

Section Title	Current Text	Proposed Text
Station Transformer Pg 53	A transformer supplying electrical power to the Auxiliaries of (a) a Power Station , which is not directly connected to the Generating Unit terminals (typical voltage ratios being 132/11kV or 275/11kV), or (b) a DC Converter Station or HDVC Converter	No Change- as text states 'typical'
Single Point of Connection PC.A.8.1	For a Single Point of Connection to a User's System (and OTSUA), as an equivalent 400kV or 275kV source and also in Scotland and Offshore as an equivalent 132kV source, the data (as at the HV side of the Point of Connection (and in the case of OTSUA , each Interface Point and Connection Point) reflecting data given to The Company by Users) will be given to a User as follows: The data items listed under the following parts of PC.A.8.3: (a) (i), (ii), (iii), (iv), (v) and (vi) and the data items shall be provided in accordance with the detailed provisions of PC.A.8.3 (b) - (e)	For a Single Point of Connection to a User's System (and OTSUA), as a Transmission System voltage source an equivalent 400kV or 275kV source and also in Scotland and Offshore as an equivalent 132kV source , the data (as at the HV side of the Point of Connection (and in the case of OTSUA , each Interface Point and Connection Point) reflecting data given to The Company by Users) will be given to a User as follows: The data items listed under the following parts of PC.A.8.3: (a) (i), (ii), (iii), (iv), (v) and (vi) and the data items shall be provided in accordance with the detailed provisions of PC.A.8.3 (b) - (e)
Data Items PC.A.8.3	(d) Since the equivalent will be produced for the 400kV or 275kV and also in Scotland and Offshore 132kV parts of the National Electricity Transmission System The Company will provide the appropriate supergrid transformer data	(d) Since the equivalent will be produced for the 400kV or 275kV and also in Scotland and Offshore 132kV parts of the National Electricity Transmission System The Company will provide the appropriate supergrid transformer data for the National Electricity Transmission System associated with equivalent voltage source data.
Grid Voltage Variations for Users excluding DC Connected Power Park Modules and Remote End	Subject as provided below, the voltage on the 400kV part of the National Electricity Transmission System at each Connection Site with a User (and in the case of OTSDUW Plant and Apparatus , a Transmission Interface Point , excluding DC Connected Power Park Modules and Remote End HVDC Converters) will normally	Subject as provided below The voltage on the 400kV parts of the National Electricity Transmission System operating at nominal voltages of greater than 300kV at each Connection Site with a User (and in the case of OTSDUW Plant and Apparatus , a Transmission Interface Point , excluding DC Connected Power Park Modules and Remote End HVDC Converters) will normally remain within

<div><div>HVDC Converters</div><div>ECC.6.1.4.1</div></div>	<p>remain within $\pm 5\%$ of the nominal value unless abnormal conditions prevail. The minimum voltage is -10% and the maximum voltage is $+10\%$ unless abnormal conditions prevail, but voltages between $+5\%$ and $+10\%$ will not last longer than 15 minutes unless abnormal conditions prevail. Voltages on the 275kV and 132kV parts of the National Electricity Transmission System at each Connection Point (and in the case of OTSDUW Plant and Apparatus, a Transmission Interface Point) will normally remain within the limits $\pm 10\%$ of the nominal value unless abnormal conditions prevail. At nominal System voltages below 110kV the voltage of the National Electricity Transmission System at each Connection Site with a User (and in the case of OTSDUW Plant and Apparatus, a Transmission Interface Point), excluding Connection Sites for DC Connected Power Park Modules and Remote End HVDC Converters) will normally remain within the limits $\pm 6\%$ of the nominal value unless abnormal conditions prevail. Under fault conditions, the voltage may collapse transiently to zero at the point of fault until the fault is cleared. The normal operating ranges of the National Electricity Transmission System are summarised below:</p>	<p>$\pm 5\%$ of the nominal value unless abnormal conditions prevail. The minimum voltage is -10% and the maximum voltage is $+10\%$ unless abnormal conditions prevail, but voltages between $+5\%$ and $+10\%$ will not last longer than 15 minutes unless abnormal conditions prevail. For nominal voltages of 110kV and up to and including 300kV voltages on the 275kV and 132kV parts of the National Electricity Transmission System at each Connection Point (and in the case of OTSDUW Plant and Apparatus, a Transmission Interface Point) will normally remain within the limits $\pm 10\%$ of the nominal value unless abnormal conditions prevail. At nominal System voltages below 110kV the voltage of the National Electricity Transmission System at each Connection Site with a User (and in the case of OTSDUW Plant and Apparatus, a Transmission Interface Point), excluding Connection Sites for DC Connected Power Park Modules and Remote End HVDC Converters) will normally remain within the limits $\pm 6\%$ of the nominal value unless abnormal conditions prevail. Under fault conditions, the voltage may collapse transiently to zero at the point of fault until the fault is cleared. The normal operating ranges of the National Electricity Transmission System are summarised below:</p>																																										
	<table><thead><tr><th>National Electricity Transmission System Nominal Voltage</th><th>Normal Operating Range</th><th>Time period for Operation</th></tr></thead><tbody><tr><td>400kV</td><td>400kV -10% to $+5\%$ 400kV $+5\%$ to $+10\%$</td><td>Unlimited 15 minutes</td></tr><tr><td>275kV</td><td>275kV $\pm 10\%$</td><td>Unlimited</td></tr><tr><td>132kV</td><td>132kV $\pm 10\%$</td><td>Unlimited</td></tr><tr><td>110kV</td><td>110kV $\pm 10\%$</td><td>Unlimited</td></tr><tr><td>Below 110kV</td><td>Below 110kV $\pm 6\%$</td><td>Unlimited</td></tr></tbody></table> <p>The Company and a User may agree greater variations or longer minimum time periods of operation in voltage to those set out above in relation to a particular Connection Site, and insofar as a greater variation is agreed, the relevant figure set out</p>	National Electricity Transmission System Nominal Voltage	Normal Operating Range	Time period for Operation	400kV	400kV -10% to $+5\%$ 400kV $+5\%$ to $+10\%$	Unlimited 15 minutes	275kV	275kV $\pm 10\%$	Unlimited	132kV	132kV $\pm 10\%$	Unlimited	110kV	110kV $\pm 10\%$	Unlimited	Below 110kV	Below 110kV $\pm 6\%$	Unlimited	<table><thead><tr><th>National Electricity Transmission System Nominal Voltage</th><th>Normal Operating Range Voltage (percentage of Nominal Voltage)</th><th>Pu (1pu relates to the Nominal Voltage)</th><th>Time Period for Operation</th></tr></thead><tbody><tr><td>400kV Greater than 300kV</td><td>400kV -10% to $+5\%$ 400kV $+5\%$ to $+10\%$</td><td>0.90pu-1.05pu 1.05pu-1.10pu</td><td>Unlimited 15 minutes</td></tr><tr><td>275kV 110kV up to 300kV</td><td>275kV $\pm 10\%$</td><td>0.90pu-1.10pu</td><td></td></tr><tr><td>132kV</td><td>132kV $\pm 10\%$</td><td></td><td>Unlimited</td></tr><tr><td>110kV</td><td>110kV $\pm 10\%$</td><td></td><td>Unlimited</td></tr><tr><td>Below 110kV</td><td>Below 110kV $\pm 6\%$</td><td>0.94pu-1.06pu</td><td>Unlimited</td></tr></tbody></table> <p>The Company and a User may agree greater variations or longer minimum time periods of operation in voltage to those set out above in relation to a particular Connection Site, and insofar as a greater variation is</p>	National Electricity Transmission System Nominal Voltage	Normal Operating Range Voltage (percentage of Nominal Voltage)	Pu (1pu relates to the Nominal Voltage)	Time Period for Operation	400kV Greater than 300kV	400kV -10% to $+5\%$ 400kV $+5\%$ to $+10\%$	0.90pu-1.05pu 1.05pu-1.10pu	Unlimited 15 minutes	275kV 110kV up to 300kV	275kV $\pm 10\%$	0.90pu-1.10pu		132kV	132kV $\pm 10\%$		Unlimited	110kV	110kV $\pm 10\%$		Unlimited	Below 110kV	Below 110kV $\pm 6\%$	0.94pu-1.06pu	Unlimited
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	above shall, in relation to that User at the particular Connection Site, be replaced by the figure agreed.	agreed, the relevant figure set out above shall, in relation to that User at the particular Connection Site, be replaced by the figure agreed.
Fault Clearance Times ECC.6.2.2.2.2	<p>(a) The required fault clearance time for faults on the Generator's (including DC Connected Power Park Modules) or HVDC System Owner's equipment directly connected to the National Electricity Transmission System or OTSDUW Plant and Apparatus and for faults on the National Electricity Transmission System directly connected to the EU Generator (including DC Connected Power Park Modules) or HVDC System Owner's equipment or OTSDUW Plant and Apparatus, from fault inception to the circuit breaker arc extinction, shall be set out in the Bilateral Agreement. The fault clearance time specified in the Bilateral Agreement shall not be shorter than the durations specified below: (i) 80ms at 400kV, (ii) 100ms at 275kV, (iii) 120ms at 132kV and below but this shall not prevent the User or The Company or the Relevant Transmission Licensee or the EU Generator (including in respect of OTSDUW Plant and Apparatus and DC Connected Power Park Modules) from selecting a shorter fault clearance time on their own Plant and Apparatus provided Discrimination is achieved. A longer fault clearance time may be specified in the Bilateral Agreement for faults on the National Electricity Transmission System. A longer fault clearance time for faults on the EU Generator or HVDC System Owner's equipment or OTSDUW Plant and Apparatus may be agreed with The Company in accordance with the terms of the Bilateral Agreement but only if System requirements, in The Company's view, permit. The</p>	<p>(a) The required fault clearance time for faults on the Generator's (including DC Connected Power Park Modules) or HVDC System Owner's equipment directly connected to the National Electricity Transmission System or OTSDUW Plant and Apparatus and for faults on the National Electricity Transmission System directly connected to the EU Generator (including DC Connected Power Park Modules) or HVDC System Owner's equipment or OTSDUW Plant and Apparatus, from fault inception to the circuit breaker arc extinction, shall be set out in the Bilateral Agreement. The fault clearance time specified in the Bilateral Agreement shall not be shorter than the durations specified below:</p> <p>(i) 80ms at 400kV for connections operating at a nominal voltage of greater than 300kV</p> <p>(ii) 100ms at 275kV for connections operating at a nominal voltage of greater than 132kV and up to 300kV</p> <p>(iii) 120ms at for connections operating at a nominal voltage of 132kV and below</p> <p>but this shall not prevent the User or The Company or the Relevant Transmission Licensee or the EU Generator (including in respect of OTSDUW Plant and Apparatus and DC Connected Power Park Modules) from selecting a shorter fault clearance time on their own Plant and Apparatus provided Discrimination is achieved. A longer fault clearance time may be specified in the Bilateral Agreement for faults on the National Electricity Transmission System. A longer fault clearance time for faults on the EU Generator or HVDC System Owner's equipment or OTSDUW Plant and Apparatus may be agreed with The Company in accordance with the terms of the Bilateral Agreement but only if System requirements, in The Company's view, permit. The</p>

	probability that the fault clearance time stated in the Bilateral Agreement will be exceeded by any given fault, must be less than 2%	probability that the fault clearance time stated in the Bilateral Agreement will be exceeded by any given fault, must be less than 2%
	<p>(b) In the event that the required fault clearance time is not met as a result of failure to operate on the Main Protection System(s) provided, the Generators or HVDC System Owners or Generators in the case of OTSDUW Plant and Apparatus shall, except as specified below provide Independent Back-Up Protection. The Relevant Transmission Licensee will also provide Back-Up Protection and the Relevant Transmission Licensee's and the User's Back-Up Protections will be co-ordinated so as to provide Discrimination.</p> <p>On a Power Generating Module (other than a Power Park Unit), HVDC Equipment or OTSDUW Plant and Apparatus and connected to the National Electricity Transmission System at 400kV or 275kV and where two Independent Main Protections are provided to clear faults on the HV Connections within the required fault clearance time, the Back-Up Protection provided by EU Generators (including in respect of OTSDUW Plant and Apparatus and DC Connected Power Park Modules) and HVDC System Owners shall operate to give a fault clearance time of no longer than 300ms at the minimum infeed for normal operation for faults on the HV Connections. Where two Independent Main Protections are installed the Back-Up Protection may be integrated into one (or both) of the Independent Main Protection relays.</p> <p>On a Power Generating Module (other than a Power Park Unit), HVDC Equipment or OTSDUW Plant and Apparatus and connected to the National Electricity</p>	<p>(b) In the event that the required fault clearance time is not met as a result of failure to operate on the Main Protection System(s) provided, the Generators or HVDC System Owners or Generators in the case of OTSDUW Plant and Apparatus shall, except as specified below provide Independent Back-Up Protection. The Relevant Transmission Licensee will also provide Back-Up Protection and the Relevant Transmission Licensee's and the User's Back-Up Protections will be co-ordinated so as to provide Discrimination.</p> <p>On a Power Generating Module (other than a Power Park Unit), HVDC Equipment or OTSDUW Plant and Apparatus and connected to the National Electricity Transmission System operating at a nominal voltage of greater than 132kV 400kV or 275kV and where two Independent Main Protections are provided to clear faults on the HV Connections within the required fault clearance time, the Back-Up Protection provided by EU Generators (including in respect of OTSDUW Plant and Apparatus and DC Connected Power Park Modules) and HVDC System Owners shall operate to give a fault clearance time of no longer than 300ms at the minimum infeed for normal operation for faults on the HV Connections. Where two Independent Main Protections are installed the Back-Up Protection may be integrated into one (or both) of the Independent Main Protection relays.</p> <p>On a Power Generating Module (other than a Power Park Unit), HVDC Equipment or OTSDUW Plant and Apparatus and connected to the National Electricity Transmission System at 132 kV and below where only one Main Protection is provided to clear faults on the HV Connections within the required fault clearance</p>

	<p>Transmission System at 132 kV and where only one Main Protection is provided to clear faults on the HV Connections within the required fault clearance time, the Independent Back-Up Protection provided by the Generator (including in respect of OTSDUW Plant and Apparatus and DC Connected Power Park Modules) and the HVDC System Owner shall operate to give a fault clearance time of no longer than 300ms at the minimum infeed for normal operation for faults on the HV Connections.</p> <p>A Power Generating Module (other than a Power Park Unit), HVDC Equipment or OTSDUW Plant and Apparatus with Back-Up Protection or Independent Back-Up Protection will also be required to withstand, without tripping, the loading incurred during the clearance of a fault on the National Electricity Transmission System by breaker fail Protection at 400kV or 275kV or of a fault cleared by Back-Up Protection where the EU Generator (including in the case of OTSDUW Plant and Apparatus or DC Connected Power Park Module) or HVDC System is connected at 132kV and below. This will permit Discrimination between the Generator in respect of OTSDUW Plant and Apparatus or DC Connected Power Park Modules or HVDC System Owners' Back-Up Protection or Independent Back-Up Protection and the Back-Up Protection provided on the National Electricity Transmission System and other Users' Systems</p>	<p>time, the Independent Back-Up Protection provided by the Generator (including in respect of OTSDUW Plant and Apparatus and DC Connected Power Park Modules) and the HVDC System Owner shall operate to give a fault clearance time of no longer than 300ms at the minimum infeed for normal operation for faults on the HV Connections.</p> <p>A Power Generating Module (other than a Power Park Unit), HVDC Equipment or OTSDUW Plant and Apparatus with Back-Up Protection or Independent Back-Up Protection will also be required to withstand, without tripping, the loading incurred during the clearance of a fault on the National Electricity Transmission System by breaker fail Protection at a nominal voltage of greater than 132kV 400kV or 275kV or of a fault cleared by Back-Up Protection where the EU Generator (including in the case of OTSDUW Plant and Apparatus or DC Connected Power Park Module) or HVDC System is connected at 132kV and below. This will permit Discrimination between the Generator in respect of OTSDUW Plant and Apparatus or DC Connected Power Park Modules or HVDC System Owners' Back-Up Protection or Independent Back-Up Protection and the Back-Up Protection provided on the National Electricity Transmission System and other Users' Systems</p>
	<p>(c) When the Power Generating Module (other than Power Park Units), or the HVDC Equipment or OTSDUW Plant and Apparatus is connected to the National Electricity Transmission System at 400kV or 275kV, and in Scotland and Offshore also at 132kV, and a circuit breaker is provided by the</p>	<p>(c) When the Power Generating Module (other than Power Park Units), or the HVDC Equipment or OTSDUW Plant and Apparatus is connected to the National Electricity Transmission System operating at a nominal voltage of greater than 132kV 400kV or 275kV, and in Scotland and Offshore also at 132kV, and a circuit</p>

	<p>Generator (including in respect of OTSDUW Plant and Apparatus or DC Connected Power Park Modules) or the HVDC System owner, or the Relevant Transmission Licensee, as the case may be, to interrupt fault current interchange with the National Electricity Transmission System, or Generator's System, or HVDC System Owner's System, as the case may be, circuit breaker fail Protection shall be provided by the Generator (including in respect of OTSDUW Plant and Apparatus or DC Connected Power Park Modules) or HVDC System Owner, or the Relevant Transmission Licensee, as the case may be, on this circuit breaker. In the event, following operation of a Protection system, of a failure to interrupt fault current by these circuit-breakers within the Fault Current Interruption Time, the circuit breaker fail Protection is required to initiate tripping of all the necessary electrically adjacent circuit-breakers so as to interrupt the fault current within the next 200ms</p>	<p>breaker is provided by the Generator (including in respect of OTSDUW Plant and Apparatus or DC Connected Power Park Modules) or the HVDC System owner, or the Relevant Transmission Licensee, as the case may be, to interrupt fault current interchange with the National Electricity Transmission System, or Generator's System, or HVDC System Owner's System, as the case may be, circuit breaker fail Protection shall be provided by the Generator (including in respect of OTSDUW Plant and Apparatus or DC Connected Power Park Modules) or HVDC System Owner, or the Relevant Transmission Licensee, as the case may be, on this circuit breaker. In the event, following operation of a Protection system, of a failure to interrupt fault current by these circuit-breakers within the Fault Current Interruption Time, the circuit breaker fail Protection is required to initiate tripping of all the necessary electrically adjacent circuit-breakers so as to interrupt the fault current within the next 200ms.</p>
<p>Protection arrangements for EU Code Users in respect of Network Operators and NonEmbedded Customers User Systems directly connected to the National Electricity Transmission System, shall meet the requirements given below:</p>	<p>(a) The required fault clearance time for faults on Network Operator and Non-Embedded Customer equipment directly connected to the National Electricity Transmission System, and for faults on the National Electricity Transmission System directly connected to the Network Operator's or Non-Embedded Customer's equipment, from fault inception to the circuit breaker arc extinction, shall be set out in each Bilateral Agreement. The fault clearance time specified in the Bilateral Agreement shall not be shorter than the durations specified below: (i) 80ms at 400kV (ii) 100ms at 275kV (iii) 120ms at 132kV and below but this shall not prevent the User or The Company or Relevant Transmission Licensee from selecting a shorter fault clearance time on its own Plant</p>	<p>(a) The required fault clearance time for faults on Network Operator and Non-Embedded Customer equipment directly connected to the National Electricity Transmission System, and for faults on the National Electricity Transmission System directly connected to the Network Operator's or Non-Embedded Customer's equipment, from fault inception to the circuit breaker arc extinction, shall be set out in each Bilateral Agreement. The fault clearance time specified in the Bilateral Agreement shall not be shorter than the durations specified below:</p> <p>(i) 80ms at 400kV for connections operating at a nominal voltage of greater than 300kV</p> <p>(ii) 100ms at 275kV for connections operating at a nominal voltage of greater than 132kV and up to 300kV</p> <p>(iii) 120ms at for connections operating at a nominal voltage of</p>

ECC.6.2.3.1.1	<p>and Apparatus provided Discrimination is achieved. For the purpose of establishing the Protection requirements in accordance with ECC.6.2.3.1.1 only, the point of connection of the Network Operator or Non-Embedded Customer equipment to the National Electricity Transmission System shall be deemed to be the low voltage busbars at an EU Grid Supply Point, irrespective of the ownership of the equipment at the EU Grid Supply Point.</p>	<p>132kV and below but this shall not prevent the User or The Company or Relevant Transmission Licensee from selecting a shorter fault clearance time on its own Plant and Apparatus provided Discrimination is achieved. For the purpose of establishing the Protection requirements in accordance with ECC.6.2.3.1.1 only, the point of connection of the Network Operator or Non-Embedded Customer equipment to the National Electricity Transmission System shall be deemed to be the low voltage busbars at an EU Grid Supply Point, irrespective of the ownership of the equipment at the EU Grid Supply Point.</p>
ECC.6.2.3.1.1	<p>(b) (i) For the event of failure of the Protection systems provided to meet the above fault clearance time requirements, Back-Up Protection shall be provided by the Network Operator or Non-Embedded Customer as the case may be. (ii) The Relevant Transmission Licensee will also provide Back-Up Protection, which will result in a fault clearance time longer than that specified for the Network Operator or Non-Embedded Customer Back-Up Protection so as to provide Discrimination. (iii) For connections with the National Electricity Transmission System at 132kV and below, it is normally required that the Back-Up Protection on the National Electricity Transmission System shall discriminate with the Network Operator or Non-Embedded Customer's Back-Up Protection. (iv) For connections with the National Electricity Transmission System at 400kV or 275kV, the Back-Up Protection will be provided by the Network Operator or Non-Embedded Customer, as the case may be, with a fault clearance time not longer than 300ms for faults on the Network</p>	<p>(b) (i) For the event of failure of the Protection systems provided to meet the above fault clearance time requirements, Back-Up Protection shall be provided by the Network Operator or Non-Embedded Customer as the case may be. (ii) The Relevant Transmission Licensee will also provide Back-Up Protection, which will result in a fault clearance time longer than that specified for the Network Operator or Non-Embedded Customer Back-Up Protection so as to provide Discrimination. (iii) For connections with the National Electricity Transmission System at 132kV and below, it is normally required that the Back-Up Protection on the National Electricity Transmission System shall discriminate with the Network Operator or Non-Embedded Customer's Back-Up Protection. (iv) For connections with the National Electricity Transmission System operating at a nominal voltage greater than 132kV-400kV or 275kV, the Back-Up Protection will be provided by the Network Operator or Non-Embedded Customer, as the case may be, with a fault clearance time not longer than 300ms for faults on the Network Operator's or Non-Embedded Customer's Apparatus.</p>

	Operator's or Non-Embedded Customer's Apparatus.	
ECC.6.2.3.1.1	<p>(v) Such Protection will also be required to withstand, without tripping, the loading incurred during the clearance of a fault on the National Electricity Transmission System by breaker fail Protection at 400kV or 275kV. This will permit Discrimination between Network Operator's Back-Up Protection or Non-Embedded Customer's Back-Up Protection, as the case may be, and Back-Up Protection provided on the National Electricity Transmission System and other User Systems. The requirement for and level of Discrimination required will be specified in the Bilateral Agreement.</p> <p>(c) (i) Where the Network Operator or Non-Embedded Customer is connected to the National Electricity Transmission System at 400kV or 275kV, and in Scotland also at 132kV, and a circuit breaker is provided by the Network Operator or Non-Embedded Customer, or the Relevant Transmission Licensee, as the case may be, to interrupt the interchange of fault current with the National Electricity Transmission System or the System of the Network Operator or Non-Embedded Customer, as the case may be, circuit breaker fail Protection will be provided by the Network Operator or Non-Embedded Customer, or the Relevant Transmission Licensee, as the case may be, on this circuit breaker.</p> <p>(ii) In the event, following operation of a Protection system, of a failure to interrupt fault current by these circuit-breakers within the Fault Current Interruption Time, the circuit breaker fail Protection is required to initiate tripping of all the necessary electrically adjacent</p>	<p>(v) Such Protection will also be required to withstand, without tripping, the loading incurred during the clearance of a fault on the National Electricity Transmission System by breaker fail Protection operating at a nominal voltage of greater than 132kV 400kV or 275kV. This will permit discrimination between Network Operator's Back-Up Protection or Non-Embedded Customer's Back-Up Protection, as the case may be, and Back-Up Protection provided on the National Electricity Transmission System and other User Systems. The requirement for and level of Discrimination required will be specified in the Bilateral Agreement.</p> <p>(c) (i) Where the Network Operator or Non-Embedded Customer is connected to part of the National Electricity Transmission System operating at a nominal voltage greater than 132kV and in at 400kV or 275kV, and in Scotland also at 132kV, and a circuit breaker is provided by the Network Operator or Non-Embedded Customer, or the Relevant Transmission Licensee, as the case may be, to interrupt the interchange of fault current with the National Electricity Transmission System or the System of the Network Operator or Non-Embedded Customer, as the case may be, circuit breaker fail Protection will be provided by the Network Operator or Non-Embedded Customer, or the Relevant Transmission Licensee, as the case may be, on this circuit breaker.</p> <p>(ii) In the event, following operation of a Protection system, of a failure to interrupt fault current by these circuit-breakers within the Fault Current Interruption Time, the circuit breaker fail Protection is required to initiate tripping of all the necessary electrically adjacent circuit-breakers so as to interrupt the fault current within the next 200ms.</p>

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<p>Voltage Fluctuations ECC.6.1.7</p>	<table border="1"> <thead> <tr> <th rowspan="2">Supply system Nominal voltage</th><th colspan="2">Planning level</th></tr> <tr> <th>Flicker Severity Short Term (Pst)</th><th>Flicker Severity Long Term (Pti)</th></tr> </thead> <tbody> <tr> <td>3.3 kV, 6.6 kV, 11 kV, 20 kV, 33 kV</td><td>0.9</td><td>0.7</td></tr> <tr> <td>66 kV, 110 kV, 132 kV, 150 kV, 200 kV, 220 kV, 275 kV, 400 kV</td><td>0.8</td><td>0.6</td></tr> </tbody> </table> <p>NOTE 1: The magnitude of P_{st} is linear with respect to the magnitude of the voltage changes giving rise to it. NOTE 2: Extreme caution is advised in allowing any excursions of P_{st} and P_{ti} above the planning level.</p> <p>Table ECC.6.7.1 (b) — Planning levels for flicker</p>	Supply system Nominal voltage	Planning level		Flicker Severity Short Term (Pst)	Flicker Severity Long Term (Pti)	3.3 kV, 6.6 kV, 11 kV, 20 kV, 33 kV	0.9	0.7	66 kV, 110 kV, 132 kV, 150 kV, 200 kV, 220 kV, 275 kV, 400 kV	0.8	0.6	<table border="1"> <thead> <tr> <th rowspan="2">Supply System Nominal Voltage</th><th colspan="2">Planning Level</th></tr> <tr> <th>Flicker Severity Short Term (Pst)</th><th>Flicker Severity Long Term (Pti)</th></tr> </thead> <tbody> <tr> <td>3.3kV, 6.6kV, 11kV, 20kV, Up to and including 33kV</td><td>0.9</td><td>0.7</td></tr> <tr> <td>66kV and greater, 100kV, 132kV, 150kV, 200kV, 220kV, 275kV, 400kV</td><td>0.8</td><td>0.6</td></tr> </tbody> </table> <p>NOTE 1: The magnitude of P_{st} is linear with respect to the magnitude of the voltage changes giving rise to it. NOTE 2: Extreme caution is advised in allowing any excursions of P_{st} and P_{ti} above the planning level.</p> <p>Table ECC.6.7.1 (b) — Planning levels for flicker</p>	Supply System Nominal Voltage	Planning Level		Flicker Severity Short Term (Pst)	Flicker Severity Long Term (Pti)	3.3kV, 6.6kV, 11kV, 20kV, Up to and including 33kV	0.9	0.7	66kV and greater, 100kV, 132kV, 150kV, 200kV, 220kV, 275kV, 400kV	0.8	0.6
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Supply System Nominal Voltage	Planning Level																							
	Flicker Severity Short Term (Pst)	Flicker Severity Long Term (Pti)																						
3.3kV, 6.6kV, 11kV, 20kV, Up to and including 33kV	0.9	0.7																						
66kV and greater, 100kV, 132kV, 150kV, 200kV, 220kV, 275kV, 400kV	0.8	0.6																						
<p>Schedule 5- Users System Data Page 1 of 11</p>	<p>(a) all parts of the User's System, whether existing or proposed, operating at Supergrid Voltage, and in Scotland and Offshore, also all parts of the User System operating at 132kV,</p> <p>(b) all parts of the User's System operating at a voltage of 50kV, and in Scotland and Offshore greater than 30kV, or higher which can interconnect Connection Points, or split bus-bars at a single Connection Point,</p> <p>This Single Line Diagram shall depict the arrangement(s) of all of the existing and proposed load current carrying Apparatus relating to both existing and proposed Connection Points, showing electrical circuitry (ie. overhead lines, underground cables, power transformers and similar equipment), operating voltages. In addition, for equipment operating at a Supergrid Voltage, and in Scotland and Offshore also at 132kV, circuit breakers and phasing arrangements shall be shown.</p>	<p>(a) all parts of the User's System, whether existing or proposed, operating at Supergrid Voltage, and in Scotland and Offshore, also all parts of the User System operating at greater than 110kV 132kV,</p> <p>(b) all parts of the User's System operating at a voltage of greater than 50kV, and in Scotland and Offshore greater than 30kV, or higher which can interconnect Connection Points, or split bus-bars at a single Connection Point,</p> <p>This Single Line Diagram shall depict the arrangement(s) of all of the existing and proposed load current carrying Apparatus relating to both existing and proposed Connection Points, showing electrical circuitry (ie. overhead lines, underground cables, power transformers and similar equipment), operating voltages. In addition, for equipment operating at a Supergrid Voltage, and in Scotland and Offshore also at 110kV and above 132kV, circuit breakers and phasing arrangements shall be shown.</p>																						
<p>Schedule 5- Users System Data Page 8 of 11</p>	<p>(f) The following data is required on all transformers operating at Supergrid Voltage throughout Great Britain and, in Scotland and Offshore, also at 132kV: three or five limb cores or single phase units to be specified, and</p>	<p>(f) The following data is required on all transformers operating at Supergrid Voltage throughout Great Britain and, in Scotland and Offshore, also at greater than 110kV 132kV: three or five limb cores or single phase units to be specified, and operating peak flux density at nominal voltage.</p>																						

Legal Text for GC0142

	operating peak flux density at nominal voltage.	
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