

Stakeholder Comment and Rationale Form

AESO AUTHORITATIVE DOCUMENT PROCESS

Stakeholder Consultation Draft

Date: 2011-08-04

New, Amended and Removed Reliability Standards Definitions

Date of Request for Comment [yyyy/mm/dd]: <u>2011-08-04</u> Period of Consultation [yyyy/mm/dd]: <u>2011-08-04</u> through <u>2011-08-19</u> Comments From: <u>ATCO Electric</u> Date [yyyy/mm/dd]: <u>2011-08-17</u>	Contact: <u>Tien Tran</u> Phone: <u>780-420-5615</u> E-mail: <u>tien.tran@atcoelectric.com</u>
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Definitions – New				
Existing	Proposed	Rationale	Stakeholder Comments and/or Alternate Proposal	AESO Reply
No definition currently exists in the reliability standards.	<p>“aggregated generating facility” means an aggregation of generating units, including any reactive power resources, which:</p> <ul style="list-style-type: none"> (i) the ISO designates as an aggregated generating facility and publishes on a list posted on the AESO website; and (ii) are situated in the same proximate location at one or more point of connections. 	<p>The content of this definition was approved for use in the ISO rules after consulting on the Package 4 definition changes which came into effect on September 7, 2010. This version of the definition has been updated to reflect current AESO drafting standards. Namely, the term is presented in the singular and the meaning is written in the active rather than the passive voice.</p> <p>Because this definition is used in</p>	<p><i>Comment # 1: Insert Comments / Reason for Position (if any)</i></p>	

		<p>upcoming reliability standards, the AESO proposes that it be approved for use in the reliability standards.</p>		
	<p>“apparent power” means the total power, in MVA, in an alternating current power system and is calculated as the vector sum of real power and reactive power.</p>	<p>This definition was amended and approved for use in the ISO rules after consulting on the Package 5 definition changes which came into effect on July 23, 2010.</p> <p>Because this definition is used in the definitions of “power factor” and “reactive power”, the AESO proposes that it be approved for use in the reliability standards.</p>	<p>The Consolidated Authoritative Document Glossary (CADG) presently contains “apparent power” as an Alberta Reliability Standards (ARS) definition.</p>	
	<p>“business day” means a day other than:</p> <ul style="list-style-type: none"> (i) a holiday during which banks in Alberta are generally closed; (ii) Saturday; or (iii) Sunday. 	<p>This definition was amended and approved for use in the ISO rules after consulting on the Package 6 definition changes which came into effect on December 1, 2010. It is currently used in EOP-002-AB-2, PRC-004-WECC-AB-1 and the definition of “on peak”.</p> <p>Because the AESO is proposing to eventually delete the language in the current reliability standards which incorporates ISO rules definitions into the reliability standards and because this definition is also used in upcoming reliability standards,</p>	<p>The CADG presently contains “business day” as an ARS definition.</p> <p>There are 2 identical “business day” definitions that can be combined.</p>	

		the AESO proposes that it be specifically approved for use in the reliability standards.		
	<p>“collector bus” means the low voltage side of any step-up transformers connected to the transmission system where the real power and reactive power produced by any generating units or reactive power resources, or both of them, are collected.</p>	<p>This definition was approved for use in the ISO rules after consulting on the Package 4 definition changes which came into effect on September 7, 2010.</p> <p>Because this definition is used in upcoming reliability standards, the AESO proposes that it be approved for use in the reliability standards.</p>		
	<p>“generating unit” as defined in the Act means the component of a power plant that produces, from any source, electric energy and ancillary services, and includes a share of the following associated facilities that are necessary for the safe, reliable and economic operation of the generating unit, which may be used in common with other generating units:</p> <ul style="list-style-type: none"> (i) fuel and fuel handling equipment; (ii) cooling water facilities; (iii) switch yards; (iv) other items. 	<p>This definition was amended and approved for use in the ISO rules after consulting on the Package 1 definition changes which came into effect on December 1, 2010. It is currently used in EOP-002-AB-2, EOP-003-AB-1, FAC-001-AB-0, PRC-001-AB-1, PRC-004-AB-1, PRC-004-WECC-AB-1, TPL-001-AB-0, TPL-002-AB-0, TPL-003-AB-0 and TPL-004-AB-0.</p> <p>Because the AESO is proposing to eventually delete the language in the current reliability standards which incorporates ISO rules definitions into the reliability standards and because this</p>	<p>The CADG presently contains “generating unit” as an ARS definition.</p>	

		definition is also used in upcoming reliability standards, the AESO proposes that it be specifically approved for use in the reliability standards.		
	<p>“interconnected electric system” as defined in the Act means all transmission facilities and all electric distribution systems in Alberta that are interconnected, but does not include an electric distribution system or a transmission facility within the service area of the City of Medicine Hat or a subsidiary of the City, unless the City passes a bylaw that is approved by the Lieutenant Governor in Council under section 138.</p>	<p>This definition was amended and approved for use in the ISO rules after consulting on the Package 1 definition changes which came into effect on December 1, 2010.</p> <p>Because this definition is used in upcoming reliability standards, the AESO proposes that it be approved for use in the reliability standards.</p>	<p>The CADG presently contains “Interconnected Electric System” as an ARS definition.</p> <p>The CADG definition also includes the words “of the Act” at the end of the definition.</p>	
	<p>“ISO” means the Independent System Operator as defined in the Act being the corporation established by section 7 of the Act.</p>	<p>This definition was amended and approved for use in the ISO rules after consulting on the Package 1 definition changes which came into effect on December 1, 2010. It is used extensively in the current reliability standards.</p> <p>Because the AESO is proposing to eventually delete the language in the current reliability standards which incorporates ISO rules</p>	<p>The CADG presently contains “ISO” as an ARS definition.</p>	

		<p>definitions into the reliability standards and because this definition is also used in upcoming reliability standards, the AESO proposes that it be specifically approved for use in the reliability standards.</p>		
	<p>“legal owner” means the person who owns electric industry property including any one or more of:</p> <ul style="list-style-type: none"> (i) a generating unit; (ii) any aggregated generating facility; (iii) a transmission facility; (iv) an electric distribution system; (v) an industrial system that has been designated as such by the Commission; and (vi) a load facility with system access service under subsection 101(2) of the Act. 	<p>This definition was approved for use in the ISO rules after consulting on the Package 4 definition changes which came into effect on September 7, 2010.</p> <p>Because this definition is used in upcoming reliability standards, the AESO proposes that it be approved for use in the reliability standards.</p>		
	<p>“market participant” as defined in the Act means:</p> <ul style="list-style-type: none"> (i) any person that supplies, generates, transmits, distributes, trades, exchanges, purchases or sells electricity, electric energy, electricity services 	<p>This definition was amended and approved for use in the ISO rules after consulting on the Package 2 definition changes which came into effect on December 16, 2009.</p> <p>Because this definition is used in</p>	<p>The CADG presently contains “market participant” as an ARS definition.</p>	

	<p>or ancillary services; or (ii) any broker, brokerage or forward exchange that trades or facilitates the trading of electricity, electric energy, electricity services or ancillary services.</p>	<p>upcoming reliability standards, the AESO proposes that it be approved for use in the reliability standards.</p>		
	<p>“maximum authorized real power” means: (i) for an aggregated generating facility with one or more collector busses, the sum of the maximum gross real power that the ISO has authorized the generating units to deliver to those collector busses; (ii) for an aggregated generating facility without a collector bus, the maximum gross real power that the ISO has authorized each generating unit to deliver to its generator terminal; or (iii) for a generating unit that is not part of an aggregated generating facility, the maximum gross real power that the ISO authorizes the generating unit to deliver to its generator terminal.</p>	<p>This definition was approved for use in the ISO rules after consulting on the Package 4 definition changes which came into effect on September 7, 2010.</p> <p>Because this definition is used in upcoming reliability standards, the AESO proposes that it be approved for use in the reliability standards.</p>		

	<p>“operator” means a person given expressed authority by a legal owner to operate on the legal owner's behalf any one or more of its electric industry properties, including:</p> <ul style="list-style-type: none"> (i) a generating unit; (ii) any aggregated generating facilities; (iii) a transmission facility; (iv) an electric distribution system; (v) an industrial system that has been designated as such by the Commission; and (vi) a load facility with system access service under subsection 101(2) of the Act; <p>and includes the legal owner, if no such other person has been so authorized.</p>	<p>This definition was approved for use in the ISO rules after consulting on the Package 4 definition changes which came into effect on September 7, 2010.</p> <p>Because this definition is used in upcoming reliability standards, the AESO proposes that it be approved for use in the reliability standards.</p>		
	<p>“power factor” means the ratio of real power to apparent power.</p>	<p>This definition was amended and approved for use in the ISO rules after consulting on the Package 5 definition changes which came into effect on July 23, 2010. It is currently used in FAC-001-AB-0.</p> <p>Because the AESO is proposing to eventually delete the language in the current reliability standards which incorporates ISO rules</p>	<p>The CADG presently contains “power factor” as an ARS definition.</p>	

		<p>definitions into the reliability standards and because this definition is also used in upcoming reliability standards, the AESO proposes that it be specifically approved for use in the reliability standards.</p>		
	<p>“reactive power” means the power, in MVA_r, developed when there are inductive, capacitive or nonlinear elements in an alternating current power system and is calculated as the vector difference between apparent power and real power.</p>	<p>This definition was amended and approved for use in the ISO rules after consulting on the Package 5 definition changes which came into effect on July 23, 2010. It is currently used in FAC-001-AB-0, TPL-001-AB-0, TPL-002-AB-0, TPL-003-AB-0 and TPL-004-AB-0.</p> <p>Because the AESO is proposing to eventually delete the language in the current reliability standards which incorporates ISO rules definitions into the reliability standards and because this definition is also used in upcoming reliability standards, the AESO proposes that it be specifically approved for use in the reliability standards.</p>	<p>The CADG presently contains “reactive power” as an ARS definition.</p>	
	<p>“real power” means the power, in MW, which does useful work and is developed when there are resistive elements in an electric</p>	<p>This definition was amended and approved for use in the ISO rules after consulting on the Package 5 definition changes which came</p>	<p>The CADG presently contains “real power” as an ARS definition.</p>	

	<p>power system.</p>	<p>into effect on July 23, 2010. It is currently used in BAL-001-AB-0a.</p> <p>Because the AESO is proposing to eventually delete the language in the current reliability standards which incorporates ISO rules definitions into the reliability standards and because this definition is also used in upcoming reliability standards, the AESO proposes that it be specifically approved for use in the reliability standards.</p>		
	<p>“transmission system” as defined in the Act means all transmission facilities in Alberta that are a part of the interconnected electric system.</p>	<p>This definition was amended and approved for use in the ISO rules after consulting on the Package 4 definition changes which came into effect on September 7, 2010. It is currently used in FAC-003-AB-1, PRC-001-AB-1, TPL-001-AB-0, TPL-002-AB-0, TPL-003-AB-0 and TPL-004-AB-0.</p> <p>Because the AESO is proposing to eventually delete the language in the current reliability standards which incorporates ISO rules definitions into the reliability standards and because this definition is also used in upcoming reliability standards,</p>	<p>The CADG presently contains “transmission system” as an ARS definition.</p> <p>There are 2 “transmission system” definitions that can be combined.</p>	

		the AESO proposes that it be specifically approved for use in the reliability standards.		
Definitions - Amended				
Existing	Proposed	Rationale	Stakeholder Comments and/or Alternate Proposal	AESO Reply
<p>“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.</p>	<p>“balancing authority area” means the collection of generation, transmission and loads, within the metered boundaries of the balancing authority area, and for which the balancing authority maintains load-resource balance and supports Interconnection frequency in real-time.</p>	<p>This definition is currently used in BAL-001-AB-0a, BAL-006-AB-1, MOD-018-AB-0 and various definitions.</p> <p>The AESO proposes to update this definition to make it consistent with the ISO rules definition which was approved in the Package 6 definition changes which came into effect on December 1, 2010.</p>	<p><i>Comment # 2: Insert Comments / Reason for Position (if any)</i></p>	
Definitions – Removed				
Existing	Proposed	Rationale	Stakeholder Comments and/or Alternate Proposal	AESO Reply
<p>“corrective action plan” means a list of actions and an associated timetable for implementation to remedy a specific problem.</p>		<p>The term “corrective action plan” is used in PRC-004-AB-01.</p> <p>In the AESO’s opinion, plain language is sufficient to communicate the meaning of the term and the current definition does not add any significant clarity.</p>	<p><i>Comment # 2: Insert Comments / Reason for Position (if any)</i></p>	
<p>“facility” means a set of</p>		<p>The term “facility” is used</p>	<p>No objection to “facility”</p>	

<p>electrical equipment that operates as a single bulk electric system element, including without limitation, a transmission line, generating unit, shunt compensator, or transformer.</p>		<p>throughout the ISO rules and the reliability standards. It is currently a defined term in the reliability standards but not in the ISO rules.</p> <p>In the AESO’s opinion, plain language is sufficient to communicate the meaning of the term and the current definition does not add any significant clarity. In addition, removing this definition will eliminate any confusion between the definition and the various non-defined uses of the word.</p>	<p>removal. However,</p> <p>If “facility” is removed, does “transmission facilities” in “interconnected electric system” and “transmission system” definitions now include non-BES elements as well?</p>	
<p>“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.</p>		<p>The term “facility rating” is used once in each of the appendices of TPL-001-AB-0, TPL-002-AB-0, TPL-003-AB-0 and TPL-004-AB-0 in the following sentence:</p> <p>“All <i>ratings</i> must be established by the applicable entity consistent with applicable <i>ISO</i> rules addressing <i>facility ratings</i>.”</p> <p>The term “facility rating” is also used in the definition of “system operating limit”.</p> <p>In the AESO’s opinion, plain</p>		

		language is sufficient to communicate the meaning of the term and the current definition does not add any significant clarity.		
“frequency deviation” means a change in Interconnection frequency.		The term “frequency deviation” is used in BAL-001-AB-0a and BAL-003-AB-0a. In the AESO’s opinion, plain language is sufficient to communicate the meaning of the term and the current definition does not add any significant clarity.		
“high voltage direct current or HVDC” means a high voltage direct current power transmission facility that uses direct current to transfer power.		The term “HVDC” is used in INT-003-AB-2. On further review, the AESO is of the opinion that the definition is not entirely correct as it states that HVDC is a facility when, in fact, it is more appropriate to refer to it as a characteristic of a facility. This is, in fact, how the term is used in the reliability standard. In addition, it is the AESO’s opinion that plain language is sufficient to communicate the meaning of the term and the current definition does not add any significant clarity. On a go	“HVDC” should be retained. Why should “HVDC” be removed if the CADG includes standard electricity terms such as “apparent power”, “power factor”, “reactive power” and “real power”?	

		forward basis, the AESO will write out the term in full.		
" owner of industrial system " means the owner of an industrial system designated as such by the Commission in accordance with the <i>Hydro and Electric Energy Act</i> and includes the operator of such system.		The term "owner of industrial system" is not currently used in any reliability standards.		
" rating " means the operational limits of a transmission system element under a set of specified conditions.		<p>The term "rating" is used in the reliability standards in both a defined and undefined sense.</p> <p>In the AESO's opinion, plain language is sufficient to communicate the meaning of the term and the current definition does not add any significant clarity.</p>		
" schedule " means to set up a plan or arrangement for an interchange transaction.		<p>The definition of the term "schedule" is currently drafted as a verb. However, the term is most commonly used in the reliability standards and the ISO rules as a noun or an adjective.</p> <p>In the AESO's opinion, plain language is sufficient to communicate the meaning of the term and the current definition does not add any significant</p>		

		clarity. In addition, removing this definition will eliminate any confusion between the definition and the various non-defined uses of the word.		
" stability " means the ability of an electric system to maintain a state of equilibrium during normal and abnormal conditions.		<p>The term "stability" is currently only used in the definitions of "stability limit" and "system operating limits".</p> <p>In the AESO's opinion, plain language is sufficient to communicate the meaning of the term and the current definition does not add any significant clarity.</p>	<p>"stability" should be retained.</p> <p>Why should "stability" be removed if the CADG includes standard electricity terms such as "apparent power", "power factor", "reactive power" and "real power"?</p>	
" 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.		<p>The term "stability limit" is currently only used in the definition of "system operating limit".</p> <p>In the AESO's opinion, plain language is sufficient to communicate the meaning of the term and the current definition does not add any significant clarity.</p>		
" surge " means transient variation of current, voltage, or power flow in an electrical circuit or across an electric system.		<p>The term "surge" is used once in FAC-001-AB-0 in reference to "surge protection".</p>	<p>"surge" should be retained.</p> <p>Why should "surge" be removed if the CADG includes</p>	

		In the AESO's opinion, plain language is sufficient to communicate the meaning of the term and the current definition does not add any significant clarity.	standard electricity terms such as "apparent power", "power factor", "reactive power" and "real power"?	
" system " means a combination of generation, transmission, and distribution of components.		<p>The term "system" is used throughout the reliability standards to mean both the defined term and other types of "systems", such as "communications systems".</p> <p>In the AESO's opinion, plain language is sufficient to communicate the meaning of the term and the current definition does not add any significant clarity. In addition, removing this term as a definition will eliminate any confusion between the definition and any non-defined uses of the word.</p>		
" tie line " means a circuit connecting two balancing authority areas.		The term "tie line" is used in BAL-001-AB-0a, BAL-003-AB-0a and BAL-006-AB-1. "Tie line" is also used in the definition of "import load remedial action scheme" but is not bolded and this use pre-dates its introduction as a defined term.		

		In the AESO's opinion, plain language is sufficient to communicate the meaning of the term and the current definition does not add any significant clarity. In addition, on a go forward basis, the AESO intends to use the term "intertie" in order to better align with the language in the <i>Transmission Regulation</i> .		
"Transmission Maintenance and Inspection Plan" or "TMIP" means a written plan for the regular and ongoing maintenance of transmission facilities.		The term "Transmission Maintenance and Inspection Plan" or "TMIP" is used in FAC-501-WECC-AB-1. In the AESO's opinion, plain language is sufficient to communicate the meaning of the term and the current definition does not add any significant clarity.		
"transmission vegetation management plan" or TVMP means a plan for vegetation management work to ensure the reliability of electric transmission systems.		The term "transmission vegetation management plan" or "TVMP" is used in FAC-003-AB-1. In the AESO's opinion, plain language is sufficient to communicate the meaning of the term and the current definition does not add any significant clarity.		