



Regulatory treatment of CLASS as a balancing service in RIIO-ED2 network price control

Sembcorp Energy UK's response

Solihull, 23rd March 2020

Dear Louise,

Thank you for the opportunity to share our views on the regulatory treatment of CLASS as a balancing service.

Many thanks also for taking time to meet us earlier this month and for the very useful discussion. We very much hope Ofgem will undertake further analysis of the real costs to consumers of CLASS and will take our views into consideration when reaching a decision on this matter.

As you know, we do not agree with Ofgem's 'minded to' position that CLASS services meet the criteria for inclusion in DRS8 and we feel that there is a need for more detail to be considered by Ofgem, especially on the actual detriment to consumers.

We believe CLASS should be prohibited as a balancing service including in relation to the RIIO-ED2 price control, because:

1. CLASS is aggregation and as Ofgem has previously indicated that DNOs should be prohibited from such activity, permitting CLASS as a balancing service would not be in accordance with Ofgem's previous decision on this matter.
2. Excluding CLASS from balancing services would safeguard effective and fair competition, and would avoid conflicts of interest.
3. CLASS participation in competitive markets carries hidden and distortive costs. For as long as such hidden costs are not fully identified and factored in, it cannot be fairly stated that CLASS is genuinely a cheaper solution for consumers.

Our in-depth position and supportive evidence of these three points is detailed in the following pages of this document.

We very much look forward to Ofgem's response to industry's views and concerns, and we remain at your disposal for further discussion.

Kind regards,

Alessandra De Zottis
Regulatory Affairs Manager
Sembcorp Energy UK

Response to the consultation questions

Q1. Are there other options we should have considered? Please provide reasons.

We believe that Ofgem should be investigating whether treating CLASS as a DRS8 service is permissible. Industry was not consulted on this issue in 2016 when the Authority issued the Direction¹ to include CLASS into this category, and therefore industry did not have the opportunity to offer evidence on the detrimental effects to competition and to the end consumers of this decision.

We are keen to continue our collaborative engagement with Ofgem by responding to the specific questions set out in the consultation, but we also want to offer our reasoning as to why CLASS should not be treated as a DRS8 service.

The Direction refers to Special Condition CRC 5C (Directly Remunerated Services) of the Electricity Distribution Licence. This section states that:

"The services listed in Appendix 1² are Directly Remunerated Services to the extent that they also comply with the "General Principle". [...]"

"The General Principle is that a service provided by the licensee as part of the normal activities of its Distribution Business within the Distribution Services Area is to be treated as a Directly Remunerated Service if and to the extent that the service so provided is not already remunerated under any of the income categories set out in paragraph 5C.5."

We do not believe that the General Principle is met because CLASS is not a normal activity of the Distribution Business. The Special Condition defines a Distribution Business³ as one which comprises any of the following activities: (a) the distribution of electricity through the licensee's Distribution System (including any business in providing connections to that system); (b) the provision of Metering Services and Metering Equipment; and (c) the provision of Data Services, and in each case includes any business that is ancillary to the business in question.

On point (c) which includes any business that is ancillary to the Distribution System, it is of key importance to note that balancing services (as CLASS is being considered and utilised) are not ancillary to the normal activities of a Distribution Business i.e. they do not support that business and are not necessary. This is also supported by the evidence that all DNOs - with the only exception of ENWL - do not provide CLASS.

We urge Ofgem to consider these arguments and re-examine whether CLASS services meet the criteria for inclusion in DRS8.

¹ https://www.ofgem.gov.uk/system/files/docs/2016/04/dno_voltage_control_drs8_direction.pdf

² i.e. "Specific categories of Directly Remunerated Service"

³ Page 35 of <https://www.ofgem.gov.uk/ofgem-publications/85493/crcsupannex1pdf>

Moving on to respond to the individual questions of the consultation, we ask Ofgem to share greater detail about the Ofgem analysis and impact assessment of the three potential options. The only option that was more detailed in the Ofgem paper was the one preferred by the Regulator i.e. continue to remunerate CLASS as a DRS8 service via participation in competitive markets. We feel that there is a need for more detail on the other two options. In particular Option 3, prohibiting the service. We believe that the beneficial impacts for consumers of prohibiting CLASS as a balancing service have not been considered fully, or at least they have not been detailed in the Ofgem paper. The consumer benefit/detriment point should be considered in detail for Option 3 and Ofgem's assessment should be published for industry comment.

As we have made known to you already, we believe that CLASS should be prohibited as a balancing service and there are several elements that Ofgem should consider when assessing this option.

CLASS is aggregation

It should be understood that DNOs providing CLASS are acting as aggregators and this should be prohibited, in line with the Ofgem decision to prohibit DNOs operating in storage or acting as commercial aggregators, both of which can be done by third parties⁴.

The 2016 Baringa report⁵ commissioned by ENWL, when looking at eligibility of CLASS in providing balancing services, consistently points out that aggregation is the mechanism by which ENWL delivers this service. For example, the Baringa report stated that ENWL can achieve the de minimis capacity required for FFR and FR via aggregation of multiple substations through a central point of control.

There is no difference between CLASS and commercial aggregation and we do not agree that "unlike storage and aggregation, CLASS represents a network solution uniquely deliverable by DNOs". The reason why we do not agree with this statement is two-fold:

1. The services provided via CLASS are response and reserve, which can be (and are currently) provided by commercial providers via flexible assets – therefore they are not "uniquely deliverable by DNOs". Furthermore, the capacity used by ENWL is not owned by the DNO, and is made up of aggregation of capacity connected at a given substation. ENWL's argument that consumers do not realise when voltage is being reduced, should raise the concern that DNOs are acting as aggregators, without informing their customers that their capacity is being utilised to make profit. The view that CLASS is effectively aggregation, and should therefore be prohibited, is also reinforced by the definition used by Ofgem itself in a letter from 2017⁶, whereby "*Independent aggregators are defined here as parties*

⁴ <https://www.ofgem.gov.uk/publications-and-updates/enabling-competitive-deployment-storageflexible-energy-system-changes-electricity-distribution-licence>

⁵ https://www.enwl.co.uk/globalassets/innovation/class/class-documents/assessing-the-impact-of-class-on-the-gb-electricity-market_redacted.pdf

⁶ Letter of July 2017 on Ofgem's views on the design of arrangements to accommodate independent aggregators in energy markets. Accessible here: 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

who bundle changes in consumer's loads or distributed generation output for sale in organised markets and who do not simultaneously supply the customer with energy".

2. CLASS is not a simple network solution, as has been suggested by Ofgem. It will carry a significant and yet unknown cost., and is undermining the merchant and competitive response and reserve markets via the inclusion of a monopoly "guaranteed revenue" player in the markets. To be considered a network solution, a specialised kit would have to be put in place by the DNO (the cost of which is recovered from the RIIO pot) and utilised by the DNO itself to deal with its own network needs e.g. meeting demand, or avoiding or deferring network investment. However, despite RIIO covering the costs of this specialised kit, CLASS is instead being used as a fully-fledged balancing service to the ESO, with remuneration in a currently merchant and competitive market which allows DNOs to recover uncapped revenues.

CLASS participation in competitive markets carries hidden and distortive costs

We believe that CLASS participation in competitive markets carries hidden and distortive costs, which were not duly taken into account when evaluating the actual positioning of this type of service among other FR and FFR services and, ultimately, when assessing the cost implications for consumers.

It is inappropriate to make the simple assumption that CLASS technology can reduce balancing costs or DUoS costs for consumers by using a unique technology that beats the competition fairly to the benefit of consumers.

We of course agree that effective competition is important for driving down costs for consumers. However, competition that is not based on a level playing field carries severe risks of market distortion and harming end consumers. For example, CLASS has had a "crowding-out" effect on those providers that operate solely in competitive markets to stack value and, therefore, lower their prices across the range of balancing services they can offer.

The hidden costs of providing CLASS might be associated with:

1. Consumers bearing some of the costs of CLASS through the price control, because it may be difficult to separate network costs from CLASS-specific costs;
2. The provision of the service deteriorating the "asset life" of the CLASS technologies, leading to the need for these to be replaced sooner and more often after being utilised for services that place much greater strain on assets. These costs would be recovered through the RIIO pot, ultimately increasing DUoS charges.
3. The increased costs to suppliers due to their out of balance position: by reducing demand on the system, DNOs cause suppliers to be out of balance, and as such be subject to the System Imbalance Price. This cost is however not reflected in the price bid. Suppliers may then pass on any increases to consumers.
4. The impact on the assets life of commercial and industrial customers, that will have to invest to install voltage protection equipment.

Allowing CLASS to continue under the current regulatory regime will on the one hand, undermine the level-playing field among providers of reserve and response by allowing monopoly players with guaranteed price control revenue to out compete merchant players; On the other hand, it will also undermine investor confidence in the very flexible assets that are needed to underpin the net-zero transition because monopoly networks are allowed to unfairly compete with these assets.

These elements all influence the ultimate cost to end consumers.

For as long as such hidden costs are not fully identified and factored in, it cannot be stated that that CLASS is genuinely a cheaper solution for consumers. Therefore, we are of the opinion that CLASS should not be allowed as a balancing service currently and in RIIO-ED2 price control.

Q2. Do you agree that market based mechanisms can provide the most efficient incentive for CLASS participation in balancing services?

We do not agree at all that CLASS should be in any way allowed to participate in balancing services and be incentivised by market-based mechanisms. Market-based mechanisms should not even be viewed as an incentive: these two tools need to stay distinct as incentive frameworks are duly regulated, set in advance and foreseeable. Competitive markets are by their very nature changing environments, where market participants behave and respond to market forces, not to pre-set rules and schemes that tell them exactly how they are going to recover their costs.

Q3. What is your view on DNOs' sharing profits with consumers, even if this means consumers are also exposed to DNOs' losses (including how this might affect DNOs' competitive behaviour noting this is different to other providers of balancing services)?

The claim that a DRS8 solution is good for consumers because the DUoS charges could potentially be reduced is only partially a positive effect compared to the undue profit of DNOs from managing the voltage of the system, which is something they need to do anyway, without making any extra revenue.

The question here should instead be whether consumers should be made aware of how their capacity is being utilised. Although ENWL has been acting as an aggregator, they have not been subject to the same obligations as aggregators.

For example, aggregators must obtain explicit permission from the sites they manage to shift their demand, and the customers must have signed a contract agreeing to share revenues or losses. In the case of the DNO accessing customer's capacity and providing reserve or response services to the ESO, there is no such a requirement on the DNO to seek permission from users. Secondly, by sharing potential losses, the DNOs are exposed to significantly less financial risk than a commercial aggregator as a result of the price control.

This is also in clear contravention of the [Flexibility Market Principles document produced by the Open Networks Project](#), which states that *"where Flexibility Services are open to competition, System Operators should not be allowed to be active in that area. This is due to System Operators having part of their costs covered by*

regulated tariffs, subsequently carrying a lower risk profile supported by their core monopoly activity and placing the System Operator in an advantageous position over other Market Participants”.

DNOs would also be driven to maximise their offer of balancing services through CLASS, bypassing all the contractual agreements with the connected customers who are not aware of the impact of such voltage control on their assets and the implications of their response capability in case they are already providing DSR via a commercial aggregator, while also be unknowingly exposed to potentially increased DUoS charges.

In addition, depending on the service, aggregators might need to have the consent of the supplier of a given customer to be able to access their capacity for Demand Side Response (DSR). This has historically been a contentious issue between aggregators and suppliers, particularly as it relates to the need to ensure that suppliers are not going to be in imbalance following reduced demand from their customers who become DSR providers. Conversely, voltage reduction actions taken by the DNOs with CLASS cause suppliers to be out of balance, and as such be exposed to imbalance price. This cost to suppliers needs to be taken into account in assessing whether CLASS is actually cheaper for consumers.

Furthermore, it is very likely that DNOs will be incentivised to limit competition to their own CLASS services from distribution-connected commercial providers of reserve and response services. This could be done through posing excessively onerous or long connections or tests. Although Ofgem dismisses this possibility by referring to the threat of severe fines for DNOs, Sembcorp has some examples of DNOs placing substantial economic and timeline burden on market entrants who wanted to provide reactive services to the ESO⁷. The DNOs are also those responsible for approving whether a given embedded asset is suitable to provide reactive power, as such they have the power to decline any request from commercial providers. This is particularly concerning considering the increasing number of reactive power trials such as the Mersey region trial by the ESO and the Power Potential project by the ESO in partnership with UKPN.

In support of our request to prohibit CLASS as aggregation, we point out a previous Ofgem decision not to allow another DNO to seek ways to make DNO-led DSR commercially viable for Business as Usual operation and allow customers in their network to participate in DSR schemes. We refer here to Western Power Distribution’s Project Entire⁸, some elements of which were prohibited by Ofgem as falling into the realm of aggregation⁹. The question here is: how is this project different in its outcome from what ENWL has been doing via their CLASS technology? With Project Entire, WPD was seeking to develop DNO services that could sit alongside existing ESO services such as a flexible Short Term Operating Reserve (STOR) contracts. ENWL is offering the ESO reserve and response services, by achieving the de minimis capacity required for these services via aggregation of multiple substations.

⁷ Letter of July 2019 in response to our request to know what changes would be needed to be able to provide reactive power to the ESO. Available upon request.

⁸ Project Entire, Closedown Report. Accessible here: <https://www.westernpower.co.uk/projects/project-entire>

⁹ Whilst the project originally included the offering of a managed, stacked services to customers, this element was removed from the project as part of a review with Ofgem and the project focussed instead on the development of market complementary services, allowing stacking and asset management to remain the focus of the competitive market

Q4. How might limits on charges to the ESO in DRS9 affect investment and utilisation signals for CLASS?

We don't think this is an appropriate option to explore.

Q5. Do you agree that requiring CLASS in the price control would not promote efficient investment signals in CLASS and could distort competitive outcomes?

Yes, we agree with Ofgem that requiring CLASS in the price control would undermine competition as it would effectively be a free service for the ESO (but not free to the consumer), which would damage the response and reserve markets by introducing unfair competition.

Q6. Do you have evidence CLASS could affect the likelihood of system reliability issues?

Wider reliability issues will be evident in the medium-long term as commercial providers are not given the right signal to invest in technologies or flexibility solutions that can be placed in balancing services markets as these markets will effectively be saturated by CLASS. Already with only ENWL participating in FR and FFR, the market has considerably changed: we do not refer to the price reduction (which is a natural and healthy result of competition), but to the crowding out effect that CLASS has imposed on those providers that count solely on competitive markets to stack value and, therefore, lower their prices in the range of balancing services they can offer.

The severe impact on market confidence will result on lack of investment in flexible technology with severe long-term negative impacts on security of supply: the ESO will not have sufficient and diverse providers to procure reserve from as such providers will have stopped investing in technologies and solutions because there is no market for them.

However, DNOs are best placed to answer this question as they hold the information concerning their system needs in the short-, medium-, and long-term. Yet, this exposes the conflict of interests and the fact that DNOs do have access to privileged information that they would be able to use to inform their commercial strategy. As such, we question whether DNOs would actually be incentivised to provide a robust and comprehensively accurate answer to Ofgem regarding system reliability issues, in the best interest of consumers.

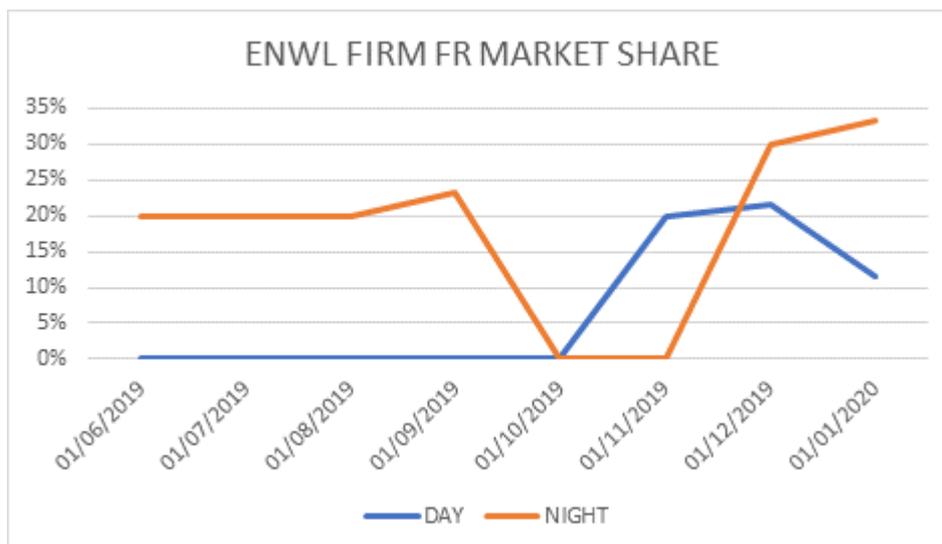
Q7. Do you have evidence competition is currently being distorted or impeded by the participation of CLASS? Do you agree with our assessment that it is unlikely DNOs have or would have market power in future, and the reasons we have provided in Appendix 2?

We strongly disagree with Ofgem's conclusion that it is unlikely that DNOs would have market power in the future. Although the projections by Baringa of over 3GW of CLASS capacity in the system have not yet materialised, there is a real risk that DNOs could achieve market power to an extent that would be damaging for competition, market confidence, and security of supply.

Ofgem's analysis shows that "In 2019, ENWL provided 1.6% of secondary FFR and 13% of firm FR that was procured by the ESO in tenders for those products."

According to our own analysis of the Firm FR tender results¹⁰, ENWL has been holding between 12-33% of market share across day and night provision of FR.

DELIVERY	ENWL ACCEPTED		MARKET		SHARE	
	DAY	NIGHT	DAY	NIGHT	DAY	NIGHT
01/06/2019		30	300	150	0%	20%
01/07/2019		30	300	150	0%	20%
01/08/2019		30	300	150	0%	20%
01/09/2019		35	300	150	0%	23%
01/10/2019			300	150	0%	0%
01/11/2019	60		300	150	20%	0%
01/12/2019	65	45	300	150	22%	30%
01/01/2020	70	50	600	150	12%	33%



Other evidence of the future risk of CLASS market power is given by a number of sources:

¹⁰ <https://www.nationalgrideso.com/balancing-services/reserve-services/fast-reserve?market-information>

- The [feasibility and scoping studies developed in preparation of the CLASS Full submission](#) estimated that Electricity North West (ENW) could deliver up to 170MW via CLASS, thereby displacing up to 40% of tendered Frequency Reserve.
- The provision of ancillary services by DNOs has also been highlighted as a key commercial arrangement in documents such as [SP Energy Networks' DSO Vision](#), indicating that other DNOs are likely to invest in provision of CLASS-style services. A [2016 presentation by ENW](#) modelled potential CLASS deployment on their network alone growing from 180MW in 2014-15 to 3GW in 2027. Given the scale of this potential growth, it is surprising that Ofgem do not foresee a risk of DNOs having market power in the future.

Q8. What information could the DNO have privileged access to that that could offer it an unfair advantage in balancing services provision? How might this change in future if the DNO and ESO increasingly coordinate?

The DNOs are likely to have privileged access to National Grid Control Room planning and actions; including potentially ESO demand and its procurement strategy for reserve and response services ahead of time. This information is not available to commercial participants in these markets.

Furthermore, stemming from the conclusions of the Energy Data Task Force, DNOs and the ESO are required to work closely together, share and align the information, format, and level of granularity of their Future Energy Scenarios. This collaboration, while of course being very welcome and necessary for a transparent and comparable set of data, can easily lead to DNOs accessing network information and leveraging their position to determine their commercial position in their offering to the ESO.

Q9. What measures would you consider effective and proportionate to ensure that privileged information the DNO has access to is not used inappropriately to benefit the commercial performance of CLASS?

We do not believe that there will be any adequate measures to ensure that DNOs would not be incentivised to take advantage of privileged information. Already acknowledging that DNOs have such access should trigger much deeper concern from Ofgem in allowing DNOs to be in competition with commercial providers.

One potential solution, which however we don't think would fully solve the issue of CLASS as a balancing service, is mandating the legal separation between DNOs and DSOs, with clear boundaries on contestable services.

Q10. In what other ways do you think DNOs could take advantage of their DNO role in the context of providing balancing services with CLASS?

The DNOs would be leveraging their monopoly position because the assets used to provide CLASS do not pay connection fees like any other distribution-connected flexibility asset. They would also be exempt from DUoS charges. As such, DNOs already start ahead of other providers, with unfair advantage due to their monopoly position, the privileged information on the network, no connection and network charges to account for, no responsibility for the imbalance position of suppliers resulting from them reducing demand, and no contractual obligations with the customers of whom they are utilising the capacity.

Q11. How far do you think existing safeguards (including licence obligations and competition law) against DNOs taking advantage of their DNO role in the context of participating in the balancing markets with CLASS are sufficient?

There don't seem to be clear procedures in place for DNOs to prove that they are not leveraging their monopoly position. Industry and investors needs confidence that these are effective and can be accessible so that industry can verify the DNOs claims and keep them accountable.

Q12. What additional measures would be effective and proportionate to address actual or perceived risks of DNOs taking advantage of their DNO role?

Should DNOs be allowed to continue to provide CLASS in RIIO-ED2, they should be required to seek explicit consent from all customers of whom they intend to use capacity for CLASS provision. This obligation should apply retroactively to include those customers already being utilised for CLASS. This contractual agreement should spell out that the customer is agreeing to be exposed to losses in the form of higher tariffs as well as gains in the form of lower tariffs and that within a certain range, their voltage will be affected. Customers should also be made aware of their DSR capability should they already be contracted with a commercial aggregator.

Q13. Are there other specific effects to competition that are relevant to our decision? What effects would these have on consumers?

As noted above, investors' confidence will be severely undermined by Ofgem suddenly overturning legal and regulatory principles. We are particularly concerned by Ofgem's potential departure from their statutory duty to promote effective competition by allowing regulated monopolies to leverage their position to influence competition in a contestable market.

Further concerning signals to investors stem from Ofgem's apparent position that conflicts of interest are acceptable if they are mitigated, rather than avoided. For investors, such a regulatory approach is deeply troubling and will undermine confidence of long terms investments if there is a fear that assets will have to compete on an un-even playing field with Monopoly network owners.