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SECMP0046 'Allow DNOs to control Low Carbon Technologies connected to Smart Meter infrastructure'

19 November 2020 Joint DCUSA Working Group – Meeting Summary

Attendees

Attendee	Organisation
Ali Beard (AB)	SECAS (Chair)
Bradley Baker (BB)	SECAS
Abhay Soorya (AS)	Gemserv
Rick Parfett (RP)	ADE
Ben Cattermole (BC)	BEIS
Dennis De Cala (DDC)	BEIS
Derek Weaving (DW)	British Gas
Rajni Nair (RJ)	Citizens Advice
David Walsh (DW)	DCC
Paul Bedford (PBe)	Drax
Paul Saker (PS)	EDF Energy
George Dawson (GD)	ElectraLink
Richard Colwill (RC)	ElectraLink
Mark De Sousa Wilson (MW)	Elaxon
Donna Townsend	Energy Assets
Symon Gray (SG)	Energy Assets
Joseph Cosier (JC)	Energy UK
Matthew Cullen (MC)	E.ON
Terry Carr (TC)	E.ON
Steve Mockford (SM)	GTC UK
Claire Addison (CA)	Flexitricity
Richard Sarti (RS)	NODES Market
Chris Allanson (CA)	Northern Powergrid
John Noad (JN)	Npower
David Sykes (DS)	Octoenergy
Francesca Barrick (FB)	Ofgem
Emslie Law (EL)	OVO Energy
Rustam Majainah (RM)	OVO Energy
Alessandra De Zottis (AZ)	Sembcorp

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Paul Farmer (PF)	Shell Energy
Eric Taylor (ETa)	SLS
Bob Hopkins (BH)	SSEN
Megan Coventry (MCo)	SSE
Edda Dirks (ED)	SSE
Donald Preston (DP)	SSE
Richard Wiles (RW)	Trilliant
Steve Halsey (SH)	UK Power Networks
Lisa Waters (LW)	Waters Wye Associates
Richard Brady (RB)	Western Power
Sven Hoffmann (SH)	Western Power

Welcome and introductions

The Smart Energy Code Administrator and Secretariat (SECAS) Chair (AB) welcomed attendees to the meeting and reiterated the Competition Law guidance.

Outcomes

The Chair (AB) highlighted proposed outcomes from the joint Working Group which included agreeing the direction of the Distribution, Connection and Use of System Agreement (DCUSA) draft legal text in order to progress to the DCUSA Working Group Consultation, agree suitable Consumer compensation parameters, to further define the business case of the modification and to agree next steps.

Overview

Refinement of the Road Map leading to the use of the SEC solution

Last Resort roadmap

SECAS (AB) presented an updated version of the road map that was initially provided by Scottish and Southern Electricity Networks (SSEN). The latest version differs from the previous whereby once the Load reaches a predefined level on a monitored feeder or substation, the next step is for the Distribution Network Operator (DNO) to commence permanent solution investigations. This may include upgrading cables, overlaying cables, replacing transformers or new smart solutions as they become available.

The Working Group noted the amendment and provided feedback. A member (CA) stated that references to Electric Vehicles (EVs) should be replaced with Low Carbon Technologies (LCTs). It was also stated the for clarity, 'flexibility services tender' should be replaced with 'flexibility services tenders' as there will be multiple contracts tendered. A Department for Business, Energy and Industrial Strategy (BEIS) representative (BC) queried when flexibility services are deemed to be 'uneconomical'. The Proposer responded that this is not yet defined as flexibility contracts on Low Voltage (LV) networks are still in their infancy. However, it was advised that the costs of network reinforcement and Customer Interruptions / Customer Minutes Lost (CI/CML) Penalties should be considered when considering the cost benefit analysis.

Roadmap stage 1

SECAS provided further detail of the first stage of the road map. It has been agreed that each Distribution Network Operator (DNO) would publish their methodology for the point at which they start to procure flexibility. This will be captured in their Network Plan which is to be published under the Clean Energy Package. The Working Group was informed that each Network Plan must be updated every two years to ensure that DNOs are reviewing progress and are providing a reliable network for Consumers.

The Chair confirmed that the SEC Proposed Solution cannot be used if a feeder or substation is not monitored by the DNO for that network. The subject of independent Distribution Network Operators (iDNOs) not being able to monitor load was raised, as this would make the SEC Proposed Solution irrelevant to them. One iDNO representative said that they were looking to monitor feeders going forward as their business grew.

Further conversation was held around monitoring networks, and the Proposer stated that local knowledge is essential as DNOs will be aware of areas where feeders and substations may be at risk of overloading.

It was asked if the details around how DNOs produce their Plan are to be included in a DNO Network Plan (as per the Clean Energy Package) and if each plan must be displayed in the same format. The Proposer stated that each DNO can use their own format to present their plan. The Working Group questioned how this would be 'Policed'. Members were concerned that DNOs may not anticipate EV and LCT uptake appropriately and therefore it might be an excuse to use the SEC solution to avoid costs. One Working Group member (ET) thought it was unreasonable to expect DNOs to anticipate which customers would take up EVs and other LCTs.

It was stated that if an overloading event occurred on a feeder unexpectedly because the DNO had not anticipated/modelled the LCT uptake accurately, a diesel-powered generator would be used (as is currently the case) to ensure Consumers are not without electricity. The Proposer confirmed the usual approach is to reinforce the network within a 12-month timeframe. The Proposer also advised that the CI/CML Penalties would apply in this case. He reiterated DNOs' commitment to flexibility and the expected CEP measures stating that there was no reason for DNOs to not plan effectively as the Penalties would be significant.

'Capacity Headroom' was discussed as a way of monitoring when Load is reaching levels that puts energy supply at risk. One Working Group member questioned how the industry could ensure DNOs were working to this definition, would they plan far enough ahead and would Penalties apply? The Proposer stated that the Authority (Ofgem) already has the power to impose considerable Penalties. In addition the CI/CML rules ensure DNOs have incentives to plan ahead and in future the Clean Energy Package will place added regulations on DNOs.

Queries regarding the Penalty process were raised, especially in the scenario where flexibility procurement has failed and the SEC last resort solution is used. The Proposer stated that if there was an outage for any reason, the CI/CML Penalties are around £40 per hour per customer.

It was asked whether the DCUSA should regulate how DNOs execute pre-emptive steps to prevent network outages. This is due to concerns where DNOs may not take the correct approach to provide a reliable service and the last resort Proposed Solution is used too frequently. The Proposer responded that DNOs were committed to using flexibility. Procurement of flexibility will always be the first step to ensure power is retained to Consumers (this will be organised in advance). However, DNOs were concerned about the situation when flexibility fails. If it fails, emergency tenders will be produced and plans for network reinforcement will be undertaken to safeguard Consumers going forwards. Another scenario where emergency tenders may be undertaken is where network demand exceeds Load projections (Uptake of LCTs is faster than modelled). The Proposer reassured the

Working Group members that DNOs are providing an ever more reliable service and fewer power cuts are being experienced. However, they will have a challenge to manage the expected increased uptake of EVs/LCTs in the future.

One Working Group member suggested that one flexibility platform should be used. Another Working Group member suggested areas of risk, as identified by DNOs should be flagged to flexibility providers to enable them to put contracts in place.

A Working Group member (LW) suggested that a format for emergency tenders should be drawn up in advance as an overloading event is time-sensitive and flexibility providers will not have time to review contracts in a short period of time.

A question was raised regarding the timeframe of emergency tenders and whether this methodology will be included in the DCUSA. The Working Group agreed that the DCUSA is not the appropriate place for these flexibility procurement discussions, but it should be discussed by the ENA Open Networks project¹.

Network outages

The Working Group Chair provided an overview of the DCUSA draft legal text relating to network outages, as seen below:

“Where a network outage occurs, the DNO will investigate the cause. If evidence determines that the outage is not a one-off random event or as a result of external interference with network assets, and is as a result of the Flexibility Service Provider failing to deliver the procured Flexibility Service then the use of the Smart Meter Last Resort Solution would be triggered. In parallel to this an emergency tender for Flexibility Services will be issued.”

The process of flexibility failing was queried. This related to a scenario where there were three flexibility providers contracted and one failed. A Working Group member questioned if the DNO would class this as ‘flexibility failure’ and use the SEC last resort solution. This is currently theory as this scenario is yet to happen. The DNO reiterated their commitment to using flexibility where possible.

An agreed amendment for the text was to use plural for “Flexibility Service Provider” to better reflect the situation.

A Device Manufacturer (ET) advised that it may be beneficial to be more openminded in terms of the Proposed Solution. This relates to the use of the Auxiliary Load Control Switch (ALCS), Home Area Network Controlled Auxiliary Load Control Switch (HICALCS) and Standalone Auxiliary Proportional Controller (SAPC). It was suggested that the legal text should provide an opportunity for the marketplace to build a solution based on the capabilities of the smart metering system and not restrict innovation. Therefore the suggestion was to remove references to the DCC from the DCUSA draft legal text. This would mean that future advancements in technology may provide a better vehicle for a last resort solution to operate. It was advised that any future developments in technology would have to be stringently assessed to ensure security is not compromised. It was suggested that the Security Sub-Committee (SSC) should be briefed on any developments. It was highlighted that the British Standards Institute (BSI) proposal PAS1879 allowed for alternative solutions.

It was agreed that this does not undermine the SEC Modification however, as the Proposed Solution utilising the DCC System provides a guaranteed method of DNOs communicating with HAN Devices and controlling the load. It is worth highlighting that previous conversations surrounding developing

¹ ENA Open Networks program (WS1A: Flexibility Services program)
<https://www.energynetworks.org/creating-tomorrows-networks/open-networks>

new smart EV chargers were dismissed due to high development and Commercial Product Assurance (CPA) approval costs.

Consumer Journey

The Working Group Chair (AB) presented a flow diagram that describes key events in the Consumer journey which had been requested at the last Working Group. Discussing the flow diagram allowed the Working Group to provide feedback on how the journey can be enhanced. Citizens Advice (RN) stated that the diagram may need an added step that states when the last resort Proposed Solution is no longer used. The Proposer (BH) advised that the Consumer should be notified when the problem has been resolved and that their internal systems would be updated.

The Working Group discussed the need for DNO Customer Service Assistants to have adequate training so that they know how to approach vulnerable customers in an appropriate manner. It will be important that customers should not be 'sold to' and should be given sufficient information to allow them to make their own decision. This would include identifying any contracts currently in place and any tariff affected. This will be applied following Consumer Protection from Unfair Trading (CPUT) Regulations². It was agreed that this should not be included in the DCUSA but falls under CPUT with Ofgem providing further oversight to ensure customers are treated fairly. In addition the Citizens Advice representative suggested that any information handed out to consumers should include a contact for where to get help and advice.

Billing was discussed and how the Proposed Solution or any advancements in technologies would be paid for. It has been agreed in previous Working Group meetings that where the DNO agrees to reduce LCT load the DNO will pay for the ALCS/HCALCS/SAPC installation as per the SEC Proposed Solution. However, if another Party wished to effect Load Control it would be that Party's responsibility to pay for and install the Device. Upon this discussion, it was agreed that the Device used should be referred to as Load Controlling Equipment. Further to this, it was advised that when referring to Load 'curtailment', the term that should be used is 'modulation' as this is a more accurate representation of the situation.

Last Resort definition

The Working Group Chair (AB) provided an overview of each of the proposed last resort definitions:

- Where the Distributor cannot procure flexibility in a transparent, non-discriminatory and market-based way - Article 32 of the Clean Energy Package
- 'Capacity Headroom' means the minimum margin below the maximum capacity of the Distribution System which the Company reasonably believes is necessary and justifiable to maintain Security of Supply and other technical parameters - DCUSA
- Every commercial option has been exhausted - Grid code GC0147 discussions
- All reasonable steps - used in other industry Codes

A Working Group member (RP) suggested the use of what is stated in the Universal Smart Energy Framework (USEF)³, which provides a colour-coded market-based coordination mechanism. This will require further investigation ahead of the DCUSA Working Group Consultation. Further suggestions were provided in relation to the DCUSA draft legal text, such as clarifying that the last resort and the

² CPUT regulations

<https://www.legislation.gov.uk/ukxi/2008/1277/contents/made>

³ Universal Smart Energy Framework relating to last resort definition (Section 4.2, page 24)

https://www.usef.energy/app/uploads/2016/12/USEF_TheFrameworkExplained-18nov15.pdf#popup_overlay2

attempt of gaining an emergency flexibility contract occur at the same time. The group agreed that views would be sought on the definitions during the DCUSA Working Group Consultation.

DCUSA draft legal text for Network Plan

Further discussion was held regarding the DCUSA draft legal text addressing DNOs' Clean Energy Package Network Plans. It was advised that for transparency, DNOs should publish the time elapsed to undertake network reinforcement so it will be clear when the 12-month time limit for work to be completed has been reached. It was suggested that any reporting should be on postcode out code and the times the last resort solution had been used. The DCUSA (RC) advised that once the Working Group agrees the legal text, it will be forwarded on to the DCUSA's legal advisors for further refinement. Once completed, DCUSA will distribute the document to Working Group members ahead of the consultation, scheduled for mid-December 2020.

Compensation options

The Proposer (BH) informed the Working Group that their position on compensation is that they agree it is a necessary part of the process. It was however highlighted that with the Low Voltage network flexibility market still in its infancy, it is difficult to set a level of compensation that will not distort the market when the market is fully operational.

An important point was raised whereby if the level of compensation is higher than that of the flexibility contract, there will be a detrimental impact on the flexibility market as Consumers will be more inclined to accept compensation.

The Proposer (BH) stated that DNOs cannot receive individual household consumption data and instead receive it from the DCC at an aggregate level. This prevents them from being able to provide an individual level of compensation per household.

The Working Group agreed that compensation is a necessary factor in the progression of this proposal, however it should not deter from the aim of providing a constant supply of electricity to the Consumer.

Some of the options suggested were Volume of Load lost, CI/CML costs, or the ceiling of the flexibility costs. However, it was pointed out that the customer still uses the electricity but it is spread over a slightly longer period of time. One Working Group member suggested compensation may be important if no flexibility providers offer contracts to Consumers in that particular area. One DNO offered information that for some streets in London the flexibility price is around £75/kWh.

A Working Group member (MC) stated that some figures relating to Low Voltage flexibility markets have recently been provided by UK Power Networks⁴. It was advised that this document could be used as a guide to help provide a level of compensation that will not negatively impact flexibility markets going forwards. It was agreed that this must be fully defined by the time Ofgem make their decision on both the SEC and DCUSA Modifications.

A Working Group member (ED) highlighted the relevance of EU regulation (Clean Energy Package - CEP), Reg (EU) 2019/943, Article 13⁵, which has been transposed into UK law. In their view, the provision sets out that compensation is in fact due to those network Users who are not BM parties, and they suggested that the Working Group explore this provision in detail.

⁴ Flexibility Services procurement pricing (found under the tab Flexibility Services - Procurement January 2021 – Appendix 6) <https://smartgrid.ukpowernetworks.co.uk/flexibility-hub/>

⁵ Regulation (EU) 2019/943 of the European Parliament and of the Council, Article 13 <https://www.legislation.gov.uk/eur/2019/943/article/13>

They quoted paragraph 7: “Where non-market based redispatching is used, it shall be subject to financial compensation by the system operator requesting the redispatching to the operator of the redispatched generation, energy storage or demand response facility except in the case of producers that have accepted a connection agreement under which there is no guarantee of firm delivery of energy. Such financial compensation shall be at least equal to the higher of the following elements or a combination of both if applying only the higher would lead to an unjustifiably low or an unjustifiably high compensation.[...]”

Redispatching being defined in article 2 as “a measure, including curtailment, that is activated by one or more transmission system operators or distribution system operators by altering the generation, load pattern, or both, in order to change physical flows in the electricity system and relieve a physical congestion or otherwise ensure system security”.

A similar issue is being explored by a Grid Code Working Group for GC0147, and the Working Group member (ED) thought that it would be relevant to keep a watching brief on those developments to ensure consistency across codes.

It was agreed that the relevant extracts of article 13 would be circulated to the Working Group for their further consideration.

Penalty options

The Proposer (BH) stated that there is an existing Penalty framework for DNOs policed by Ofgem. It was advised that the financial impact of these Penalties is extremely high, and that company reputation will also be at risk due to the Penalty notification being publicly available. As the current structure of Penalties is set by Ofgem, it is not necessary to outline them within the DCUSA code itself.

Currently, one of these penalties is £29 per Consumer losing supply, plus 14 pence per minute the customer is off supply. This can quickly add up to hundreds of thousands of pounds. It is a high priority for DNOs to provide a reliable service to Consumers and customer interruption is a prominent factor in DNO annual reports which are submitted to Ofgem.

An action was noted that the Proposer would discuss with Ofgem the Penalties relating to network reinforcement exceeding the agreed 12 months. It was suggested that Ofgem could use its discretion to state that network reinforcement projects should be completed ‘as soon as reasonably practical’, thus providing a level of flexibility for DNOs, which will then be monitored.

The DCUSA Working Group Consultation will include details surround the penalty process and the responses will be fed back to the subsequent SEC / DCUSA joint Working Group.

Further modification clarifications

A Working Group member (ED) requested further clarity on the SEC Modification process in relation to SECMP0046’s progression. The Chair (AB) stated that the agreed approach is for SECMP0046 and DCP371 to be presented to Ofgem together to enable them to make the most informed decision. Each modification must have completed the relevant modification process before being presented.

The next step in the process for SECMP0046 will be to request the DCC Impact Assessment. The assessment will cost £ £15,436.21, which is borne by SEC Parties. As a result, SECAS are allowing for DCP371 to develop further before requesting that the DCC undertake the assessment. An action was taken to provide a timeline for the intended progress for each modification to the point of decision. This will provide further clarity to new Working Group members.

Next steps

The following actions were recorded from the meeting:

- DCUSA to develop draft legal text with legal partners
- DCUSA to issue Working Group Consultation
- SECAS to provide a joint modification timeline for the next meeting

Next Meeting Date:

To be confirmed (likely end of January 2021)