



DCUSA Consultation

DCP 133 - 500MW Network Common Model for CDCM Input

1 PURPOSE

- 1.1 This document is a consultation issued to all Distribution Connection and Use of System Agreement (DCUSA) Parties, the Authority and other interested Parties in accordance with Clause 11.14 of the DCUSA seeking industry views on DCP 133 - 500MW Network Common Model for CDCM Input.
- 1.2 Respondents are invited to consider the questions in section 11 below and submit comments using the form attached as Appendix A to DCUSA@electralink.co.uk or by completing the online form available on the following webpage:

<https://www.surveymonkey.com/s/DCP133>

- 1.3 Responses should be submitted no later than **Friday, 7 March 2014**.

2 DCP 133 - 500MW NETWORK COMMON MODEL FOR CDCM INPUT

- 2.1 The 500MW model is used to derive network level gross asset values, for input into the Common Distribution Charging Methodology (CDCM) model. Currently DNOs have their own individual 500MW models rather than using a single version of the model.
- 2.2 DCP 133 has been raised by UK Power Networks following on from the work of the Distribution Charging Methodologies Forum (DCMF) Methodologies Issues Group (MIG) 500MW Commonality sub-group. The intent of CP is to introduce a common 500MW network model spreadsheet, which will be referred to as the Hypothetical Incremental Distribution Asset Model (HIDAM), under DCUSA governance which would be used across all DNOs.
- 2.3 The Change Proposal form is provided as Appendix B to this document.

3 The DCP 133 WORKING GROUP

- 3.1 The DCP 133 Working Group is comprised of representatives from Suppliers, Distributors and Ofgem. Meetings are held in open session and the documents of each meeting are available on the DCUSA website – www.dcusa.co.uk.
- 3.2 The Working Group has met on 28 occasions and developed a common 500MW model. This model is referred to as the HIDAM and is provided as Appendix C.

This replaces what has previously been referred to as the 500MW model.

- 3.3 The design of the HIDAM is detailed in the legal text provided as Appendix D, and the model user manual is provided in Appendix E.

4 THE HYPOTHETICAL INCREMENTAL DISTRIBUTION ASSET MODEL

4.1 What is the purpose of the HIDAM model?

- 4.1.1 The HIDAM methodology is designed to calculate the asset cost at each network level of a notional distribution network capable of meeting a permanent 500MW increase in demand. In other words the model essentially calculates the cost of building a new 500MW network, with the costs spilt by the following network levels:

- 132kV circuit network level
- 132kV/EHV transformation level
- EHV circuit network level
- EHV/HV transformation level
- 132kV/HV transformation level
- HV circuit network level
- HV/LV transformation level
- LV circuit network level

- 4.1.2 It is a hypothetical model which is intended as a means of representing a scaled version of an actual network. The use of a scaled version is possible because it is not the absolute cost at each network level that drives DUoS charges, but rather the relative cost between voltage levels. The methodology is based on the concept of producing forward looking cost signals.

4.2 Why has the HIDAM Model been developed?

- 4.2.1 Currently, DNO organisations each have their own 500MW models. These were developed under common guidance in advance of the introduction of the CDCM in 2010. The HIDAM model has been developed in response to a drive by Ofgem to introduce greater commonality in the calculation of DUoS charges across DNOs. It is proposed that all DNOs would use this single model.
- 4.2.2 In addition to introducing a common model, the HIDAM methodology introduces a greater reliance on published data sources, such as the Regulatory Reporting Pack (RRP). This means that the HIDAM methodology will improve commonality in the both calculations and the data used by the DNOs.

4.3 Who will be impacted by the introduction of the HIDAM?

- 4.3.1 The output from each DNO's individual 500MW model is one of the key inputs into the CDCM model, which is used to generate Distribution Use of System (DUoS) tariffs for HV and LV customers. Some of the tables in the 500MW models also feed into the EHV Distribution Charging Methodology (EDCM) model, which is used to calculate DUoS tariffs for EHV customers.
- 4.3.2 Replacing DNO's individual 500MW models with the common HIDAM will, therefore, affect the tariffs for LV, HV and EHV connected customers. The Working Group has carried out a detailed impact assessment on the HIDAM and this is presented in section 7 below.

5 DEVELOPMENT OF THE HIDAM

- 5.1 The HIDAM methodology was developed by the DCMF MIG 500MW Commonality sub-group over the course of approximately 30 meetings. During these meetings there was much discussion on developing commonality in the model and its inputs across DNOs. Discussions on commonality have continued within the DCP 133 Working Group.
- 5.2 The following table outlines the areas in which a common approach has been developed.

Developed Common Areas:

1	Clarified asset unit costs principles
2	Reviewed assets list and determined asset categories in various network levels
3	Determined network level boundaries and therefore the cost categories
4	Determined common data sources
5	Developed a common approach of calculating the Coincidence Factors which are used to calculate the modelled maximum demand at 132kV/EHV, 132kV/HV and EHV/HV levels
6	Developed a common approach of calculating the installed and firm capacity for single and multi-transformer substations
7	Developed common constraint conditions of modelled firm capacity vs. modelled max demand of substations above HV level when the substation numbers are determined
8	Developed a common constraint conditions of modelled installed capacity vs. modelled firm capacity of HV/LV substations when their numbers are determined
9	Developed a common approach of calculating the modelled firm capacity of HV/LV

	pole mounted and ground mounted substations
10	Developed a common approach of calculating the modelled length of 132kV, EHV, HV and LV circuits
11	Developed a common approach of calculating the modelled number of HV/LV substations
12	Developed a common approach and introduced common data source to calculate protection devices at HV level

5.3 Whilst many common areas have been developed there are some areas where it is felt that it is appropriate for DNOs to make a decision based on their own design policies and expectations. The HIDAM has been designed to allow for DNOs to determine the most appropriate value for their network in the areas outlined in the following table.

Open areas for DNOs to make the decision based on their own design policies, purchase data or estimates:

1	Typical type of transformer configurations and circuits at various levels
2	Unit cost of network assets
3	Adjusted proportion of underground cables and overhead lines for 132kV, EHV circuits and the adjusted proportion of excavate, lay and reinstatement relative to lay only for HV, LV cables
4	Number of each substation configuration at 132kV/EHV and EHV/HV and 132kV/HV levels
5	The enhanced forced cooling ratings of grid and primary transformers
6	Additional HV switchgear to meet DNO standard
7	Adjustments to existing asset quantities where parts of the network are generation dominated (i.e. where generation is higher than demand)

5.4 Some of the topics in the above table are discussed in further detail in the next section of this consultation document.

6 DCP 133 CONSULTATION TOPICS

6.1 As part of this consultation the Working Group is seeking respondents views on the areas outlined below.

6.2 Why is it called the HIDAM model?

6.2.1 The model developed under DCP 133 has been called the Hypothetical

Incremental Distribution Asset Model to reflect its purpose and to distinguish it from existing 500MW models. This name was chosen by the DCMF MIG 500MW Commonality sub-group.

6.2.2 A proposal has been made by the DCP 133 Working Group that it could instead be called the 'Common 500MW Network Model'.

6.2.3 Consultation respondents are invited to provide their view on this suggestion by using the form provided as Appendix A to answer the following question:

- *Do you agree that the model should be called the 'The Hypothetical Incremental Distribution Asset Model' or would your preference be for it to be called 'The Common 500MW Network Model'?*

6.3 Publication of Populated HIDAM Models

6.3.1 Currently, DNOs do not publish their individual populated 500MW models as they contain customer specific data.

6.3.2 Having sought legal advice, the Working Group has determined that in the interests of competition law populated HIDAM models should not be published by DNOs. The populated HIDAM models will contain DNO asset costs and information relating to future strategic plans that could potentially be harmful to competition by giving DNOs visibility of the costs of other DNOs which could influence their own costs.

6.4 Ownership of the Model, Methodology and User Manual

6.4.1 When DCP 133 was raised the proposed legal text in the CP form sought only to place an obligation on DNOs to use the HIDAM template as issued by the DCUSA Panel, with the HIDAM methodology and User Manual remaining outside of the DCUSA.

6.4.2 The Working Group has discussed this point and proposes that the methodology should be incorporated into DCUSA, so that any future changes to the methodology would be progressed through the DCUSA change process. Both the HIDAM model and methodology would, therefore, be under the ownership of DCUSA.

6.4.3 The Working Group proposes that the user manual be maintained outside of the DCUSA governance process with updates made via the DCMF MIG, which would be the same approach to that currently taken for the CDCM and EDCM User Manuals. This would enable updates to the user manual to be made without a DCUSA change proposal being required.

6.4.4 The Working Group is seeking responses to the following questions regarding ownership of the model, methodology and user manual:

- *Do you agree that both the HIDAM model and the methodology should be incorporated into DCUSA? (An alternative is that the methodology (Annex A in the legal text) is not incorporated into DCUSA but rather kept outside of DCUSA governance).*
- *Should the methodology be incorporated in the DCUSA as an annex to schedule 16 or as a separate schedule?*

6.5 **Exclusion of Distributed (Embedded) Generation**

6.5.1 All current 500MW models are demand based models which do not take into account distributed generation. The MIG 500MW Commonality sub-group were also tasked with developing a demand model. Consequently, the HIDAM model has not been designed to take into account distributed generation, as it would not be feasible to do so in this type of model.

6.5.2 Some circuits in the existing DNO areas will be feeding distributed generation. Including these circuits will increase the circuit length in the model. A greater circuit length will mean an increase in the cost of that particular voltage level.

- 6.5.3 To reduce the impact of this and to maintain the principle of a demand based model, circuits which are solely used by a distributed generator will be excluded from the HIDAM calculations. There will, however, still be circuits in the model which are feeding generation as well as demand.
- 6.5.4 It was assumed within the Working Group that if a circuit is feeding generation as well as demand then it was likely that that circuit was there before the generator, feeding load only. As part of this consultation, the Working Group is seeking views on whether this is a reasonable assumption.
- 6.5.5 The group recognises that as networks develop there is the likelihood that these circuits that are currently used solely to supply generation will be used to supply load as well. In the future a model that is not solely demand based may need to be considered. The Working Group notes that the inclusion of Distributed Generation is outside of the scope of DCP 133, therefore, a separate CP would be required.
- 6.5.6 As part of this consultation, the Working Group is seeking responses to the following questions with regards to embedded generation:
- *For the purposes of the HIDAM model it is assumed that if a circuit is feeding generation as well as demand then it was likely that that circuit was there before the generator, feeding load only, and based on this assumption it is reasonable that the circuit should be included when calculating circuit lengths. Do you agree that this is a reasonable assumption?*
 - *Do you have any views on how the methodology could be improved to better accommodate embedded generation. If yes, please provide details.*

6.6 Differences in DNO Design Policies

- 6.6.1 The Working Group notes that the different design policies that DNOs have will impact the costs of their network.
- 6.6.2 For example, DNOs use transformers of similar size, however, the choice of forced cooling rating for a transformer (whether it be the name plate, long term emergency or continuous emergency rating, etc...) could affect costs in that distribution area. This is because the forced cooling rating used can affect the

number of transformers that need to be installed to meet expected load and the lifespan of the transformers.

- 6.6.3 The Working Group could specify what forced cooling rating to enter thus achieving consistency in the HIDAM model. However, if the group were to do this then the differences in cost incurred due to different DNO design policies would not be reflected in the HIDAM output. As part of this consultation the Working Group is seeking views on mandating HIDAM input values where differences in design policy could result in differences in the values entered into the HIDAM by DNOs.
- 6.6.4 The Working Group is seeking responses to the following question with regards to differences in DNO design policies:
- *Where there is a difference in DNO design policy which could result in differences in the values entered into the HIDAM by DNOs for similar assets, should the input value for the asset be fixed by the Working Group? For example, it could be specified what forced cooling rating to enter into the model. This would improve consistency across DNOs and make the input values more predictable; however, the differences in cost incurred due to different DNO design policies would not be reflected in the HIDAM output.*

6.7 Number of configurations in HV/LV transformation

- 6.7.1 DNOs have various options with regards to what transformer configurations they install on their networks. For the purpose of the HIDAM, the view is that the balance of assets that a DNO has at present will be broadly representative of what assets are likely to be installed going forward.
- 6.7.2 With regards to the number of configurations of HV/LV transformers in the model, the Working Group has discussed at length how much this should be based on the total existing number of transformers that the DNO has on its network and the number that were commissioned in the last five years.
- 6.7.3 It is argued that the existing spread of HV/LV transformer assets may not necessarily be reflective of the likely installations going forward. Using only those assets installed over the last five years may also not be reflective, for instance,

there may recently have been a drop in the number of new housing estates built leading to a short term drop in the number of assets installed for new business.

- 6.7.4 To promote consistency the DCP 133 Working Group members support introducing a 50/50 split based on installed capacity, rather than quantity. For example, if at present 50% of HV/LV transformation is supplied through 500 kVA transformers but in the last 5 years only 40% of new LV load has been supplied through 500 kVA transformers. Then if this size transformers is to be used in the model a figure 45% should be used. The intention is to reflect recent and potential future network extensions yet capture existing topography of DNO's area.
- 6.7.5 As part of this consultation, the Working Group is seeking views on fixing the proportion of existing spread of HV/LV transformers relative to transformers added to the network in the last five years at 50/50. This would improve consistency across DNOs and make the input values more predictable; however, the differences in cost incurred due to different DNO design policies would not be reflected in the HIDAM output. Note, if the ratio is fixed then a Change Proposal would need to be raised to alter it should a change be desired in the future.
- 6.7.6 The Working Group is seeking responses to the following consultation question in relation to this area:
- *Do you agree that the existing spread of HV/LV transformers relative to transformers added to the network in the last five years should be fixed at 50/50? This would improve consistency across DNOs and make the input values more predictable; however, the input values may be less representative of DNOs forward looking expectations than the otherwise might be the case.*

6.8 Fixing the Proportions of Other HIDAM Inputs

- 6.8.1 The HIDAM methodology and model allow the DNO to adjust other model inputs such that it moves the percentage used in the HIDAM calculations away from the DNO's existing network proportions. One example is the proportion of overhead cable relative to the proportion of underground cable. Another example is the proportion of new circuits where the DNO does not need to excavate the ground to lay the cable (most likely because the site developer has already carried out

the excavation) relative to the proportion of circuits where the DNO needs to carry out the excavation.

- 6.8.2 Fixing the proportions would make the HIDAM input values more predictable; however, it may be the case that existing percentages are not representative of DNOs' expected percentages going forward. For instance, recent planning consent decisions may indicate that the proportion of overhead lines installed going forward will be lower than current proportions.
- 6.8.3 As part of this consultation, the Working Group is seeking views on the following question:
- *Do you agree that proportions for other inputs (for example, the proportion of overhead cables to underground cables) should not be locked down to the existing percentages? If you believe they should be locked down please provide details of what value they should be locked down to.*

6.9 HV Switchgear Unit Cost Data

- 6.9.1 In general, the more switchgear that is installed on a network the greater the network performance will be, as the use of this switchgear will ensure that less customers will be impacted by a network outage. DNOs need to install a certain number of switchgear to meet the statutory obligations set out in distribution network planning standard 'Engineering Recommendation P2/6' (ER P2/6). However, DNOs can and may seek to maximise network performance by installing more switchgear than are required to meet statutory obligations.
- 6.9.2 Table 1754 (Switchgear Unit Cost Data) in the HIDAM allows DNOs to enter the minimum scheme to meet industry requirements. It also allows DNOs to add additional costs associated with the DNO going beyond the minimum standard in order to meet its own design policy standards.
- 6.9.3 As part of this consultation document, the DCP 133 Working Group is seeking views on the approach taken in the methodology to meet the minimum specification for P2/6 compliance and the way of capturing costs to meet average UK performance for customer interruptions per fault. The approach is defined within the proposed DCP 133 legal text (provided as Appendix D) in Annex A - Section 9.3. The approach defined in this section of the legal text is implemented

in HIDAM table 1754.

6.9.4 The Working Group is also seeking views on allowing DNOs to add additional costs to meet their own current design standards, i.e. whether the HIDAM should be modelling the minimum scheme or the DNO practices.

6.9.5 Please provide your views on these points by answering the following questions:

- *Do you agree the approach taken in the methodology to meet the minimum specification for p2/6 compliance and the way of capturing costs to meet average UK performance for customer interruptions per fault?*
- *What are your views on allowing DNOs to add additional costs to meet their own current design standards?*

6.10 **HIDAM Calculated Power Factors**

6.10.1 The CDCM model, which is used to calculate HV and LV tariffs, uses power factors in its calculations. Currently DNOs enter a power factor of 0.95 in their CDCM models.

6.10.2 As part of its calculations the HIDAM model produces power factors for each voltage level. These power factor values are used in the HIDAM to calculate the capacity required at each voltage level.

6.10.3 The Working Group notes that in Schedule 16 of the DCUSA document there are several references to the CDCM using a power factor of 0.95. Therefore, to use the more accurate power factors calculated by the HIDAM model in the CDCM would require schedule 16 to be updated. It is the majority view of the Working Group that such a change is outside of the scope of DCP 133.

6.10.4 A minority of the Working Group members believe that using different power factors to derive asset cost to those used to convert asset costs to charges creates an inconsistency and therefore should be addressed under DCP 133.

6.10.5 The Working Group is seeking views on the following points with regards to the HIDAM calculated power factors:

- *The HIDAM model calculates more accurate power factors than currently used in the CDCM model. Do you believe that these more accurate power factors should be used in the CDCM?*
- *Do you agree that updating the CDCM to include the HIDAM calculated power factors, rather than the assumed 0.95 power factor, is outside the scope of DCP 133?*

6.11 HIDAM Calculated Diversity Factors

- 6.11.1 The diversity allowances used in the CDCM are calculated outside of the CDCM model and are also a "smoothed" 3 year average (as per implemented DCUSA change proposal DCP087 - 'Smoothing Load Characteristics and Peaking').
- 6.11.2 The HIDAM model calculates coincidence factors and diversity allowances based upon network data at different voltage levels and the Working Group believes that these could potentially be used in the CDCM as these will improve consistency between HIDAM and CDCM.
- 6.11.3 Specifically for the HV network, the diversity allowance currently used in the CDCM is a very high-level estimate while the HIDAM calculated diversity allowance is based on a composite coincidence/utilisation factor.
- 6.11.4 The Working Group notes that using the diversity factors calculated by the HIDAM in the CDCM has the potential to have a larger impact on tariffs than the use of the HIDAM calculated asset costs. 6.11.4 As part of this consultation, the Working Group is seeking views on the following question:
- *Do you believe that the diversity allowances calculated in the HIDAM should be used in the CDCM, as opposed to the current situation where diversity allowances are calculated outside the CDCM and are also a "smoothed" 3 year average (as per implemented DCUSA change proposal DCP087 - 'Smoothing Load Characteristics and Peaking').*
 - *Do you agree that updating the CDCM to include the HIDAM calculated diversity factors, is outside the scope of DCP 133?*

6.12 Direct and Indirect Costs

- 6.12.1 The Working Group believes that the asset unit costs in the HIDAM should be direct costs only, with indirect costs not included. The Working Group's position is based on the overall design of the CDCM and EDCM pricing models, where direct costs and indirect costs are treated separately. Attribution of indirect costs to asset values may cause double counting of indirect costs. As part of this consultation, the Working Group is seeking your views on this position.
- 6.12.2 With regards to direct and indirect costs the Working Group is seeking responses to the following consultation question:
- *The Working Group has not included indirect costs in the HIDAM model do you agree with this position?*

7 IMPACT ANALYSIS

- 7.1 DNOs have populated the HIDAM model with full and representative data for their distribution licence areas. For the purpose of the impact analysis the Working Group has entered the output from the HIDAM for each DNO area in to the April 2014 CDCM model to calculate the impact of the HIDAM model on charges. In addition, if notice has been given for a significant change to the input values for 2015/16 (i.e. other than RPI) then an impact assessment has been carried out using the 2015/16 updated asset costs which have been calculated using the exiting 500MW model.
- 7.2 When populating the HIDAM for the purpose of the impact assessment the following rules were applied. The group feels that these are the issues that need to be resolved, however, it should be noted that there are a considerable number of rules that must be followed when populating the HIDAM, as described in the Annex A of the DCP 133 legal text.
- The proportion of existing spread of LV transformers relative to transformers added to the network in the last five years was fixed at 50/50;
 - DNOs were free to enter transformer forced cooling ratings that were consistent with their own design policies;
 - DNOs were free to enter proportions of their choosing for other HIDAM inputs;
 - DNOs were free to enter additional switchgear costs where the DNO's design policy is to exceed the minimum statutory scheme; No amendments were made to the current CDCM power factors, i.e. they have been left at 0.95; and

- The diversity factors have been updated.

7.3 The impact assessment is provided as Appendix F to this consultation.

7.4 In line with the legal advice that the Working Group has received, populated versions of the HIDAM model have not been provided with this consultation document. Please see paragraph 6.3.2 for more detail.

8 PROPOSED LEGAL TEXT

8.1 The DCP 133 legal drafting proposes to amend the text in paragraph 16 and paragraph 21 of DCUSA Schedule 16. It also proposes to add the HIDAM methodology as an annex to DCUSA Schedule 16.

8.2 The proposed legal drafting for DCP 133 is provided as Appendix D.

8.3 As part of this consultation the Working Group is seeking views on the following questions:

- *Do you agree with the assumptions in the HIDAM methodology as set out in the legal text (Appendix D)? If no, please provide alternative proposals?*
- *Do you agree that the methodology should be incorporated into the DCUSA, as opposed to being maintained outside the DCUSA with only the model itself under DCUSA governance?*
- *Should the methodology be incorporated into DCUSA as an annex to Schedule 16 or should it be added as a new schedule?*
- *Do you have any other comments on the legal text?*

9 ASSESSMENT AGAINST THE DCUSA OBJECTIVES

9.1 The Working Group has identified that DCP 133 better facilitates the following DCUSA Objectives.

Charging Objective One – ‘that compliance by each DNO Party with the Charging Methodologies facilitates the discharge by the DNO Party of the obligations imposed on it under the Act and by its Distribution Licence’

9.2 The Common 500 MW Model provides greater consistency between companies in the tariff modelling used to underpin the CDCM charging methodologies, thereby enhancing the transparency and cost reflectivity of charges. This helps facilitate

compliance with the statutory duty on licensees to develop and maintain an efficient, coordinated and economical system of electricity distribution.

Charging Objective Two – ‘that compliance by each DNO Party with the Charging Methodologies facilitates competition in the generation and supply of electricity and will not restrict, distort, or prevent competition in the transmission or distribution of electricity or in participation in the operation of an Interconnector (as defined in the Distribution Licences)’

- 9.3 The Common 500MW Model will provide greater commonality in tariff modelling and will through the CDCM help to facilitate competition in the generation and supply of electricity through allowing greater transparency and consistency in the detailed application of charging methodologies.
- 9.4 The use of the common model will retain and enhance the benefits to competition of existing common charging methodologies.
- 9.5 The Working Group notes that the HIDAM models a demand network and is not forward looking with respect to generation.
- 9.6 The Working Group believes that in the round Charging Objective Two is better facilitated.

Charging Objective Three – ‘that compliance by each DNO Party with the Charging Methodologies results in charges which, so far as is reasonably practicable after taking account of implementation costs, reflect the costs incurred, or reasonably expected to be incurred, by the DNO Party in its Distribution Business’

- 9.7 The Common 500 MW Model will allow greater commonality in tariff modelling to be used in the common charging methodologies and assist in enhancing cost reflectivity of charges. This will help ensure that the relevant CDCM charging methodology, results in charges on the basis of costs incurred, or reasonably expected to be incurred, by the licensee in its Distribution Business.

Charging Objective Four – ‘that, so far as is consistent with paragraphs 13A.6A to 13A.9, the CDCM, so far as is reasonably practicable, properly take account of developments in each DNO Party’s Distribution Business’

- 9.8 The introduction of a greater commonality in tariff modelling has certain mandatory requirement for data however the proposals for governance ensure that, where appropriate, developments in the distribution business in areas such

as network design practices and procurement procedures will be able to be reflected in modification proposals submitted.

- 9.9 The implementation of this change will enable distribution businesses to meet their Licence Condition 13A.clause13A.6A.

General Objective Two – ‘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’

- 9.10 The Common 500 MW Model will provide greater commonality in tariff modelling and will through the CDCM and EDCM help to facilitate competition in the generation and supply of electricity through allowing greater transparency and consistency in the detailed application of charging methodologies.
- 9.11 The use of the common model will retain and enhance the benefits to competition of existing common charging methodologies.
- 9.12 The Working Group notes that the HIDAM models a demand network and is not forward looking with respect to generation.
- 9.13 The Working Group believes that in the round General Objective Two is better facilitated.

General Objective Three – ‘The efficient discharge by the DNO Parties and IDNO Parties of obligations imposed upon them in their Distribution Licences’

- 9.14 The implementation of this change will introduce a common model based upon a single methodology to all DNO parties to enable them efficiently comply with the obligation imposed upon them.

10 IMPLEMENTATION

- 10.1 The Working Group intend to submit DCP 133 to Ofgem for approval during 2014 to allow for first notification in December 2014. The new methodology would then be implemented in April 2016.
- 10.2 The applicable input tables in the CDCM are subject to a 15 month notice period, this enables suitable notice period for customers and Suppliers to allow for the

changes that are required.

10.3 The output from the HIDAM model must therefore be published by DNOs 15 months before it is used in the calculation of DUoS tariffs. Any future updates to the model itself or its inputs would also be subject to this notice period requirement.

10.4 For demonstration purposes, the following timetable provides an overview of the dates associated with an implementation date of November 2014.

Date	Event
November 2014	DCP 133 implementation
December 2014	DNOs publish: <ul style="list-style-type: none"> • April 2015 indicative CDCM and EDCM tariffs based on existing 500MW models • Notice of the HIDAM outputs that will be used in the calculation of April 2016 CDCM and EDCM tariffs
1 April 2015	Tariffs for the 1 April 2015 to 31 March 2016 charging period take effect.
December 2015	DNOs publish: <ul style="list-style-type: none"> • April 2016 indicative CDCM and EDCM tariffs based on HIDAM data (as published the previous December) • Notice of the HIDAM outputs that will be used in the calculation of April 2017 CDCM and EDCM tariffs
1 April 2016	Tariffs for the 1 April 2016 to 31 March 2017 charging period take effect. These are the first CDCM and EDCM tariffs that incorporate the new HIDAM model in the calculations.

11 CONSULTATION

11.1 The Working Group is seeking views on the below questions. The group recognise that some of these questions are technical in nature and not all respondents will be able to provide a view on each and every question; partial responses are welcome. When answering the questions please provide your rationale.

No.	Question
1	<p>Do you understand the intent of the CP?</p> <p><i>"The intent of CP is to introduce a common 500MW network model spreadsheet, which will be referred to as the Hypothetical Incremental Distribution Asset Model (HIDAM), under DCUSA governance which would be used across all DNOs."</i></p>
2	<p>Are you supportive of the principles established by this proposal?</p>
3	<p>Do you agree that the model should be called the 'The Hypothetical Incremental Distribution Asset Model' or would your preference be for it to be called 'The Common 500MW Network Model'?</p>
4	<p>Do you agree that both the HIDAM model and the methodology should be incorporated into DCUSA? (An alternative is that the methodology (Annex A in the legal text) is not incorporated into DCUSA but rather kept outside of DCUSA governance).</p>
5	<p>Should the methodology be incorporated in the DCUSA as an annex to schedule 16 or as a separate schedule?</p>
6	<p>For the purposes of the HIDAM model it is assumed that if a circuit is feeding generation as well as demand then it was likely that that circuit was there before the generator, feeding load only, and based on this assumption it is reasonable that the circuit should be included when calculating circuit lengths. Do you agree that this is a reasonable assumption?</p>
7	<p>Do you have any views on how the methodology could be improved to better accommodate embedded generation. If yes, please provide details.</p>
8	<p>Where there is a difference in DNO design policy which could result in differences in the values entered into the HIDAM by DNOs for similar assets, should the input value for the asset be fixed by the Working Group? For example, it could be specified what forced cooling rating to enter into the model. This would improve consistency across DNOs and make the input values more predictable; however, the differences in cost incurred due to different DNO design policies would not be reflected in the HIDAM output.</p>

9	Do you agree that the existing spread of HV/LV transformers relative to transformers added to the network in the last five years should be fixed at 50/50? This would improve consistency across DNOs and make the input values more predictable; however, the input values may be less representative of DNOs forward looking expectations than the otherwise might be the case.
10	Do you agree that proportions for other inputs (for example, the proportion of overhead cables to underground cables) should not be locked down to the existing percentages by the Working Group and that DNOs should provide a comment against the inputs in the model justifying the adjustment value chosen? If you believe they should be locked down please provide details of what value they should be locked down to.
11	Do you agree with the approach taken in the methodology to meet the minimum specification for p2/6 compliance and the way of capturing costs to meet average UK performance for customer interruptions per fault?
12	What are your views on allowing DNOs to add additional costs to meet their own current design standards?
13	The HIDAM model calculates more accurate power factors than currently used in the CDCM model. Do you believe that these more accurate power factors should be used in the CDCM?
14	Do you agree that updating the CDCM to include the HIDAM calculated power factors, rather than the assumed 0.95 power factor, is outside within the scope of DCP 133?
15	Do you believe that the diversity allowances calculated in the HIDAM should be used in the CDCM, as opposed to the current situation where diversity allowances are calculated outside the CDCM and are also a "smoothed" 3 year average (as per implemented DCUSA change proposal DCP087 - 'Smoothing Load Characteristics and Peaking').
16	Do you agree that updating the CDCM to include the HIDAM calculated diversity factors is outside the scope of DCP 133?
17	The Working Group has not included indirect costs in the HIDAM model do you

	agree with this position?
18	Do you agree with the assumptions and methodology as set out in the legal text (Appendix D)? If no, please provide alternative proposals?
19	Do you agree that the methodology should be incorporated into the DCUSA, as opposed to being maintained outside the DCUSA with only the model itself under DCUSA governance?
20	Should the methodology be incorporated into DCUSA as an annex to Schedule 16 or should it be added as a new schedule?
21	Do you have any other comments on the legal text?
22	Are there any alternative solutions or matters that should be considered?
23	Are there any unintended consequences of this proposal? If yes, please provide details.
24	Do you consider that the proposal better facilitates the DCUSA objectives?
25	Are you supportive of the proposed implementation date of the next release following Authority consent?
26	Please state any other comments or views on the Change Proposal.

11.2 Responses should be submitted by completing and emailing the form attached as Appendix A to DCUSA@electralink.co.uk or by completing the online form available on the following webpage:

<https://www.surveymonkey.com/s/DCP133>

11.3 Responses should be submitted no later than **Friday, 7 March 2014.**

11.4 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.

12 NEXT STEPS

12.1 Following the end of the consultation period the responses will be reviewed by the Working Group. The Working Group will finalise the drafting of the CP and submit

its final report to the Panel. Following Panel approval, the Change Proposal will be issued to all DCUSA Parties for voting and, following the vote, issued to Ofgem for final determination.

12.2 If you have any questions about this paper or the DCUSA Change Process please contact the DCUSA Help Desk by email to DCUSA@electralink.co.uk or telephone 020 7432 3011.

13 APPENDICES

Appendix A – Response Form

Appendix B – DCP 133 Change Proposal Form

Appendix C – Unpopulated HIDAM Model

Appendix D – Proposed Legal Text

Appendix E – HIDAM User Manual

Appendix F – Impact Assessment