

**DCUSA DCP 222 Consultation Three responses – collated comments**

<b>Company</b>	<b>Confidential/ Anonymous</b>	<b>1. Do you understand the intent of DCP 222?</b>	<b>WG Comments</b>
Electricity North West	Non-confidential	Yes.	Noted
Northern Powergrid on behalf of Northern Powergrid (Yorkshire) Plc and Northern Powergrid (Northeast) Ltd	Non-confidential	Yes	Noted
Power Data Associates Ltd	Non-confidential	No. The report indicates that NG have not made it clear to the working group what the problem is that is seeking to be resolved.	The Working Group noted that the CP was raised as a result of an issue flagged by National Grid in regards to generators potentially being asked to operate outside of the 0.95 power factor limit to assist with this system wide voltage control issue. It was noted that National Grid have made clear the issue that is seeking to be resolved by the CP.
SmartestEnergy	Non-confidential	The intent of DCP 222 is to prevent generators being charged for operating outside of the 0.95 power factor, when DNOs request that they do so in order to bring an overall benefit to the system.	Noted

Southern Electric Power Distribution plc and Scottish Hydro Electric Power Distribution plc	Non-confidential	Yes	Noted
SP Distribution / SP Manweb	Non-confidential	Yes we understand the intent of DCP 222	Noted
SSE Energy Supply	Non-confidential	Yes	Noted
The Electricity Network Company	Non-confidential	Yes	Noted
UK Power Networks	Non-confidential	Yes	Noted
Western Power Distribution	Non-confidential	Yes	Noted
Supplier 1	Anonymous	Yes	Noted

Company	Confidential/ Anonymous	2. Do you agree with the principles of DCP 222?	WG Comments
Electricity North West	Non-confidential	Yes.	Noted

Northern Powergrid on behalf of Northern Powergrid (Yorkshire) Plc and Northern Powergrid (Northeast) Ltd	Non-confidential	<p>Yes, we are supportive of the principle that generators should not be charged for excess reactive power when they are only operating under conditions that would result in those charges being billed at the explicit request of the Distribution Network Operator (DNO).</p> <p>However, it has not been demonstrated that DNOs currently require CDCM generators to operate outside 0.95 power factor on a sufficiently high number of occasions (if at all) that would warrant this change. We therefore feel that it would be more prudent to monitor the situation over the next few years.</p>	Noted
Power Data Associates Ltd	Non-confidential	No – The report indicates that NG have not made it clear to the working group what the problem is that is seeking to be resolved.	It was noted that National Grid have made clear the issue that is seeking to be resolved by the CP.
SmartestEnergy	Non-confidential	Yes	Noted
Southern Electric Power Distribution plc and Scottish Hydro Electric Power Distribution plc	Non-confidential	<p>No, for the reasons outlined below and stated in our responses to earlier consultations:</p> <ul style="list-style-type: none"> <li>- “The CP affects LV and HV connected generation only, which is normally relatively small scale. This level of generation is not typically required to truly assist with issues affecting the national transmission system.</li> <li>- We do not currently experience any significant issues with CDCM generator reactive power charges. The scale of the issue this CP seeks to address has not been demonstrated effectively and we do not believe an adequate case has been made to justify any changes to the CDCM at this time. Alternative solutions out with the CDCM should be considered i.e. contractual agreements between NG and the DG customer.</li> </ul>	The Working Group noted that the respondent does not agree with Option 1 and Option 3.

		- Option 1 seeks to introduce arrangements which would add complexity and administration issues. There would inevitably be significant site-specific technical and contractual reviews required around implementation of tariffs/billing of charges to resolve a transmission system matter.”	
SP Distribution / SP Manweb	Non-confidential	Yes with agree with the principles of DCP 222	Noted
SSE Energy Supply	Non-confidential	Yes	Noted
The Electricity Network Company	Non-confidential	Yes, broadly speaking we agree with the basic principles of the change proposal but we have reservations regarding the approach(es) being explored.	Noted
UK Power Networks	Non-confidential	Yes	Noted
Western Power Distribution	Non-confidential	Yes	Noted
Supplier 1	Anonymous	Whilst we agree that it is unfair to charge generators for operating outside of the 0.95 PF limit when requested to do so for the benefit of the wider system, we do not believe that removing the reactive charge for the whole year to be a proportionate resolution of the defect described.	Noted

Company	Confidential/ Anonymous	3. Are there any unintended consequences of this proposal?	WG Comments
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Electricity North West	Non-confidential	None that we are currently aware of.	Noted
Northern Powergrid on behalf of Northern Powergrid (Yorkshire) Plc and Northern Powergrid (Northeast) Ltd	Non-confidential	<p>Within our licence areas we currently have no requirements for CDCM generation connectees to operate outside of the parameters stated in the standard connection agreement.</p> <p>If the industry moves to a point where one of the options to be discussed at CDCM level, is the creation of a trilateral agreement, then this would require consideration of governance arrangements and constraints and also operational arrangements.</p> <p>Presumably any trilateral agreement would involve National Grid (NG) having a contractual arrangement with the DNO connectees, who are not connected to the transmission network and therefore currently have no relationship with NG. Generally our experience is that industry parties are not supportive of trilateral agreements.</p> <p>In addition as a consequence of Option 1 creating new tariffs, there will also be new Line Loss Factor Classes (LLFCs) created and it may be necessary to migrate a generation customer between tariffs year-on-year dependent on the best view of the DNO and what the reactive power requirements will be 15 months hence.</p>	<p>It was noted that the respondent is concerned about the connection agreement between National Grid and DNOs.</p> <p>The group considered what a bilateral agreement between National Grid and DNOs will be based on and noted that the CP was raised to address this issue in the first place.</p>
Power Data Associates Ltd	Non-confidential	<p>The analysis has been done on the current charges and the current behaviour of generators. Remove the charges and the power factor may change significantly. The report does not address what analysis has been done on generator behaviour if the excess reactive charges were to be removed.</p> <p>The report references that failure to maintain the correct reactive level would be considered as a breach of the connection agreement. But in a previous DCP on excess capacity charges the Distributors argued that</p>	<p>The group noted that the respondent is against Option 3 which would result in the removal of the charge for excess reactive power for all generators in the CDCM and would bring them in line with generators connected at EHV.</p>

		<p>they could not enforce the customer to keep within the agreed capacity under the connection agreement without demonstrating a financial impact on themselves. Is this scenario different? If so please explain how, and how the a generator exceeding the reactive power clause in the connection agreement will be monitored or enforced.</p> <p>The BSC arrangements were changed, at ongoing cost to many generation customers to separately meter the reactive consumption when the site is importing or exporting active power. Are these changes now redundant? Were the changes not actually required? If they are no longer required for DUoS charging will a BSC change be raised to remove the unnecessary requirements?</p>	
SmartestEnergy	Non-confidential	Theoretically, a generator would have less of an incentive to operate at its agreed power factor; as the charge for not doing so would be removed.	Noted
Southern Electric Power Distribution plc and Scottish Hydro Electric Power Distribution plc	Non-confidential	<p>This proposal only deals with Export and not the potentially larger concerns of Import; the authorised MIC and exceeded Import Capacity. If a generator operates outside the 0.95 power factor limit, there are concerns that this may have consequential impacts on the Import (increased VARs) and the customer may be penalised through the Exceeded Capacity charge.</p> <p>Also, the formalisation of charging arrangements involving low power factor could be seen as wider acceptance of low power factor in other respects and which is generally contrary to efficient network operation.</p> <p>With regard to Option 1, it may be difficult given the 15 month notice constraint to forecast which generators will be required to operate outside the 0.95 power factor limit. There is the potential that customers will therefore have to move tariffs within the charging year.</p>	<p>The Working Group noted that the respondent is against Option 3 and highlighted that with Option 1 it may be difficult to forecast the level of operating outside 0.95 power factor limit. It was noted that operating outside 0.95 will result in a small quantity of reactive power charges and that this will be of a small value.</p> <p>It was highlighted that there is a potential that customers will therefore have to move tariffs within the charging year.</p>

SP Distribution / SP Manweb	Non-confidential	The reactive units impact on the capacity charge for the associated Import MPAN. There is no capacity charge on the Export MPANS. In order not to penalise the Import MPAN with a potential high capacity charge due to the reactive from the Export MPAN, then the Import tariff would need to ignore the reactive. The DURABILL application already deals with this issue if needed. We currently bill the excess Import capacity.	It was noted that the respondent is against Option 3 which would result in the removal of the charge for excess reactive power for all generators in the CDCM and would bring them in line with generators connected at EHV.
SSE Energy Supply	Non-confidential	No	Noted
The Electricity Network Company	Non-confidential	<p>We believe that the implementation of DCP 222 may have unintended consequences that have not been addressed by the consultations for this change.</p> <p>One consequence of this change is that generators may, where requested to operate outside the normal power factor by DNOs, exceed their Maximum Export Capacity (MEC). The kVA export is determined, in part, by the reactive power component. Where a customer has a poor power factor this will have an adverse impact to increase the exported kVA. This may mean that the generator will be required to increase their MEC and pay more for reserving this export capacity or they may be faced with excess capacity charges. We do not believe that this issue has been addressed by the working group up to this point but believe that it may be counter to the intention of the change proposal if the generator faces higher capacity charges as a result of being asked to operate outside of the normal power factor window by the DNO.</p> <p>A further consequence that we do not believe has been considered by the working group is the socialisation of the costs that will not be recovered by charging excess reactive power for generation customers. Whilst it has been confirmed that for the CDCM these costs will be put</p>	It was noted that the respondent is against Option 3.

		<p>back in to the CDCM revenue pot there is no confirmation as to how these costs will subsequently be allocated. Reactive power charges are deemed to reflect the reasonable costs incurred in operating the distribution system. We do not believe that the change proposal has reasonably considered where the revenues that will not be recovered from the excess reactive power charges will be reallocated to. If the DNO requires a generation customer to operate outside of the normal power factor window then it must be demonstrated that another group of customers will benefit from this.</p> <p>Until such time as it has been thoroughly demonstrated that a set of customers will benefit from generators operating in this way we do not believe that it is reasonable for all the costs that are reassigned to be smeared across the generality of customers.</p>	
UK Power Networks	Non-confidential	The purpose of reactive power charges is to encourage sites to operate at or near unity power factor. If this is achieved then the site receives no excess charges and typically network costs are minimised. If excess charges are removed the change could result in a generator producing excess reactive power and causing additional problems to the operation of the network.	Noted
Western Power Distribution	Non-confidential	There are no unintended consequences for Option 1 but if option 3 were to be applied then there will be less reason for generators to control their power factors. This could have adverse effects on the network.	Noted
Supplier 1	Anonymous	Removing the financial incentive for generators to remain within a 0.95 PF potentially leads to increased reactive power flows on the network and thereby increase DNO costs. We also have concerns around how	The Working Group noted that the respondent is against Option 3 which would result in the removal of the charge for excess reactive power for all generators in the CDCM and would bring



		capacity utilisation would be calculated in instances where the DNO has requested that the generator operates at a PF below 0.95.	them in line with generators connected at EHV.
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Company	Confidential/ Anonymous	4. For each option (1 & 3) which DCUSA General Objectives does the CP better facilitate? Please provide supporting comments.	WG Comments
Electricity North West	Non-confidential	<p>For Option 1:</p> <p>We believe that DCUSA General Objective 1 is better facilitated by DCP 222 as it will enable DNOs to manage system voltage control by requesting that a generator operate outside a power factor limit for certain periods (without the generator being subject to Reactive Power charges), potentially resulting in more efficient operation of the distribution network.</p> <p>For Option 3:</p> <p>As above we believe that DCUSA General Objective 1 is better facilitated by DCP 222, but we believe this benefit is partly undermined by the removal of all Reactive Power charges which weakens economic incentives for generators to operate in a manner which facilitates the efficient operation of distribution networks.</p>	Noted
Northern Powergrid on behalf of Northern Powergrid (Yorkshire) Plc and	Non-confidential	<p>We believe Option 1 introduces some significant complexity in that it would create additional tariffs and associated LLFCs and the monitoring of year-on-year tariff changes.</p> <p>Both options would remove the reactive power charges from generators and bring them more in line with EDCM customers who have no reactive</p>	Noted

Northern Powergrid (Northeast) Ltd		<p>charges as this is taken into account in the loadflow element of the methodology.</p> <p>General Objective One – The development, maintenance and operation by the DNO Parties and IDNO Parties of efficient, co-ordinated, and economical Distribution Networks.</p> <p>Both options will ensure generators are not financially penalised or discouraged from operating outside a 0.95 power factor when the DNO requires them to.</p> <p>General Objective Three – The efficient discharge by the DNO Parties and IDNO Parties of obligations imposed upon them in their Distribution Licences.</p> <p>A common model used by every DNO based upon a common methodology will enable compliance with distribution licences, but Option 1 could result in inefficient/disproportionate costs being incurred to manage a small number of customers and will add an additional level of complexity to the CDCM, therefore does not better meet this objective.</p>	
Power Data Associates Ltd	Non-confidential	Without a clear understanding of the problem that is seeking to be solved, it is not clear whether the solution meets the objectives.	It was noted that National Grid have made clear the issue that is seeking to be resolved by the CP.
SmartestEnergy	Non-confidential	<p>Option 1: Better facilitates DCUSA general objectives 1.</p> <p>Option 3: Better facilitates DCUSA general objectives 1,3 and 4.</p>	Noted

Southern Electric Power Distribution plc and Scottish Hydro Electric Power Distribution plc	Non-confidential	<b>Option 1 &amp; 3</b> – We would argue both options are contrary to efficient charging arrangements (for reasons specified previously) and therefore do not believe the DCUSA General Objectives are better facilitated.	Noted
SP Distribution / SP Manweb	Non-confidential	We agree with the working group that DCUSA General Objectives 1 and 3 are better facilitated for each option.	Noted
SSE Energy Supply	Non-confidential	We believe Option 1 and 3 better facilitates all DCUSA General Objectives	Noted
The Electricity Network Company	Non-confidential	<p>We cannot be convinced that, in their current form, either of the proposals can better facilitate any of the DCUSA General Objectives. It could be argued that the 1<sup>st</sup> DCUSA General Objective (development and maintenance of an efficient distribution system) is better facilitated by options 1 &amp; 3 as it affords the DNOs flexibility in the way that they manage their distribution system. However, the introduction of new tariffs or alteration to existing tariffs may cause some uncertainty with customers and lead to the customer, and therefore the distribution system, being operated inefficiently.</p> <p>We believe that the 2<sup>nd</sup> DCUSA General Objective is directly damaged by adopting option 1. Generators would be unable to determine through any action of their own whether they are being charged excess reactive</p>	Noted

		<p>power as this would be through a decision made by the distributor. Therefore it appears unduly discriminatory to some generators and may have an adverse effect on competition within generation of electricity.</p> <p>We would refer to the comments above with regards to the 3<sup>rd</sup> General Objective as DNOs are under licence conditions (4.6) to adopt charging methodologies that facilitate competition in the generation of electricity.</p> <p>We believe that DCUSA General Objectives 4 and 5 are unaffected by this change proposal</p>	
UK Power Networks	Non-confidential	We do not believe that any general objectives are better facilitated as a result of this change (either option 1 or 3).	Noted
Western Power Distribution	Non-confidential	<p>1.The development, maintenance and operation by each of the DNO Parties and IDNO Parties of an efficient, co-ordinated, and economical Distribution System.</p> <p>Option 1 better facilitates general objective 1 because it helps with the control of reactive power.</p> <p>Option 3 worse facilitates general objective 1 because it does not with the control of reactive power.</p>	Noted
Supplier1	Anonymous	We do not believe either of the options can be shown to better facilitate any of the DCUSA General Objectives than the current baseline	Noted
			Some members of the Working Group believe that the DCUSA General Objective 1 facilitates Option 1, however some of the Working Group members feel that the

			DCUSA General Objectives do not best facilitate the proposed change.
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Company	Confidential/ Anonymous	5. For each option (1 & 3) which DCUSA Charging Objectives does the CP better facilitate? Please provide supporting comments.	WG Comments
Electricity North West	Non-confidential	<p>For Option 1:</p> <p>We believe the DCUSA charging objectives 1 and 3 are better facilitated by DCP 222.</p> <p>For Option 3:</p> <p>We believe the DCUSA charging objective 1 is better facilitated by DCP 222. Option 3 would weaken the cost reflectivity of the CDCM model due to the removal of all Reactive Power charges.</p>	Noted
Northern Powergrid on behalf of Northern Powergrid (Yorkshire) Plc and Northern Powergrid (Northeast) Ltd	Non-confidential	<p>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.</p> <p>A common methodology will result in consistency and also transparency of process. However Option 1 may not be as transparent if year-on-year tariff changed are required.</p>	Noted
Power Data Associates Ltd	Non-confidential	Without a clear understanding of the problem that is seeking to be solved, it is not clear whether the solution meets the objectives.	Noted

SmartestEnergy	Non-confidential	Option1: Better facilitates DCUSA charging objectives 3 Option3: Better facilitates DCUSA charging objectives 1, 3	Noted
Southern Electric Power Distribution plc and Scottish Hydro Electric Power Distribution plc	Non-confidential	<b>Options 1 &amp; 3</b> – We would argue both options are contrary to efficient charging arrangements (for reasons specified previously) and therefore do not believe the DCUSA Charging Objectives are better facilitated.	Noted
SP Distribution / SP Manweb	Non-confidential	We agree with the working group that DCUSA Charging Objective 1 is better facilitated for each option.	Noted
SSE Energy Supply	Non-confidential	We believe Option 1 and 3 better facilitates DCUSA Charging Objective 1.	Noted
The Electricity Network Company	Non-confidential	In the current form we believe that, for the reasons we have stated in the second and third paragraphs of our response to question 4, the 1 <sup>st</sup> and 2 <sup>nd</sup> DCUSA Charging Objectives will be adversely impacted by option 1.  We believe that the impact on the 3 <sup>rd</sup> Charging Objective is negative for both solutions but particularly option 3. Currently the costs for excess reactive power are charged on the basis that it reflects costs which the distribution business incurs in managing the system. However, by the managing the distribution system more efficiently and allowing generators to operate at a power factor below 0.95 some of the costs in managing the system will not be incurred. Although it is correct that these costs should then not be charged to the generator it does not	Noted

		<p>appear to be cost reflective to socialise the recovery of these costs across the whole network.</p> <p>We do not believe that Charging Objectives 4 and 5 are impacted by either solution</p>	
UK Power Networks	Non-confidential	We do not believe that any charging objectives are better facilitated as a result of this change (either option 1 or 3).	Noted
Western Power Distribution	Non-confidential	<p>3. 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</p> <p>Option 1 better facilitates charging objective 3 because it better reflects the costs of the network.</p>	Noted
Supplier 1	Anonymous	We do not believe either of the options can be shown to better facilitate any of the DCUSA Charging Objectives than the current baseline.	Noted
			<p>The Working Group noted that the consultation responses show diverse responses as to whether the Charging Objectives are better facilitated by the CP. It was highlighted that there is a difference of opinion within the Working Group.</p>

Company	Confidential/ Anonymous	6. Is your preference for Options 1or 3? (The Working Group has at this time discounted Option 2). Please provide reasons.	WG Comments
Electricity North West	Non-confidential	Our preference is for Option 1, Option 3 removes the Reactive Power charges entirely which would weaken the cost reflectivity of the model, and could influence generators to behave in a manner which would be against the efficient running of the distribution network.	Noted
Northern Powergrid on behalf of Northern Powergrid (Yorkshire) Plc and Northern Powergrid (Northeast) Ltd	Non-confidential	Our preference would be for Option 3 as it would be simpler to implement and bring CDCM generators more in line with EDCM generators.	Noted
Power Data Associates Ltd	Non-confidential	<p>It could be argued that option 3 makes EDCM &amp; CDCM align – which is probably currently an inconsistent approach and should be rectified irrespective of this DCP.</p> <p>However, option 3 results in generator customers gaining a benefit by removal of reactive charges which the import customers do not. In the extreme, the import customer, on the same physical connection, would be liable to reactive charges but the export customer is not. It is not clear why such a charging approach correctly/fairly reflects the costs of using a distribution network.</p> <p>Has the workgroup considered removal of all excess reactive power charges for HV connected customers, import and export? The impact of</p>	The Working Group noted the suggested Option for removal of all excess reactive power charges for HV connected customers, import and export and agreed that there is no need to consult on a further option on the CP



		<p>poor power factor on HV sites is substantially less than LV connected customers.</p> <p>The indication of the problem that NG are encountering is the power factor at the Distributor/NG boundary has improved, and they would actually like to see a poorer power factor. In which case moving the industry towards a 0.9 (rather than 0.95) power factor may be a fair and equitable approach. Although without NG being explicit about the problem it is impossible to progress.</p>	
SmartestEnergy	Non-confidential	Option 3. The difficulties surrounding option 1 were clearly set out following the original consultation (inability to input tariffs with time sensitivities and socialisation of under-recovered revenues). Option 3 addresses the issues.	Noted
Southern Electric Power Distribution plc and Scottish Hydro Electric Power Distribution plc	Non-confidential	We do not support either of Options 1 or 3.	Noted
SP Distribution / SP Manweb	Non-confidential	Option 1 as this allows for any generators that have been asked by the DNO to operate outside a 0.95 PF not to receive excess reactive charges.	Noted
SSE Energy Supply	Non-confidential	We support either option but have a preference for Option 1.	Noted

The Electricity Network Company	Non-confidential	At this stage we cannot provide a preference but option 3 has less impact on the relevant objectives.	Noted
UK Power Networks	Non-confidential	Option 1 will continue to provide a signal to generators to operate at or near unity.	Noted
Western Power Distribution	Non-confidential	Our preference is for Option 1 because as mentioned in the answer to question 3 if option 3 were to be applied then there will be less reason for generators to control their power factors. This could have adverse effects on the network.	Noted
Supplier 1	Anonymous	Whilst we do not support either option, if any were to be taken forward we consider option 3 (removal of reactive charges from all generators) to be the least detrimental, due to the simplicity of implementation (reduced admin) and the removal of the option to 'game' between tariffs as the removal of reactive power charges would apply to all.	Noted

Company	Confidential/ Anonymous	7. Do you believe there are any implementation issues with either option 1 or 3?	WG Comments
Electricity North West	Non-confidential	Option 1 would require new LLFCs to be set-up. This would require some advanced notice to ensure this could be done in line with MDD timetables.	Noted
Northern Powergrid on behalf of Northern Powergrid (Yorkshire)	Non-confidential	Option 1 creates an additional level of complexity in the CDCM by creating new tariffs. There will also be new LLFCs created and it may be necessary to migrate a generation customer between LLFCs year-on-year dependent on the best view of the DNO and what the reactive power requirements will be 15 months hence as we now publish tariffs with 15 months' notice.	Noted

Plc and Northern Powergrid (Northeast) Ltd			
Power Data Associates Ltd	Non-confidential	On the face of it removing charges is simple implementation in option 3. Is that going to lead to a consequential change in the BSC to 'undo' the excessive and costly additional metering costs which were only implemented to facilitate DUoS billing?	Noted
SmartestEnergy	Non-confidential	No	Noted
Southern Electric Power Distribution plc and Scottish Hydro Electric Power Distribution plc	Non-confidential	Option 1 would burden distributors with an additional level of complexity. It could potentially open up considerable scope for misapplication of tariffs, erroneous claims for tariff changes, withdrawal of legitimate charges and other areas of dispute.	Noted
SP Distribution / SP Manweb	Non-confidential	None from a billing perspective.	Noted
SSE Energy Supply	Non-confidential	No	Noted

The Electricity Network Company	Non-confidential	We do not foresee any issues as long as the change to charging is communicated effectively with generators.	Noted
UK Power Networks	Non-confidential	Option 1 could result in year on year changes to customers charging arrangements. These changes could cause confusion to both Suppliers and Customers potentially increasing both risks and costs.	Noted
Western Power Distribution	Non-confidential	None	Noted
Supplier 1	Anonymous	Option 1 would require additional records to be kept relating to sites requested to act at low PF to ensure the appropriate tariff were applied to each site for each year.	Noted

Company	Confidential/Anonymous	8. Which option do you believe is more reflective of the costs incurred by a DNO of allowing a generator to operate outside the 0.95 power factor?	WG Comments
Electricity North West	Non-confidential	Option 1.	Noted
Northern Powergrid on behalf of Northern Powergrid (Yorkshire) Plc and Northern	Non-confidential	It is difficult to say which option is more cost reflective as the values recovered could be classed as insignificant, therefore it may be more appropriate to recover these costs through other elements of the charge.	Noted

Powergrid (Northeast) Ltd			
Power Data Associates Ltd	Non-confidential	It is not clear why the DCP is indicating to allow only generators to operate outside 0.95 power factor. It is discriminatory to all import customers who are not able to operate at a lower power factor without incurring excess reactive power charges.	The Working Group noted that customers are able to connect if they are able to operate outside 0.95 power factor and that this is not discriminatory
SmartestEnergy	Non-confidential	Whilst option 1 is probably more reflective of costs incurred by the DNO, option 3 is the better option owing to its ease of use and the fact that it will help DNOs lower their costs through the wider system benefits it brings.	Noted
Southern Electric Power Distribution plc and Scottish Hydro Electric Power Distribution plc	Non-confidential	We don't support either option; but Option 1 might be the more cost reflective of the two. Primarily as the principle of charging excess reactive power will remain for those generators not asked to operate outside the 0.95 power factor thereby the costs imposed on the DNO would continue to be reflected in the CDCM.	Noted
SP Distribution / SP Manweb	Non-confidential	Option 1 - Excess reactive charges are calculated in the CDCM to reflect the cost imposed by the DNO of poor power factors.	Noted
SSE Energy Supply	Non-confidential	Option1	Noted

The Electricity Network Company	Non-confidential	We believe Option 1 is more cost reflective. However, until we can ascertain how the socialised costs are going to be recovered we cannot be sure that this is cost reflective.	Noted
UK Power Networks	Non-confidential	The purpose of allowing a generator to operate in excess of the power factor threshold is typically to resolve system operation issues at transmission level and avoiding the costs of resolving these issues by application of different approaches. Therefore it is possible that neither option is more reflective of the costs incurred by the DNO.	Noted
Western Power Distribution	Non-confidential	Option 1 is more cost reflective.	Noted
Supplier 1	Anonymous	We do not believe either option to be more cost reflective than the current baseline.	Noted

Company	Confidential/ Anonymous	9. Does the excess reactive power charge for generators provide an incentive for generators to run more efficiently?	WG Comments
Electricity North West	Non-confidential	We believe the reactive power charges provide an economic incentive for generators to run in a way that enables the distribution network to which they are connected to operate more efficiently; this is the justification for having reactive power charges in the CDCM.	The respondent highlighted that reactive power charges were put in place for a reason and that they allow the distribution network to operate more efficiently.
Northern Powergrid on behalf of Northern Powergrid (Yorkshire) Plc and	Non-confidential	The revenue recovered across all DNO areas is very small in comparison to the total revenue recovered. Either the excess reactive power charge does not provide any real signal to generators or alternatively DNOs are managing those customers who do operate outside 0.95 power factor via other means than UoS charges.	Noted

Northern Powergrid (Northeast) Ltd			
Power Data Associates Ltd	Non-confidential	That probably depends on the form of generation equipment.	Noted
SmartestEnergy	Non-confidential	Yes	Noted
Southern Electric Power Distribution plc and Scottish Hydro Electric Power Distribution plc	Non-confidential	Although the costs/revenues associated with excess reactive aren't significant (relative to the total CDCM revenue) we believe that the charge does incentivise generators to run more efficiently.	Noted
SP Distribution / SP Manweb	Non-confidential	- Excess reactive charges are calculated in the CDCM to reflect the cost imposed by the DNO of poor power factors.	Noted
SSE Energy Supply	Non-confidential	Yes	Noted
The Electricity	Non-confidential	The excess reactive power charge incentivises generators to operate in certain way. By having a reactive power charge we believe that generators are incentivised to operate in a way that delivers maximum	Noted

Network Company		power to the distribution system. In the sense of their primary purpose of generating power and exporting this to the distribution system then yes, we believe that the excess reactive power charge does provide an incentive for generators to operate more efficiently. However when viewed holistically we believe that the excess reactive power charge may constrain generators from operating in a way most beneficial for the distribution system and its users.	
UK Power Networks	Non-confidential	The purpose of the excess reactive power charge is to encourage the generator to run more efficiently which would have a positive impact on the operation of the network.	Noted
Western Power Distribution	Non-confidential	Yes	Noted
Supplier 1	Anonymous	Yes we believe it does	Noted

Company	Confidential/Anonymous	10. Are there any alternative solutions or matters that should be considered?	WG Comments
Electricity North West	Non-confidential	<p>Given the low materiality of reactive power charges for CDCM customers we would be satisfied with Option 1. However, a potential alternative solution that might be worth consideration is given below:</p> <p>Where generators are requested to operate outside a power limit for the benefit of National Grid, National Grid could compensate generators directly for any DNO reactive power charges incurred by the generator.</p>	Noted



		<p>This would ensure all benefits and costs are sustained by National Grid, and so the costs of generators operating outside reactive power limits could be properly evaluated against other alternative actions that National Grid may be able to undertake. This would result in the optimal economic solution to issues on the transmission network.</p> <p>As there would be no impact on charges on the DNO's network this would maintain the full cost reflectivity of the current CDCM charges without compromise.</p> <p>In regards to other matters to consider: the removal of Reactive Power charges from the CDCM would result in the CDCM and EDCM being inconsistent. Although the EDCM does not feature separate Reactive Power charges, the associated costs are accounted for in the EDCM methodology via the load flow calculations.</p>	<p>The Working Group noted that another option would be for National Grid to incur the costs for generators.</p>
Northern Powergrid on behalf of Northern Powergrid (Yorkshire) Plc and Northern Powergrid (Northeast) Ltd	Non-confidential	None that we are aware of at this stage.	Noted

Power Data Associates Ltd	Non-confidential	Without a clear understanding of the problem that is seeking to be solved, it is not clear whether the solution meets the objectives. See answer to Q6 which also considers import customers	Noted
SmartestEnergy	Non-confidential	n/a	Noted
Southern Electric Power Distribution plc and Scottish Hydro Electric Power Distribution plc	Non-confidential	<p>In our experience, reactive power issues affecting chargeable capacity are of greater concern to generators with regard to their MIC, metered at the same connection point as their MEC.</p> <p>Chargeable capacity issues can also significantly affect excess import capacity charges for EDCM generation customers which may be truly assisting the transmission system.</p> <p>It would therefore be of benefit to consider a solution that takes into account the potential impacts on Capacity Charges.</p>	Noted
SP Distribution / SP Manweb	Non-confidential	None at this time.	Noted
SSE Energy Supply	Non-confidential	No	Noted
The Electricity Network Company	Non-confidential	n/a	Noted
UK Power Networks	Non-confidential	Having actively participated in the working group we are not aware of any further solutions at this time that can be applied as general 'tariff	Noted

		applications'. We would support the application of a targeted approach where 'free VARhs' could be applied to generators in areas where there were specific system operation issues that needed resolutions. Using the 'free VARh' approach generators are able to operate within an extended power factor range applicable to their generation output. This would be applied to address specific issues that arise.	
Western Power Distribution	Non-confidential	None	Noted
Supplier 1	Anonymous	where a generator is required to operate outside of the 0.95 PF the cost of reactive power charges could be reimbursed through bilateral commercial agreements between the generator and network operator requesting the action.	Noted

Company	Confidential/ Anonymous	11. Are you supportive of the proposed implementation date of 1 April 2018?	WG Comments
Electricity North West	Non-confidential	Yes.	Noted
Northern Powergrid on behalf of Northern Powergrid (Yorkshire) Plc and Northern	Non-confidential	Yes this is the earliest date which this change could be implemented.	Noted

Powergrid (Northeast) Ltd			
Power Data Associates Ltd	Non- confidential	Not without clarity of the reason for the change and consideration of all options	Noted
SmartestEner gy	Non- confidential	Yes	Noted
Southern Electric Power Distribution plc and Scottish Hydro Electric Power Distribution plc	Non- confidential	No as we do not support the CP on the basis of the information presented at this time.	Noted
SP Distribution / SP Manweb	Non- confidential	If the change is approved we would be supportive of the implementation date.	Noted
SSE Energy Supply	Non- confidential	Yes	Noted
The Electricity Network Company	Non- confidential	Subject to the concerns highlight earlier in this response being addressed in adequate time we would be supportive of this implementation date.	Noted

UK Power Networks	Non-confidential	If a change were to be approved then we would agree that 1 April 2018 would be the appropriate date.	Noted
Western Power Distribution	Non-confidential	Yes	Noted
Supplier 1	Anonymous	No	Noted

Company	Confidential/Anonymous	12. Please state any other comments or views on the Change Proposal.	WG Comments
Electricity North West	Non-confidential	None.	Noted
Northern Powergrid on behalf of Northern Powergrid (Yorkshire) Plc and Northern Powergrid (Northeast) Ltd	Non-confidential	<p>We do not believe that there is currently a requirement for this change to be progressed as there is no pressing need, or current request, for generators to operate outside 0.95 power factor; specifically at voltages of 11kV or below. This should be monitored and if this becomes an issue at 11kV or below then there should be a change proposal raised and progressed at that time.</p> <p>If Option 1 were implemented it does not seem right that customers would receive the benefit for the full year, if it is not required by the DNO. There would be the option for a customer to “game” the system and operate outside a 0.95 power factor even at times they were not explicitly required to do so and they would benefit financially from this action, whilst potentially causing more network management issues for the Network Operator than this change seeks to resolve.</p>	The Working Group considered whether there is a benefit to operating less efficiently and noted that the reactive power charges provide an economic incentive for generators to run in a way that enables the distribution network to which they are connected to operate more efficiently; this is the justification for having reactive power charges in the CDCM.

Power Data Associates Ltd	Non-confidential	<p>Based on the statement in the change proposal there would appear to be a cross transfer of monies from the Distribution users to the Transmission users. If the transmission system requires a different level of reactive demand on the transmission network then that should be made clear and reflected in the charges of all distribution users, not just a subset who are being required by NG to operate at a different power factor. On the above information if NG wish to influence the operating power factor of certain generators then they need to reimburse them for the additional costs (DUoS) they incur. That ensures the charges are fair to all users (DUoS users) and the costs fall on those that require a service (NGT).</p> <p>Para 8.1 was only asking for responses from DNOs? No reason was stated for limiting the type of respondents. The email and response document does not include the same restriction.</p>	Noted
SmartestEnergy	Non-confidential	N/A	Noted
Southern Electric Power Distribution plc and Scottish Hydro Electric Power Distribution plc	Non-confidential	N/A	Noted
SP Distribution / SP Manweb	Non-confidential	We do not believe that at this time there is currently a requirement for this change proposal.	Noted

SSE Energy Supply	Non-confidential	N/C	Noted
The Electricity Network Company	Non-confidential	<p>We have some general concerns that this change proposal may be addressing issues which are outside of the scope of the DCUSA. We have highlighted the below</p> <p><b>Standard Licence Condition 12 states:</b></p> <p><i>“12.1 The licensee must, on receiving a request from any person (“the requester”) asking it to do so, offer to enter into an agreement for Use of System under which it will:</i></p> <p><i>(a) accept into the licensee’s Distribution System, at any Entry Point and in any quantity that was specified by the requester in the request, electricity that is provided by or on behalf of the requester; and</i></p> <p><i>(b) distribute that quantity of electricity (subject to any distribution losses) to such Exit Point on the licensee’s Distribution System and to any person as the requester may specify”.</i></p> <p>The Licence Condition here is about the distributor meeting the needs of the customer; it is not about meeting the needs of the distributor. We retain concerns that the circumstances described in the change proposal are outside of the scope of SLC 12. Use of system charges are by “agreement” with the supplier. The generator does not contract for use of system with the distributor unless, potentially, they register under CVA arrangements.</p> <p><b>Standard Licence Condition 13 states:</b></p> <p><i>“13.3 The Relevant Objectives in relation to the Charging Methodology are:</i></p>	<p>The Working Group noted that the issue on SLC 12 on the distributor meeting the needs of the customer is not a material issue to the proposed change.</p>

		<p><i>(a) that compliance with the methodology facilitates the discharge by the licensee of the obligations imposed on it under the Act and by this licence;</i></p> <p><i>(b) that compliance with the methodology facilitates competition in the generation and supply of electricity, and does not restrict, distort, or prevent competition in the transmission or distribution of electricity;</i></p> <p><i>(c) that compliance with the methodology results in charges which reflect, as far as is reasonably practicable (taking account of implementation costs), the costs incurred by the licensee in its Distribution Business;</i></p> <p><i>(d) that, so far as is consistent with subparagraphs (a), (b), and (c), the methodology, as far as is reasonably practicable, properly takes account of developments in the licensee's Distribution Business; and</i></p> <p><i>(e) compliance with the Regulation and any relevant legally binding decisions of the European Commission and/or the Agency for the Co-operation of Energy Regulators".</i></p> <p>It is understandable that Section 9 of the Electricity Act places and obligation on the distributor to operate networks in an economic and efficient manner, and that the activities described in this DCP may better enable this. We struggle to understand, however, that these services fall within the scope of SLC 12 &amp; 13 and our view is, therefore, that such services fall outside the scope of DCUSA and should be contracted separately for with the customer. The "price" that a distributor pays for provision of such services should link directly to the quantified benefits it receives.</p> <p>The Electricity Act Definitions are as follows:</p>	
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UK Power Networks	Non-confidential	We don't believe that a change to the arrangements will have any impact on solving the issues which National Grid has at a transmission level. We also understand that National Grid are looking at their charging arrangements to address this and similar issues. Therefore we see no benefit in taking this change forward until National Grid have completed the review of their charging arrangements.	Noted
Western Power Distribution	Non-confidential	None	Noted
Supplier 1	Anonymous	We have no further comments at this time	Noted

