

DCUSA Consultation		At what stage is this document in the process?
<h1>DCP 326</h1> <h2>Introduction of Load Diversification Identifiers for Load Managed Areas</h2> <p><i>Raised on the 20 June 2018 as a Standard Change</i></p>		01 – Change Proposal
		02 – Consultation
		03 – Change Report
		04 – Change Declaration
Purpose of Change Proposal: <p>This Change Proposal (CP) seeks to introduce a simplified process for retaining the diversification of demand in Load Managed Areas (LMA) during the replacement of Radio Teleswitch System (RTS) controlled metering equipment by Suppliers or post the decommissioning of the RTS.</p>		
<p>The Workgroup recommends that this CP should: proceed to Consultation.</p>		
<p>Parties are invited to consider the questions set in section 9 and submit comments using the form in Attachment 1 to dcusa@electralink.co.uk by 11 January 2019.</p>		
<p>DCP 326 has been designated as a Part 1 Matter and a standard change.</p>		
<p>The Working Group will consider the consultation responses and determine the appropriate next steps for the progression of the CP.</p>		
<p>Impacted Parties: Suppliers, DNOs, IDNOs</p>		
<p>Impacted Clauses: Schedule 8</p>		

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Timetable

The timetable for the progression of the CP is as follows:

Change Proposal timetable

Activity	Date
Initial Assessment Report Approved by Panel	11 July 2018
Consultation issued to Parties	December 2018
Change Report issued to Panel	February 2019
Change Report issued for Voting	February 2019
Party Voting Ends	February 2019
Change Declaration Issued to Parties	February/ March 2019
Authority Decision	March 2019
Implementation	September 2019

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Any questions?

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1 Summary

What?

- 1.1. The intention of this CP is to modify the wording in Schedule 8 of the DCUSA to provide a more practical way of ensuring diversification of switched load timing in LMAs and introduce a process to facilitate this.

Why?

- 1.2. Distributors may, from time to time, designate part of their network as an LMA¹ where they have identified a need to reinforce or extend the capacity of such areas and have been able to avoid or defer the need for such reinforcement or extension through limiting the coincidence of switched load by adopting to control the Load Switching Regimes.
- 1.3. Currently LMAs have diversification through the use of the numerous Standard Settlement Classes (SSCs) to ensure switched load such as night storage heaters and water heating does not occur simultaneously.
- 1.4. To maintain the best value for money for the customer, it is important to retain this load diversification particularly where on parts of the distribution network, for example in the highland and islands, where they were designed to use this approach. If it is not retained the estimated cost in the Scottish Hydro Electric Power Distribution (SHEPD) Licence area alone is in the region of £718m². In conjunction with this report there was also a supporting technical paper which was published for some additional technical detail³. Making the most efficient use of networks, through diversification of switched load timing (such as night storage heating) is well aligned with the abilities that are being developed as part of the transition to Distribution System Operator.
- 1.5. The diversification of switching times which enables networks to be utilised efficiently and cost effectively is under threat as metering systems are changed to accommodate smart metering through the removal of existing switch load timing systems such as RTS. It should be noted that it will not be possible to have visibility of dynamic switching times used by RTS due to the variable nature of the switching instructions made by the specific Supplier who acts as the Group Code sponsor.
- 1.6. There is no defined process to retain the diversification that is obligated in Schedule 8. Since this diversification will be required indefinitely, this CP endeavours to make Schedule 8 easier to comply with and ensures that it is more sustainable into the future. The Working Group also discussed

¹ LMAs exist in SSEPD and WPD network areas.

² Derived from an EA Technology Ltd (EATL) report written in 2012 – Attachment 2

³ The technical paper can be found in Attachment 3

creating an implementation guide that parties can use to implement this solution if approved. This would ensure a consistent approach across the country.

How?

- 1.7. The proposed solution seeks to make amendments to Schedule 8 to provide a mechanism to duplicate as closely as possible the current switching arrangements when replacing RTS with smart metering.
- 1.8. The principle proposal is to introduce a Load Diversification Identifier (LDI) which is derived from the last digit of the Metering Point Administration Number (MPAN) at the relevant property. Each LDI will correspond to a specific set of switching times defined by the Distributor responsible for the connection to the property.
- 1.9. This process will point the supplier to a switching time from the ten available LDIs when configuring the replacement smart meter which will retain the required load diversification i.e. any one tariff could have up to ten variants on switching times, one for each LDI. Each LDI needs to map to either an existing SSC or a new SSC will have to be created by following the Elexon process covering Market Domain Data or follow the time pattern for half hourly traded MPANs.
- 1.10. By comparison with the current system, use of the LDI to determine switching times for a customer on any tariff will be more transparent because the LDI is based on readily available information (the MPAN and the SSC), whereas the information currently required to replicate existing RTS switching times is not held on any central system especially where Dynamic Switching takes place. The requirement to allocate LDIs to determine switching times for customers will be incorporated into Schedule 8 of DCUSA.

2 Governance

Justification for Part 1 Matter

- 2.1. This Change Proposal should be classed as a Part 1 matter since it:
 - 9.4.1 it is likely to have a significant impact on the interests of electricity consumers;
 - 9.4.2 (C) it is likely to have a significant impact on competition in the supply of electricity; and
 - 9.4.4 it is directly related to the safety or security of the Distribution Network.

Current Next Steps

- 2.2. This Consultation Document is issued for a period of five weeks. The Working Group will review the responses after this period.

3 Why Change?

Background of DCP 326

- 3.1. In conventional metering the time switch and switched load settings on metering systems are implemented on site by the MOP (as the Supplier's agent) via the equipment fitted to reflect the supply tariff (the settings being based on the SSC/Time Pattern Regime (TPR) is provided by the Supplier). Time switching settings on smart metering systems can be applied remotely or locally (via hand-held terminal equipment).
- 3.2. Only Suppliers have access to the relevant commands to set the time switching settings on a smart meter. Distributors have no ability to control, or be involved, with the tariff arrangements applied to any meters on their network. This will lead to a removal in part of the diversification of switched load times in their areas that were previously managed through Group Codes that were randomly associated with the RTS infrastructure. For example, there are five published SSC configurations operating in the SHEPD Scottish Mainland LMAs with a different Group Code association to each. This means approximately a 5th of the portfolio, on these arrangements, switch concurrently thus providing a smoothing of the load in that region to protect the network from peak demand.
- 3.3. The current obligation in DCUSA is for the Supplier to replicate the Switching Regime as closely to that already at the premises: Paragraph 8.4(d) states "where the User⁴ is replacing a Load Switching Device at a particular Metering Point, in the area identified in such a notice, the User shall use reasonable endeavours to ensure that the Load Switching Regime, and any other material characteristics of the existing Load Switching Device, are replicated on the new Load Switching Device".
- 3.4. This process may be possible to follow due to the visibility of the switching times associated with the semi-static/ static SSCs. However, it will not be possible to have visibility of dynamic switching times due to the variable nature of the switching instructions made by the Group Code sponsor. In addition, as the time switched equipment is removed, the smoothing effect enabled by this will be lost.
- 3.5. This solution is only considering the non-half hourly markets as there is no concept of structured off-peak time patterns, which are currently represented in the SSCs within half-hourly trading.
- 3.6. The implications of this are that the smoothing of switched load times provided by the numerous SSCs will be lost resulting in the security of supply being put at risk, leading to the potential of faults, loss of supply and consequentially a significant negative impact on customers in terms of reliability and costs. This would ultimately lead to an escalation of the processes contained within Schedule 8 such as Security Restriction Notices being issued. The risks to supply security are also exacerbated by the loss of visibility of switching regimes once the load switching provision is replaced with a smart meter. It may also result in more LMAs being introduced as dynamically switched customers move

⁴ The User in this instance means the Supplier.

to a static regime or economy 7 customers all move on to the same switching times. The above was highlighted in the development of DCP204⁵.

- 3.7. The solution proposed will enable the responsible Distributor to specify the LDI and hence the corresponding switching times for each customer in an LMA in order to protect their network. Moreover, for Suppliers to comply with Schedule 8 as it stands the Suppliers are required to replicate the current switching times, which they may have little or no visibility of, for example suppliers who are not Group Code sponsors and piggy back on the switching times determined by the Group Code sponsor. There is concern that, through lack of visibility of switching times, Schedule 8 as it is currently written will not be complied with. This change provides an easily derivable format that allows more flexibility whilst minimising ongoing workload for Suppliers and maintains the integrity of Schedule 8 and more importantly the security of supply.
- 3.8. A consequence of doing nothing will result in significant costs to the industry as indicated in the EA Technology report (Attachment 2 and 3) .

Q1: Do you understand the intent of DCP 326?

Q2: Are you supportive of the principles of DCP 326?

4 Working Group Assessment

DCP 326 Working Group Assessment

- 4.1. The DCUSA Panel established a Working Group to assess DCP 326. This Working Group consists of DNOs, Suppliers and Ofgem representatives. Meetings were held in open session and the minutes and papers of each meeting are available on the DCUSA website – www.dcusa.co.uk.
- 4.2. The issue of replicating Time Switching and Load Switching in the Smart Roll-out was originally raised in DCP 204. Paragraphs 6.19-6.24 within DCP 204 change report discusses this issue and the outcome was that it should be raised as a new CP once DCP 204 and the new legal text was approved. Subsequently a DCUSA Issue Form (DIF) 50 was submitted and discussed (including a consultation) as a sub group⁶ to the Standing Issues Group resulting in this CP being submitted.
- 4.3. The DIF 50 Subgroup considered a number of options and have developed a potential solution that replicates the benefit of switch load arrangement apart from the ability to dynamically switch the load (dynamic customers will be discussed in more detail below).

⁵ [DCP204 Working Group papers](#)

⁶ [DIF 50 Sub Group papers](#)

- 4.4. As stated above the proposed solution seeks to make amendments to Schedule 8 to provide a mechanism to duplicate as closely as possible the current switching arrangements when replacing non-half hourly switched load with smart metering and when the current RTS contract ends in March 2020. The principal proposal is to introduce a LDI which is derived from the last digit of the MPAN at the relevant property. Each LDI will correspond to a specific set of switching times defined by the Distributor responsible for the connection to the property.
- 4.5. It was noted that some customers will have a primary MPAN and a related (heating) MPAN. It was agreed that when establishing a LDI, Distributors should always use the primary MPAN. In cases where there is a related MPAN, this should be placed in the same LDI group as the primary MPAN. It was noted that this would be an exception to the rule as the related MPAN may have a different last digit. Therefore, the Working Group agreed that this would need to be recognised within the legal text of Schedule 8 in DCUSA.
- 4.6. The Working Group also agreed that for this proposed solution to be successful each Distributor that has a LMA needs to evaluate their existing switching times and determine how many LDIs they require. Effectively this splits the switching times of the load in up to 10 switching time bands per tariff (e.g. an economy 7 tariff could have up to ten switching times, as could Economy 10) thereby facilitating diversity of demand by allocating the last digit of the MPAN to a LDI. The LDI will form part of the LMA notice.
- 4.7. The current approach when providing the LMA notice (as suggested by DCP204) is shown below:

GSP Area (A_B_C_etc...)	First Two Digits of MPAN	Notice Effective From Date	Notice End Date (leave empty if ongoing)	Restriction Start Time (leave empty if 24hrs per day)	Restriction End Time (leave empty if 24hrs per day)	Restriction Start Month (leave empty if full year)	Restriction End Month (leave empty if full year)	Postcode Outcode	Total number of MPANs affected by Restriction
_L	22	01-Jan-15		00:00:00	05:00	01-Nov	31-Mar	EX16	
_L	22	01-Jan-15		00:00:00	05:00	01-Nov	31-Mar	EX23	
_L	22	01-Jan-15		00:00:00	05:00	01-Nov	31-Mar	EX39	
_P	17	01-Aug-14				01-Oct	31-Mar	AB30	
_P	17	01-Aug-14				01-Oct	31-Mar	AB34	

- 4.8. It is suggested that the above is amended to cater for the LDI and the associated SSCs. The example below shows the necessary changes associated with one of the postcode outcodes and adds the additional columns to cater for which MPANs are associated with a LDI together with the existing SSC and the ones that are also available for selection to cater for the different tariffs available. In this example there are only 5 LDIs required with e.g. MPANs ending in 1 and 6 on the same LDI. It means that instead of the report indicating how many MPANs are affected by the restriction, the report needs to indicate each MPAN. It also caters for how to represent a related MPAN by have a separate row with no additional postcode outcode.

GSP Area (A_B_C_etc...)	Notice Effective From Date	Notice End Date (leave empty if ongoing)	Restriction Start Time (leave empty if 24hrs per day)	Restriction End Time (leave empty if 24hrs per day)	Restriction Start Month (leave empty if full year)	Restriction End Month (leave empty if full year)	Geographical area/Postcode Outcode	MPAN	LDI	Existing SSC	Available SSCs
L	01-Jan-15						TR21	22nnnnnnnnn1	1	0176	Quartz TBA-1
							TR21	22nnnnnnnnn2	2	0177	Quartz TBA-2
							TR22	22nnnnnnnnn3	3	0178	Quartz 0244
							TR21	22nnnnnnnnn4	4	0393	Quartz 0151
								22xxxxxxxxx7	4	0251	Quartz 0151
							TR25	22nnnnnnnnn5	5	0244	Quartz TBA-3
							TR21	22nnnnnnnnn6	1	0151	Quartz TBA-1
							TR21	22nnnnnnnnn7	2	0244	Quartz TBA-2
							TR24	22nnnnnnnnn8	3	0186	Quartz 0244
							TR22	22nnnnnnnnn9	4	0178	Quartz 0151
							TR21	22nnnnnnnnn10	5	0179	Quartz TBA-3
							TR21	22nnnnnnnnn11	1	0177	Quartz TBA-1

- 4.9. The Working Group believe that this approach provides clarity to suppliers and what to do when replicating a Load Switching Device and would like your views on the formatting of the report and whether such a format should form part of an Appendix to Schedule 8.

Q3: Do you agree with the format of the report when submitting a LMA report?

Q4: Do you agree with the Working Group that the format of the report be included as an Appendix to schedule 8?

Q5: Supplier only – Is the information provided in paragraph 4.8 sufficient for the supplier to implement the proposed enduring process? If not, what additional information will be required?

Proposed analysis that needs to be undertaken by Distributors

- 4.10. Distributors will need to consider the relative distribution of customer MPANs which would be associated to LDIs to ensure a relatively even distribution load across each LDI.

A simplified process will follow the steps below:

1. Calculate the representative LDI for each customer MPAN in the list of declared LMAs
2. Create half hourly schedule which blocks out peak times e.g. between 8:00-10:00 and 16:30-18:30.
3. Spread switching times through the day dependent upon the tariff across the LDIs, taking care that no more than 60% of customers are covered during one half hour.
4. Undertake this for 8 hours of heating load and for 12 hours of heating load.

- 4.11. However, to understand the specific impact on the network in areas of dense switched load usage, this process will be followed up with a HV and EHV network analysis on a sample of impacted areas by modelling the winter peak half hourly load set to enable load flow analysis. This analysis will need to be created by removing the current switched load for the existing load set from the load flow model by interrogating the current switching schedules and linking each MPAN to the relevant network. This interrogation of demand data will allow the average heating load for each customer to be calculated, based on historic trend analysis, for it to be subsequently applied to the base load as per the proposed switching times. This will then allow an impact assessment to be undertaken on the sample areas which will provide an overall view on the wider network impacts.

Q6: Do you agree that the suggested analysis is sufficient to determine the number of LDIs?

Dynamically Switched Customers.

- 4.12. The proposed solution replaces dynamic switching with a fixed time because it will not be possible to have visibility of dynamic switching times due to the variable nature of the switching instructions made by the Group Code sponsor which change dependent upon variables such as weather temperature. It is anticipated that without this CP the actions undertaken by Suppliers may result in additional LMAs being introduced and existing ones resulting in an escalation potentially resulting in Security Restriction Notices being issued.
- 4.13. As part of the replacement of dynamic switched load metering (currently provided using RTS) with a smart meter Suppliers should provide an appropriate engagement with the customer explaining how the heating arrangements will operate in the future including when switching times would take place. It was suggested that guidance on this could be included in Smart Metering Installation Code of Practice (SMICoP).

Q7: Do you agree that it would be appropriate to add guidance in the SMICoP where a dynamic switching arrangement has been replaced?

Areas with no Wide Area Network (WAN)

- 4.14. The Working Group are aware of a known issue within the smart metering roll out where there are areas of the country that have no WAN availability. The following options are considered to be available for these customers:
- The existing arrangements remain installed with the exception of post RTS decommissioning;
 - A smart meter is installed that has the ability to manually adjust the settings; or
 - Install a time switching device that replaces the current RTS arrangements.
- 4.15. The Working Group are of the view that finding a solution to this issue is out of scope for this CP and exists now.

Q8: Areas with no WAN is a known issue within the smart meter rollout. Do you agree that this is out of scope for this CP?

Alternative Solutions

- 4.16. The Working Group would like Parties to consider whether there are any alternative proposals they would like the Working Group to consider.

Q9: Do you believe that there are any other solutions that the Working Group needs to consider?

5 Legal Text

- 5.1 This CP places an obligation on the Distributors to include in the LMA notice sent to Suppliers the following additional information associated with an MPAN:
- LDI number
 - The current SSC; and
 - Available SSCs.
- 5.2 An Appendix to Schedule 8 shows the format of the LMA report. Contained within it is a reference to related MPANs being associated with the same LDI number as the primary MPAN at the customer's property.
- 5.3 The draft legal text is in Attachment 4.

Q10: Do you have any comments on the proposed legal text?

6 Relevant Objectives

Assessment Against the DCUSA Objectives

- 6.1 For a DCUSA Change Proposal to be approved it must be demonstrated that it better meets the DCUSA Objectives.
- 6.2 The Proposer believes that this change will:
- Better facilitate DCUSA General Objective 1 because it will continue to protect the network and avoid substantial reinforcement works. It will also facilitate a more effective process to co-ordinate with suppliers;
 - Negatively impact DCUSA General Objective 2 because it will limit the exact switching times that can be applied to customers and therefore limit the times in the tariffs that can be offered;
 - Better facilitate DCUSA General Objective 3. because Distributors must operate a safe and reliable network, this proposal significantly limits the likelihood of overloading which impacts both of these; and
 - Better facilitate DCUSA General Objective 4 because the change is a minor amendment which simplifies the process of retaining the necessary diversification during the smart meter roll out and beyond.

	DCUSA General Objectives	Identified impact
<input checked="" type="checkbox"/>	1. The development, maintenance and operation by the DNO Parties and IDNO Parties of efficient, co-ordinated, and economical Distribution Networks	Positive
<input checked="" type="checkbox"/>	2. The facilitation of effective competition in the generation and supply of electricity and (so far as is consistent therewith) the promotion of such competition in the sale, distribution and purchase of electricity	Negative
<input checked="" type="checkbox"/>	3. The efficient discharge by the DNO Parties and IDNO Parties of obligations imposed upon them in their Distribution Licences	Positive
<input checked="" type="checkbox"/>	4. The promotion of efficiency in the implementation and administration of the DCUSA	Positive
<input checked="" type="checkbox"/>	5. Compliance with the Regulation on Cross-Border Exchange in Electricity and any relevant legally binding decisions of the European Commission and/or the Agency for the Co-operation of Energy Regulators.	None

Q11: Do you believe that the DCUSA General objectives are better facilitated by this CP. Please provide your rationale?

7 Impacts & Other Considerations

Does this Change Proposal impact a Significant Code Review (SCR) or other significant industry change projects, if so, how?

7.1 The Working Group view is that this CP can be progressed in isolation of any SCR, however a number of issues have been raised that are as a consequence of two Significant Code Reviews, Mandating HH Settlements and The Faster Switching Programme.

Mandating HH settlements

7.2 The issue is that there is only a default SSC used for HH settled MPANs and as such the proposed solution does not cater for HH settlements. The view is to keep the change specific to the current arrangements and leave the issue to the SCR since any change raised would have to be considered as an overlap with the programme or attempt to future proof it within this CP.

Q12: Do you agree with the Working Group approach to limit this CP to the NHH settlement Arrangements. If not, what do you envisage the main challenges HH settlement will bring to distributors in regards to managing load in the future and how can they be overcome?

Faster Switching Programme

- 7.3 The Working Group discussed a suggestion that the centralised switching service provider's system, and the metering point registration systems could be an appropriate place to put 'a flag' on the MPANs that are covered by a LMA to build on the notices that are currently sent out to Suppliers. This could ensure that Suppliers have a quick and easy way to check if they have any customers within LMAs, particularly when they gain new customers.
- 7.4 As per the earlier SCR, the Working Group are of the opinion that such a change is out of scope of this CP but recognise that it may be an opportunity to raise such a suggestion during the development phase of the SCR.

Q13: Do you agree that it is sensible to include a flag within the metering point systems as part of the SCR associated with the Faster Switching Programme?

Q14: Are you aware of any wider industry developments that may impact upon or be impacted by this CP?

8 Implementation

- 8.1. The Working Group considered the importance of this CP due to the decommissioning of the RTS hence the decision to exclude any additional requirements that cross over with the SCRs and also the need for Distributors to undertake network analysis to determine the number of LDIs required in each MLA.
- 8.2 In considering the above, the Working Group agreed that the implementation should occur 6 months after Authority approval, currently expected to be September 2019. In considering this CP, the Working Group would appreciate comments on whether this implementation date is acceptable.

Q15: The proposed implementation date for DCP 326 is 6 months after Authority approval. Do you agree with the proposed implementation date?

9 Consultation Questions

9.1. The Working Group is seeking industry views on the following consultation questions:

Number	Questions
1	Do you understand the intent of DCP 326?
2	Are you supportive of the principles of DCP 326?
3	Do you agree with the format of the report when submitting a LMA report?
4	Do you agree with the Working Group that the format of the report be included as an Appendix to schedule 8?
5	Supplier only – Is the information provided in paragraph 4.8 sufficient for the supplier to implement the proposed enduring process? If not, what additional information will be required?
6	Do you agree that the suggested analysis is sufficient to determine the number of LDIs?
7	Do you agree that it would be appropriate to add guidance in the SMICoP where a dynamic switching arrangement has been replaced?
8	Areas with no WAN is a known issue within the smart meter rollout. Do you agree that this is out of scope for this CP?
9	Do you believe that there are any other solutions that the Working Group needs to consider?
10	Do you have any comments on the proposed legal text?
11	Do you believe that the DCUSA General objectives are better facilitated by this CP. Please provide your rationale?
12	Do you agree with the Working Group approach to limit this CP to the NHH settlement Arrangements. If not, what do you envisage the main challenges HH settlement will bring to distributors in regards to managing load in the future and how can they be overcome?
13	Do you agree that it is sensible to include a flag within the metering point systems as part of the SCR associated with the Faster Switching Programme?
14	Are you aware of any wider industry developments that may impact upon or be impacted by this CP?

15	The proposed implementation date for DCP 326 is 6 months after Authority approval. Do you agree with the proposed implementation date?
16	Do you have any other comments?

9.2 Responses should be submitted using Attachment 3 to dcusa@electralink.co.uk no later than, **11 January 2019**.

9.3 Responses, or any part thereof, can be provided in confidence. Parties are asked to clearly indicate any parts of a response that are to be treated confidentially.

Attachments

- Attachment 1 – DCP 326 Consultation Response Form
- Attachment 2 - EA Technology Ltd (EATL) report
- Attachment 3 - EA Technology Ltd (EATL) report - supporting technical paper
- Attachment 4 – Draft legal text
- Attachment 5 – Glossary of Terms