

## Addendum-1

### Electricity Transmission Code (Ver.2, Rev. 2 dated 30 June 2020)

Issue Date: 15 November 2020

S.N	Code Reference Chapter/Section/Page	Statement per the Code (ETC ver.2 Rev.2 dated 30 June 2020)	Revised/Amended Statement
1	Chapter-1, Glossary and Definitions	Not defined	<p><b>Fault Clearance Time</b></p> <p>Fault clearance time is the total time taken from the fault current inception to arc extinction, which includes relay operation time (set time delay in the relay + time taken for relay to arrive at a tripping decision + relay output trip contact time + trip relay operating time, if applicable) + circuit breaker break time + telecommunication signalling time, if applicable.</p>
2	Chapter-1, Glossary and Definitions	Not defined	<p><b>Infeed Loss Risk</b></p> <p>Is a value set for the <b>Transmission System</b> and as defined in the <b>Electricity Transmission System Security Standard</b>.</p>
3	Chapter-1, Glossary and Definitions	Not defined	<p><b>Critical Fault Clearing Time</b></p> <p>Is the maximum time during which a disturbance can be applied without the system losing its stability.</p>
4	Chapter-3, Connection Conditions, Section-6 (Technical, Design and Operational Criteria)  Clause 6.2.2 GENCO/TRANSCO Connection Points  Sub-Clause 6.2.2.3 Fault Clearance Times  Pages 68	<p><b>6.2.2 GENCO/TRANSCO Connection Points</b></p> <p><b>6.2.2.3 Fault Clearance Times</b></p> <p>The fault clearance times for faults on the <b>GENCO</b> equipment directly connected to the <b>Transmission System</b> and for faults on the <b>Transmission System</b> directly connected to the <b>GENCO</b> equipment, from fault inception to the circuit breaker arc extinction, shall be set out in accordance with the <b>Connection Agreement</b>. The times specified in accordance with the <b>Connection Agreement</b> shall not be faster than:</p> <p>i) 50ms for faults cleared by busbar protection at 400kV, 220kV and 132kV; and</p> <p>ii) 60ms for faults cleared by ultra-high speed directional comparison protection on 400kV, 220kV and 132kV overhead lines.</p>	<p><b>6.2.2 GENCO/TRANSCO Connection Points</b></p> <p><b>6.2.2.3 Fault Clearance Times</b></p> <p>The <b>Fault Clearance Time</b> for faults on the <b>GENCO</b> equipment directly connected to the <b>Transmission System</b> or for faults on the <b>Transmission System</b> directly connected to the <b>GENCO</b> equipment shall be set out in accordance with the <b>Connection and Interface Agreement</b>. The times specified in accordance with the <b>Connection and Interface Agreement</b> shall not exceed the following unless otherwise agreed in the <b>Connection and Interface Agreement</b>:</p> <p>i) 80ms for faults cleared by the main protection at 400kV and 220kV;</p> <p>ii) 100ms for fault cleared by the main protection at 132kV *</p> <p>* For close to Generator applications, it shall not exceed 80ms.</p> <p>Slower <b>Fault Clearance Time</b> may be specified in accordance with the <b>Connection and Interface Agreement</b> for faults on <b>the Transmission System</b>. Slower <b>Fault Clearance Time</b> for faults on the <b>GENCO</b> equipment may be agreed in accordance with the <b>Connection and Interface Agreement</b> but only if <b>System</b> requirements permit. The probability that the slower</p>

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		<p>Slower fault clearance times may be specified in accordance with the <b>Connection Agreement</b> for faults on the <b>Transmission System</b>. Slower fault clearance times for faults on the <b>GENCO</b> equipment may be agreed in accordance with the terms of the <b>Connection Agreement</b> but only if <b>System</b> requirements, in <b>TRANSCO</b> view, permit. The probability that the fault clearance times stated in accordance with the <b>Connection Agreement</b> shall be exceeded by any given fault, must be less than 2%.</p> <p>For the event that the above fault clearance times are not met as a result of failure to operate on the <b>Main Protection System(s)</b>, the <b>GENCOs</b> shall provide <b>Back-Up Protection</b>. <b>TRANSCO</b> shall also provide <b>Back-Up Protection</b> and these <b>Back-Up Protections</b> shall be coordinated so as to provide discrimination and protect equipment from damage.</p>	<p><b>Fault Clearance Times</b> stated in accordance with the <b>Connection and Interface Agreement</b> by any given fault shall not exceed 5% based on the test samples over a period of 5 years.</p> <p>For the event that the above <b>Fault Clearance Times</b> are not met as a result of failure to operate on the <b>Main Protection System(s)</b>, the <b>GENCOs</b> shall provide <b>Back-Up Protection</b>. <b>TRANSCO</b> shall also provide <b>Back-Up Protection</b> and these <b>Back-Up Protections</b> shall be coordinated to provide <b>Discrimination</b> and protect equipment from damage with a safety margin of at least 20% with the respective equipment damage curves.</p>

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5	Chapter-3, Connection Conditions, Section-6 (Technical, Design and Operational Criteria)  Clause 6.2.2 GENCO/TRANSCO Connection Points  Sub-Clause 6.2.2.4 Protection Equipment to be provided  Pages 68 and 69	<p><b>6.2.2.4 Protection Equipment to be provided</b></p> <p><b>Protection of Interconnecting Connections</b></p> <p>The requirements for the provision of <b>Protection</b> equipment for interconnecting connections (i.e. the primary conductors from the current transformer accommodation on the circuit side of the circuit breaker to the <b>Connection Point</b>) shall be specified in the <b>Connection Agreement</b>.</p> <p><b>Circuit-breaker fail Protection</b></p> <p>When the <b>Generating Unit</b> is connected to the <b>Transmission System</b> at 400kV, 220kV or 132kV and a circuit breaker is provided by the <b>GENCO</b> or <b>TRANSCO</b>, circuit breaker fail <b>Protection</b> shall be provided by the <b>GENCO</b> or <b>TRANSCO</b> on this circuit breaker. In the event, following operation of a <b>Protection</b> system, of a failure to interrupt fault current by these circuit-breakers within the <b>Fault Current Interruption Time</b>, the circuit breaker fail <b>Protection</b> 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><b>6.2.2.4 Protection Equipment to be provided</b></p> <p><b>Protection of Interconnecting Connections</b></p> <p>The requirements for the provision of <b>Protection</b> equipment for interconnecting connections (i.e. the primary conductors from the current transformer accommodation on the circuit side of the circuit breaker to the <b>Connection Point</b>) shall be specified in the <b>Connection and Interface Agreement</b> and shall follow the provisions of Clause 6.2.2.3 as above.</p> <p><b>Circuit-breaker fail Protection</b></p> <p>When the <b>Generating Unit</b> is connected to the <b>Transmission System</b> at 400kV, 220kV or 132kV and a circuit breaker is provided by the <b>GENCO</b> or <b>TRANSCO</b>, circuit breaker fail <b>Protection</b> shall be provided by the <b>GENCO</b> or <b>TRANSCO</b> 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 <b>Fault Clearance Time</b>, the circuit breaker fail <b>Protection</b> is required. The circuit breaker fail <b>Protection</b> shall initiate tripping of all the necessary electrically adjacent circuit breakers including remote ends to interrupt the fault current within the next 300ms.</p>
6	Chapter-3, Connection Conditions, Section-6 (Technical, Design and Operational Criteria)  Clause 6.2.3 DISCOs and Non-Embedded customers  Sub-Clause 6.2.3.2 Fault Clearance Times	<p><b>6.2.3 DISCO and Non-Embedded Customers</b></p> <p><b>6.2.3.2 Fault Clearance Times</b></p> <p>The fault clearance times for faults on <b>DISCO</b> and <b>Non-Embedded Customer</b> equipment directly connected to the <b>Transmission System</b>, and for faults on the <b>Transmission System</b> directly connected to the <b>DISCO</b> or <b>Non-Embedded Customer</b> equipment, from fault inception to the circuit breaker arc extinction, shall be set out in accordance with each <b>Connection Agreement</b>. The times specified in accordance with the <b>Connection Agreement</b> shall not be faster than:</p> <p>i) 50ms for faults cleared by busbar protection at 400kV, 220kV and 132kV; and</p>	<p><b>6.2.3 DISCO and Non-Embedded Customers</b></p> <p>All the existing ETC sub-sections of Clause 6.2.3 will be segregated and specified separately for DISCOs and Non-Embedded Customer category (after re-arranging the Clause numbers) and there shall be no change in those Clauses. The following Clauses are the only changes/additions and shall be modified accordingly (to be aligned with the overall ETC Clause numbers) and will be integrated within the ETC.</p> <p><b>6.2.3.2 Fault Clearance Times at Non-Embedded Customer Interfaces</b></p> <p>The <b>Fault Clearance Time</b> for faults on the <b>Non-Embedded Customer</b> equipment directly connected to the <b>Transmission System</b> or for faults on the <b>Transmission System</b> directly connected to the <b>Non-Embedded Customer</b> equipment, shall be set out in accordance with the <b>Connection and Interface Agreement</b>. The times specified in accordance with the</p>

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	Pages 69	<p>ii) 60ms for faults cleared by ultra-high speed directional comparison protection on 400kV, 220kV and 132kV overhead lines.</p> <p>Slower fault clearance times may be specified in accordance with the <b>Connection Agreement</b> for faults on the <b>Transmission System</b>. Slower fault clearance times for faults on the <b>DISCO</b> and <b>Non-Embedded Customers</b> equipment may be agreed in accordance with the terms of the <b>Connection Agreement</b> but only if <b>System</b> requirements, in <b>TRANSCO's</b> view, permit. The probability that the fault clearance times stated in accordance with the <b>Connection Agreement</b> shall be exceeded by any given fault must be less than 2%.</p> <p>For the event of failure of the <b>Protection</b> systems provided to meet the above fault clearance time requirements, back-up <b>Protection</b> shall be provided by the <b>DISCO</b> or <b>Non-Embedded Customer</b>. <b>TRANSCO</b> shall also provide back-up <b>Protection</b>, which shall result in a fault clearance time slower than that specified for the <b>DISCO</b> or <b>Non-Embedded Customer</b> back-up <b>Protection</b> so as to provide <b>Discrimination</b>.</p> <p>For connections with the <b>Transmission System</b> at 400kV, 220kV or 132kV, the back-up <b>Protection</b> shall be provided by the <b>DISCO</b> or <b>Non-Embedded Customer</b> with a fault clearance time not slower than 300ms for faults on the <b>DISCO</b> or <b>Non-Embedded Customer</b> Apparatus.</p>	<p><b>Connection and Interface Agreement</b> shall not exceed the following unless otherwise agreed in the <b>Connection and Interface Agreement</b>:</p> <p>i) 80ms for faults cleared by the main protection at 400kV and 220kV; ii) 100ms for fault cleared by the main protection at 132kV *</p> <p>* For close to Generator applications, it shall not exceed 80ms.</p> <p>Slower <b>Fault Clearance Time</b> may be specified in accordance with the <b>Connection and Interface Agreement</b> for faults on the <b>Transmission System</b>. Slower <b>Fault Clearance Time</b> for faults on the <b>Non-Embedded Customer</b> equipment may be agreed in accordance with the <b>Connection and Interface Agreement</b> but only if <b>System</b> requirements permit. The probability that the slower <b>Fault Clearance Times</b> stated in accordance with the <b>Connection and Interface Agreement</b> by any given fault shall not exceed 5% based on the test samples over a period of 5 years.</p> <p>For the event that the above <b>Fault Clearance Times</b> are not met as a result of failure to operate on the <b>Main Protection System(s)</b>, the <b>Non-Embedded Customer</b> shall provide <b>Back-Up Protection</b>. <b>TRANSCO</b> shall also provide <b>Back-Up Protection</b> and these <b>Back-Up Protections</b> shall be coordinated to provide <b>Discrimination</b> and protect equipment from damage with a safety margin of at least 20% with the respective equipment damage curves.</p> <p><b>6.2.3.3 Protection Equipment to be provided for Non-Embedded Customers</b></p> <p><b>Protection of Interconnecting Connections</b></p> <p>The requirements for the provision of <b>Protection</b> equipment for interconnecting connections (i.e. the primary conductors from the current transformer accommodation on the circuit side of the circuit breaker to the <b>Connection Point</b>) shall be specified in the <b>Connection and Interface Agreement</b> and shall follow the provisions of Clause 6.2.3.2.</p> <p><b>Circuit-breaker fail Protection</b></p> <p>When the <b>Non-Embedded Customer</b> equipment is connected to the <b>Transmission System</b> at 400kV, 220kV or 132kV and a circuit breaker is provided by the <b>Non-Embedded Customer</b> or <b>TRANSCO</b>, circuit breaker fail <b>Protection</b> shall be provided by the <b>Non-Embedded Customer</b> or <b>TRANSCO</b> on this circuit breaker. In the event, following operation of a <b>Protection</b> system, of a failure to interrupt fault current by these circuit-breakers within the <b>Fault Clearance Time</b>, the circuit breaker fail <b>Protection</b> is required. The circuit breaker fail <b>Protection</b> shall initiate tripping of all the necessary electrically adjacent circuit breakers including remote ends to interrupt the fault current within the next 300ms.</p>

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			<p><b>6.2.3.4 Signals for Tariff Metering</b></p> <p><b>Non-Embedded Customer</b> shall install current and voltage transformers supplying all tariff meters at a voltage to be specified, and in accordance with the <b>Connection and Interface Agreement</b>.</p>
7	<p>Chapter-3, Connection Conditions, Section-6 (Technical, Design and Operational Criteria)</p> <p>Clause 6.2.3</p> <p>DISCOs and Non-Embedded customers</p> <p>Sub-Clause 6.2.3.2</p> <p>Fault Clearance Times</p> <p>Pages 69</p>	<p><b>6.2.3 DISCO and Non-Embedded Customers</b></p> <p><b>6.2.3.2 Fault Clearance Times</b></p> <p>The fault clearance times for faults on <b>DISCO</b> and <b>Non-Embedded Customer</b> equipment directly connected to the <b>Transmission System</b>, and for faults on the <b>Transmission System</b> directly connected to the <b>DISCO</b> or <b>Non-Embedded Customer</b> equipment, from fault inception to the circuit breaker arc extinction, shall be set out in accordance with each <b>Connection Agreement</b>. The times specified in accordance with the <b>Connection Agreement</b> shall not be faster than:</p> <p>i) 50ms for faults cleared by busbar protection at 400kV, 220kV and 132kV; and</p> <p>ii) 60ms for faults cleared by ultra-high speed directional comparison protection on 400kV, 220kV and 132kV overhead lines.</p> <p>Slower fault clearance times may be specified in accordance with the <b>Connection Agreement</b> for faults on the <b>Transmission System</b>. Slower fault clearance times for faults on the <b>DISCO</b> and <b>Non-Embedded Customers</b> equipment may be agreed in accordance with the terms of the <b>Connection Agreement</b> but only if <b>System</b> requirements, in <b>TRANSCO's</b> view, permit. The probability that the fault clearance times stated in accordance with the <b>Connection Agreement</b> shall be exceeded by any given fault must be less than 2%.</p> <p>For the event of failure of the <b>Protection</b> systems provided to meet the above fault clearance time requirements, back-up <b>Protection</b> shall be provided by the <b>DISCO</b> or <b>Non-Embedded Customer</b>. <b>TRANSCO</b> shall also provide back-up <b>Protection</b>, which shall result in a fault clearance</p>	<p><b>6.2.3.5 Fault Clearance Times at DISCO Interfaces</b></p> <p>The <b>Fault Clearance Time</b> for faults on <b>DISCO</b> equipment directly connected to the <b>Transmission System</b>, or for faults on the <b>Transmission System</b> directly connected to the <b>DISCO</b> equipment shall be set out in accordance with each <b>Connection and Interface Agreement</b>. The times specified in accordance with the <b>Connection &amp; Interface Agreement</b> shall not exceed the following at the <b>TRANSCO/DISCO</b> interfaces unless otherwise agreed in the <b>Connection and Interface Agreement</b>:</p> <p>100ms for faults cleared by main protection at 220kV, 132kV, 33kV, 22kV, and 11kV.</p> <p>Slower <b>Fault Clearance Times</b> may be specified in accordance with the <b>Connection and Interface Agreement</b> for faults on the <b>Transmission System</b>. Slower <b>Fault Clearance Times</b> for faults on the <b>DISCO</b> equipment may be agreed in accordance with the terms of the <b>Connection and Interface Agreement</b> but only if <b>System</b> requirements permit. The probability that the slower <b>Fault Clearance Times</b> stated in accordance with the <b>Connection and Interface Agreement</b> by any given fault shall not exceed 5% based on the test samples over a period of 5 years.</p> <p><b>6.2.3.6 Protection Equipment to be provided at DISCO Interfaces</b></p> <p><b>Protection of Interconnecting Connections</b></p> <p>The requirements for the provision of <b>Protection</b> equipment for interconnecting connections (i.e. the primary conductors from the current transformer accommodation on the circuit side of the circuit breaker to the <b>Connection Point</b>) shall be specified in the <b>Connection and Interface Agreement</b> and shall follow the provisions of Clause 6.2.3.5.</p> <p><b>6.2.3.7 Backup Fault Clearance Times at DISCOs Interfaces</b></p> <p>For connections with the <b>Transmission System</b>, the <b>Back-up Protection</b> shall be provided by the <b>DISCO</b> at the <b>Connection Point</b> (viz., transformer incomer) with a <b>Fault Clearance Time</b> that shall NOT exceed 1100ms for any faults on the <b>DISCO</b> Apparatus connected to the <b>TRANSCO</b> interface transformers with maximum short circuit withstand duration of 2s. In case of <b>TRANSCO</b> interface transformers with maximum short circuit withstand duration of 3s, the <b>Fault Clearance Time</b> at the connection point shall NOT exceed 1250ms for any faults on the <b>DISCO</b> apparatus.</p>

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		<p>time slower than that specified for the <b>DISCO</b> or <b>Non-Embedded Customer</b> back-up <b>Protection</b> so as to provide <b>Discrimination</b>.</p> <p>For connections with the <b>Transmission System</b> at 400kV, 220kV or 132kV, the back-up <b>Protection</b> shall be provided by the <b>DISCO</b> or <b>Non-Embedded Customer</b> with a fault clearance time not slower than 300ms for faults on the <b>DISCO</b> or <b>Non-Embedded Customer</b> Apparatus.</p>	<p>Slower <b>Back-up Protection Fault Clearance Time</b> for the faults on the <b>DISCO</b> equipment may be agreed with <b>TRANSCO</b> in accordance with the terms of the <b>Connection and Interface Agreement</b> but only if the <b>System</b> requirements in <b>TRANSCO's</b> view permit. For such exceptional cases <b>TRANSCO</b> may agree to extend upto 1200ms on case to case basis at those <b>TRANSCO's</b> interface transformers with maximum short circuit withstand duration of 2s. Similarly, for exceptional cases <b>TRANSCO</b> may agree to extend upto 1400ms on case to case basis at those <b>TRANSCO's</b> interface transformers with maximum short circuit withstand duration of 3s.</p> <p><b>6.2.3.8 Signals for Tariff Metering</b></p> <p><b>DISCOs</b> shall install current and voltage transformers supplying all tariff meters at a voltage to be specified, and in accordance with the <b>Connection and Interface Agreement</b>.</p>
8	<p>Chapter-3, Connection Conditions, Section-6 (Technical, Design and Operational Criteria)</p> <p>Clause 6.2.4 Self-Supply User/TRANSCO Connection Point</p> <p>Sub-Clause 6.2.4.3 Fault Clearance Times</p> <p>Pages 71</p>	<p><b>6.2.4. Self-Supply User/TRANSCO connection point</b></p> <p><b>6.2.4.3. Fault Clearance Times</b></p> <p>The <b>Fault Clearance Times</b> for faults on <b>Self-Supply User</b> equipment directly connected to the <b>Transmission System</b>, and for faults on the <b>Transmission System</b> directly connected to the <b>Self-Supply User</b> equipment, from fault inception to the circuit breaker arc extinction, shall be set out in accordance with the <b>Connection and Interface Agreement</b>. The times specified in accordance with the Connection Agreement shall not be faster than:</p> <p>a) 50ms for faults cleared by busbar protection at 400kV, 220kV and 132kV; and</p> <p>b) 60ms for faults cleared by ultra-high speed directional comparison protection on 400kV, 220kV and 132kV overhead lines</p> <p>In accordance with the <b>Connection and Interface Agreement</b>, slower fault clearance times may be specified for faults on the <b>Transmission System</b>. Slower fault clearance times for faults on the <b>Self-Supply User</b> equipment may be agreed in accordance with the terms of the <b>Connection and Interface Agreement</b> but only if system requirements, in <b>TRANSCO's</b> sole view, and acting reasonably, permit. The probability that the fault clearance times stated in accordance with the <b>Connection</b></p>	<p><b>6.2.4. Self-Supply User/TRANSCO connection point</b></p> <p><b>6.2.4.3 Fault Clearance Times</b></p> <p>The <b>Fault Clearance Time</b> for faults on the <b>Self-Supply User</b> equipment directly connected to the <b>Transmission System</b> or for faults on the <b>Transmission System</b> directly connected to the <b>Self-Supply User</b> equipment shall be set out in accordance with the <b>Connection and Interface Agreement</b>. The times specified in accordance with the <b>Connection and Interface Agreement</b> shall not exceed the following unless otherwise agreed in the <b>Connection and Interface Agreement</b>:</p> <p>i) 80ms for faults cleared by the main protection at 400kV and 220kV;</p> <p>ii) 100ms for fault cleared by the main protection at 132kV *</p> <p>* For close to Generator applications, it shall not exceed 80ms.</p> <p>Slower <b>Fault Clearance Time</b> may be specified in accordance with the <b>Connection and Interface Agreement</b> for faults on <b>the Transmission System</b>. Slower <b>Fault Clearance Time</b> for faults on the <b>Self-Supply User</b> equipment may be agreed in accordance with the <b>Connection and Interface Agreement</b> but only if <b>System</b> requirements permit. The probability that the slower <b>Fault Clearance Times</b> stated in accordance with the <b>Connection and Interface Agreement</b> by any given fault shall not exceed 5% based on the test samples over a period of 5 years.</p> <p>For the event that the above <b>Fault Clearance Times</b> are not met as a result of failure to operate on the <b>Main Protection System(s)</b>, the <b>Self-Supply User</b> shall provide <b>Back-Up Protection</b>. <b>TRANSCO</b> shall also provide <b>Back-Up Protection</b> and these <b>Back-Up Protections</b> shall be coordinated to provide <b>Discrimination</b> and protect equipment from damage with a safety margin of at least 20% with the respective equipment damage curves.</p>

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		<p><b>and Interface Agreement</b> shall be exceeded by any given fault must be less than 2%.</p> <p>In 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 <b>Self-Supply User</b>. <b>TRANSCO</b> shall also provide <b>Back-Up Protections</b>, and these <b>Back-Up Protections</b> shall be coordinated so as to provide discrimination and protect equipment from damage.</p>	
9	Chapter-3, Connection Conditions, Section-6 (Technical, Design and Operational Criteria)  Clause 6.2.4 Self-Supply User/TRANSCO Connection Point  Sub-Clause 6.2.4.4 Protection Equipment to be provided  Pages 72	<p><b>6.2.4.4 Protection Equipment to be provided</b></p> <p><b>Circuit-breaker fail Protection</b></p> <p>When the <b>Self-Supply User</b> is connected to the <b>Transmission System</b> at 400kV, 220kV or 132kV and a circuit breaker is provided by the <b>Self-Supply User</b> or <b>TRANSCO</b>, circuit breaker fail Protection shall be provided by the <b>Self-Supply User</b> or <b>TRANSCO</b> on this circuit breaker. In the event, following operation of a <b>Protection</b> system, of a failure to interrupt fault current by these circuit-breakers within the <b>Fault Current Interruption Time</b>, the circuit breaker fail <b>Protection</b> 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><b>6.2.4.4 Protection Equipment to be provided</b></p> <p><b>Circuit-breaker fail Protection</b></p> <p>When the <b>Self-Supply User</b> is connected to the <b>Transmission System</b> at 400kV, 220kV or 132kV and a circuit breaker is provided by the <b>Self-Supply User</b> or <b>TRANSCO</b>, circuit breaker fail <b>Protection</b> shall be provided by the <b>Self-Supply User</b> or <b>TRANSCO</b> 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 <b>Fault Clearance Time</b>, the circuit breaker fail <b>Protection</b> is required. The circuit breaker fail <b>Protection</b> shall initiate tripping of all the necessary electrically adjacent circuit breakers including remote ends so as to interrupt the fault current within the next 300ms.</p>