion on the future of the "Supplier Hub" arrangements.
ScottishPower	Yes	ScottishPower believes mandating this service facilitates TERRE.
SmartestEnergy	No	This question typifies all that is wrong with this modification. If the supplier is not to be provided with the data so that it can identify which site is spilling, we think that it is wholly inappropriate that there be an obligation on Suppliers to ensure that HHDAs submit HH metered volume data for SVA Metering System Numbers associated with Secondary BM Units to Settlement: if the supplier has to liaise with the DA, there should be a contribution from the Aggregator/customer (otherwise the supplier is funding this activity from other customers).

Respondent	Response	Rationale
SSE plc	Yes	It seems sensible for the industry to leverage the use of a current market service provider to pass through existent data which is critical to the P344 solution, at what should be a relatively modest incremental cost. SSE notes however that Suppliers pay for core HHDA services through a commercial relationship. Therefore, should the incremental costs be or become significant, then a clear cross-subsidy will be created by the arrangements which may distort competition and may require a mechanism to allow Suppliers to recover unreasonable costs.
The Association For Decentralised Energy (ADE)	Yes	The ADE agrees that the provision of HHDA services to the market should be mandated, as allowing an opt-out of providing HHDA services would create significant risks that customers would be unable to participate in TERRE, or would only be able to if they could persuade their Supplier to appoint a different HHDA. This would have a detrimental impact upon competition and represent a significant barrier to entry for aggregators and small players.
The Renewable Energy Company (Ecotricity)	Yes	The TERRE processes assume that HHDAs are unable to opt-out of providing HHDA services for use within the GB TERRE arrangements. Allowing such an opt-out would risk participants being unable to participate in TERRE, or only so where such participant can appoint a different HHDA. This could prove difficult for smaller participants.
TMA Data Management Ltd	Yes	We agree that P344 should be mandated for HHDA to avoid any issue/delays when/if P344 is implemented.
UK Power Reserve Ltd	No comment	
Uniper UK Ltd	Yes	It seems the only way to do this. Presumably this would require a contractual change between Suppliers and their agents to put this in place.
Welsh Power Group Limited	No	Where other, possibly operational, metering can correctly settle the TERRE product and the BSC position that would be likely to include more parties into the market. This seems to be being considered under P354 so we do not understand why different arrangements would apply.

Question 11: Do you have any further comments on P344?

Summary

Yes	No
14	7

Responses

Respondent	Response	Rationale
Centrica	Yes	Secondary BMU is not subject to any (positive or negative) imbalance costs. However, the proposals do not directly deal with the energy that a supplier purchases to match an expected load profile, which then differs due to a Secondary BMU's actions, meaning a supplier has purchased energy for which it is unable to bill for (sometimes called the 'Bulk Energy Issue'). We believe it is right that Elexon has not introduced changes to address this. Centrica believes that this issue should be rectified contractually between suppliers and customers, either by passing through the cost or by providing customers with 'tolerances' on their demand load shape. We flag the Eurelectric paper on the difference between 'bulk energy' and 'imbalance' issues. http://www.eurelectric.org/media/340062/eurelectric_dr_aggregation_final_report-2017-2521-0002-01-e.pdf
Drax Group plc	Yes	We would welcome further detail around what the 'day 1' solution for the Virtual Lead Parties performance assurance techniques would look like. Given the proposed "opt-in" arrangements for the HH delivered volumes, the risk of suppliers breaching tolerance levels on demand forecasts are increased. These must be within 3% for NHH and 6% for HH, as stipulated in the CUSC. We believe that the Workgroup should consider the impact an "opt-in" arrangement for the sharing of information would have on Suppliers. Depending on the Suppliers customer base and their participation capabilities in TERRE, there could be large inaccuracies with demand forecasts. Providing Suppliers with the HH delivered Volumes from customers would enable suppliers to factor the behaviour of their customers into demand forecasts.
Dwr Cymru Cyfyngedig Welsh Water	Yes	There should have been some consideration factored in to encourage participation more from demand side response and low carbon sources perhaps through better financial incentives for different classes of participation. The proposal as it stands is attractive for carbon intensive generation sources which does not complement other areas of UK and European environmental policies.

Respondent	Response	Rationale
EDF Energy	Yes	We have not been able to comprehensively review the complex consultation materials in the time available. What assurance would there be that registrants of secondary BM Units would submit accurate and timely delivery volumes for individual MSID pairs? • For TERRE volumes alone? • For TERRE and BM volumes together? Registrants of secondary BMUs will, like primary BMUs, be subject to imbalance and non-delivery (and deviation in future) charges for delivery volume relative to calculated expected balancing volumes, with host Supplier imbalance adjusted by the claimed delivery volume. Could submission of inaccurate delivery volume reduce the imbalance/non-delivery charges associated with the secondary BMU, and create additional imbalance for the host Supplier Primary BM unit? Eg. Expected import 12 MWh, Instructed import reduction 5 MWh, Measured Import 10 MWh, Claimed Delivered 5 MWh (implying expectation 15 MWh rather than actual 12 MWh), secondary BMU has apparent perfect delivery with no imbalance, host supplier imbalance increased by reported delivery of 5 MWh rather than 2 MWh actually delivered. We acknowledge and agree that actual instructions to balancing providers should be simple (time,MW) points as for the BM, encompassing BM and TERRE acceptances, with settlement processes determining relevant volumes for different payments and charges after the event according to prescribed rules. However, we have not fully understood the possible interactions between TERRE acceptances and BM acceptances as described in the related GC0097 proposal consultation and this P344 consultation. Among other things, the interactions involve deemed ideal TERRE profiles, TERRE profiles assuming actual ramp rates, and actual instructions honouring ramp rates and other dynamic parameters to deliver TERRE volume and/or BM acceptances, potentially one or the other, or potentially to deliver both at the same time or undo one or the other, with issues for ramps between 15 minute periods, issues for PN for TERRE 'beyond the wall', and issues for TERRE ramps 'beyond the period after the wall'. Compromises have been made, but we have been unable to test all the possible scenarios to be confident that the compromises are reasonable. In determination and separation of TERRE acceptance volumes and interacting BM acceptance volumes, it would be conceptually simple, and in principle correct, if the actual instructions were processed strictly sequentially in order of issue as for BM acceptances, with 'undo' actions for BM participants, at BM prices. BM acceptances (if any) prior to NGET's determination of TERRE need should be built on by TERRE acceptances deemed to be made at the time of NGET's determination of need, subsequently being built on by subsequent BM acceptances modifying or undoing the previous instructions. Participants in both TERRE and BM

Respondent	Response	Rationale
		simultaneously would accept that a BM acceptance before TERRE would be at BM Bid-Offer price; instruction away from it due to subsequent TERRE acceptance would be at TERRE price for additional TERRE volume in the same direction, or at BM undo price for undoing and TERRE price for volume in the opposite direction. Subsequent instructions from that position would be at BM Bid-Offer Price. There is a necessary gap between NGET's determination of need, and the receipt of TERRE acceptances and their conversion into instructions. Workarounds might be required for Bid-Offer acceptances issued in this period (for delivery in later periods). A simplification might consider TERRE volumes as deemed to be instructed immediately after gate closure, setting starting level for any subsequent BM actions, with a workaround for any Bid Offer acceptances issued before actual TERRE instructions are issued. There is cost for NGET in undo actions due to bid-offer price differences, but that is no different to current BM activity where cost is incurred for undoing previously instructed action. There is a difference in that TERRE may effectively instruct 'undo' volume to meet an external system need rather than a GB need; that might be something for NGET to consider in its settlement of costs with other TSOs. A comprehensive guide to the proposed solution should be produced, to aid parties and potential parties in understanding the complex interacting features, and to assist in verification that the legal text is delivering the intention. This should be created in time to be included with the assessment report to the Panel and to Ofgem.
Energy Networks Association (ENA)	Yes	Further detail on the potential distribution network impacts of the changes related to P344 are included in the response to the GC0097 consultation.
Engie	Yes	**Data publication.** We have received conflicting advice as to when relevant data such as RR Acceptances, RR Instructions, the clearing price and whether meeting GB or non-GB needs. From the slides issued at the TERRE industry day we understood that the data is to be published "no more than" 30 minutes after the end of the delivery period. A source close to TERRE implementation within the SO has stated that this is not the case and that RR Acceptances, Instructions and clearing price for the full hour will be published 30 minutes prior to delivery of the first 15 minute settlement period, in line with the issuance of RR Instructions. If this data is published after the delivery period, market participants who have received an RR Instruction will have access to inside information and additional data points over and above the rest of the participants that may give them an unfair advantage. If the data is published 30 minutes after the delivery period, this is too late to be included in the initial published cashout price.

Respondent	Response	Rationale
		If the data is published prior to the delivery period, at the same time as the RR Instructions are issued then this advantage is removed. Engie believes that RR Acceptances and RR Instructions must be transparent in the same way that Bid Offer Acceptances are also transparent and therefore published alongside issuance of RR Instructions to the RR provider. **Non-GB actions unpriced.** TERRE Acceptances may be for GB need or for other need. Only GB need acceptances will feed into cashout. Engie agrees with this approach. Non-GB acceptance volume will feed into stack but will be "unpriced". Unpriced is represented as priced at £0/MWh in the TERRE industry day slides. Engie believes that "unpriced" is not equivalent to pricing at £0/MWh and this introduces the possibility of distorting cashout.
Flexitricity Limited	No	
IMServ Europe	Yes	It is again disappointing that the Party responsible for delivering the service has no concrete requirements to review. Will there be a further review once the HHDA requirements have been captured in detail? Without this, HHDAs may not be able to deliver the service as intended.
National Grid Interconnectors Ltd	No	
Npower	Yes	We understand and agree that the Replacement Reserve should be used to stand-down STOR earlier (i.e. at t+30mins) where the Replacement Reserve procured through the TERRE process is in commercial merit. However we are concerned at the suggestion that "an asset will not be able to hold a conventional ancillary services contract and also a TERRE contract" which appears quite alarming from a commercial and technical perspective and appears to contradict National Grid's System Needs and Product Strategy (SNaPS) agenda seeking to ensure GB assets can access multiple services (in series and potentially in parallel). In next year's new TERRE world, a Medium Combustion Plant Directive (MCPD) compliant GB asset would be able to offer capacity in to STOR or similar services at a given utilisation price and also in to TERRE at a distinct utilisation price (set through the international pay-as-clear auction). So in an enduring GB-initiated reserve event, we would expect that the STOR asset would be despatched and then continue to provide power after the 30-minute period to satisfy the RR event (when contracted to provide RR and in merit). It would appear odd that the asset could be prohibited from participating and contributing to the RR event and instead the TSO would have to despatch

Respondent	Response	Rationale
		other, potentially off-shore assets to satisfy the requirement. We accept that off-shore assets may be able to displace GB tech through the RR auction process, potentially setting the TERRE clearing price – our key concerns relate to the prohibition of GB Reserve assets from participating in TERRE and the potential that less efficient generation (i.e. not MCPD compliant) may have an economical advantage over territorial assets.
Quorum Development	Yes	I have a number of minor observations relating to the draft legal text. a. Section A: Parties and Participation, 1.4A.1. This says 'A Party may at any point in time only hold either a Virtual Balancing Account or Energy Accounts'. Is there a need for a Party to hold both during a period of transition until all settlement activity has ceased for a relinquished Account, i.e. should a distinction be made between an active (used for Settlement Days on and after the transition date) and an inactive (for Settlement Days prior to the transition date) Account? b. Section J: Party Agents and Qualification under the Code, 3.5.1 and 3.5.2. Possible typographic error: is the wording specifying the exceptions of Supplier and Virtual Lead Party in these two paragraphs consistent? c. Section K: Classification and Registration of Metering Systems and BM Units 8.1.3. What is the basis for making such a classification, given that a Secondary BM Unit 'cannot be in a Trading Unit' (BR2.7)? d. Section N: Invoicing and Payment 10.2. Should this paragraph be re-named 'Information – Imbalance Parties'? e. Section Q: Balancing Services Activities, 4.3.3. I believe a RR Bid needs also to be marked as divisible (or not). f. Section Q: Balancing Services Activities, 5.3.1(d). Section Q Paragraph 5 is dealing explicitly with 'Balancing Mechanism Bid-Offer Acceptance' so by implication the Acceptance Data (sub-paragraph 5.3) will never be flagged as 'RR Instruction Flagged'; for the sake of clarity should this be removed from the text of 5.3.1(d)? g. Section Q: Balancing Services Activities. Should there not be a paragraph dealing explicitly with RRIs, similar to paragraph 5 that deals with BM Acceptances? h. Section Q: Balancing Services Activities, 6.1.14. Possible typographic error: 'At the same *time* as the issue to Users …' i. Section T, Settlement and Trading Charges, 3.4.2A. Should the variable used in sub-paragraphs (a) to (d) be qA^k_{it} rather than $qA^k_{ij}(t)$? j. Section T, Settlement and Trading Charges, 3.4.2A. This paragraph appears to work as long as a condition that cannot

Respondent	Response	Rationale
		be met explicitly results in 'FALSE' – should this be stated explicitly? k. Section T, Settlement and Trading Charges, 3.6. Paragraph established accepted bid-offer volumes for acceptances that are not flagged as RR related, but there doesn't appear to be an equivalent paragraph establishing $RRAO^{kn}_{ij}$ and $RRAB^{kn}_{ij}$, referred to late in T3.9.3 and T3.9.4. l. Section T, Settlement and Trading Charges, 3.9.5. This implies that the 'RR Acceptance Level' is a signed value in MW representing the deviation from the pre-RR Acceptance position – but 'RR Acceptance Level' doesn't seem to be defined anywhere. m. Section T, Settlement and Trading Charges, 4.3B. Should this be called 'Determination of Period Supplier Delivered Volume …' rather than 'Determination of Account Period Supplier Delivered Volume …'? n. Section T, Settlement and Trading Charges, 4.3B.5. Is the summation expressed in the equation in this paragraph correct? Should it not be a summation of all Supplier Delivered Volumes arising from Secondary BM Units i affecting the Supplier's Primary BM Unit i2? o. Section T, Settlement and Trading Charges, 4.6.1. Should this not also include Virtual Balancing Accounts, in order to establish that QACE (needed for QAEI, 4.6.3) is zero, specifying (perhaps in 4.5.1) that QCE_{iaj} for Secondary BM Units is 0 MWh? p. Section T, Settlement and Trading Charges, Annex T-1, 17. Should this table also include relevant RR volumes etc? q. Section V, Reporting, Table 1: BMRS. Do the row relating to RR Bid data adequately handle the fact that such data may not be at quarter hour granularity? Will Secondary BM Units be subject to the need to make reports of availability loss under REMIT and (in the event they meet the capacity qualification) ETR reporting requirements?
RWE Supply and Trading GmbH	No	
ScottishPower	No	No comment
SmartestEnergy	Yes	In July 2017 Ofgem published an open letter in which they stated that balancing costs should be borne by the parties that created them. If suppliers cannot identify who has caused them imbalance, then the associated costs will have to be shared amongst other customers. The currently favoured proposal is therefore in direct contradiction of Ofgem's thinking.
SSE plc	No	

Respondent	Response	Rationale
The Association For Decentralised Energy (ADE)	Yes	The ADE supports the P344 solution but has a number of questions and concerns. We understand that, due to limited timescales and the complexity of the solution, the proposed implementation approach focuses on creating a workable solution, with further refinement possible. However, we believe that it is important to highlight the following issues for further consideration and further collaboration with industry as, without this, P344's goal of delivering market access to non-BM participants may fail: 1. At the TERRE Industry Day, a participant asked whether Distribution Network Operators could become Virtual Lead Parties and it was confirmed that there was no barrier to them doing so. This could pose a significant risk to competition and should be considered carefully by the Workgroup. 2. More detail is needed on the Qualification Testing that will form part of the Market Entry Process for TERRE, as described by ELEXON at the TERRE Industry Day. It is essential that opportunities be provided for industry to work with ELEXON to ensure that Qualification Testing provides necessary assurances while not creating a barrier to market entry for Virtual Lead Parties through technical requirements that would be difficult or impossible to deliver. 3. The ADE supports the Workgroup's decision to create a mechanism to implement a Balancing Energy Deviation Price while initially setting it to zero. It is important, however, that any decision to raise a BSC Modification to change this price be signalled well in advance to industry, as this will allow them to consider the impact of the change upon pricing of bids.
The Renewable Energy Company (Ecotricity)	Yes	The detailed work demanded by TERRE and P344 is extremely onerous for smaller participants to meaningfully take on in terms of workgroup participation and review. This results in the larger participants with an abundance of resource having their opinions overly represented at the expense of the wider interest. Any help which can be provided to smaller participants for P344, as well as any other widely impacting future changes is gratefully welcome.
TMA Data Management Ltd	No	
UK Power Reserve Ltd	No	
Uniper UK Ltd	Yes	There may be an issue to address relating to the Capacity Market as volumes associated with RR procured under the TERRE mechanism should be used to adjust a capacity provider's Adjusted Load Following Capacity Obligation (ALFCO) in a similar manner to how it is adjusted to account for BM actions and for other balancing services. This is probably something that needs to be accounted for under a CM rule change rather than a BSC change however.

Respondent	Response	Rationale
Welsh Power Group Limited	Yes	We have concerns about the ability of NG to deliver their side of the IT solution in time and in a robust manner. As well as NG's own system we will then have to implement our own IT solutions. Given the timetable, we need to understand the data flows, protocols, etc. around now. We assume that Ofgem has been made aware by the working group that given the delays to EBS, MODIS and the CM systems, the market has concerns about NG's IT delivery ability. We hope Ofgem will therefore make sure IT is delivered by NG in a timely manner. In the report there is a comment that P355 is similar to P344. We disagree. P355 seems to aim to allow smaller parties to be full participants in the BM. This paper explains how TERRE and BOAs interact, illustrating very well how a TERRE provider and a BMU can differ. Following the removal of embedded benefits, removal of spill energy under P354 and changes to supplier CM payments, it is vital that smaller gencos are allowed to enter and compete in the wholesale energy markets and that MUST include the BM. The other issue not noted in the document is the wider impact on the GB market. We noted at the TERRE day that NG said there had been an EU wide impact assessment. While imports are limited by interconnector capacity, and it is unclear how much energy the GB SO will want to buy as an RR product, Ofgem and BEIS should be concerned about the very differing costs of generation between member states. For example, under TERRE, the GB gencos will compete with gencos not paying CPS, a material tax burden. If GB plant is displaced by EU plant the government may find the capacity market needing to secure more plant to maintain GB security. This could mean GB customers gain a little from cheaper RR products, but lose on high CM costs. It does not seem obvious that greater market integration is good for UK plc unless governments also better align the cost basis of the competing generators.