

“*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;

“*arranged interchange*” means the state where the *interchange authority* has received the *interchange* information (initial or revised);

“*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*;

“*confirmed interchange*” means the state where the *interchange authority* has verified the *arranged interchange*;

“*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 ACE* over a specified time period;

“*corrective action plan*” means a list of actions and an associated timetable for implementation to remedy a specific problem;

“*demand*” means:

- 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;

- the rate at which electric energy is being used by the *demand customer*;

“*dependability-based misoperation*” means the absence of a *protection system* or *RAS* operation when intended. Dependability is a component of *reliability* and is the measure of a device’s certainty to operate when required;

“*element*” means any electrical device, comprised of one or more components, with terminals that may be connected to other electrical devices such as a generating unit, transformer, circuit breaker, bus section, or transmission line;

“*facility*” means a set of electrical equipment that operates as a single *bulk electric system element*, including without limitation, a transmission line, generating unit, shunt compensator, or transformer;

“*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;

“*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);

“*functionally equivalent protection system* or “*FEPS*” means a *protection system* that provides performance as follows:

- each *protection system* can detect the same faults within the zone of protection and provide the clearing times and coordination needed to comply with all *reliability standards*;
- each *protection system* may have different components and operating characteristics;

“functionally equivalent RAS” or “FERAS” means a RAS that provides the same performance as follows:

- each RAS can detect the same conditions and provide mitigation to comply with all *reliability standards*;
- each RAS may have different components and operating characteristics;

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

“interchange” means energy transfers that cross *balancing authority* boundaries;

“interchange authority” means the responsible entity that authorizes implementation of valid and balanced *interchange schedules* between *balancing authority areas*, and ensures communication of *interchange* information for *reliability* assessment purposes;

“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;

“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*;

“misoperation” means any one of the following:

- any failure of a *protection system element* to operate within the specified time when a fault or abnormal condition occurs within a zone of protection;
- any operation for a fault not within a zone of protection, except an operation as backup protection for a fault in an adjacent zone that is not cleared within a specified time for the protection for that zone;
- any unintentional *protection system* operation when no fault or other abnormal condition has occurred unrelated to on-site maintenance and testing activity;

“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;

"*normal clearing*" means that a *protection system* operates as designed and the fault is cleared in the time normally expected with proper functioning of the installed *protection systems*;

"*owner of industrial system*" means the owner of an industrial system designated as such by the *Commission* in accordance with the Hydro and Electric Energy Act and includes the operator of such *system*;

"*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*;

"*protection system*" means protective relays, associated communication systems, voltage and current sensing devices, station batteries and DC control circuitry;

"*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;

"*security-based misoperation*" means a *misoperation* caused by the incorrect operation of a *protection system* or *RAS*. Security is a component of *reliability* and is the measure of a device's certainty not to operate falsely;

"*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;

“surge” means transient variation of current, voltage, or power flow in an electric circuit or across an electric system;

"system operating limit" or “SOL” 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 Maintenance and Inspection Plan” or “TMIP” means a written plan for the regular and ongoing maintenance of *transmission facilities*;

“transmission connected end-use customer” means an entity purchasing electricity for their own use that are connected to the AIES at a high voltage level above 25 kV;

“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 service provider” means the entity that administers the transmission tariff and provides transmission service to *Transmission Customers* under applicable transmission service agreements;

"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*.