

Introduction

Pinerogy is an energy transition company.

We supply, analyse, and transform with sustainable energy. We're helping our customers make data-informed choices today, to take control of their energy tomorrows. Through ongoing consultative partnerships, we help our customers to understand & optimise their energy consumption through our range of products & services. From Green Energy supply, through solar energy and storage solutions, energy measurement and EV charging, we are helping our customers to change their energy future, now.

Pinerogy welcomes the opportunity to respond to the SEMC's consultation on Demand Side Units: A Revised Phase 1 Solution for Energy Payments and Other Issues.

Overview

We welcome the aim of this consultation: providing stronger incentives for demand side units to come into action at peak times. What is proposed is an important step in addressing the energy trilemma, and we are supportive of this primary goal. However, we have concerns that there may be unintended consequences to the changes, and careful analysis must be done to ensure that the benefit falls as intended.

With regards to current issues in relation to how demand side units are dealt with in the SEM, these need to be addressed within the context of the overarching vision for the future of the wholesale and retail market, taking into account metering and fair compensation for capacity.

With a number of development plans in motion between the SEMC, TSO, DSO, Regulator, and DECC, it is vital that these are all linked into one overarching vision out to 2030 and beyond.

A strategy is needed for measuring and profiling units that are behind the meter to allow proper incentives to encourage the capital investment required. This should not be a replacement for the current system of metering, but be complimentary to it.

Questions

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

The analysis is welcome and appears reasonable overall. That said, a number of assumptions have been made and these deserve consideration as we plan for the future. For example, the assumption is that tariffs are basically flat and not linked to the rise and fall of electricity prices every half hour in the wholesale markets. Equally, a supplier with no DSUs on its meter points would not get much financial benefit from the arrangement and would instead face extra costs as a result.

There is room for further analysis of the signalling effect of this scheme. There is not much clarity on the reasons for why it is currently difficult to make and take appropriate payments from individual suppliers.

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

The general treatment appears to be reasonable, however it is not clear how this would work in practice. The description (and perhaps the solution) is very complex and difficult to understand.

Perhaps it is a matter for another consultation, but this approach does also not account for non-energy consequences, in particular network charges. There is no particularly clear reason why a generator forming part of a long-run DSU would not be compensated for network loading avoided by having a generator behind the meter, as well as the energy generation costs avoided.

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.

We think this may be suitable as an interim solution to achieve an immediate saving in imperfections charges and to provide a stronger incentive for short-run DSUs. However, ultimately there is a risk of undesirable effects if it is extended. All energy generation should be accounted for and allocated to a wholesale unit where it is generated and to another wholesale unit where it is consumed. Where the generation and consumption happens behind the meter, this could be achieved through submetering.

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.

Ultimately this is acceptable as a short term solution but the compensation for the DSU will be based on what is ultimately an arbitrary price, the supplier compensation price, which is based on some sort of average calculation rather than reflecting the reality of the particular situation.

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.

There is simply no one solution to this. It is likely that the most appropriate structure will change from year to year, which is why we would be concerned about a solution like this in the long-term. There will be too many ongoing adjustments required to try to keep the mechanism 'fair' and each adjustment will have an impact on profitability and even solvency for DSUs, particularly short-run DSUs. As a result there will either be unfairness or uncertainty and neither is desirable in the medium or longer term. Therefore we think it is important that this be an interim solution only.

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.

Whilst it looks like it should work adequately, it is hard to anticipate how it will interact with new technological and market developments. We do note that the previous arrangements ultimately turned out to have unexpected consequences, leading to the current consultation.

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.

This may work for large units where there are the resources to oversee the negotiation, however it is difficult to see how smaller units would be in a position to represent themselves sufficiently in negotiations. Growth will ultimately have to come from developing a larger number of smaller units and if only for this reason, this kind of negotiation will be difficult.

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.

The problem with introducing a dichotomy is that a new category of 'mid-run' units will surely arise. Rather than a dichotomy, it might be more appropriate to have a gradation. At the same time, a more variable capacity charge. All of this also depends on more accurate measurement.

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.

On the face of it, capacity charges should be levied based on consumption of capacity resources at times of stress. If capacity is being procured, the person who supplied the capacity should not be paid a second time in the form of not having to pay capacity charges.

However, our current capacity charge does not work like this; capacity is charged even on days or hours where there is unlikely to be any system stress. In this context it seems to make more sense that capacity charges not be levied on consumption that doesn't 'hit' the system.

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.

There should be some form of baselining. However, baselining should be viewed more as an intermediate step rather than as a long-term solution. It is a way of incentivising and capitalising a change in consumption or generation behaviour, but it does not work for the long-term for the simple reason that the baselining period (before the incentive was introduced) is becoming more and more remote. For the most part, incentives based on the baseline should be phased out over time in favour of more 'implicit' measures.

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

Sub-metering is extremely important. It appears to be all but inevitable to implement the requirements of the recast electricity markets directive, i.e., to provide for aggregators being balance-responsible and to provide for a second or subsequent balance-responsible supplier to be present on the same site as an existing supplier. (Equally, a generator or other type of unit could be present on the site.)

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.

In principle yes, however in practice there are some substantial problems. As noted, there is a difficulty reckoning on which supplier is the related site where there is a

DSU. To be able to use this information usefully, it needs to be correlated to the site and the supplier unit registered as a supplier for the site. This may present a difficulty in how the sites are configured.

The simplest way to resolve this might well be new metering and a new system for dealing with aggregators and secondary suppliers. This 'behind the meter' metering is quite different in nature from the current DSO and TSO metering and new arrangements are probably required for it.

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.

There is no end of potential configurations. A supplier unit could also be used for this aggregation under the de minimis arrangements. Perhaps there are too many potential configurations, and everything needs to be simplified.

Where part or all of the generation is being consumed on-site, then aggregating generation may cause more confusion than dealing with the sites individually as de minimis sites are all attached to one supplier unit.

This question is no doubt a reflection of the great change coming to the market as the practical differentiation between those providing capacity (traditionally GUs and DSUs) and those consuming capacity (traditionally SUs) begin to blend together. A modern GU may not provide much capacity at all, if it is derated as a result of its type and is unable to respond to system stress. Similarly, a supplier unit may have within it an ability to respond to changes in generation through innovative new incentives (like the Demand Flexibility Service in Britain) or simply through greater responsiveness to market prices or through incorporating a component of dispatchable demand or storage.

Conclusion

Whilst having a range of potential configurations to choose from no doubt has advantages for the generator, there needs to be uniformity, i.e, similar things need to be treated in a similar way.

It is probably beyond the scope of this consultation, but it may be timely to reconsider the basis for the SEM charges and payments at the same time as we reconsider the network charges. Our concepts of capacity may need to be adjusted to meet the realities of the flexible, distributed grid of the future.