



# Alberta Reliability Standards Glossary of Terms

Effective: XXX

“adjacent balancing authority” means a *balancing authority area* that is interconnected with another *balancing authority area* either directly or via a multi-party agreement or transmission tariff;

“balancing authority” or “BA” means a responsible entity that integrates resource plans ahead of time, maintains load-interchange generation balance within a *balancing authority area*;

“balancing authority area” means the collection of generation, transmission and loads, within the metered boundaries of a *balancing authority area*, and supports *Interconnection* frequency in real-time;

“bulk electric system” or “BES” as defined by the Regional Reliability Organization, means the electrical generation resources, transmission lines, interconnections, with neighbouring systems, and associated equipment, generally operated at voltages of 100kV or higher; radial transmission facilities serving only load with one transmission source are generally not included in this definition;

“cascading” means the uncontrolled successive loss of system elements triggered by an incident at any location; cascading results in widespread electric services interruption that cannot be restrained from sequentially spreading beyond an area predetermined by studies;

“compliance monitor” means the entity(s) appointed by the Commission to carry out compliance monitoring of *reliability standards*;

“contingency” means the unexpected failure or outage of a system component, such as a generating unit, transmission line, circuit breaker, switch or electrical element;

“control performance standard” or “CPS” means the reliability standard that sets the limits of a balancing authority’s area control error over a specified time period;

“facility rating” means 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;

“frequency bias” means a value, usually expressed in megawatts per 0.1 Hertz (MW/0.1 Hz), associated with a balancing authority area that approximates the balancing authority area’s response to *Interconnection* frequency error;

“frequency bias setting” means a value, usually expressed in MW/0.1 Hz, set into a balancing authority ACE algorithm that allows the balancing authority to contribute its frequency response to the *Interconnection*;

“frequency deviation” means a change in *Interconnection* frequency;

**Deleted:** “automatic generation control” or “AGC” means equipment that automatically adjusts a control area’s generation in a balancing authority area from a central location to maintain the balancing authority’s frequency or interchange schedule plus or minus frequency bias. AGC may also accommodate automatic inadvertent payback and time error correction;¶  
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"frequency error" means the difference between the actual and scheduled frequency. ( $F_A - F_S$ )

"frequency response" means, for an equipment, the ability of a *system* or elements of the *system* to react or respond to a change in *system* frequency, or for a *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);

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"high voltage direct current" or "HVDC" means a *high voltage direct current* power transmission facility that uses direct current to transfer power;

"industrial system" or "IS" means "industrial system" as defined in the *Hydro and Electric Energy Act*.

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"interchange" means energy transfers that cross *balancing authority* boundaries;

"interconnected transmission operator" means the entity outside of Alberta responsible for the reliability of its "local" transmission system, and that operates or directs the operations of the transmission facilities.

"interconnection" means the electrical connection of the AIES with any electric *system* in a jurisdiction bordering Alberta. When capitalized, it means any one of the three major electric *system* networks in North America: Eastern, Western, and ERCOT;

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"interconnection reliability operating limits" or "IROL" means a *system operating limit*, that if violated, could lead to instability, uncontrolled separation or *cascading outages* that adversely impact the *reliability* of the *bulk electric system*;

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"net actual interchange" means the algebraic sum of all metered interchange over all interconnections between two physically adjacent balancing authority areas;

"net energy for load" means net *balancing authority area* generation, plus energy received from other *balancing authority areas*, less energy delivered to *balancing authority areas* through *interchange*; it includes *balancing authority area* losses but excludes energy required for storage at energy storage facilities;

"net interchange schedule" means the algebraic sum of all interchange schedules with each adjacent balancing authority;

"peak demand" means:

- the highest hourly integrated *net energy for load* within a *balancing authority area* occurring within a given period;
- the highest instantaneous demand within the *balancing authority area*;

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"rating" means the operational limits of a transmission system element under a set of specified conditions;

"receiving balancing authority" means the balancing authority importing the interchange;

"schedule" means to set up a plan or arrangement for an interchange transaction;

"scheduling path" means the transmission service arrangements reserved by a market participant for an interchange transaction;

"sending balancing authority" means the balancing authority exporting the interchange;

"stability" means the ability of an electric system to maintain a state of equilibrium during normal and abnormal conditions;

"stability limit" means 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;

"system operating limit" means the value (MW, MVar, amperes, frequency or volts) that satisfies the most limiting of prescribed operating criteria for a specified system configuration to ensure operation within acceptable reliability criteria; system operating limits are based upon certain operating criteria:

- facility ratings (applicable pre- and post-contingency equipment or facility ratings)
- transient stability ratings (applicable pre- and post-contingency stability limits)
- voltage stability ratings (applicable pre- and post-contingency voltage stability)
- system voltage limits (applicable pre- and post-contingency voltage limits)

"system" means a combination of generation, transmission, and distribution of components;

"tie line" means a circuit connecting two balancing authority areas;

"transmission operator" means the entity responsible for the reliability of its "local" transmission system, and that operates or directs the operations of the transmission facilities;

"transmission vegetation management program" or "TVMP" means a plan for vegetation management work to ensure the reliability of electric transmission systems;

"VRC" means the Vancouver Reliability Coordinator.

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