

DCUSA DCP 133 Consultation Responses – Collated Comments

Question One	Do you understand the intent of the CP? <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>	Working Group Comments
Working Group General Comments		The Working Group noted that all respondents understood the intent of the CP
SP Distribution/SP Manweb	Yes, we understand the intent.	
British Gas	Yes	
Northern Powergrid	Yes, we are supportive of the a common methodology to create a 500MW model which will allow each DNO to calculate the asset cost at each network level based upon forward looking expectations and removing legacy issues that would not be repeated in a new forward looking network.	
UKPN	Yes	
ENWL	Yes, we understand the intent of the CP.	
SSE Energy Supply	Yes	
Npower	Yes	

WPD	Yes	
SSE Distribution	Yes	
Question Two	Are you supportive of the principles established by this proposal?	Working Group Comments
Working Group General Comments		The working group are supportive of the principles to some extent with the exceptions explained in the individual responses.
SP Distribution/SP Manweb	Yes we are supportive of the principle to establish a common 500MW model.	
British Gas	We support improving the commonality of the hypothetical 500MW model used to derive DUoS charges, however the wide range of outputs derived from the HIDAM across the DNOs suggest to us that this may not yet have been achieved.	The working group note that the range of outputs should be reflective of the topologies and current design standards of the different DNOs.
Northern Powergrid	Yes, we are supportive of having a common methodology that will fairly apportion asset costs over each voltage level and which is representative of each specific licence area and the topology/spread of customers.	
UKPN	Yes	
ENWL	We are supportive of the principles behind the proposal but not supportive of how they have been applied in the model. We consider that the analysis that has been undertaken in understanding the issues has been valuable; however, in the context of the overall CDCM and EDCM process, we do not believe that the proposed level of detail for ongoing population of the model is appropriate. The proposed HIDAM model is too large and	The working group believes they have delivered a solution that meets the needs of the change proposal. The group note that the model guidance suggests that the model should be updated about every 3-5 years with costs updated on an annual basis and consequently do not believe this represents a disproportionate amount of time and effort to

	would require a disproportionate amount of time, effort and resource to maintain compared with the CDCM and EDCM models. The HIDAM model should be reduced in scope and simplified, which should also be reflected in the volume of supporting legal text.	maintain.
SSE Energy Supply	Yes, providing it doesn't produce excessive tariff disturbances.	The Working Group believes that the proposal better meets the charging objectives and therefore any disturbance will be improve charge allocation.
Npower	Yes	
WPD	Yes	
SSE Distribution	Supportive of the principles but have concerns regarding representation of generation dominated networks in the HIDAM model (wind and hydro in Scotland, PV in the South).	The scope of the DCP was to deliver a common 500MW network model standardising what was currently in place and worked on the principle that the representation of generation was out of scope.
Question Three	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'?	Working Group Comments
Working Group General Comments		Most of the respondents prefer the 'The Common 500MW Network Model'
SP Distribution/SP Manweb	Either, no preference.	
British Gas	The Common 500MW Network Model.	
Northern Powergrid	Our preference would be "The Common 500MW Network Model" as it is our opinion that this captures	Northern Powergrid are happy with 'The Common 500MW Network Model'

	what the CP is trying to achieve better than the use of the word "Hypothetical". If given a free choice, the name "Representative 500MW Network Model" would be preferred by us.	
UKPN	Both have their own advantages, but prefer 'The Common 500MW Network Model' which has been known in the industry widely and also indicates clearly the capacity considered in the model.	
ENWL	We agree the model should be called "The Hypothetical Incremental Distribution Asset Model".	ENWL are happy with 'The Common 500MW Network Model'
SSE Energy Supply	'The Common 500MW Network Model' is a better name. The name "'Hypothetical Incremental Distribution Asset Model' sounds too obscure.	
Npower	No Comment	
WPD	WPD would prefer it to be called 'The Common 500MW Network Model'	
SSE Distribution	Preference for The Common 500MW Network Model. This model name is widely understood historically.	
Question Four	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).	Working Group Comments
Working Group General Comments		The respondents are all in agreement that the methodology should be incorporated into the DCUSA
SP Distribution/SP	Yes, the methodology should be incorporated into	

Manweb	DCUSA. This would ensure any updates are correctly/formally agreed and processed.	
British Gas	Both should be incorporated into DCUSA.	
Northern Powergrid	Yes, as having the HIDAM model and methodology under open governance will only serve to increase transparency and allow other interested parties to offer alternative solutions not yet proposed. If not within DCUSA, it is likely that the commonality would be lost over time.	
UKPN	Yes. Both template and methodology incorporated into DCUSA.	
ENWL	Yes we agree that both the model and the methodology should be incorporated into DCUSA to allow open governance. To work properly, the model, methodology and legal text should be in DCUSA.	
SSE Energy Supply	Yes	
Npower	Yes both the HIDAM and the methodology should be incorporated into DCUSA	
WPD	The HIDAM model should be incorporated into DCUSA	
SSE Distribution	Charging Objective 2 is better facilitated with both the model and methodology being incorporated into DCUSA as it provides transparency. However, having the methodology within DCUSA allows for all parties to raise changes.	The working group believe that having the methodology within DCUSA is meant as a positive aspect.
Question Five	Should the methodology be incorporated in the DCUSA as an annex to schedule 16 or as a separate schedule?	Working Group Comments
Working Group General Comments		The majority of the respondents agreed that it should be incorporated as an annex to

		schedule 16.
SP Distribution/SP Manweb	An annex to the Schedule 16.	
British Gas	As an annex to schedule 16.	
Northern Powergrid	It should be incorporated as a separate schedule to ensure that the importance of this discrete piece of methodology is maintained.	
UKPN	Yes as an annex as the methodology in this change is linked to the CDCM included in Schedule 16.	
ENWL	This should be incorporated in the DCUSA as an Annex to Schedule 16 however the size and volume needs to be reduced.	
SSE Energy Supply	No preference.	
Npower	No Comment	
WPD	Should be as an annex to schedule 16	
SSE Distribution	Should be incorporated as an Annex to schedule 16.	
Question Six	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?	Working Group Comments
Working Group General Comments		The working group notes the concerns raised and feel that these should be addressed going forward with future DCPs as the issues become

		more prevalent.
SP Distribution/SP Manweb	Yes, we agree this is a reasonable assumption.	
British Gas	Analysis should be undertaken to demonstrate the impact of this. If the impact is relatively small then this would seem to be reasonable simplifying assumption.	The working group don't believe this is a large enough issue yet to justify the additional workload and could possibly hold up the change process of incorporating the methodology.
Northern Powergrid	No, we do not agree this is a reasonable assumption as there could be a long line to a windfarm (for example) with a large generation capacity and a small load which exists purely to facilitate generation. It is our opinion that this assumption is outdated due to the increasing penetration of new DG.	The working group believe that if the DCP is implemented then the respondent should raise a new Change Proposal to address this specific issue.
UKPN	Yes. It is reasonable to consider this type of circuits in the model because they were built originally to supply load.	
ENWL	We consider that this is a reasonable assumption; however the HIDAM is a hypothetical (long run marginal) forward looking model and we consider that this detailed level of review of historical data should not be required for future updates.	
SSE Energy Supply	We are unable to comment.	
Npower	No Comment	
WPD	This is a reasonable assumption for a traditional demand dominated DNO area. However as networks are rapidly changing to accommodate embedded generation the inputs to the HIDAM may be influenced by these	The working group believe that if the DCP is implemented then the respondent should raise a new Change Proposal to address this specific issue.

	changes. For example if transformers are uprated to accommodate reverse power flow caused by generation then the “Existing Installed Capacity” may be higher and will alter outputs from HIDAM i.e. level of HV/LV capacity and LV circuit length. Many of the network extensions carried out the 5 years have been carried out to accommodate generation, at HV and at HV/LV this is more difficult to account for and could slow outputs from HIDAM.	
SSE Distribution	Agree for a demand dominated networks that the assumption is true. However for a generation dominated network, the circuit was likely to be installed and sized for the generation in the area. We note that adjustments to existing asset quantities (including circuit lengths) where parts of the network are generation dominated are allowed in the methodology. However, there is no mention on how these adjustments should be made.	The working group believe that if the DCP is implemented then the respondent should raise a new Change Proposal to address this specific issue.
Question Seven	Do you have any views on how the methodology could be improved to better accommodate embedded generation. If yes, please provide details.	Working Group Comments
Working Group General Comments		The working group believe that if DCP 133 is implemented all parties should examine the options for future development and raise CPs as appropriate. At this stage the working group believe they have met the scope of the DCP by delivering a Common 500MW Network Model.
SP Distribution/SP Manweb	Given the intermittent and/or unreliable nature of small and medium power stations this should not be included within the HIDAM.	

British Gas	No Comment	
Northern Powergrid	As the model is forward looking, and with the increasing penetration of DG, lines will exist purely to facilitate generation. It would be reasonable to include these lines in a “scaled down” network model. If the network was rebuilt, these lines would also have to be rebuilt and the model should take account of this.	The working group believe that if the DCP is implemented then the respondent should raise a new Change Proposal to address this specific issue.
UKPN	No. We feel it is better at this time to consolidate the existing DNO models as a demand only common model	
ENWL	No, we believe the inclusion of embedded generation to be outside the scope of DCP 133.	
SSE Energy Supply	No.	
Npower	No Comment	
WPD	The methodology would need to be changed to probably include some type of load flow analysis to determine utilisation of existing assets by generation and/or demand. Perhaps a scaling factor could then be produced to adjust inputs to HIDAM.	The working group believe that if DCP 133 is implemented all parties should examine the options for future development and raise CPs as appropriate.
SSE Distribution	No comment.	
Question Eight	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	Working Group Comments

	incurred due to different DNO design policies would not be reflected in the HIDAM output.	
Working Group General Comments		The Working Group had to address the balance between reflecting DNOs operation of the networks and having standardised inputs. The Working Group feel that it is more appropriate for the proposed approach to allow DNOs to use the values used in their operational practice.
SP Distribution/SP Manweb	No the HIDAM should reflect the DNO design policy. For example, the interconnected SP Manweb network is different to other DNO networks and the 500MW should be able to reflect this.	
British Gas	It should be more cost reflective to allow different DNOs to reflect their own design policies in the HIDAM. However we are sceptical about whether the wide range of HIDAM outputs across the DNOs can be explained by different design policies or DNO topography. Furthermore, we are concerned that since HIDAM models will not be published, any misapplication of the HIDAM methodology by a DNO (and resultant impact on CDCM and EDCM tariffs) will not be transparent to the industry and so is unlikely to be corrected.	
Northern Powergrid	No, this should not be fixed by the working group as the aim is to recreate a subset of the DNO's own network. If there were to be parameters fixed that would be not representative of each specific licence area, then the aim of the methodology would have failed.	

UKPN	No. Improving consistency or commonality to the model does not mean to create the same design policy for all DNOs. The values which may be different due to different design policies among DNOs should not be fixed. Values which are able to reflect individual design policies should be applied.	
ENWL	We agree with the principle that DNOs should be able to reflect their own design policies. However these assumptions could remain fixed for a set period of time (say [5] years) to reduce volatility and improve predictability. The model should only be updated on an annual basis for asset costs and possibly diversity. DNOs should be allowed to justify their own inputs and set them for a period of time accordingly.	
SSE Energy Supply	We are unable to comment.	
Npower	We believe that in the interests of predictability the input values should be fixed specified values.	
WPD	No, calculation of cyclic/emergency ratings etc. will depend upon a number of factors which are DNO specific. In the above example load curves, ambient conditions and transformer specification amongst others will influence the performance of transformers. Also running transformers above their nameplate ratings will have an ageing effect on the transformer which DNOs may have a different opinion on.	
SSE Distribution	Yes. DNOs could agree on the input value for similar assets.	
Question Nine	Do you agree that the existing spread of HV/LV	Working Group Comments

	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.	
Working Group General Comments		The working group believe that the majority of the respondents tend to agree in principle with the approach proposed and therefore we would not change the wording. It is suggested that if respondents still have concerns following the implementation of this DCP then a DCP specific to this concern can be raised in the future.
SP Distribution/SP Manweb	No, the inputs should reflect the DNOs expectations.	
British Gas	This appears to be a pragmatic attempt to reflect recent and potential future network extensions yet capture existing topography of DNO's area.	
Northern Powergrid	No, we don't agree it should be fixed at 50/50. DNO's should be allowed to use forward looking input values – input values should not be predictable based upon historical installations, but should be representative of forward looking expectations.	
UKPN	Agree. This split provides a reasonable assumption to both existing and forward looking installation possibilities.	

ENWL	See response to Q8.	
SSE Energy Supply	We are unable to comment.	
Npower	Yes we agree that it should be fixed.	
WPD	<p>In principle yes. However this figure maybe too far skewed towards recent experience and will not reflect the topography and spread of existing customers across a DNO region. For example if the majority of transformers installed in the last 5 years have been large capacity ground mounted units on urban re-development land or to connect embedded generation then this is unlikely to accurately reflect the existing DNO area and the HV/LV transformation costs will be under estimated.</p> <p>Using a bias towards the last 5 years could also add some volatility to HIDAM due to changes in the economic climate. To safeguard against this, moving the bias towards existing installed HV/LV sized transformers should be explored which should reduce possible instability and more accurately reflect the DNO region.</p> <p>A suggestion would be to assume a 40 year installation life for the existing transformer population and compare with what sized transformers have been installed over the past 5 years. Dividing 5/40 would give a 1/8th bias to be applied towards what has been installed over the last 5 years from the existing installation. i.e. in the example given in the consultation document paragraph 6.7.4, 48.75% would be used not 45%. Over a period of time as</p>	

	the population of existing transformers change then this will also influence input into HIDAM.	
SSE Distribution	Yes	
Question Ten	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.	Working Group Comments
Working Group General Comments		The majority of the respondents agree that it should not be locked down, and if there are still concerns then they should be addressed through future DCPs.
SP Distribution/SP Manweb	No, we do not believe the proportions should be locked down.	
British Gas	It does not seem appropriate to allow networks to adjust the values as they see fit, especially considering the models will not be published (and so the comment will not be seen). A more appropriate approach would be to lock down the existing percentages to begin with and then if any DNO believes they have compelling grounds for changing the locked down values they could submit a separate change proposal to that effect. This would ensure that any move from the locked down values will be subject to industry scrutiny.	The working group states that this is a forward looking model and should be allowed to reflect the networks appropriately as they develop.
Northern Powergrid	Other inputs should not be locked down as this would	

	not be representative of a forward looking network model – comments should be provided, but these should remain confidential within each DNO's HIDAM model.	
UKPN	Agree they should not be locked down. Because the existing percentage may not reflect forward looking installation projects properly.	
ENWL	See response to Q8.	
SSE Energy Supply	We are unable to comment.	
Npower	We Believe a methodology similar to that proposed for LV/HV transformation	
WPD	If the HIDAM is to reflect a modern extension to assets then the proportion of new overhead line construction to underground cable installation are likely to be different to the existing proportions. Relying on a percentage split of new network extensions could dramatically alter circuit costs. It is suggested that the ability to alter the proportion of overhead lines to underground cables should be limited. If this is not done then at HV network level a conflict with Section 9.3.2 could occur. For example a DNO could decide to install a 100% underground HV network but yet have overhead circuit types for calculating HV switchgear cost.	The working group believe that if the DCP is implemented then the respondent should raise a new Change Proposal to address this specific issue.
SSE Distribution	Yes	
Question Eleven	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	Working Group Comments

	fault?	
Working Group General Comments		The Working Group believes that the method of establishing the costs correctly allocates additional cost to users that benefit from the equipment.
SP Distribution/SP Manweb	We agree with the approach to meet the minimum specification for p2/6.	
British Gas	The 500MW model should only meet the minimum specification for p2/6 compliance. There should be no costs included to meet average UK performance for customer interruptions per fault. To do so risks customers paying twice for actions taken to reduce customer interruptions – once through the change in allocation of costs driven by the inclusion of these costs and again through any incentive amounts recovered through allowed revenue.	The working group states that the Common 500MW Network Model is only used within the methodology to apportion revenue to different network levels and therefore there is not an issue of double charging customers. The additional cost of assets is allocated to the users that benefit from that equipment.
Northern Powergrid	Yes, sectionalising the load into 1MW demand that can be isolated is reasonable and this approach also ensures that underground and overhead faults are incorporated into the methodology.	
UKPN	Agree. P2/6 is the minimum specification we should comply with when determining the quantities of HV switchgear within the model. Meeting average performance reflects the current approach which the regulator applies to evaluate the network performance of each DNO.	
ENWL	See response to Q8.	

SSE Energy Supply	We are unable to comment.	
Npower	No Comment	
WPD	It appears to be a structured and reasonable approach to capture HV switchgear costs in a common way across DNOs to enable them to achieve a new “average performing circuit”.	
SSE Distribution	Yes	
Question Twelve	What are your views on allowing DNOs to add additional costs to meet their own current design standards?	Working Group Comments
Working Group General Comments		The working group believe that allocating additional costs to their correct network level allocates that cost to users that are either causal or beneficiaries and so is an appropriate approach. This is generally supported by respondents.
SP Distribution/SP Manweb	DNO should be able to reflect their design standards and include additional costs as appropriate.	
British Gas	The 500MW model should only meet the minimum specification for p2/6 compliance.	
Northern Powergrid	Additional costs to meet current design standards are appropriate if current design standards are approximately equal to the minimum standards. For example, it would not be fair to have customers paying for additional security through the HIDAM as these costs should be recovered via the excluded services.	

UKPN	No strong views to against it, although it may enlarge gap on asset costs between DNOs.	
ENWL	See response to Q8.	
SSE Energy Supply	We are unable to comment.	
Npower	We believe the HIDAM should be modelling the minimum scheme	
WPD	This could be considered to be over what is required to achieve a “minimum cost network”.	
SSE Distribution	Should be allowed, as DNOs have varying design requirements.	
Question Thirteen	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?	Working Group Comments
Working Group General Comments		<p>The Working Group acknowledges that more accurate power factors could be used in the CDCM. However this is out of scope of this DCP and should be reviewed subject to this DCP being implemented.</p> <p>We agree with the respondents that additional changes are required to the legal text to clarify the use of power factor in paragraphs 78 and 79 of schedule 16.</p> <p>Following this response we would make the following changes to the legal text in paragraph 78 and 79, change “power factor in network model” to “standard design power factor” and after 0.95 in paragraph 79 add “for</p>

		use in the calculation of charges".
SP Distribution/SP Manweb	An impact assessment would need to be undertaken to understand the impact of using more accurate power factors.	
British Gas	<p>There needs to be consistency between the power factor used in determining the asset quantities (and therefore cost) in the HIDAM and the power factor used in the CDCM model to convert these costs to tariffs. This principle is applied currently in the 500MW models and the CDCM model, both of which stipulate the same power factor of 0.95, and the principle needs to be maintained.</p> <p>Paragraph 78 of Schedule 16 (see below, our emphasis added) makes clear that the calculation of the p/kVA/day for modelled network assets needs to apply the same power factor used in the network model:</p> <p>78. For each demand user type, and for each network level, the unit cost to be attributed to capacity charges or fixed charges in respect of that network level is</p> $[\text{p/kVA/day from network model assets}] = 100 * [\text{standing charge factor}] * [\text{network level } \text{£/kW/year}] * [\text{user loss factor}] / [\text{network level loss factor}] * (1 - [\text{contribution proportion}]) / [\text{days in year}] / (1 + [\text{diversity allowance}]) * [\text{power factor in network model}]$ <p>Paragraph 79 of schedule 16 states that the power factor</p>	

	<p>in network model parameter is set to 0.95, but this is set out explicitly to ensure consistency with paragraph 21 which states that the 500MW model's design assumes a power factor of 0.95.</p> <p>The current version of the legal text being consulted upon removes the requirement set out at paragraph 21 in relation to the power factor assumed in the 500MW model's design, but maintains the requirement set out at paragraph 79 so that tariffs are still calculated using a 0.95 power factor. This creates an inconsistency between the derivation of the asset costs and the derivation of the CDCM tariffs, with an adverse impact on the cost reflectivity of the final tariffs.</p>	
Northern Powergrid	Yes they should be used in the CDCM due to the increased accuracy which would improve this input to the CDCM which is currently an industry fixed input value and not based on recent historical data which would be more accurate. However, would need a better understanding of the impacts of this and interaction with other tariff elements.	
UKPN	No. It is believe that the assumed single power factor applied in CDCM is able to reflect general power factors in distribution networks and is enough for CDCM model calculation.	
ENWL	We feel this to be over complicated and would require gathering a significant quantity of data and performing calculations that deliver a spurious level of accuracy. We further question the need for calculating power factors at	

	<p>different voltage levels.</p> <p>We believe one power factor should be used although we agree that the value could be reviewed at intervals of, say, 5 years, on a similar basis to other network design assumptions (see Q8).</p>	
SSE Energy Supply	We are unable to comment.	
Npower	No	
WPD	This is out of scope of DCP133.	
SSE Distribution	Yes	
Question Fourteen	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?	Working Group Comments
Working Group General Comments		The majority of the respondents agree that updating the power factor used in calculations within the CDCM methodology is outside the scope of the DCP. However we note the comment raised by one respondent and the working groups response is noted in question 13.
SP Distribution/SP Manweb	Yes, however this could be treated as a consequential change.	
British Gas	Paragraph 21 and 79 are intrinsically linked together. One mandates the use of a 0.95 power factor for the design of the 500MW model and the other, necessarily, mandates the use of a 0.95 power factor to convert the resultant	Please see general comment for question 13.

	network costs into a tariff. One cannot be changed without the other. Therefore if it is deemed that the power factor within the 500MW model is within scope then it must follow that the power factor in the CDCM model is within scope.	
Northern Powergrid	Yes this is outside the scope of DCP 133.	
UKPN	Yes. Because the potential modification to CDCM model is outside of the scope of DCP 133 where the intent is to develop a common HIDAM spreadsheet.	
ENWL	Yes we agree this is out of scope of DCP 133, and also believe it to be inappropriate.	
SSE Energy Supply	We are unable to comment.	
Npower	We believe updating the power factors to the HIDAM calculated values is out of scope of DCP133	
WPD	Yes	
SSE Distribution	This is outside of the scope of DCP 133 and it is recommended that another DCP is raised for this purpose.	
Question Fifteen	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’).	Working Group Comments
Working Group General Comments		The Working Group notes the responses and acknowledges the differing viewpoints and if

		DCP 133 is implemented further CPs could be raised to address the issue.
SP Distribution/SP Manweb	This seems reasonable (not sure the reference DCP 087 is correct?).	
British Gas	<p>We do not believe the diversity allowances calculated in the HIDAM for the HV level should be used in the CDCM.</p> <p>The diversity allowances should still represent the extent to which the sum of the maximum load across all substations below would exceed the corresponding sum for substations above. However, this is clearly not the case for the HV diversity allowances where the HIDAM calculates diversity using firm capacity data rather than maximum demand data (as is used for the other voltages and required by the current CDCM). We do not consider that firm capacities are a suitable replacement for maximum demands for the purposes of calculating diversity allowances. If maximum demand data is unavailable for the purposes of the HV diversity allowance then the existing estimates in the CDCM should remain in place.</p> <p>We are also concerned about the wide range of values derived from the HIDAM method for calculating HV diversity. The calculated allowances range from 18% - 99% across DNOs in the HIDAM compared to the existing range of 15% - 37%. We believe that this change in the HV diversity calculation is the key driver for the</p>	

	<p>significant changes seen in CDCM tariffs.</p> <p>We would also note that Diversity allowances are not currently a smoothed 3 year average as suggested by the question above, but there is a requirement to provide 15 months notice of any change.</p>	
Northern Powergrid	Yes, as this will improve consistency between CDCM and the HIDAM which would be desirable.	
UKPN	No, they are separated models and it is believed that the diversity allowances calculation in CDCM is sufficient for its own purpose.	
ENWL	<p>We believe the same diversity factors should be used in both the HIDAM and the CDCM and should be reflected as such in both models. The diversity factors should continue to be calculated in the current manner outside the HIDAM model and used as an input into the HIDAM model for consistency.</p> <p>We note that at present DNOs provide 15 months notice to change Diversity Factors not a “smoothed” 3 year average.</p>	
SSE Energy Supply	We are unable to comment.	
Npower	No	
WPD	The model is based on different assumptions which should flow through to diversity factors.	
SSE Distribution	Yes. In addition to introducing consistency between HIDAM and CDCM, the HV diversity allowance calculated in the HIDAM (based on transformer installed capacities)	

	is a better estimate.	
Question Sixteen	Do you agree that updating the CDCM to include the HIDAM calculated diversity factors is outside the scope of DCP 133?	Working Group Comments
Working Group General Comments		The working group believe that the majority of the respondents agree that this outside of the scope of DCP 133.
SP Distribution/SP Manweb	Yes, however this again could also be treated as a consequential change.	
British Gas	<p>The diversity allowances should still represent the extent to which the sum of the maximum load across all substations below would exceed the corresponding sum for substations above.</p> <p>HIDAM diversity calculations for GSP, 132kV and EHV voltage levels maintain this principle and therefore whether they are calculated within the HIDAM spreadsheet or outside of it should not have a material impact on the calculated values.</p> <p>However the HIDAM diversity calculation for the HV level does not maintain the principle that diversity allowances should represent the extent to which the sum of the maximum load across all substations below would exceed the corresponding sum for substations above since it uses firm capacity data rather than maximum demand data. Such a change is therefore outside the scope of DCP 133.</p>	

Northern Powergrid	Yes, this is outside the scope of DCP 133.	
UKPN	Yes. Because the potential modification to CDCM model is outside of the scope of DCP 133 where the intent is to develop a common HIDAM spreadsheet.	
ENWL	We agree this is outside the scope of DCP 133.	
SSE Energy Supply	Yes.	
Npower	We believe updating the diversity factors to the HIDAM calculated values is out of scope of DCP133	
WPD	No for the reason specified above.	The working group notes the comments from this and the previous question.
SSE Distribution	Yes	
Question Seventeen	The Working Group has not included indirect costs in the HIDAM model do you agree with this position?	Working Group Comments
Working Group General Comments		The working group note that all respondents who commented agreed with the conclusions of the working group.
SP Distribution/SP Manweb	Yes, we agree not to include indirect costs.	
British Gas	We understand that indirect costs are recovered elsewhere in the CDCM and therefore should not be included in the HIDAM.	
Northern Powergrid	Yes, we agree with this position as in the CDCM and EDCM direct costs and indirect costs are treated separately – including indirect costs in the HIDAM may result in double counting. Only direct costs associated with each specific asset should be included.	

UKPN	Yes agree. It is believed that it is consistent with what has been done for most of DNOs when updating the existing 500MW models each year.	
ENWL	We agree that Indirect costs should not be included in the HIDAM model. The CDCM and EDCM models both include indirect costs within the calculation of prices. Including this element within the HIDAM and within the CDCM/EDCM models means this element will be recovered twice and customers could potentially be over-charged. This is particularly an issue for EDCM customers due to the way the EDCM revenue target is derived.	
SSE Energy Supply	We are unable to comment.	
Npower	No Comment	
WPD	Indirect costs would be too difficult to include under the HIDAM model which is an asset cost model. Indirect costs are included in the CDCM separately.	
SSE Distribution	Yes – to avoid potential double counting in the CDCM as indirect costs are recovered as a separate item.	
Question Eighteen	Do you agree with the assumptions and methodology as set out in the legal text (Appendix D)? If no, please provide alternative proposals?	Working Group Comments
Working Group General Comments		The working group note that the respondents agree with the assumptions and methodology as set out in the legal text.
SP Distribution/SP Manweb	We have no comments on the legal text.	
British Gas	The HIDAM diversity calculation for the HV level does not	

	maintain the principle that diversity allowances should represent the extent to which the sum of the maximum load across all substations below would exceed the corresponding sum for substations above since it uses firm capacity data rather than maximum demand data. We do not consider that firm capacities are a suitable replacement for maximum demands for the purposes of calculating diversity allowances. If maximum demand data is unavailable for the purposes of the HV diversity allowance then the existing estimates in the CDCM should remain in place.	
Northern Powergrid	Yes, we agree with the assumptions and methodology in the legal text.	
UKPN	Yes, but if the name of 'The 500MW Network Model' is kept, all relative wordings need to be modified.	The Working Group notes the comments and agrees to update the legal text as appropriate and ensure the legal text is consistent.
ENWL	We believe the assumptions and methodology set out in the legal text to be lengthy and over complicated. We believe that the model needs to be simplified and this will be reflected in the legal text.	The working group reviewed the response and noted the comments received. The working group believes they have delivered a solution that meets the needs of the change proposal
SSE Energy Supply	We are unable to comment.	
Npower	No Comment	
WPD	Yes	
SSE Distribution	Yes	
Question Nineteen	Do you agree that the methodology should be incorporated into the DCUSA, as opposed to being maintained outside the DCUSA with only the model	Working Group Comments

	itself under DCUSA governance?	
Working Group General Comments		The working group notes that the respondents are all in agreement that the methodology should be incorporated into the DCUSA.
SP Distribution/SP Manweb	The methodology and model should be incorporated into DCUSA.	
British Gas	Both should be under DCUSA and our preference is for the models to be published.	
Northern Powergrid	Yes, we agree that having the HIDAM model and methodology under open governance will only serve to increase transparency and allow other interested parties to offer alternative solutions not yet proposed. If not within DCUSA, it is likely that the commonality would be lost over time.	
UKPN	Yes, under DCUSA governance.	
ENWL	We agree that the methodology should be incorporated into the DCUSA along with the model itself as this would provide a clear framework to work from for any future changes.	
SSE Energy Supply	Yes.	
Npower	No Comment	
WPD	The methodology should be incorporated into DCUSA	
SSE Distribution	See question 4	
Question Twenty	Should the methodology be incorporated into DCUSA as an annex to Schedule 16 or should it be added as a new schedule?	Working Group Comments

Working Group General Comments		The majority of the respondents agreed that it should be incorporated as an annex to schedule 16.
SP Distribution/SP Manweb	A repeat of question 5?	
British Gas	As an annex to schedule 16	
Northern Powergrid	It should be incorporated as a new schedule to ensure that the importance of this discrete piece of methodology is maintained.	
UKPN	Yes as an annex as the methodology in this change is linked to the CDCM included in Schedule 16.	
ENWL	The methodology should be incorporated as an annex to schedule 16.	
SSE Energy Supply	We are unable to comment.	
Npower	No Comment	
WPD	Should be as an annex to schedule 16	
SSE Distribution	See question 5	
Question Twenty One	Do you have any other comments on the legal text?	Working Group Comments
Working Group General Comments		The Working Group notes that the following changes will be required to the legal text. Schedule 16 paragraph 165 and 169 will need to be amended from "design power factor of the network model" to "standard design power factor". Schedule 17 and 18 paragraph 15.11 change "power factor in the 500MW network model (0.95)" to "standard design

		power factor in CDCM". The working group also agrees to update the legal text in Clause 3 and 16 of Schedule 16 as suggested by UKPN.
SP Distribution/SP Manweb	No further comments at this stage.	
British Gas	<p>The legal text removes the stipulated 0.95 power factor from paragraph 20, however fails to remove it from paragraph 79. Paragraph 79 should also be removed to maintain consistency between the power factor used in the HIDAM and the power factor applied to convert the HIDAM costs to a tariff. We are concerned that this modification may not be capable of approval unless this inconsistency is corrected.</p> <p>Paragraphs 164,165, 168, 169 may also need to be amended.</p> <p>We also note the reference to a stipulated 0.95 power factor in paragraph 15.11 of schedule 17, which will need to be reviewed.</p>	See response to question 13.
Northern Powergrid	Not at this time	
UKPN	We believe the legal text needs to include the version number and release date of the model. However this is best captured in Clause 3 of Schedule 16 and hence Clause 16 of Schedule 16 does not need to refer to the model as issued etc. We suggest that the text proposed to be inserted into Clause 16 of Schedule 16 is changed	The working group agrees to update the legal text in Clause 3 and 16 of Schedule 16 as suggested by UKPN.

	<p>to say “utilises the relevant Hypothetical Incremental Distribution Asset Model (“HIDAM”) version as issued by the Panel prior to giving the relevant notice period for changes to the” and that the text in Clause 3 of Schedule 16 is revised accordingly to state the relevant model versions.</p> <p>It is also unclear what 25B is trying to achieve but it seems to be about the process for undertaking the work rather than the actual methodology?”</p>	
ENWL	The legal text is onerous on all parties, over complicated and in fact is larger than that for the CDCM and EDCM models. It needs to be substantially reduced to be workable.	The working group reviewed the response and noted the comments. The working group believes they have delivered a solution that meets the needs of the change proposal.
SSE Energy Supply	No.	
Npower	No Comment	
WPD	No	
SSE Distribution	No Comments	
Question Twenty Two	Are there any alternative solutions or matters that should be considered?	Working Group Comments
Working Group General Comments		The working group notes that the majority of respondents did not have any alternative solutions to be considered however it was noted that there were concerns raised by three respondents. The working group believes they have delivered a solution that meets the needs of the change proposal. If DCP 133 is

		implemented the concerns raised within the response can be raised in a future DCP.
SP Distribution/SP Manweb	None at this stage.	
British Gas	No Comment	
Northern Powergrid	Not at this time	
UKPN	No	
ENWL	We would ask the working group to consider the current 500MW models used by the DNOs and look at the existing complexity and review the HIDAM in this context.	The working group reviewed the response and noted the comments. The working group believes they have delivered a solution that meets the needs of the change proposal.
SSE Energy Supply	No.	
Npower	No Comment	
WPD	The HIDAM methodology appears to assume all existing 132kV and EHV transformation is supplied by radial circuits. Calculating an existing circuit length per existing installed firm capacity and applying this factor to the new modelled installed transformer capacity would be acceptable if all new circuits were also radial. However if a network is interconnected or of a ring type construction then the above assumption could underestimate circuit lengths for 132kV or EHV networks. By applying an enhanced rating to the new transformers will mean fewer transformers in the model, but the area they serve will be the same. If the design policy of the DNO is to install a ring or interconnected network then circuit	The working group reviewed the response and noted the comments. The working group believes they have delivered a solution that meets the needs of the change proposal. If DCP 133 is implemented the concerns raised within the response can be raised in a future DCP.

	<p>length may not reduce in line with transformer capacity and could be underestimated in the model.</p> <p>If there are less 132kV/EHV substations due to the use of enhanced ratings and utilisation then it is likely there will be an increase in EHV circuit length to serve downstream EHV/HV substations.</p> <p>Consideration should be given to adjusting existing circuit length per MVA of existing installed capacity to reflect the use of enhanced ratings of transformers and proposed utilisation.</p>	
SSE Distribution	Yes, the matter regarding representation of generation dominated networks in the HIDAM model (Wind and hydro in Scotland; PV in the South).	The working group reviewed the response and noted the comments. The working group believes they have delivered a solution that meets the needs of the change proposal. If DCP 133 is implemented the concerns raised within the response can be raised in a future DCP.
The Working Group		
Question Twenty Three	Are there any unintended consequences of this proposal? If yes, please provide details.	Working Group Comments
Working Group General Comments		The Working Group notes that the majority of the respondents did not see any unintended consequences of the DCP being implemented. For the respondents that did, they have been addressed within the individual comments below.

SP Distribution/SP Manweb	No.	
British Gas	<p>As stated in the consultation, 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. However whilst the HIDAM may be a common spreadsheet, we are not convinced that the HIDAM methodology has been applied in a common manner across DNOs, since the variations in a number of the outputs being entered into the CDCM have actually increased significantly rather than reduced.</p> <p>We note that DNOs felt that they could not share their HIDAM input data due to concerns around competition law, but it is essential that an exercise is undertaken to ensure a common application. If networks cannot share their data then an external audit should be considered.</p> <p>At the moment, the HIDAM does not appear to improve the commonality in the calculation of DUoS charges. Examples include:</p> <p>Current range for 500 MW asset values at HV: £87m (£95m - £182m) HIDAM range for 500 MW asset values at HV: £184m (£68m - £252m)</p> <p>Current range for 500 MW asset values at LV: £95m</p>	<p>The working group believes that the solution if implemented, introduces greater commonality and the methodology will be contained within the DCUSA governance. Consequently the working group feels that this will be an appropriate starting point and further areas for future improvement will now be able to be addressed via the DCUSA Change Process.</p>

	<p>(£40m - £135m) HIDAM range for 500 MW asset values at LV: £135m (£58m - £194m)</p> <p>Current range for 500 MW asset values at EHV: £111m (£12m - £124m) HIDAM range for 500 MW asset values at EHV: £168m (£15m - £184m)</p> <p>Current range for Diversity Allowance at HV: 22% (15% - 37%) HIDAM range for Diversity Allowance at HV: 81% (18% - 99%)</p> <p>These large changes in CDCM inputs are having a significant impact on the resultant tariffs, both in the CDCM and in the EDCM and we are very concerned that the change proposal, despite the reasonable endeavours of the working group, will add significant complexity to the process for producing tariffs and significant volatility to the resultant tariffs whilst not achieving the increase in commonality that was desired at the beginning of the process.</p>	
Northern Powergrid	<p>Depending on the starting position (i.e. each DNO's current 500 MW model), the introduction of a common methodology may cause some initial disturbance in tariffs. However, this should settle after the first year assuming when models are reviewed they follow a broadly similar trend to the existing HIDAM (as would be</p>	

	expected year on year) so there should not be significant volatility after year 1.	
UKPN	No	
ENWL	We believe the unintended consequences would be extra time and resources required to update the HIDAM model and the time and resource that would be required to maintain open governance of the model due to its lack of transparency.	The working group believes they have delivered a solution that meets the needs of the change proposal. The group note that the model guidance suggests that the model should be updated about every 3-5 years with costs updated on an annual basis and consequently do not believe this represents a disproportionate amount of time and effort to maintain.
SSE Energy Supply	No.	
Npower	No Comment	
WPD	No	
SSE Distribution	There are significant price impacts for end customers, in both CDCM and EDCM. These are highlighted in Impact Assessment Commentary provided to the working group.	The working group believes that the solution if implemented, introduces greater commonality and the methodology will be contained within the DCUSA governance. Consequently the working group feels that this will be an appropriate starting point and further areas for future improvement will now be able to be addressed via the DCUSA Change Process.
Question Twenty Four	Do you consider that the proposal better facilitates the DCUSA objectives?	Working Group Comments
Working Group General Comments		The Working Group notes that the concerns raised regarding transparency, complexity and

		<p>commonality are valid points to be raised. However, it is noted that when bringing in a complex model which demonstrates how the DNOs had calculated these values, which was previously outside the governance of DCUSA, will be a significant step into improving the transparency for all Parties concerned. In doing this, the objectives of DCUSA XX will be better facilitated, and will also give Parties the opportunity to raise changes to the methodology in the future.</p>
SP Distribution/SP Manweb	We agree with the working group assessment in relation to the development of a common model.	
British Gas	<p>We are unable to conclude that the change proposal better facilitates the DCUSA objectives. Whilst the change strives to improve commonality and transparency we are not convinced these aims are achieved and the change does add considerable complexity to the tariff methodologies.</p> <ul style="list-style-type: none"> • Despite a common HIDAM spreadsheet many of the inputs remain open to DNO judgement which results in a lack of commonality many areas. • The outputs of the HIDAM vary significantly more across DNOs than the existing 500MW model outputs suggesting that a common application has not been achieved. 	

	<ul style="list-style-type: none"> • The populated HIDAM models will not be published and so transparency is not improved in this area. • The proposal as it stands introduces an inconsistency between the power factor assumptions in the HIDAM and the CDCM. 	
Northern Powergrid	<p>Charging Objective One – Yes –a common methodology will result in consistency and also transparency of process. Whether or not it is more cost reflective would depend on the accuracy of the current 500 MW model.</p> <p>Charging Objective Two – Yes – Commonality and transparency will assist in the facilitation of competition.</p> <p>Charging Objective Three – Yes –as the costs will be reflective of the real costs that would be incurred. To ensure cost reflectivity continues, it would be reasonable to assume the model would be reviewed yearly with updated asset costs as DNO specific asset costs would be expected to change year on year.</p> <p>Charging Objective Four - Yes – a review of costs and also the model on a yearly basis will ensure that changes in design practices costs are captured in the model.</p> <p>General Objective Two – Yes – Commonality and transparency will assist in the facilitation of competition.</p> <p>General Objective Three – Yes – a common model used</p>	

	by every DNO based upon a common methodology will enable compliance.	
UKPN	Yes. We would agree with the working groups view of how this change better facilitates both Charging Objectives 1, 2, 3 and 4 along with General Objectives 2 and 3 as a result of the introduction of a common 500MW model.	
ENWL	<p>We believe the CP to be neutral on Charging Objective one.</p> <p>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)’.</p> <p>We believe that this proposal doesn’t better meet charging objective two because the model significantly increases the complexity of the charging methodology and reduces the transparency of the calculation. This makes it harder for Suppliers and customers to predict and acts as a barrier for new Suppliers entering the market.</p> <p>Charging Objective Three – ‘that compliance by each DNO Party with the Charging Methodologies results in charges which, so far as is</p>	

	<p>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'</p> <p>We believe that this proposal is neutral against charging objective three. Although there is an argument that the asset values are more cost reflective because the model is more detailed, this is countered by the level of accuracy which is spurious in the context of a hypothetical model.</p> <p>We agree that the CP better meets charging proposal 4.</p>	
SSE Energy Supply	Yes. We agree with the reasons given in the Change Proposal document.	
Npower	No Comment	
WPD	The DCP133 facilitates the objective of better competition as all DNOs will be costing their 500 MW models under a common method.	
SSE Distribution	Agree to a certain extent as it provides commonality, but the complexity of the model has increased. Also, the HIDAM model does not represent generation dominated networks (Wind and hydro in Scotland; PV in the South).	
Question Twenty Five	Are you supportive of the proposed implementation date of the next DCUSA release following Authority consent?	Working Group Comments
Working Group General Comments		The Working Group notes that the majority of respondents agree with the proposed

		implementation date.
SP Distribution/SP Manweb	We agree with the proposed implementation date.	
British Gas	Yes – provided that DNOs provide a minimum 15 months notice of any change to any of the CDCM inputs affected by this new methodology.	
Northern Powergrid	Yes	
UKPN	We believe the implementation date has to be 1 April and to give proper notice it should be 1 April 2016 – a pre-release of the model having been published	
ENWL	No, the proposed model requires a complete review before implementation can be considered.	The majority of the Working Group believes the model brings forward many benefits to the Charging methodology and any perceived weaknesses can be addressed through the DCUSA Change Process.
SSE Energy Supply	Yes, providing it doesn't produce excessive tariff disturbances.	
Npower	No Comment	
WPD	Yes	
SSE Distribution	Yes, but it should be noted that the Common 500MW Model is subject to 15 months notice of change.	
Question Twenty Six	Please state any other comments or views on the Change Proposal.	Working Group Comments
Working Group General Comments		The Working Group feel that they have delivered what is required under the scope of the DCP.
SP Distribution/SP	None.	

Manweb		
British Gas	No Comment	
Northern Powergrid	No further comments	
UKPN	No Comment	
ENWL	In summary, we are supportive of the proposal to develop a common methodology but not supportive of the way it has been applied. The large amount of legal text makes the management of the methodology through open governance extremely difficult and compliance with the methodology will be difficult to check for DNOs and the Authority. Implementing the HIDAM model in its present format would be also be onerous for DNOs to update on an annual basis and increase charging volatility for Suppliers and end customers. Consequently we believe that the HIDAM model is not fit for purpose in its present format and we request that the working group reviews the model in the context of these comments.	The majority of the Working Group believes the model brings forward many benefits to the Charging methodology and any perceived weaknesses can be addressed through the DCUSA Change Process.
SSE Energy Supply	It's unfortunate that this change may conflict with the Government's policy to stabilise domestic energy prices. The 0.2 p/kWh increase in domestic unit rates in the Scottish Hydro area isn't desirable.	The working group believes that the solution if implemented, introduces greater commonality and the methodology will be contained within the DCUSA governance. Consequently the working group feels that this will be an appropriate starting point and further areas for future improvement will now be able to be addressed via the DCUSA Change Process.
Npower	No Comment	

WPD	N/A	
SSE Distribution	No Comment	