

# Glossary of Terms Used in Reliability Standards

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Term	Acronym	Definition
Adequacy		The ability of the electric system to supply the aggregate electrical demand and energy requirements of the <u>end-use</u> customers at all times, taking into account scheduled and reasonably expected unscheduled outages of system elements.
<u>Adjacent Balancing Authority</u>		<del>Two</del> <u>A Balancing Authority Area that <del>are</del> is interconnected another Balancing Authority Area either 1.) <del>Directly to each other,</del> or 2.) <del>V</del>via a multi-party agreement or transmission tariff.</u>
<u>Agreement</u>		<u>A contract or arrangement, either written or verbal and sometimes enforceable by law.</u>
<u>Area Control Error</u>	<u>ACE</u>	<u>The instantaneous difference between a Balancing Authority's net actual and scheduled interchange, taking into account the effects of <del>f</del>Frequency <del>b</del>Bias and correction for meter error.</u>
Ancillary Service		<u>Those services that are necessary to support the transmission of capacity and energy from resources to loads while maintaining reliable operation of the Transmission Service Provider's <del>T</del>Transmission <del>S</del>system in accordance with <del>G</del>good <del>U</del>Utility <del>P</del>practice. (From FERC order 888-A.)</u>
Anti- <del>aliasing</del> - <u>Aliasing</u> Filter		An analog filter installed at a metering point <del>to remove aliasing errors from the data acquisition process. The filter is designed</del> to remove the high frequency components of the signal over the AGC sample period.
Automatic Generation Control	AGC	Equipment that automatically adjusts generation in a Balancing Authority Area from a central location to maintain <del>its</del> <u>the Balancing Authority's</u> interchange schedule plus <del>frequency</del> - <u>Frequency bias</u> <del>Bias</del> . <u>AGC may also accommodate automatic inadvertent payback and time error correction.</u>

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Available Transfer Capability	ATC	A measure of the transfer capability remaining in the physical transmission network for further commercial activity over and above already committed uses. ATC is defined as the Total Transfer Capability (TTC), less the Transmission Reliability Margin (TRM), less the sum of existing transmission commitments (which includes retail customer service) and the Capacity Benefit Margin (CBM).
Balancing Authority	BA	The <del>responsible</del> entity <del>with the highest level of responsibility for that integrating-integrates</del> resource plans ahead of time, <del>maintaining-maintains</del> load-interchange-generation balance within a Balancing Authority Area, and <del>supporting-supports</del> Interconnection frequency in real time.
Balancing Authority Area		The collection of generation, transmission, and loads within the metered boundaries of the Balancing Authority. The Balancing Authority maintains load-resource balance within this area.
Base Load		The minimum amount of electric power delivered or required over a given period at a constant rate.
Blackstart Capability Plan		A documented procedure for a generating unit or station to go from a shutdown condition to an operating condition delivering electric power without assistance from the electric system. – This procedure is only a portion of an overall system restoration plan.
Bulk Electric System		As defined by the Regional Reliability Organization, the electrical generation resources, transmission lines, interconnections with neighboring systems, and associated equipment, generally operated at voltages of 100 kV or higher. – Radial transmission facilities serving only load with one transmission source are generally not included in this definition.
Burden		Operation of the Bulk Electric System that violates or is expected to violate a System Operating Limit or <del>Interconnected-Interconnection</del> Reliability Operating Limit in the Interconnection, or that violates any other NERC, Regional Reliability Organization, or local operating reliability <del>policies or</del> standards <u>or criteria</u> .

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Capacity Benefit Margin	CBM	That amount of transmission transfer capability reserved by Load-Serving Entities to ensure access to generation from interconnected systems to meet generation reliability requirements. <u>Reservation of CBM by a Load-Serving Entity allows that entity to reduce its installed generating capacity below that which may otherwise have been necessary without interconnections to meet its generation reliability requirements.</u>
Capacity Emergency		A capacity emergency exists when a <del>system's or pool</del> <u>Balancing Authority Area</u> 's operating capacity, plus firm purchases from other systems, to the extent available or limited by transfer capability, is inadequate to meet its demand plus its regulating requirements.
Cascading		The uncontrolled successive <del>loss-failure</del> of system elements triggered by an incident at any location <u>within the Interconnection</u> . <u>Cascading results in widespread electric service interruption, which that cannot be restrained from sequentially spreading beyond an area predetermined by appropriate studies.</u>
Clock Hour		The 60-minute period ending at :00. <u>All surveys, measurements, and reports are based on <del>clock</del> Clock hour Hour periods unless specifically noted.</u>
Cogeneration		Production of electricity from steam, heat, or other forms of energy produced as a by-product of another process.
Compliance Monitor		<del>Function</del> <u>The entity that monitors, reviews, and ensures audits and documents</u> compliance of responsible entities with reliability standards.  <u>NOTE: Def from Functional Model: Monitors, reviews, and ensures compliance with Reliability Standards and administers sanctions or penalties for non-compliance to the standards.</u>
Congestion Management Report		A report <del>generated every time a TLR is issued in the NERC IDC</del> <u>that the Interchange Distribution Calculator issues when a Reliability Coordinator initiates the Transmission Loading Relief procedure</u> . This report identifies the transactions and native and network load curtailments that must be initiated to achieve the loading relief requested by the initiating Reliability Coordinator.

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Constrained Facility		A transmission facility (line, transformer, breaker, etc.) that is approaching, is at, or is beyond its <u>System Operating Security Limit</u> or <u>Interconnection Reliability Operating Limit</u> .
<u>Contingency</u>		<u>The failure, with little or no warning, of one or more elements of the transmission system. This includes, but is not limited to, generator, transmission line, transformer, and circuit breaker failures or misoperations.</u>
Contingency Reserve		The provision of capacity deployed by the Balancing Authority to <del>reduce ACE to</del> meet the Disturbance Control Standard (DCS) and other NERC and Regional Reliability Organization contingency requirements. <del>Contingency Reserve is composed of Contingency Reserve—Spinning and Contingency Reserve—Supplemental.</del>
Contract Path		<del>An specific-agreed upon</del> electrical path for the continuous flow of electrical power between the parties <del>to a power sale of an Interchange Transaction. However, the laws of physics dictate the path the power actually will flow.</del>
Control Performance Standard	CPS	<u>The reliability standard that sets the limits of a Balancing Authority's Area Control Error over a specified time period.</u>
Curtailement		A reduction in the scheduled capacity or energy delivery <u>of an Interchange Transaction.</u>
Curtailement Threshold		The minimum Transfer Distribution Factor which, if exceeded, will subject an Interchange Transaction to curtailement to relieve a transmission facility <del>Constraint</del> <u>constraint.</u>
<u>Demand</u>		<u>1. The rate at which electric energy is delivered to or by a system or part of a system, generally expressed in kilowatts or megawatts, at a given instant or averaged over any designated interval of time. 2. The rate at which energy is being used by the customer.</u>
Demand-Side Management	DSM	The term for all activities or programs undertaken by <del>an</del> <u>electric system Load-Serving Entity</u> or its customers to influence the amount or timing of electricity <u>they</u> use.

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Direct Control Load Management	DCLM	<del>Demand-Side Management The customer demand that can be interrupted by that is under the</del> direct control of the system operator. <del>DCLM may control controlling</del> the electric supply to individual appliances or equipment on customer premises. <del>This type of control, when used by utilities, usually involves residential customers. Direct Control Load Management</del> <u>DCLM</u> as defined here does not include Interruptible Demand.
Dispersed Load by Substations		Substation load information configured to represent a system for power flow or system dynamics modeling purposes, or both.
Distribution Factor	DF	The portion of an Interchange Transaction, <u>typically</u> expressed in per unit, that flows across a transmission facility (Flowgate).
Distribution Provider	<del>DP</del>	Provides and operates the “wires” between the transmission system and the end-use customer. <u>For those end-use customers who are served at transmission voltages, the Transmission Owner also serves as the Distribution Provider. Thus, the Distribution Provider is not defined by a specific voltage, but rather as performing the Distribution function at any voltage.</u>
Disturbance		<u>1. An unplanned event that produces an abnormal system condition. 2. Any perturbation to the electric system. 3. The unexpected change in ACE that is caused by the sudden failure of generation or interruption of load.</u>
Disturbance Control Standard	DCS	<u>The reliability standard that sets the time limit following a Disturbance within which a Balancing Authority must return its Area Control Error to within a specified range.</u>
Dynamic Interchange Schedule or Dynamic Schedule		A telemetered reading or value that is updated in real time and used as a schedule in the AGC/ACE equation and the integrated value of which is treated as a schedule for interchange accounting purposes. – <u>Commonly used for scheduling jointly owned generation to or from another control area.</u>
Dynamic Transfer		The provision of the real-time monitoring, telemetering, computer software, hardware, communications, engineering, energy accounting (including inadvertent interchange), and administration required to electronically move all or a portion of the real energy services associated with a generator or load out of one Balancing Authority Area into another.

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Economic Dispatch		The allocation of demand to individual generating units on line to effect the most economical production of electricity.
Electrical Energy		The generation or use of electric power by a device over a period of time, expressed in kilowatthours (kWh), megawatthours (MWh), or gigawatthours (GWh).
Element		Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. <del>An element may be comprised of one or more components.</del>
Emergency or BES Emergency		Any abnormal system condition that requires automatic or immediate manual action to prevent or limit <del>loss-the failure</del> of transmission facilities or generation supply that could adversely affect the reliability of the <del>Bulk Eelectric systemSystem</del> .
Emergency Rating		The rating as defined by the equipment owner that specifies the level of electrical loading <del>or output</del> , usually expressed in megawatts (MW) <del>or MVar</del> or other appropriate units, that a system, facility, or element can support, <del>produce</del> , or withstand for a finite period. The rating assumes acceptable loss of equipment life or other physical or safety limitations for the equipment involved.
Energy Emergency		A condition when a <del>Load-Load</del> -Serving Entity has exhausted all other options and can no longer provide its customers' expected energy requirements.
<u>Facility Rating</u>		<u>The maximum or minimum voltage, current, frequency, or real or reactive power flow through a facility that does not violate the applicable equipment rating of any equipment comprising the facility.</u>
Fault		An event occurring on an electric system such as a short circuit, a broken wire, or an intermittent connection.
Firm Demand		That portion of the <del>Contract</del> -Demand that a power supplier is obligated to provide except when system reliability is threatened or during emergency conditions.
Firm Transmission Service		The highest quality ( <u>priority</u> ) service offered to customers under a filed rate schedule that anticipates no planned interruption.

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Flowgate		<u>A designated point on the transmission system through which the Interchange Distribution Calculator calculates the power flow from Interchange Transactions.</u>
Forced Outage		1. The removal from service availability of a generating unit, transmission line, or other facility for emergency reasons. 2. The condition in which the equipment is unavailable due to unanticipated failure.
Frequency Bias		A value, usually <del>given expressed</del> in megawatts per 0.1 Hertz (MW/0.1 Hz), associated with a <u>Control Balancing Authority</u> Area that <del>relates the difference between scheduled and actual frequency to the amount of generation required to correct the difference</del> <u>approximates the Balancing Authority Area's response to Interconnection frequency error.</u>
Frequency Bias Setting		A value, <u>usually expressed</u> in MW/0.1 Hz, set into a Balancing Authority <del>AGC equipment</del> <u>ACE</u> algorithm <u>that allows the Balancing Authority to contribute its frequency response to the Interconnection.</u> <del>to represent a Balancing Authority response to a frequency deviation</del>
Frequency Deviation		<del>A departure from scheduled frequency.</del> <u>A change in Interconnection frequency.</u>
<u>Frequency Error</u>		<u>The difference between the actual and scheduled frequency. (<math>F_A - F_S</math>)</u>
Frequency Regulation		The ability of a Balancing Authority to <del>assist the interconnected system in maintaining</del> <u>help the Interconnection maintain</u> Scheduled Frequency. This assistance can include both turbine governor response and <del>automatic</del> <u>Automatic generation</u> <del>Generation control</del> <u>Control</u> .
Frequency Response		(Equipment) The ability of a system or elements of the system to react or respond to a change in system frequency.  (System) The sum of the change in demand, plus the change in generation, divided by the change in frequency, expressed in megawatts per 0.1 Hertz (MW/0.1 Hz).
Generator-to-Load Distribution Factor	GLDF	The algebraic sum of a Generator Shift Factor and a Load Shift Factor to determine the total impact of an Interchange Transaction on an identified transmission facility or <del>monitored</del> <u>Flowgate</u> .

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Term	Acronym	Definition
<u>Generator Operator</u>		<u>The entity that operates generating unit(s) and performs the functions of supplying energy and Interconnected Operations Services.</u>
<u>Generator Owner</u>		<u>Entity that owns and maintains generating units.</u>
Generator Shift Factor	GSF	A factor to be applied to a generator's expected change in output to determine the amount of flow contribution that change in output will impose on an identified transmission facility or <del>monitored-f</del> Flowgate.
Host Balancing Authority		1. A Balancing Authority that confirms and implements Interchange Transactions for a Purchasing Selling Entity that operates generation or serves customers directly within the Balancing Authority's metered boundaries. 2. The Balancing Authority within whose metered boundaries a jointly owned unit is physically located.
Hourly Value		Data measured on a Clock- <del>h</del> Hour basis.
Inadvertent Interchange		The difference between the Balancing Authority's Net Actual Interchange and Net Scheduled Interchange. ( $I_A - I_S$ )
Independent Power Producer	IPP	Any entity that owns or operates an electricity generating facility that is not included in an electric utility's rate base. This term includes, but is not limited to, cogenerators and small power producers and all other nonutility electricity producers, such as exempt wholesale generators, who sell electricity.
Interchange Distribution Calculator	IDC	The mechanism used by Reliability Coordinators in the Eastern Interconnection to calculate the distribution of Interchange Transactions over specific Flowgates. It includes a database of all Interchange Transactions and a matrix of the Distribution Factors for the Eastern Interconnection.
Interchange Transaction		An agreement to transfer energy from a seller to a buyer that crosses one or more Balancing Authority Area boundaries.
<u>Interchange Schedule</u>		An agreed-upon <u>Interchange</u> <del>t</del> Transaction size (megawatts), start and end time, beginning and ending ramp times and rate, and type required for delivery and receipt of power and energy between <u>the sSource and sSink Balancing Authorities</u> <del>the contracting parties and the Control Area(s)</del> involved in the transaction.

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<u>Interchange Transaction Tag</u> or <u>Tag</u>		<u>The details of an Interchange Transaction required for its physical implementation.</u>
Interconnected Operations Service		A service (exclusive of basic energy and transmission services) that is required to support the reliable operation of interconnected Bulk Electric Systems.
Interconnection		When capitalized, any one of the three major electric system networks in North America: Eastern, Western, and ERCOT.
Interconnection Reliability Operating Limit	IROL	The value (such as MW, MVar, Amperes, Frequency or Volts) derived from, or a subset of the System Operating Limits, which if exceeded, could expose a widespread area of the Bulk Electric System to instability, uncontrolled separation(s) or cascading outages.
<u>Interruptible Load</u> or <u>Interruptible Demand</u>		<u>Load Demand that the end-use customer makes available to its Load-Serving Entity via contract or agreement for curtailment.</u>
Intermediate Balancing Authority		A Balancing <u>Authority</u> Area that has connecting facilities in the Scheduling Path between the Sending Balancing Authority Area and Receiving Balancing Authority Area and operating agreements that establish the conditions for the use of such facilities.
Joint Control		Automatic <del>generation-Generation control</del> <u>Control</u> of jointly owned units by two or more Balancing Authorities.
Limiting Element		The element that is <u>1.)</u> <del>is</del> <u>is</u> either operating at its appropriate rating, or <u>2.)</u> <del>would</del> <u>would</u> be following the limiting contingency. <u>Thus, the Limiting Element, and, as a result,</u> establishes a system limit.
Load		An end-use device or customer that receives power from the electric system.
Load-Serving Entity	<u>LSE</u>	Secures energy and transmission service (and related Interconnected Operations Services) to serve the electrical demand and energy requirements of its end-use customers.

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Load Shift Factor	LSF	A factor to be applied to a load's expected change in demand to determine the amount of flow contribution that change in demand will impose on an identified transmission facility or monitored flowgate.
Native Load		<del>The wholesale or retail power customers who by statute, franchise, regulatory requirement, or contract, have an obligation to construct and operate the needed infrastructure to meet the reliable electric needs of such customers. The end-use customers that the Load-Serving Entity is obligated to serve.</del>
Net Actual Interchange		The algebraic sum of all metered interchange over all interconnections between two physically Adjacent Balancing Authority Areas.
Net Energy for Load		<del>The electrical energy requirements of an electric system, defined as system n</del> Net Balancing Authority Area generation, plus energy received from others <del>BAA</del> Balancing Authority Areas's, less energy delivered to others <del>BAA's</del> Balancing Authority Areas through interchange. <del>It includes system BAA</del> Balancing Authority Area losses but excludes energy required for storage at energy storage facilities.
Net Interchange Schedule		The algebraic sum of all Interchange Schedules with each Adjacent Balancing Authority <del>Area</del> .
Net Scheduled Interchange		The algebraic sum of all <del>scheduled transactions</del> <u>Interchange Schedules</u> across a given path or between Balancing Authorities for a given period or instant in time.
Network Integration Transmission Service		Service that allows an electric transmission customer to integrate, plan, economically dispatch and regulate its network reserves in a manner comparable to that in which the Transmission Owner serves Native Load customers.
Non-Firm Transmission Service		Transmission service that is reserved <del>and scheduled</del> on an as-available basis and is subject to curtailment or interruption.
Non-Spinning Reserve		1. That <del>operating-generating</del> reserve not connected to the system but capable of serving demand within a specified time, <del>or</del> 2. interruptible load that can be removed from the system in a specified time.

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Normal Rating		The rating as defined by the equipment owner that specifies the level of electrical loading, usually expressed in megawatts (MW) or other appropriate units that a system, facility, or element can support or withstand through the daily demand cycles without loss of equipment life.
Off-Peak		Those hours or other periods defined by NAESB business practices, contract, agreements, or guides as periods of lower electrical demand.
On-Peak		Those hours or other periods defined by NAESB business practices, contract, agreements, or guides as periods of higher electrical demand.
Open Access Same Time Information Service	OASIS	An electronic posting system <u>that the Transmission Service Provider maintains</u> for transmission access data <u>and</u> that allows all transmission customers to view the data simultaneously.
Open Access Transmission Tariff	OATT	Electronic transmission tariff accepted by the U.S. Federal Energy Regulatory Commission requiring the <del>transmission</del> <u>Transmission Service Provider</u> to furnish to all shippers with non-discriminating service comparable to that provided by <del>transmission</del> <u>Transmission owners</u> <u>Owners</u> to themselves.
Operating Reserve		That capability above firm system demand required to provide for regulation, load forecasting error, equipment forced and scheduled outages and local area protection. It consists of spinning and non-spinning reserve.
Operating Reserve - Spinning		The portion of Operating Reserve <del>provided from</del> consisting of: <ul style="list-style-type: none"> <li>• Generation synchronized to the system and fully available to serve load within the Disturbance Recovery Period following the contingency event; or</li> <li>• Load fully removable from the system within the Disturbance Recovery Period following the contingency event.</li> </ul>

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Operating Reserve - Supplemental		<p>The portion of Operating Reserve <del>provided from</del> consisting of:</p> <ul style="list-style-type: none"> <li>• Generation (synchronized or capable of being synchronized to the system) that is fully available to serve load within the Disturbance Recovery Period following the contingency event; or</li> <li>• Load fully removable from the system within the Disturbance Recovery Period following the contingency event.</li> </ul>
Overlap Regulation Service		<p>A method of providing regulation service in which the Balancing Authority providing the regulation service incorporates <del>all of the other</del> <u>another</u> Balancing Authority's <del>tie lines</del> <u>actual interchange</u>, frequency response, and schedules into <del>its own</del> <u>providing Balancing Authority's</u> AGC/ACE equation.</p>
Peak Demand		<p><del>The highest electric requirement occurring in a given period (e.g., an hour, a day, month, season, or year). For an electric system, it is equal to the sum of the metered net outputs of all generators within a system and the metered line flows into the system, less the metered line flows out of the system.</del> <u>1. The highest hourly integrated Net Energy For Load within a Balancing Authority Area occurring within a given period (e.g., day, month, season, or year). 2. The highest instantaneous demand within the Balancing Authority Area.</u></p>
Planning Authority		<p><del>A function</del> <u>The responsible entity</u> that coordinates and integrates transmission facility and service plans, resource plans, and protection systems.</p>
Point of Delivery	<u>POD</u>	<p><del>A point on the electric system where a power supplier or wheeling entity delivers electricity to the receiver of that energy or to a wheeling entity. This point could include an interconnection with another system or a substation where the transmission provider's transmission and distribution systems are connected to another system.</del> <u>A location that the Transmission Service Provider specifies on its transmission system where an Interchange Transaction leaves or a Load-Serving Entity receives its energy.</u></p>

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Point of Receipt	<u>POR</u>	<del>A point on the electrical system where an entity receives electricity from a power supplier or wheeling entity. This point could include an interconnection with another system or generator bus bar.</del> <u>A location that the Transmission Service Provider specifies on its transmission system where an Interchange Transaction enters or a Generator delivers its output.</u>
Point to Point Transmission Service	PTP	The reservation and transmission of capacity and energy on either a firm or non-firm basis from the Point(s) of Receipt to the Point(s) of Delivery.
<del>Power Pool</del>		<del>Two or more interconnected electric systems planned and operated to supply power for their combined demand requirements.</del>
Pro Forma Tariff		<u>Usually refers to</u> <del>the</del> standard OATT and/or associated transmission rights mandated by the U.S. Federal Energy Regulatory Commission Order No. 888.
Pseudo-Tie		A telemetered reading or value that is updated in real time and used as a <u>“virtual”</u> tie line flow in the AGC/ACE equation but for which no physical tie or energy metering actually exists. <del>–</del> The integrated value is used as a metered MWh value for interchange accounting purposes.
Purchasing-Selling Entity		The entity that purchases or sells, and takes title to, energy, capacity, and Interconnected Operations Services. Purchasing-Selling Entities may be affiliated or unaffiliated merchants and may or may not own generating facilities.
Ramp Rate <u>or</u> <u>Ramp</u>		(Schedule) The rate, expressed in megawatts per minute, at which the interchange schedule is attained during the ramp period.  <u>(Generator) The rate, expressed in megawatts per minute, that a generator changes its output.</u>
Rating		The operational limits of <del>an electric system, facility, or a</del> <u>transmission system</u> element under a set of specified conditions.

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Reactive Power		The portion of electricity that establishes and sustains the electric and magnetic fields of alternating-current equipment. <u>Reactive power must be supplied to most types of magnetic equipment, such as motors and transformers. It also must supply the reactive losses on transmission facilities. Reactive power is provided by generators, synchronous condensers, or electrostatic equipment such as capacitors and directly influences electric system voltage. It is usually expressed in kilovars (kvar) or megavars (Mvar).</u>
Real Power		<del>The rate of producing, transferring, or using electrical energy, usually expressed in kilowatts (kW) or megawatts (MW). The portion of electricity that supplies energy to the load.</del>
Reallocation		The total or partial curtailment of Transactions during TLR Level 3a or 5a to allow Transactions using higher priority to be implemented.
<u>Regional Reliability Organization</u>		<del>1. One of the NERC Regional Reliability Organizations. An entity that ensures that a defined area of the Bulk Electric System is reliable, adequate and secure. 2. A member of the North American Electric Reliability Council. The Regional Reliability Organization can serve as the Compliance Monitor.</del>
Regional Reliability Plan		<del>The plan that explains how specifies the Reliability Coordinators and Balancing Authorities within the Regional Reliability Organization, and explains how reliability coordination will be accomplished. will meet the NERC Standards that deal with operational security.</del>
Regulating Reserve		An amount of <del> reserve responsive to Automatic Generation Control, which is sufficient to provide normal regulating margin.</del>

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Regulation Service		The process whereby one Balancing Authority contracts to provide corrective response to all or a portion of the ACE of another Balancing Authority. <del>The controlling utility-Balancing Authority providing the response</del> assumes the obligation of meeting all applicable control criteria as specified by NERC <u>for itself and the Balancing Authority for which it is providing the Regulation Service.</u> <del>Adjustments to control parameters shall be per applicable NERC Operating Policies.</del> <del>Control may be transferred by transmittal of an ACE quantity or the transmittal of the actual tie flows and corresponding schedules (see Overlap Regulation Service and Supplemental Regulation Service).</del>
Reliability Coordinator Area		The collection of generation, transmission, and loads within the boundaries of the Reliability Coordinator. Its boundary coincides with one or more Balancing Authority Areas.
Reliability Coordinator Information System	RCIS	<u>The system that Reliability Coordinators use to post messages and share operating information in real time.</u>
Reliability Coordinator		The entity <del>that is with</del> <u>that is</u> the highest level of authority who <del>is NERC holds</del> <u>is</u> responsible for the reliable operation of the Bulk Electric System, has the Wide Area view of the Bulk Electric System, and has the operating tools, processes and procedures, including the authority to prevent or mitigate emergency operating situations in both next-day analysis and real-time operations.  The <del>entity with</del> <u>Reliability Coordinator has</u> the purview that is broad enough to enable the calculation of Interconnection Reliability Operating Limits, which may be based on the operating parameters of <del>other</del> transmission systems beyond <del>the any</del> Transmission Operator's vision. <del>The highest level of all entities responsible for ensuring the real time operating reliability of the interconnected bulk electric transmission systems within a Reliability Authority Area.</del>
Remedial Action Scheme	RAS	See "Special Protection System"

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Reportable Disturbance		<del>The definition of a reportable disturbance shall be provided by the respective Regional Reliability Organization. The definition shall include events</del> Any event that causes an ACE change greater than or equal to 80% of a <del>control area's</del> Balancing Authority's or reserve sharing group's most severe contingency. <del>The definition of a reportable disturbance must be is</del> specified in the operating policy adopted by each Regional Reliability Organization. <del>This definition may not be retroactively adjusted in response to observed performance.</del>
Reserve Sharing Group		A group whose members consist of two or more Balancing Authorities that collectively maintain, allocate, and supply operating reserves required for each Balancing Authority's use in recovering from contingencies within the group. <del>Scheduling energy in</del> from an Adjacent Balancing Authority to aid recovery need not constitute reserve sharing provided the transaction is ramped in over a period <del>which</del> the supplying party could reasonably be expected to load generation in (e.g., ten minutes). <del>If the transaction is ramped in quicker (e.g., between zero and ten minutes) then, for the purposes of Disturbance Control Performance, the Areas become a Reserve Sharing Group.</del>
Response Rate		The <del>rate of load change</del> Ramp Rate that a generating unit can achieve <del>for normal loading purposes</del> under normal operating conditions expressed in megawatts per minute (MW/Min).
Schedule		(Verb) To set up a plan or arrangement for an Interchange Transaction.  (Noun) An Interchange Schedule.
Scheduled Frequency		60.0 Hertz, except during a time correction.
Scheduling Entity		An entity responsible for approving and implementing Interchange Schedules.
Scheduling Path		The Transmission Service arrangements reserved by the <del>Purchasing-Purchasing-</del> Selling Entity for a Transaction.
Sink Balancing Authority		The Balancing Authority in which the load (sink) is located for an Interchange Transaction. <del>(This will also be a Receiving Balancing Authority for the resulting Interchange Schedule.)</del>

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Term	Acronym	Definition
Source Balancing Authority		The Balancing Authority in which the generation (source) is located for an Interchange Transaction. (This will also be a Sending <del>The</del> -Balancing Authority for the resulting Interchange Schedule.)
Special Protection System (Remedial Action Scheme)		A protection system designed to detect abnormal or predetermined system conditions, and take corrective actions other than and/or in addition to the isolation of faulted components to maintain system reliability. <del>Such</del> action may include changes in demand, generation (MW and Mvar), or system configuration to maintain system stability, acceptable voltage, or power flows. <del>An</del> SPS does not include (a) underfrequency or undervoltage load shedding or (b) fault conditions that must be isolated or (c) out-of-step relaying (not designed as an integral part of an SPS). <del>Also</del> called Remedial Action Scheme.
Spinning Reserve		Unloaded generation that is synchronized and ready to serve additional demand.
Stability <del>BES</del> Stability		The ability of an electric system to maintain a state of equilibrium during normal and abnormal <del>system</del> conditions or disturbances.
Stability Limit		The maximum power flow possible through some particular point in the system while maintaining stability in the entire system or the part of the system to which the stability limit refers.
Supervisory Control and Data Acquisition	SCADA	A system of remote control and telemetry used to monitor and control the transmission system.
Supplemental Regulation Service		A method of providing regulation service in which the Balancing Authority providing the regulation service receives a signal representing all or a portion of the other Balancing Authority's ACE.
Surge		A transient variation of current, voltage, or power flow in an electric circuit or across an electric system.
System		A combination of generation, transmission, and distribution components.

## Glossary of Terms Used in Reliability Standards

Term	Acronym	Definition
System Operating Limit		<p>The value (such as MW, MVar, Amperes, Frequency or Volts) that satisfies the most limiting of the prescribed operating criteria for a specified system configuration to ensure operation within acceptable reliability criteria. System Operating Limits are based upon certain operating criteria. These include, but are not limited to:</p> <ul style="list-style-type: none"> <li>• Facility Ratings (Applicable pre- and post-Contingency equipment or facility ratings)</li> <li>• Transient Stability Ratings (Applicable pre- and post-Contingency Stability Limits)</li> <li>• Voltage Stability Ratings (Applicable pre- and post-Contingency Voltage Stability)</li> <li>• System Voltage Limits (Applicable pre- and post-Contingency Voltage Limits)</li> </ul>
System Operator		An individual at <del>an electric system a</del> control center ( <u>Balancing Authority, Transmission Operator, Generator Operator, Reliability Coordinator</u> ) whose responsibility it is to monitor and control that electric system in real time.
<del>BES Operator</del>		<del>A person authorized to operate or supervise the operation of the bulk electric system.</del>
Telemetry		The process by which measurable electrical quantities from substations and generating stations are instantaneously transmitted <del>using telecommunication techniques. to the control center, and by which operating commands from the control center are transmitted to the substations and generating stations.</del>
Thermal Rating		The maximum amount of electrical current that a transmission line or electrical facility can conduct over a specified time period before it sustains permanent damage by overheating or before it <u>sags to the point that it</u> violates public safety requirements.
Tie Line		A circuit connecting two <del>or more transmission systems of an electric system.</del> <u>Balancing Authority Areas.</u>
Tie Line Bias		<del>A mode of operation under automatic generation control in which the Area Control Error is determined by the actual net interchange minus the biased scheduled net interchange. A mode of Automatic Generation Control that allows the Balancing Authority to 1.) maintain its Interchange Schedule and 2.) respond to Interconnection frequency error.</del>

## Glossary of Terms Used in Reliability Standards

Term	Acronym	Definition
Time Error		<p><del>An</del> <u>The accumulated time</u> difference between <u>the Interconnection time measured at the</u> Balancing Authority <u>(ies) system time</u> and the time <del>standard</del> <u>specified by the National Institute of Standards and Technology.</u> <del>Time error is caused by a deviation in Interconnection frequency from 60.0 Hertz</del> <u>the accumulation of Frequency Error over a given period.</u></p>
Time Error Correction		<p>An offset to the Interconnection's scheduled frequency to <del>correct for the time error accumulated on electric clocks</del> <u>return the Interconnection's Time Error to a predetermined value.</u></p>
TLR Log		<p>Report required to be filed after every TLR Level 2 or higher in a specified format. <del>The NERC IDC prepares the report for review by the issuing Reliability Coordinator.</del> <u>After approval by the issuing Reliability Coordinator, the report is electronically filed in a public area of the NERC web site.</u></p>

## Glossary of Terms Used in Reliability Standards

Term	Acronym	Definition
Total Transfer Capability	TTC	<p>The amount of electric power that can be <u>reliably</u> transferred over the interconnected transmission network, <u>in a reliable manner based on all of the following conditions:</u></p> <ol style="list-style-type: none"> <li><del>1. For the existing or planned system configuration, and with normal (precontingency) operating procedures in effect, all facility loadings are within normal ratings and all voltages are within normal limits.</del></li> <li><del>2. The electric systems are capable of absorbing the dynamic power swings, and remaining stable, following a disturbance that results in the loss of any single electric system element, such as a transmission line, transformer, or generating unit.</del></li> <li><del>3. After the dynamic power swings subside following a disturbance that results in the loss of any single electric system element as described in 2 above, and after the operation of any automatic operating systems, but before any postcontingency operator initiated system adjustments are implemented, all transmission facility loadings are within emergency ratings and all voltages are within emergency limits.</del></li> <li><del>4. With reference to condition 1 above, in the case where precontingency facility loadings reach normal thermal ratings at a transfer level below that at which any first contingency transfer limits are reached, the transfer capability is defined as that transfer level at which such normal ratings are reached.</del></li> <li><del>5. In some cases, individual system, power pool, subregional, or Regional planning criteria or guides may require consideration of specified multiple contingencies, such as the outage of transmission circuits using common towers or rights of way, in the determination of transfer capability limits. If the resulting transfer limits for these multiple contingencies are more restrictive than the single contingency considerations described above, the more restrictive reliability criteria or guides must be observed.</del></li> </ol>
Transaction		See Interchange Transaction.

## Glossary of Terms Used in Reliability Standards

Term	Acronym	Definition
Transfer Capability		The measure of the ability of interconnected electric systems to move or transfer power <i>in a reliable manner</i> from one area to another over all transmission lines (or paths) between those areas under specified system conditions. The units of transfer capability are in terms of electric power, generally expressed in megawatts (MW). <del>In this context, “area” may be an individual electric system, power pool, Control Area, subregion, or NERC Region, or a portion of any of these. Transfer capability is directional in nature. That is, t</del> The transfer capability from “Area A” to “Area B” is <i>not</i> generally equal to the transfer capability from “Area B” to “Area A.”
Transfer Distribution Factor		See Distribution Factor.
Transmission		An interconnected group of lines and associated equipment for the movement or transfer of electric energy between points of supply and points at which it is transformed for delivery to customers or is delivered to other electric systems.
Transmission Constraints		<del>A</del> Limitations on <del>a transmission line or one or more transmission</del> elements that may be reached during normal or contingency system operations.
Transmission Customer		<u>1.</u> Any eligible customer (or its designated agent) that can or does execute a transmission service agreement or can or does receive transmission service. <u>2. Any of the following responsible entities: Generator Owner, Load-Serving Entity, or Purchasing-Selling Entity.</u>
Transmission Operator		The entity responsible for the reliability of its “local” transmission system, and that operates or directs the operations of the transmission facilities. <del>– The Transmission Operator may not be aware of the impact of its system on any Interconnection Reliability Operating Limit.</del>
<u>Transmission Owner</u>		<u>The entity that owns and maintains transmission facilities.</u>
<u>Transmission Planner</u>		<u>The entity that develops a long-term (generally one year and beyond) plan for the reliability (adequacy) of the interconnected bulk electric transmission systems within its portion of the Planning Authority Area.</u>

## Glossary of Terms Used in Reliability Standards

Term	Acronym	Definition
Transmission Service		<del>1. Services provided to the Transmission Customer by the Transmission Service Provider to move energy from a Point of Receipt to a Point of Delivery. needed to move energy from a receipt point to a delivery point provided to customers by the transmission provider. 2. As defined by FERC: Point To Point Transmission Service provided under Part II of the Tariff on a firm and non-firm basis.</del>
Transmission Service Provider		The entity that administers the transmission tariff and provides <del>t</del> Transmission <del>s</del> Services to <del>qualified market participants</del> <u>Transmission Customers</u> under applicable transmission service agreements.
Wide Area		The entire Reliability Coordinator Area as well as the critical flow and status information from adjacent Reliability Coordinator Areas as determined by detailed system studies to allow the calculation of Interconnected Reliability Operating Limits.