

DCP 313 'Eligibility Criteria for EDCM Generation Credits': RFI Responses

	Electricity North West Ltd	Northern Powergrid	Scottish Power Energy Networks	UK Power Networks	Western Power Distribution
How many sites currently have intermittent and non-intermittent generation on the same site?	I'm not aware of any (or at least where the intermittent and non-intermittent are of any significant scale).	We assume this question is intended to relate only to EDCM sites. We have a small number of EDCM sites which combine different generation technologies, one of which combines intermittent and non-intermittent generation (i.e. the remainder which combine technology are either solely intermittent or solely non-intermittent).	We have not been made aware by our customers of any sites with a MEC exporting generation from both intermittent and non-intermittent onto our network, the odd sites which do have with mixed generation do not export onto our network and utilise this generation within their own network. That said, we are seeing interest in this type of connection, and may be more likely in future especially following the introduction of battery storage.	We do not have any mixed sites	2 in West Midlands and 1 in the South West.
What is the DNO process under the EDCM in determining credits for intermittent and non-intermittent generators at the same site?	We would calculate the F factor for the site by following the approach set out in ETR130 based on the expected aggregate output profile of the site. From that point, a mixed site would be treated as per any other EDCM site.	We assume this question is specifically in relation to the F factor which is assigned. We would undertake a site-specific assessment of the sites ability to support the network at peak.	We calculate a tariff per MPAN, hence if and MPAN should have both intermittent & non-intermittent generation exporting onto our network, we would assess the site and use an average of the generic F-Factors based on the MEC proportionate to both intermittent and non-intermittent generation for use within the FCP. When using actual data, all sites actively exporting both intermittent and non-intermittent are almost certain to be eligible for a credit under the existing methodology (for the total MEC per MPAN), given the F-factor calculation	N/A	When determining the F factor for an existing generator, consideration is given on a site by site basis using either ER P2/6 or ETR 130 where appropriate. For new generators we simply apply the P2/6 tables to assign an F factor unless the contractual arrangements under an ANM scheme for

			would almost certainly result in a non-zero f-factor.		example prohibit the running of the generator on demand.		
<p>Would the F factor be reduced on a mixed site resulting in a reduction in the credit provided and if so is there a similar reduction in the credits provided, e.g. if the F factor was reduced by 50% would it reduce the credit by 50% too?</p>	<p>The F factor of a mixed site would be dependent on the outcome of the calculation. It is likely that a mixed site F factor would be lower than a purely non-intermittent site’s F factor. This would be fed into the power flow model and would result in a lower assumed output at winter peak, but we don’t believe the result of this would be directly proportional to the credit generated by the power flow model.</p>	<p>Where data is available, the site-specific assessment mentioned in response to the previous question would be based on actual half-hourly data for units exported from the site. Consequently, the F factor determined would be based on actual output and its reliability over a number of years, and not on an adjustment made to reflect the different capacities of each technology. In reality, this may result in an F factor being reduced by half if half of the site is intermittent (as only half of the export will be reliable), but equally may not result in a reduction of exactly one half. Should a new site connect with a mix of technology types, we would take into account the installed capacity of intermittent and non-intermittent generation when determining the combined F factor – this being the case, the F factor would</p>	<p>The F-Factor calculation per MPAN looks at the security of supply for the sites as a whole taking into account both intermittent and non-intermittent generation. As such any intermittent generation with a zero/nominal F-factor would reduce the sites overall F-Factor when compared to it being solely non-intermittent.</p> <p>The impact on the FCP locational charge (charge 1 £/kVA/year) may or may not be significant and depends on many other influential factors but and impact experienced would affect the ‘charge 1’ hence all sites connected to/via that network locational level and would not be specific to an individual customer. I.e. take three 132kv connected sites with the same site-specific inputs, charge 1 credit in their Network group is £2/kVA/year, the only difference being their type of generation:</p> <table> <tr> <td>Site 1- Solely Intermittent generation with zero F Factor</td> <td>Not eligible for credits</td> </tr> </table>	Site 1- Solely Intermittent generation with zero F Factor	Not eligible for credits	N/A	<p>If WPD had a site with mixed intermittent and non-intermittent generation where the generation is priced as one customer then the F Factor would have to take into account both types of generation. From speaking to our engineers if the F Factor was reduced by e.g. 50% then it is expected that the credit produced by the load flow would reduce although we cannot say if this relationship is linear</p>
Site 1- Solely Intermittent generation with zero F Factor	Not eligible for credits						

		likely be lower for a site with export capability which was made up of (for example) half intermittent and half non-intermittent technologies compared to a site with the same export capability compared to a site with the same export capability made up of only non-intermittent technologies. With regard to a reduction in credit – no, this would be in breach of the EDCM which required the proportion eligible for charge one credits to be set to one if the F factor is non-zero.	<p>Site 2- 50% Intermittent 50% non-intermittent 2.11 E Export super-red unit rate (p/kWh)</p> <p>Site 3 – 100% Non-Intermittent 2.11 Export super-red unit rate (p/kWh)</p> <p>it is almost certain that a mixed site would always have a non-zero F Factor hence set to 1 for 'Proportion Eligible for Charge one credits'.</p>		
On sites where there is intermittent and non-intermittent generation and each technology type is fed by a separate MPAN would the DNOs provide a credit	Where designated EHV Properties have one connections (as identified in the Connection Agreement) fed from a single source then I'd expect that all the MPANs would be associated and a single credit rate would apply to all the MPANs. Where MPANs have not been associated, for	Credits would be associated with the site. EDCM charges are calculated in respect of connectees which are designated EHV properties, not in respect of MPANs. Further, we cannot envisage a scenario in which a DNO would be in a position to provide a credit for intermittent and non-intermittent technologies separately based on metering data for a site with multiple MPANs.	We would have a Tariff per MPAN	N/A	This depends on the option the connection agreement holder chooses using the Elexon guidelines for third party networks. Currently the 3 sites have gone for full settlement metering and so are priced separately with separate F Factors

<p>associated with each MPAN or would the credit be associated with each MPAN or would the credit be associated with the site?</p>	<p>example when multiple points of connection fed from different sources are used for a single site, the relevant number of separate credits and fixed charges will be applied.</p>	<p>MPANs are associated with physical meters, which the BSC requires to be located at the boundary between the DNO's assets and the customer's assets. Multiple MPANs can be used in situations where there are multiple feeders to a site, and so a requirement for multiple meters. Multiple feeders are generally used to achieve greater security of supply by enabling the customer to remain connected should any single network branch fail, for example if a site has two feeders both capable of 10MVA, the site will maintain a 10MVA connection to the wider network should either of the individual feeders fail. This is referred to as 'n-1' security. In such a situation, it would be expected that the customer's assets are interconnected behind the meters. If this were not the case, the purpose of having multiple feeders (continuity of supply in an outage situation) would be undermined, and the customer would effectively have multiple distinct sites which would not</p>			
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		benefit from 'n-1' security. So in the situation where the customer's assets are interconnected behind the meters (and assuming a generation customer for the purpose of this example, with the principle equally applicable to demand), it is not possible for the DNO to determine from which of the customer's assets units being exported were generated, and hence units through any of the meters could have been generated by any of the generating plant on site.			
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