DCMDG 'Private Networks' Sub-group - Meeting 03

19 December 2023 at 10:00
Teleconference via Microsoft Teams

Attendees	Company
Andrew Malley [AM] (part meeting)	Ofgem
Babatunde Olukotun [BO]	National Grid Electricity Distribution
Brian Clark [BC]	SSE
Chris Ong [CO]	UK Power Neworks
David Fewings [DF]	Inenco
Diandra Orodan [DO]	BU-UK
Edda Dirks [ED]	SSE Generation
Eleanor Suter [ES]	BU-UK
Victoria Burkett [VB]	SSE Energy Supply
Guests	
Reg Platt [RP] (Part Meeting)	Emergent Energy
Michelle Simpson [MS] (Part Meeting)	ElectraLink
Secretariat	
Dylan Townsend [DT] (Chair)	ElectraLink
Apologies	
Kara Burke [KB]	Northern Powergrid
Joe Boyle [JB]	Scottish Power Energy Networks

1. Administration

1.1 The group reviewed the DCUSA "Competition Law Guidance" and agreed to be bound by this for the duration of the meeting.

1.2 The Working Group reviewed minutes from previous meeting and agree they are accurate to what was discussed during the meeting.

2. Purpose of meeting

2.1 The Chair welcomed the attendees to the meeting.

2.2 The Chair explained that the purpose of the meeting was to have a discussion on any learnings that can be taken from the CUSC Modification CMP425 and to hear from Emergent Energy who operate microgrids and have developed a solution via a BSC and DCUSA innovation sandboxes. If time permits the sub-group would also receive updates on the progression of the draft RFI and background research produced by the Secretariat.

3. Discussion on CMP425 'Billing Demand Transmission Residual By Site'

3.1 The Chair asked ED to provide the group with an overview of CMP 425, especially now that Ofgem have made a decision to approve it. ,

3.2 ED highlighted that the fact that CMP 425 was raised shows that issues related to network charging for private networks are not only something that is happening at the distribution level, but also starting to appear at the transmission level.

3.3 ED explained her view that Ofgem's decision on CMP 425 could probably be interpreted as declaring how the TCR banded fixed charges should be applied in the context of private networks with competition in supply. ED noted that whilst that interpretation should be confirmed by Ofgem it would appear that private networks should be deemed to be single sites as per the TCR definition, then any such site would be banded as a whole rather than the individual customers, where they have third party supply. The group noted this view and agreed with the premise that should Ofgem concur with this view then that gives the group a clear steer and one less thing to worry about.

3.4 The Chair noted his view that the point made by ED was quite a good one in terms of what the group could look or should be looking at and what this decision is indicating. The Chair went on to summarise the position as being that the CMP 425 decision would seem to indicate an overall approach to how the issue should be viewed but not necessarily the exact mechanic of a solution at the distribution level. The Chair expanded on this point to note that the CMP 425 solution is effectively a split between Supplier BM units (in simple terms at least) and is apportioning the residual amount between the two different supplier BM units in line with their historical consumption over the past year.

3.5 ED explained that the question that might be asked by those who maybe un-familiar with DCP 328, is why can't you do the same at distribution level and that the answer relates to some of the existing and documented complications.

3.6 AM noted that the way he sees it is that the CMP425 solution was likely to be a bit simpler than the issues this group needs to look at because it doesn't have to worry about things like IDNO's but that it provides a good starting framework. It was noted that for CMP425, it was agreed that that the split would be based on consumption, because that's how the bands are set but that a sites capacity is likely to be a good starting point for trying to separate things out at the distribution level, because that's how some sites are banded.

3.7 ED noted that whilst at the distribution level banding is in many cases done by capacity, there are complications in separating this out as the way the capacity is divided up behind the boundary isn't always clear. ED went on to provide an example of where a site might have a boundary capacity of 9MW and there are four customers behind the boundary, with each using 2.5MW which makes the total 10MW behind the boundary. In that scenario the 9MW for the entire site makes sense due to diversification (i.e., because they may use them at different times) which leads to a situation where the sum is greater than the total at the boundary, which is likely to be another issue that needs to be resolved.

3.8 AM agreed and noted if there's anything that the sub-group can read across from CMP 425 to whatever replaces DCP 328, hopefully it'll be it should be possible to join a complex site or a private network and share in that fixed charge without adding to everybody's total bills and without competition in supply being something which is disincentivized by way of being on the receiving end of additional fixed charges. This hopefully will mean that people will choose where to connect without having to take into account the nature of the various charging arrangements which may be quite unpredictable.

4. Perspectives from Emergent Energy's DCUSA Sandbox trial

4.1 It was noted that a set of slides had been provided to the group prior to the meeting and these were shared on screen.

4.2 RP explained the Emergent Energy have Innovation Sandbox trials currently running under the related provisions within the DCUSA[1] and the BSC[2], with the latter now moving to the code modification stage[3]. The focus of these trials is on the way industry arrangements affect the ability/capacity of customers who are connected to private networks to choose a third party supplier.

4.3 Emergent Energy is focussed on very small customers (domestic customers and small business customers) and was looking to find a solution to the issues encountered with the current arrangements, which in their view are effectively preventing customers from being able to choose a third party supplier on private networks.

[1] https://www.dcusa.co.uk/innovation-sandbox/emergent-energys-dcusa-sandbox-application/

[2] https://www.elexon.co.uk/bsc-and-codes/derogations-from-the-bsc/

[3] P455 'On-Site Aggregation as a method to facilitate Third Party Access' https://www.elexon.co.uk/mod-proposal/p455/

4.4 Emergent Energy establishes and operates microgrids within residential housing developments, typically deploying solar PV generation, and potentially heat pumps, EV chargers and shared battery storage. Emergent enables housing companies (usually social housing providers and councils) the opportunity to benefit from lower decarbonisation costs and reduced energy bills for residents by either funding their own microgrid, or having capital funding provided. Emergent and their clients recognise that residents of microgrids must be able to exercise their right to switch their electricity supply.

The BSC Sandbox solution

4.5 Emergent applied for a Sandbox trial derogation from the BSC's rules (subsequently approved) about the submission of settlement data from a metering system at the interface between a premises and the total system. The BSC trial objectives are to allow customers located on private networks better access to other suppliers, whilst maintaining and improving the accuracy of reporting, and the allocation of electricity consumption in the balancing market.

4.6 The BSC trial allows for meter reading submissions based on the aggregation of on-site customer meters that total the value that would have been calculated using a differencing arrangement (a methodology provided for in the BSC). This enables each supplier on the site to be settled for the correct amount of consumed or generated electricity without entering into bilateral arrangements with all other suppliers operating on the site. This methodology is expected to reduce the overheads associated with supplying customers located on private networks, thereby improving access to the competitive retail electricity market.

4.7 The maximum duration of the derogation is for a 2 year trial, with up to an additional 1 year for a transition period in the event a BSC modification related to the sandbox trial is raised. RP noted that a modification has now been raised and has progressed quickly through the BSC modification process and has recently been issued for consultation.

4.8 RP explained that one significant realisation that has come about as part of the innovation sandbox trials, which he believes has now been recognised by ELEXON is that the difference metering arrangements are assumed to be more fit for purpose for large industrial and commercial customers like an airport or a port. This is because it is much more likely that those very large customers have the ability to set up bilateral arrangements with third party suppliers, as they tend to be very sophisticated purchasers of electricity, and they have significant market leverage and there's not very many of them.

4.9 RP asked the group to consider a situation where there is a new build housing estate, with say 300 houses and to assume that 60 of those houses take a third party supply (i.e., exercise their right for competition in supply) and then imagine that those 60 houses have signed up to say 10 different suppliers. To set up arrangements for enabling difference metering or shared metering, it becomes extremely complicated as there would need to be a large number of bilateral arrangements entered into across all of those different parties.

4.10 The problem in very simple terms and therefore the solution to match the problem is to say that a customer who, for example lives in a Council flat should be able to choose a tariff with a supplier exactly the way they always do. They shouldn't have to go and set up and their own arrangements, and when they do, they should not face any punitive charges for doing so.

4.11 RP explained that this does somewhat tie into the conclusions that can drawn from the Ofgem decision on CMP 425, which seems to be about removing friction that enables the customer to choose their supplier and therefore maximizing the benefits of competition and efficiency.

4.12 RP went on to note that the Emergent Energy solution to this issue is by way of something they have called 'on site aggregation'. Which is similar to the difference metering approach, which is understood to have a supply to a boundary meter and a number of third party supplied meters as well as private network supplied meters. With the differencing approach, there is a need to take the meter data from the third party supplied customers and subtract it from the boundary meter. It was noted that in terms of a micro-grid, there is also the need to account for some export on the site which may be behind the third party supplied customers or feeding directly onto the private network. The differencing approach calculates the volumes via the netting off of any of the relevant volumes related to the third party supplies from the boundary meter.

4.13 The problem arises in terms of access to the correct data, as the supplier or whoever is involved in doing this calculation needs access to the data both for the boundary meter and for the third party supplied customers. The Emergent Energy solution effectively reverses the calculations used to determine the correct volumes. The solution is to use the metered volumes for all of the private network customers because they already have that data given all customers being supplied via the private network have a meter and will be being billed. Therefore, the solution is to add up (or aggregate) the volumes that are on the private network meters and report that into settlement via an on-site aggregation MPAN us the same answer.

4.14 The above approach means that the third party supplied customers have no relationship to the private network and the private network operator doesn't need their data meaning that they don't need to be involved whatsoever. The only relationship that matters is between the private network supplier, customers and the settlement processes. The approach so far, and as approved as part of the innovation sandbox trials is limited in terms of numbers of customers that can be incorporated into the trial and the types of customers (being domestic and small non-domestic). From an innovation perspective, the novelty with the approach being used is that it has been agreed that aggregated sub meter data can be used within settlement. Therefore, arrangements needed to be established in order to maintain the integrity of settlement side of things and industry generally.

4.15 RP explained that this means it must be the Half Houly Data Collector (HHDC) who is responsible for an 'on site aggregation' MPAN is also responsible for ensuring the data integrity of the submitted data, then the Meter Operator (MOP) or the Half Houly Meter Operator Agent (HMOA) or the Metering Equipment Manager (MEM) that's appointed for the 'on site aggregation' MPAN is also responsible for the operation of the submeters. RP noted that this approach means they are using standard industry agents, and then that the metering must conform to the relevant code of practice (COP), being COP10. This has the effect of capping the load or the capacity for the customers at 100 kilowatts and it's by doing that that the solution is restricted to being applied to private networks that are supplying domestic customers or small businesses.

The DCUSA Sandbox solution

4.16 RP explained that the arrangement that has been established through the DCUSA sandbox is a rebate model, whereby the private network operator is paying the fixed charges for the on site aggregation MPAN and also the third party suppliers are also paying fixed charges and so the DNO would end up double charging the fixed charges to the private network as a whole. It was noted that Emergent Energy had partnered with Northern Powergrid, who received a Licence Derogation from Ofgem following the conclusion of the DCUSA Sandbox application process.

4.17 It was highlighted to the group that to remedy that double charging problem, the very simple solution is that the private network operator raises a rebate to the relevant DNO for the fixed charges that have been supplied to the third party supplied customers less the parts of the charge that are added as a result of supplier of last resort costs as these aren't applied uniformly across different customer types.

4.18 RP explained that since launching the scheme, it was noticed that the solution has become simpler as result of not using data from the boundary meter (which says what the volume of the consumption at the boundary is), which is irrelevant and redundant now they're submitting accurate volumes to settlement based on data from the submetering. This is because of the fact that DUoS residual charges are set effectively in relation to those settlement volumes for sites who banding is based on their annual consumption. It was noted that this approach allows the identification of the appropriate measurement class and the appropriate residual banding.

4.19 RP went on to state that the previous problem of incorrect allocation of residual charges for such schemes is solved by the BSC solution and that this therefore meant that the final element, being the remainder of the fixed charges which are being incorrectly allocated onto these schemes, and so that therefore is the focus of the rebate.

4.20 The group noted that Emergent Energy believe that it could reasonably be argued that the current arrangements are non-compliant with the EU law with respect to the ability of a customer to exercise their right for third party access because of the difficulty they face in setting up the required arrangements.

4.21 RP explained that Emergent Energy had also approached UKPN to participate in the trial for some of their London based schemes but UKPN is based on and basically they, since they don't support the rebate methodology that we've put in place.

4.22 RP shared a concern related to the fact that the work undertaken by Emergent Energy hadn't yet been discussed within this group, particularly the fact that they had already raised the issues previously via DCP 328 and were the only company in the industry that's gone to the effort and the bother of setting up the DCUSA sandbox on this topic. RP explained that his view was that their work on developing a solution to issues related to competition in supply on private networks should be factoring into the thinking of this sub-group as it's directly relevant to this issue. RP went on to note that they have effectively developed an alternative solution and this it is important that the group understand the rationale for the alternative solution which has now been provided to the group.

4.23 The Chair explained that the reason that the sandbox trial had not yet been raised for discussion with the group is that this group had been focused just on the points related to trying to ascertain the answers to the basic questions of what, who and how many as the group agreed that no one really knows the extent of the issue and that with respect to DCP 328, maybe it was trying to solve something that didn't need to be solved.

4.24 The Chair continued, and noted that the group had not been looking at solutions yet and obviously the Emergent Energy sandbox trial is exactly that but that the group has definitely welcomed the contribution as if nothing else, it points towards the fact that there will be a change into DCUSA in the same space as this groups work.

4.25 The Chair noted that as part of the sandbox being approved that there had been a discussion on the applicability of the solution to IDNOs and how the solution could be adapted for IDNOs and questioned whether any work had been done on this to date. RP explained that they hadn’t spent a lot of time on that yet but acknowledged that they will need to do but it is likely that they will do so around the point they raise the DCUSA change.

4.26 The Chair asked whether the reason for UKPN not wanting to take part in the DCUSA Sandbox Trial was at all related to negative residuals. To which RP explained that that is was to do with what UKPN saw as the additional amount of work that would be involved, especially as distributors don’t have commercial relationships directly with private network operators and would therefore need establishing. It was noted that it might not be a problem if there was only one or two of these arrangements, but if there were hundreds or thousands then that is likely to be an issue.

4.27 Regarding what happens where negative residual fixed charges, the Chair noted that as the focus of the rebate has shift from the initial view that it would help resolve a double charging issue related to the residual fixed charges and was instead focused on the remaining portion of the fixed charge, then at there may have been a need to look into this further and that need may still exist to some extent but that if the focus has shifted from residuals to the other parts of the fixed charge then it might be less relevant now. RP agreed and noted that his view was that it's probably out of the equation now, because the residuals are dealt with through the BSC side.

4.28 The Chair thanked RP for the useful summary and asked members of the sub-group whether they had any questions for RP.

4.29 ED sought clarification from RP regarding whether the sites were all difference metering, shared metering or fully settled, to which RP confirmed that none of them fell into those categories as they will utilise their new approach of on-site aggregation.

4.30 The group noted that in terms of how this feeds into the work of the subgroup, it will effectively introduce an additional arrangement to the three existing arrangements (being Shared/Difference/Full Settlement). It was also noted that Emergent Energy intend on raising a change to the DCUSA for the charging related aspect and that there is a current BSC Modification that is being developed too. Therefore, the sub-group would need to be mindful of this but it doesn't really change the fact that the three original arrangements need to be dealt with. It was further noted that RP suggested that although their Sandbox trial doesn't cover larger sites, there may be a way to translate that to larger sites too but that the group would still need find solutions for the three existing configurations.

4.31 RP made a final point with respect to how they may be able to help in reaching out to other similar entities that are looking to (or are actively developing) similar microgrids in the residential space. It was noted that those entities are looking to organise themselves as an industry grouping and so once the RFI is finalised, it could be circulated amongst that cohort with relative ease.

5. Review of output research

Identifying different types of private networks

5.1 In terms of this part of the background research, the Chair noted that for the most part this was effectively the initial document put together and explained during the last meeting which covered off the fact that there are different types of private networks and how the task of identifying operators may work.

Identifying operators and numbers of private networks

5.2 In terms of this part of the background research which is related to the identifying private network operators, the Chair shared a document on screen which set out a table with several columns which had the names of companies thought to be private networks, found via companies that have responded to the call for evidence on license exemptions and previous DCUSA changes on the subject as well as via emails that came into the DCUSA inbox and a general google search. The Chair explained that there was still a lot of work to do to then go backwards populate the table with things like website addresses and generic email address which could be used to send the RFI to but that the plan is to continue this work up until the RFI is ready to be sent.

Suitability of the various metering arrangements for each type

5.3 In terms of this part of the background research which relates to the suitability of the various arrangements, the Chair explained this is probably not that achievable with the information available but that it probably isn't actually that necessary and in fact, is what the RFI is intending to uncover.

6. Review of draft RFI

6.1 The Chair apologised to the group as he was unable to locate the document to share on screen but reassured the group that work had been done but that at that moment in time was unable to share it. The Chair advised that once located, he'd work to get it into a slightly better position and then would circulate to the group for review which was already captured as an action. Then the group can review and input into its contents and design moving forward.

7. Agreed Next Steps

7.1 Members agreed that the Secretariat should continue to gather as much information as possible around private networks in the coming weeks, collate this and present it alongside a draft of the RFI to the Working Group at the next meeting for further discussion.

7.2 ED recalled that there was an action to clarify with Ofgem the intent of the RFI because the belief was that Ofgem were keen for the group to identify the scale of the issue, and in that context, the RFI was, intended to do that but that it would be wise to go back to that action and just check with Ofgem that the RFI does or is designed to meet that. ED explained that it might also be worth revisiting that with them, especially given what the group has heard in terms of Emergent Energy and their sandbox trials as well as the recent decision on CMP 425.

7.3 It was noted that it is possible that Ofgem's view on the approach for this group may have shifted a little bit.

7.4 ED also raised a point related to the fact that previous efforts to engage with private networks haven't tended to be successful, due to the fact that they are License Exempt entities and so there's no central register of them and they don't have any obligations in the DCUSA or other codes to reply to things like RFIs and that their resources may be limited. ED agreed that the RFI should be done in a way that looks to get the maximum response rate possible and for instance that could be by way of Ofgem lending their name to the introduction.

8. Agenda items for next meeting

8.1 Members agreed to add the following items to the agenda for the next meeting:

- Review output of research; and
- Review draft RFI.

9. Any other business (AOB)

9.1 The Chair asked for any other items of business.

9.2 There were no further items of business raised.

10. Date of Next Meeting

10.1 Members agreed to hold the next DCMDG 'Private Networks' Sub-group meeting on 16 January 2024 and for the meeting to be held via Microsoft Teams/Teleconference.

11. Attachments

- None

Appendix A- Actions

New and Open Actions

Action Ref.	Action	Owner	Update
01/01	The Secretariat to follow-up with RC around an action from DCP 328 regarding contacts for LENs (PNs).	Secretariat	**New Action.** **09/10/23 -**
01/02	The Secretariat to gather information around private networks and collate for the Working Group to review.	Secretariat	**New Action.** **09/10/23 – ongoing, an initial starting point has been shared with the working group.**
01/03	The Working Group to revisit whether these issues may impact transmission charging arrangements.	Working Group	**New Action.** **09/10/23 -**
02/01	The Chair to explore whether data can be requested/used from internal resources related to the MTC 997.	Chair/Secretariat	**New Action.**
02/02	The Secretariat to continue develop the RFI and background research and issue to the working group for review.	Chair/Secretariat	**New Action.**
02/03	The Chair to engage with Ofgem to relay the groups desire for a clear steer from Ofgem as to what they would like this workstream to achieve.	Chair/Secretariat	**New Action.**

Closed Actions

Action Ref.			Update