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26th August 2022

SEM-22-036 Consultation Response

I am writing on behalf of the Demand Response Association of Ireland (DRAI), the trade association representing Demand Side Unit (DSU) providers in the all-island Single Electricity Market (SEM). By aggregating the otherwise passive electrical loads of individual consumers into substantial load portfolios, our members create predictable, reliable, and controllable assets, which provide a valuable source of Demand Side Flexibility (DSF) that can be actively used by system operators to meet the needs of the power system.

Today, the DRAI represents approximately 700 MW of demand and embedded generation response across hundreds of industrial and commercial customer sites throughout the island of Ireland. These sites are managed by our members each of whom actively participate in the capacity, DS3, and energy markets.

DRAI members are committed to shaping the future of power system flexibility through advancing DSF on the island of Ireland. As Ireland strives to achieve its renewable generation targets for 2030 and beyond, our promise as an industry-led organisation is to champion the development of innovative DSF solutions that are designed to address the system-wide requirement for flexibility.

The DRAI expresses a single voice on policy and regulatory matters of common interest to its members, and we welcome the opportunity to provide feedback on the SEM-22-036 consultation on an Enduring Solution to Enable Energy Payments in the Balancing Market for DSUs.

On behalf of the DRAI, I hope that you find our response helpful and constructive.

Siobhán McHugh
DRAI CEO

BACKGROUND – NEED FOR ENERGY PAYMENTS FOR DSUS

The current wholesale energy market design fails to provide DSUs with an opportunity to participate in the energy market when prices are below the strike price. This in turn results in a disincentive to cultivate and include certain types of demand loads in DSUs, as under the current market design they cannot be fairly compensated for dispatch. Energy payments would help to provide this incentive and compensate DSUs for costs associated with dispatch.

Under the current Interim Solution for DSUs, each dispatch of a DSU requires the unit to absorb its short run marginal cost (SRMC), unless the imbalance price exceeds the strike price, and so the economic incentive for energy market dispatch is absent.

In our response[1] to SEM-21-042 (Discussion Paper and Call for Evidence on Scarcity Pricing and Demand Response in the SEM) the DRAI raised a number of points on the lack of this market signal, and it is appropriate to put these forward here to provide context regarding energy payments for DSUs:

- Since the DSU will incur dispatch costs – through customers' opportunity costs – but receive no energy revenues enabling it to recover these costs when the reference price is less than the strike price, this means that certain potential IDSs cannot recover sufficient revenue to be incentivised to participate in a DSU. This limits the scope of customer participation.
- While many demand-side resources have high SRMC, there are other potential participating customers that have SRMC substantially below the strike price. With no opportunity for such resources to be dispatched profitably, given the lack of energy payments other than during capacity market events, there is no incentive for aggregators to seek out and develop these resources. This limits the size of the DSU industry.
- Hence, rather than having a spread of offer prices from DSUs with different characteristics, which would help the market clear more efficiently, demand side resources tend to be offered at high prices: aggregators have not sought out the customer sites with lower SRMC for the reasons outlined above, so they are not currently participating in DSUs.
- Since, in the absence of energy payments, many dispatches are essentially opportunities to lose money, it is difficult for aggregators to encourage customers to maximise their availability for dispatch.
- There are essentially no "carrots" to reward increased availability – just the "stick" of uncovered difference payments if a unit's response during a capacity market event is less than its de-rated load-following capacity obligation.

A decision by the SEMC to proceed with Phase 1 and Phase 2 solutions as outlined in the consultation document would provide the signal to demand aggregators to seek out customer load types not currently incentivised under the energy market rules, and would help to increase demand customer participation in DSUs.

Furthermore, as acknowledged by the SEMC in consultation paper SEM-22-036, the European Commission State Aid Approval for the Capacity Remuneration Mechanism, as well as the Electricity Regulation (2019/943) and Electricity Directive (2019/944) which form part of the Clean Energy Package, include clear obligations to fully integrate DSUs, ensuring non-discriminatory access to all electricity

[1] Section 2.5 of https://www.semcommittee.com/sites/semc/files/media-files/SEM-21-083%283%29%20DRAI%20Response%20to%20SEM-21-042.PDF

markets. While the SEMC determined that the interim solution for DSU energy payments (only during periods when difference charges are payable) implemented by SEM-19-029 was sufficient to comply with the requirements of the CRM State Aid approval, a significant market distortion between DSUs and generators remains, and this falls far short of the equitable treatment and full market access required under the Clean Energy Package.

SUMMARY OF DRAI RESPONSE TO THE CONSULTATION

In relation to the proposals in the consultation, the DRAI notes the following:

- The Phase 1 solution which maintains the existing "interim solution" design, extending it beyond periods where the strike price is exceeded to apply to all periods, is practical and presents a means of fairly remunerating DSUs for dispatch, without the need for extensive systems or code changes and an associated long implementation timeline.

- The socialisation of costs across suppliers via the Imperfections Charge has worked well for the current interim solution and is appropriate for Phase 1 before a means of "perimeter correction[2]" is implemented as part of the enduring solution.

- The proposed arrangements for performance monitoring by the TSOs would build on what is currently in operation. A 12 month review period is sensible and gives the opportunity to incorporate learnings from the TSOs' ongoing monitoring. It is important to note that ensuring full access to energy revenues for DSUs, at all times and on an equitable basis to Generator Units, is an essential requirement under both the State Aid approval for the CRM and various legislative requirements under the Clean Energy Package. This is required in order to remove a material distortion in the current market design which is discriminatory against DSUs, and which has long been recognised by the SEMC.

- A Generator Performance Incentive (GPI) could be an appropriate route to manage the risk of non-performance of DSUs against dispatch. It is our view that it should be focused on the key metric of delivery of response following dispatch and the use of QD as a proxy for metered demand response. Any such GPI should only be applied where the new rules changes are in place. In any case, were the rules to revert to those implemented by Mod_17_19, then any GPI should be removed to maintain equity with the current treatment of DSUs.

- The Phase 2 or "enduring solution" which involves moving from a socialised cost among suppliers (via the Imperfections Charge) to more exact "perimeter correction" of volumes for all parties will involve complex systems and rules changes across wholesale and retail markets.

IMPACT ON SECURITY OF SUPPLY

We note the statement in Section 2.1.1 of the consultation that – "This [the implementation of the phased approach to energy payments for DSUs] could incentivise units to be available this coming winter aiding system-wide flexibility."

We would advise caution on the assumption that implementation of Phase 1 of the approach will have an immediate effect on the market behaviour of DSUs. As noted above, one of the key missing signals from the energy market is the incentive to include resources within a DSU that have a SRMC below the strike price, as there is no means of compensating these sites, and including lower SRMC sites would

[2] Perimeter correction would account for volumes between supplier, customer IDS and aggregator

increase the frequency of dispatches where units are not remunerated. Energy payments will address this issue, and incentivise further demand response participation in wholesale markets by fairly rewarding service providers for costs incurred during dispatch.

A decision to support the implementation of energy payments for DSUs is welcome, and has been long advocated by market participants. However, the implementation timeframe is still unknown for both phases of the solution. Aggregators and service providers require market certainty in order to source and contract new loads to provide response. Once this certainty is achieved, aggregators can engage and contract with customers and begin the process of including these new loads within their market units.

RESPONSE TO SPECIFIC CONSULTATION QUESTIONS

The following section outlines our specific response to the consultation.

Question 1: The SEMC is keen to hear stakeholders' views on the continuation of dispatched quantity as a suitable proxy for metered quantity for an extended interim period (until phase 2 is live), acknowledging the absence of evidence during the first year in which 'phase 1' will be in place.

We consider that the current arrangements in the Trading and Settlement Code (TSC) which set a DSU's Metered Generation equal to its Dispatch Quantity to be reasonable and pragmatic. The current solution in place following the implementation of Mod_17_19 to the TSC operates well, paying DSUs for dispatch when the Imbalance Price (PIMBy) is above the Strike Price. Retaining this approach and extending it to periods where the strike price is not exceeded will greatly simplify implementation of the proposed Phase 1 solution, and allow DSUs to be properly compensated for the energy revenue portions of costs associated with dispatch.

A performance monitoring regime already operates between the TSOs and DSU participants, and dispatch events are assessed ex-post to review, among other things, performance of the unit versus dispatched quantity. The TSOs have acknowledged good performance in this regard: stakeholder engagement between the RAs and TSOs referenced in the consultation suggests that dispatched quantity is an appropriate proxy for metered quantity for DSUs. Under the current arrangements, for any instances where performance is below the required response, action plans are put in place with the individual DSU participant, and active monitoring takes place on a continuous basis.

Our assumption would be that this performance monitoring by the TSOs would continue, and so there is no risk of an "absence of evidence" during the first year of the proposed Phase 1 implementation. If necessary, processes and reporting on this by the TSO could be enhanced or formalised further during the first year of operation.

Question 2: Do stakeholders have a view on the extent of industry code or system modifications/ time involved to develop and implement phase 1?

The DRAI has no view on the extent of code or system modifications required to implement Phase 1.

Question 3: Is 12 months an appropriate period of time over which to assess effectiveness of dispatched quantity as a good proxy for metered quantity?

The DRAI believes that 12 months is an appropriate period of time to assess effectiveness. As we have already highlighted, performance monitoring by the TSOs already takes place on a continuous basis.

Question 4: In stakeholders' views, what would be deemed as satisfactory or unsatisfactory effectiveness of outcomes for a DSU operating in the market in phase 1 to aid the SEMC's assessment?

The criteria and thresholds to be applied by the RAs for the review of whether performance is satisfactory or unsatisfactory need to be clear and transparent. The elements of the review outlined in section 2.1.3 include assessment of dispatched quantity as a suitable proxy for metered quantity, and an assessment of the suitability of the Imperfections Change for funding the socialised cost of energy payments for DSUs. These elements of the solution are a continuation of the measures currently in place

under the interim solution and monitoring these, as is done currently, is a reasonable means of assessing the operation of the proposed solution.

DRAI members strongly disagree with the proposal that any such review should include an assessment on the level and cost of DSU participation in the balancing market. This cannot be done in isolation. Demand side participation in electricity markets is dependent on numerous factors including prevailing economic conditions, level of industrial and commercial activity, national and international enterprise policy, electricity network connection policy, electricity network tariffs, level of revenue certainty in energy markets and barriers to participation for demand side participants. As such, it would not be possible to conclude a that a change in energy market treatment of DSUs is responsible for a particular outcome, without also examining other relevant factors. The solution for energy payments is a welcome step forward, however other significant barriers to demand-side participation remain and it would be unfair to link energy payments and the "level" of participation (however defined) without also taking steps to resolve the wider issues.

As highlighted above, ensuring full access to energy revenues for DSUs, at all times and on an equitable basis to Generator Units, is an essential requirement under both the State Aid approval for the CRM and various legislative requirements under the Clean Energy Package. This is required in order to remove a material distortion in the current market design which is discriminatory against DSUs, and which has long been recognised by the SEMC. Making the removal of this significant market distortion contingent upon a subjective review as to the "level" of participation of DSUs is unacceptable.

Section 2.1.3 of the consultation paper also discusses a decision by the SEM Committee on whether "DSUs'" performance is satisfactory, implying that all DSU units could be, at some point, assessed as a group. This would be problematic if the poor performance of a small number of units could jeopardise the continued operation of the Phase 1 solution, or any decision to move to the Phase 2 solution. It is important that appropriate monitoring and assessment measures are put in place that demonstrate the effectiveness of the assessment mechanism and encourage any laggards to improve performance rather than punish satisfactory performers for the underperformance of others. We believe that the introduction of an appropriate Generator Performance Incentive (GPI) focused on incentivising DSU performance against dispatch (i.e. ensuring that Dispatched Quantity remains a suitable proxy for Metered Quantity for DSUs) would be an appropriate means of addressing this concern (see response to question 6).

In short, the question to answer after 12 months is whether the Phase 1 reform is causing a problem – e.g. by incentivising some kind of misbehaviour by participants. If the review does find a problem, then if at all possible, it should be addressed through an appropriate GPI, rather than by reverting to market design of questionable legality which has been acknowledged as discriminating against DSUs.

Question 5: Are there any other elements than those suggested which need to be included in the review of phase 1 to allow conclusion to be reached on feasibility to continue with 'phase 1' before phase 2 goes live?

The DRAI does not have any additional suggestions on elements of the review of Phase 1. We encourage the RAs to put in place a mechanism which takes the positive elements of the current performance monitoring arrangements and seeks to improve them, with fair and transparent means of assessing both

the performance monitoring mechanism, as well as the dispatch performance of individual units operating in the market.

Question 6: The SEMC welcomes views on the introduction of a new Generator Performance Incentive (GPI) to apply to DSUs if Phase 1 continues beyond the first twelve months (ie. After review has evidenced its effectiveness) until Phase 2 is implemented.

The DRAI would welcome industry discussion and consultation on an appropriate Generator Performance Incentive (GPI) to apply to DSUs to ensure that Dispatched Quantity remains an effective proxy for Metered Quantity. In the past, discussions on GPIs for aggregated and distributed resources have focused on metrics better suited to large conventional generation without recognising the technical capability and distributed nature of DSUs. We would welcome the development of appropriate performance metrics which could work to encourage and demonstrate good performance by DSUs.

Our view is that the initial 12 month assessment period would provide the opportunity to identify whether such a GPI is required, in relation to the effectiveness of dispatched quantity as a proxy for metered quantity and the performance of DSUs when dispatched in the energy market.

Question 7: Do stakeholders have a view on the extent of industry code or system modifications/ time involved to develop and implement phase 2?

The DRAI has no view on the extent of code or system modifications required to implement Phase 2.

Question 8: The SEMC welcomes views on 'phase 2' being an 'enduring solution' if/once implemented.

We acknowledge that the Phase 2 enduring solution will involve moving from a socialised cost among suppliers (via the Imperfections Charge) to the more specific "perimeter correction" of volumes for all parties. This will require complex systems and rules changes across wholesale and retail markets.

The relationships between Individual Demand Sites (IDS), retail suppliers and DSU aggregators requires careful consideration as part of the design of the enduring solution for energy payments for DSUs. The Clean Energy Package is quite prescriptive about some of these aspects. In addition, there will be considerable impacts on retail as well as wholesale market systems and data.

Question 9: Do stakeholders have any concerns with either phase regarding accommodating the different types of demand response?

The DRAI reiterates the importance of ensuring DSUs, irrespective of which markets they elect to participate in (Day Ahead, Intraday, Balancing, etc.), are equitably treated with respect to Generator Units and have full access to all energy payments.

Question 10: All other stakeholders' views are welcomed.

The DRAI acknowledges that there is a strong desire to design and implement a solution for energy payments for DSUs, recognising that current market deficiencies act as a disincentive for service provision and market participation for some load types. We understand that it will be necessary to balance delivery timeline and solution complexity, and acknowledge there will be a need for staged implementation of the solution.

The DRAI also acknowledges that, as recognised by the SEMC in consultation paper SEM-22-036, the European Commission State Aid Approval for the Capacity Remuneration Mechanism, as well as the Electricity Regulation (2019/943) and Electricity Directive (2019/944) which form part of the Clean Energy Package include clear obligations to fully integrate DSUs, ensuring non-discriminatory access to all electricity markets. While the SEMC determined that the interim solution for DSU energy payments (only during periods when difference charges are payable) implemented by SEM-19-029 was sufficient to comply with the requirements of the CRM State Aid approval, a significant market distortion between DSUs and generators remains, and this falls far short of the equitable treatment and full market access required under the Clean Energy Package.

In our view, the design for energy payments for DSUs should respect the following principles:

- There should be no regressive steps in terms of cost and complexity which would increase barriers to participation for DSUs.
- The aim of the solution should be to resolve the known market design issues around energy payments which disincentivise DSU participation.
- The solution should allow for fair compensation of DSUs for dispatch, in line with treatment of non-DSU units.
- The solution should recognise the technical and market characteristics of DSUs as a technology type and develop a technology-inclusive design.

The points we have raised in this response have adhered to these principles and we believe it is important that such a set of guiding principles is applied to the further development of the phased solution.

CONCLUSION

The DRAI welcomes the publication of this consultation as an important step forward in addressing current market deficiencies in relation to the treatment of demand side units.

The DRAI supports the SEMC proposal to implement a phased approach, with a "Phase 1" interim solution – extending DSU energy payments to apply at all times – being implemented as quickly as possible.

We look forward to working with our industry colleagues to successfully deliver the proposed phased implementation of energy payments for DSUs.