



iPower Response to SEM-24-046 Consultation

DSU: A revised Phase 1 Solution for Energy Payments and Other Issues
dated 23rd August 2024

iPower participates in the Demand Side Response sector of the electricity industry and perform a significant role in supporting the operation of the I-SEM balancing market and facilitating the continuous introduction of renewables through Demand Side technologies.

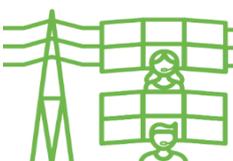
iPower currently have a registered capacity of 90.352 MW which carries a significant contribution to system support and stability and have considerable experience in working with SONI and EirGrid to provide stability and balance to system operations.

The following comments are in relation to the SEM-24-046 Demand Side Unit: A Revised Phase 1 Solution for Energy Payments and Other Issues Consultation.

iPower welcomes the opportunity to comment on this consultation and acknowledges that the paper is written to ensure DSUs are treated equally with other technologies and are properly rewarded to deliver value to the system.

iPower must emphasise their concerns regarding this paper and assumed implications of such. The most recent consultation on imperfections charge, SEM-24-048, removed the €56million provision that had previously been included for DSU Energy Payments for Oct 2024 to Sep 2025, implying that there will be further delays to receipt of any payments. DSUs have been providing balancing services in the I-SEM since 2018, without receiving energy payments, it could be said that there is an estimated loss of €56m per year to 'Long Runs' and 'Intermittent' DSUs since the start of the I-SEM in 2018.

Back as far as July 2019 the SEMC 'published an 'interim solution', SEM-19-029 to ensure DSUs received energy payments at times of system scarcity. The Clean Energy Package, published in 2019, also includes a number of obligations designed to fully integrate DSUs into the electricity market.'



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These words are cited from the Enduring Solution to Enable Energy Payments in the Balancing Market for DSUs Decision Paper, SEM-22-090, dated 25 November 2022. The solution to resolve this issue does not seem to have been a priority for the market. How much longer do DSUs have to wait?

Q1: Do you agree with the description and analysis of the models for compensating demand response and for energy payments to DSUs? Please explain your view.

Phase 1: DSU Energy Payments with Supplier Compensation. This model strikes a better balance of any of the models by ensuring that DSUs are more fairly compensated for their contributions to the grid. Additionally, it is noted that this model aims to ensure that DSUs can operate on an equal footing with traditional generation units, supporting both competition and system stability. **However, iPower do not agree** that a DSU should be required to contribute to the PCOMP to receive energy payments, as this is not included in the Offer Price to the market and is seen more as a ‘penalty’ rather than ‘incentive.’

Model 1: No DSU Energy Payments – this model is not appropriate for compensating DSUs. It does not provide the necessary financial incentives for DSUs to actively participate in demand response programs, which is essential for maintaining system reliability and efficiency, particularly in a market with increasing intermittent renewable generation. The absence of direct payments exacerbates the “missing money” issue for DSUs.

Model 2: is inappropriate because it results in double counting, inefficiency in compensating DSUs, and imposes unnecessary costs on consumers. It creates an unfair advantage for suppliers while burdening DSUs with inadequate incentives to participate actively in demand reduction programs.

Q2: Do you agree with the description and analysis of the appropriate treatment of 'long-run' DSUs? Please explain your view.

iPower agree with the analysis that long-run DSUs, which provide consistent demand reduction, do not face the same 'missing money' issues as short-run or ‘intermittent’ DSUs. However, it is vital that any compensation mechanism does not inadvertently penalize long-run DSUs or disincentivise their continued operation, which plays a crucial role in maintaining grid stability and reducing overall energy costs. Unlike intermittent DSUs that provide demand reduction sporadically, 'long-run' DSUs offer consistent and reliable demand reduction, contributing steadily to grid stability.

The consultation suggests categorising DSUs into 'long-run' and ‘intermittent’ this is welcomed by iPower.





Q3: Do you agree that incorporation of a supplier compensation payment between DSUs and suppliers would be an appropriate mechanism for addressing the 'missing money' problem for DSUs? Please explain your view.

iPower do not agree that this is a viable approach to address the 'missing money' problem. iPower's understanding was that the aim was to create a level playing field for DSU's with other generators in the market, by removing distortion caused by suppliers inadvertently benefiting from DSU demand reductions.

A transparent and predictable methodology for calculating the Supplier Compensation Price (PCOMP) is essential for market participants to plan and operate efficiently, the proposed approach is an effort to reduce the costs to the suppliers and remove the assumed benefit from the customer via DSU back to the supplier.

Q4: For the revised Phase 1 solution, if it isn't possible to identify the affected suppliers, do you agree that it would be appropriate for the supplier compensation payment to be paid into the Imperfections Charge fund? Please explain your view. Do you consider that this will allow DSUs to compete on an equal footing, without any undue disadvantage or undue advantage, compared to generators? Please explain your view.

iPower believe that it is not feasible to identify the specific suppliers affected by demand reductions and do not support the proposal for 'intermittent' DSUs to pay the supplier compensation payment into the Imperfections Charge fund. However, propose that the compensation payment for 'Long-Run' be made equal to any energy payments calculated.

Regarding the payment of 'compensation' from the DSUs into the Imperfections Charge fund. Intermittent DSUs shall not have the financial ability to cover production costs and the compensation payment without increasing its Offer price to the market.

Q5: How do you think the Supplier Compensation Price (PCOMP) should be calculated? What costs should be taken into account and what costs should be ignored? Please explain your view.

The Supplier Compensation Price (PCOMP) should be based on a fair representation of the costs that suppliers would incur in the absence of demand reduction. Like other FERA members iPower have concerns over the application of a compensation payment to Intermittent DSUs as well as Long-Runs. This is to do with the ability to financially cover the amount.

There should be a separate approach, on the application of 'compensation' payments, for 'Long-Runs' and 'Intermittent' DSUs.



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Q6: Do you agree that a supplier compensation payment would have the correct incentive effect on long-run DSUs, as well as other DSUs, and would impose reasonable costs on end consumers? Please explain your view.

It is essential that the compensation mechanism is designed to avoid imposing unreasonable costs on end consumers while ensuring that DSUs remain incentivised to participate actively in demand response programs.

The correct calculation of the 'compensation' payment for 'Long-Runs' would have the result of allowing such units to continue to participate in the markets without significant negative impact.

'Intermittent' DSUs want to obtain energy payments like other dispatchable generators so that they can efficiently cover the costs of provision of the balancing service. The best way to ensure the continued operational capability of the existing portfolios is not to implement any additional costs or complications between IDS and DSU. The 'penalty' of paying money to the Imperfections Charge fund or a supplier would not incentivise 'Intermittent' DSUs.

The paper has identified that most potential additional costs would be due to paying 'Long-Runs.' The monetary amount for covering 'intermittent' DSUs is small in the overall Imperfections and therefore the correct 'Incentive' is to pay such DSUs for energy and not implement 'compensation' payments against them.

Q7: Do you have any views on whether supplier corrections for non-consumed energy could be determined by voluntary agreement between the supplier and the DSU, or by ex-post analysis of demand reduction dispatch decisions? Please explain your views.

While voluntary agreements between suppliers and DSUs could be an option, they may lack the predictability and consistency required for market stability. We suggest that ex-post analysis of demand reduction dispatch decisions, combined with a standardised compensation mechanism, would provide a more reliable and transparent approach.





Q8: Do you agree that it would be possible to categorise DSUs into long-run and intermittent DSUs by some other criterion, such as running hours, such that it would be possible to determine whether or not compensation for 'missing money' would be appropriate? If not, please explain why. How could such a test be implemented, in practice, and eligibility criterion enforced? Should such a test be used instead of, or together with, supplier compensation payments? Please explain your view.

iPower believe it is feasible to create categories for DSUs into 'long-run' and 'intermittent' DSUs based on criteria such as running hours. 'Long-run' DSUs typically operate continuously, often relying on low-cost, on-site generation like combined heat and power (CHP) systems. These units provide consistent demand reduction and do not face the same financial risks as intermittent DSUs because their operational costs are usually covered by savings in supplier charges. 'Intermittent' DSUs provide demand reduction responding to market signals or specific events like peak demand periods. These units face greater uncertainty in revenue because they are not always operating, and thus they are more susceptible to the "missing money" problem.

Q9: Do you agree with the description and analysis of the appropriate treatment of Capacity Payments and Capacity Charges? Do you think that Capacity Charges should be levied on non-consumed energy, e.g., by an adjustment to the supplier compensation price? Please explain your view.

The current Capacity Market is designed to be a financial hedge against Scarcity events in the Energy Market. Along with that the Capacity awarded amount allows for the provision of participants to cover overheads associated with the provision of capability. This provision of capability, and its associated costs, does not reduce through the actual use (dispatch) of such services. We do not see a suitable suggestion as to the justification of taking away capacity payments to participants, since they have invested in the provision of services. Under the current rules participants set out budgets and cash flows based on the cleared volume and price in an auction, and it would be difficult to adjust such due to a centrally dispatched instruction by the TSOs. DSU's are believed to already de-rated to reflect availability in the eyes of the TSO.

We understand that any reduction in consumption from the grid by a customer shall result in a variety of supplier charges not being paid. These include Climate Change Levy as well as TUoS/DUoS payments and other elements. It is the general nature of suppliers to witness growth in demand as well as shrinkage in demand, and the Supplier can reposition their charges/tariffs to compensate.



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Q10: Do you consider that some form of baselining is needed? Would appropriate supplier compensation payment arrangements affect this? If baselining is needed, do you have any views on how the baselining methodology should work? What should be taken into account in determining the baseline profile? Please explain your view.

iPower believe that baselining is necessary to ensure accurate measurement of demand reduction. However, it is understood that the de-rating factor already captures the response nature of DSUs and therefore propose that baselining is already present and no further requirement for any additional baselining techniques is necessary.

It is suggested that any proposed changes in baselining methodology be developed in consultation with industry stakeholders to ensure it reflects actual demand patterns and provides a fair basis.

Q11: How important is it to use sub-metering? Please explain your view.

Sub-metering could provide a more accurate measure of the demand reduction provided by DSUs. However, the costs and benefits of implementing such a system need to be carefully considered. The use of SCADA data for setting DSU metered quantities is proposed to be a practical solution, given that this data is already available.

Q12: Would it be appropriate to use SCADA data for the purpose of setting DSU metered quantity? How could this arrangement work in practice? Please explain your view.

Yes it is appropriate. iPower expect that most commercial DSUs already have SCADA systems in place for monitoring and controlling their processes. This existing infrastructure can be leveraged to integrate seamlessly with grid operations, minimising the need for additional investment in new metering systems. Integration with existing systems makes SCADA a cost-effective and efficient solution for calculating DSU metered quantities, as the data can be easily accessed and processed for settlement purposes. SCADA systems are already connected to the market operator's platform via secure, real-time data transmission protocols. This system leverages existing technology while maintaining flexibility and scalability for future market developments.

DSUs are providing DS3 System Services, and the accuracy of the metering required is to a higher standard than that required by Grid Code.



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Q13: Do you consider that on-site generation could be accommodated in the SEM through the arrangements for Aggregated Generator Units? Are there reasons why it makes more sense to use Demand Side Units? Please explain your view.

iPower believe that the current DSU arrangements better capture the value of demand-side flexibility and should remain a viable option for participants. DSUs are designed to reduce demand in response to grid conditions, which is increasingly important in energy markets transitioning to more intermittent renewable generation. This is provided by both turning off equipment and/or on-site generation. DSUs do not require an MEC. An MEC can take years to obtain, if even possible, making this an unfeasible proposal.

Q14: Are there any other issues relating to the treatment of DSUs in the SEM, which the SEM Committee should consider when implementing a revised Phase 1 solution? If so, please explain these issues.

The SEM Committee should ensure that the incentive structures for DSU participation are aligned with the overall goals of the market and provide assurance that Demand Response is treated in an equivalent manner to conventional generation. The implementation of the Revised Phase 1 solution suggests that DSUs will both incur a penalty as well as an incentive, which incidentally undermines the support which was originally understood.

Q15: What are your views regarding negative demand response? Do you consider the supplier compensation payment arrangement will work for negative demand response? Do you think there is any potential for perverse outcomes and undue discrimination between customers? Please explain your view.

DCU – Demand Compensation Units have recently been proposed by the TSO at the FPM Workshop. ‘Negative’ Demand Response has also been discussed within the DASSA arrangements re response to frequency events. It must be noted that if negative demand is not a dispatchable service then it shall not obtain capacity payments and the above-mentioned consultations are more appropriate places to discuss this.



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Q16: How should shutdown costs for IDSs be accurately reflected in the COD for DSUs? Please explain your view.

iPower believe that DSUs currently comply with the BCOP and the proposals in the paper are not in line with BCOP. The suggestion that Shutdown costs should reflect the actual reduction is unworkable.

All costs for all units participating in the energy markets are reflective of the use of Central Dispatch and not Self Dispatch. As such all costs must reflect the best-case scenario of full dispatch by the TSOs as part of balancing the System, and Offers into the markets reflect that. It would be a challenge to have Price Quantity 'Shutdown' costs, and it would also need a change to the T&SC as well as the SEMO settlement systems.

Q17: How should decremental bid prices to reduce demand reduction be calculated? Under what circumstances do you consider that decremental prices could be negative? Please explain your view.

iPower welcome the MMUs guidance regarding DSU bidding but consider this should be a separate consultation that goes out to industry. This question may be answered differently by 'Long Runs' and 'Intermittent' DSUs. The suggestion that Shutdown costs should reflect the actual reduction is unworkable.

Q18: Do you agree that the Grid Code requires DSUs to declare an availability of 4 MW or above on a regular basis? If not, please explain why.

The understanding of the Grid Code with reference to the DSUs being required to declare an availability of 4MW or above on a regular basis appears to be incorrect. If this is something that the TSOs wish to amend a modification would need to be raised. By setting the threshold at 4 MW, the market may be missing valuable smaller-scale demand reductions that could still contribute to grid balancing. DSUs might be able to provide significant flexibility if aggregated properly, but the 4 MW requirement could prevent this. The requirement might lead to underutilisation of demand-side flexibility.

Q19: Do you agree that the Grid Code requires DSUs to round down their declared availability to the nearest MW? If not, please explain why.

The SONI Grid Code stipulates that Demand Side Units (DSUs) must declare their availability in whole numbers. Specifically, SDC1.4.1.3 of the Grid Code states: "The MW figure stated in the Availability Notice shall be a whole number."





If DSUs are required to round down their declared availability to the nearest whole number, they may lose out on compensation for the fractional MW of demand reduction they can provide. For example, if a DSU can provide 4.9 MW of reduction, but is forced to round down to 4 MW, the remaining 0.9 MW goes unaccounted for. This creates a scenario where DSUs are not fully compensated for the full capacity they are making available. A total of circa 22% loss of income in the above example. This discrepancy can impact the financial viability of DSUs, especially if they regularly operate just below full MW thresholds e.g., at 4.9MW.

EDIL investment is required. It is noted that the Noted that the proposed NCDR requires the TSOs to develop a roadmap to allow 0.1MW granularity – iPower welcome this after so many years of non-investment.

In Conclusion iPower thank you for the opportunity to respond to the consultation questions and are open to further discussions on any of the above responses.

Yours Sincerely,

Matt O'Kane

Managing Director



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