Date of Request for Comment: May 8, 2017

Period of Consultation: May 8, 2017 through May 23, 2017

Definitions – New				
Existing	**Original Proposed**	**Amendments to Original Proposed**	**Market Participant Comments and/or Alternate Proposal**	**AESO Replies**
No definition currently exists for use in the Alberta reliability standards	"**emergency rating**" means, as determined by the **legal owner** of the equipment or facility, the **equipment rating** or the **facility rating** that the equipment or facility can sustain for a specified period, and takes into account the physical or safety limits of the equipment or facility and assumes acceptable loss of equipment or facility life during the period.		**ENMAX Energy Corporation ("ENMAX")** Refer to the phrase "the equipment or facility can sustain for a specific period". 1. Will the AESO provide a limit on how long this period should be? (i.e., 30 minutes, 15 minutes?). Refer to TOP-007-AB-0 (R2) below: "Following a **contingency** or other event that results in an exceedance of an **interconnection reliability operating limit**, the **ISO** must return the **interconnected electric system** to within the **interconnection reliability operating limit** as soon as possible, but not longer than thirty (30) minutes." 2. Should the legal owner of the equipment or facility be restricted to the time limit as described in TOP-007-AB-0 (above) when defining an equipment's emergency rating?	1. Requirement R2.4 in proposed new FAC-008-AB-3 specifies the emergency rating durations for power transformers and transmission lines. 2. No, the legal owner of the equipment or facility should not be restricted to the time limit as described in Alberta Reliability Standard TOP-007-AB-0, *Reporting System Operating Limit and Interconnection Reliability Operating Limit Violations*. An interconnection reliability operating limit violation does

			ENMAX Power Corporation ("EPC") 3. Sounds reasonable to EPC	not necessarily result in the exceedance of an equipment or facility rating. 3. The AESO appreciates EPC's comment.
No definition currently exists for use in the Alberta reliability standards	"**equipment rating**" means, as determined by the **legal owner** of the equipment, as applicable, the maximum and minimum voltage, current, frequency, **real power**, **reactive power** and **apparent power** limit of individual equipment under the following conditions: (i) steady state, (ii) short-circuit, and (iii) transient.		**ENMAX Power Corporation ("EPC")** 4. Sounds reasonable to EPC	4. The AESO appreciates EPC's comment.
No definition currently exists for use in the Alberta reliability standards	"**normal rating**" means, as determined by the **legal owner** of the equipment of facility, the **equipment rating** or the **facility rating** that the equipment or facility can sustain on a continuous basis.	"**normal rating**" means, as determined by the **legal owner** of the equipment ~~of~~ or facility, the **equipment rating** or the **facility rating** that the equipment or facility can sustain on a continuous basis.	**ENMAX Power Corporation ("EPC")** 5. Minor verbiage change: "equipment of facility" – change to 'or' 6. Sounds reasonable to EPC	5. The AESO has amended "of" to "or". 6. The AESO appreciates EPC's comment.

Definitions – Amended				
Existing	**Original Proposed**	**Amendments to Original Proposed**	**Market Participant Comments and/or Alternate Proposal**	**AESO Replies**
facility rating" means the maximum or minimum voltage, current, frequency, or **real power** or **reactive power** flow through a facility that does not violate the applicable equipment rating of any as equipment comprising the facility.	"**facility rating**" means, ~~the maximum or minimum voltage, current, frequency, or **real power** or **reactive power** flow through a facility that does not violate the applicable equipment rating of any~~ as determined by the **legal owner** of the facility, the most limiting		**ENMAX Power Corporation ("EPC")** 7. Sounds reasonable to EPC	7. The AESO appreciates EPC's comment.

	applicable **equipment rating** of the individual equipment ~~comprising~~ that comprises the facility.			
"**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: (i) facility ratings (applicable pre- and post-**contingency** equipment or facility ratings); (ii) transient stability ratings (applicable pre- and post-**contingency** stability limits); (iii) voltage stability ratings (applicable pre- and post-**contingency** voltage stability); and (iv) system voltage limits (applicable pre- and post-**contingency** voltage limits).	"**system operating limit**" means the value ~~(MW, MVar, amperes, frequency or volts)~~, expressed in MW, MVAr, A, Hz or kV, 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~~ the following: (i) ~~facility ratings~~ **facility ratings** (applicable **equipment ratings** or **facility ratings** pre- and post-**contingency** ~~equipment or facility ratings~~); (ii) transient stability ~~limits ratings~~ (applicable transient stability limits pre- and post-**contingency** ~~stability limits~~); (iii) voltage stability ~~limits ratings~~ (applicable voltage stability limits pre- and post-**contingency** ~~voltage stability)~~; and (iv) system voltage limits (applicable system voltage limits pre- and	"**system operating limit**" means, as determined by the ISO, the value, expressed in MW, MVAr, MVA, A, Hz or kV, that satisfies the most limiting of the following: (i) **facility ratings** (applicable **equipment ratings** or **facility ratings** pre- and post-**contingency**); (ii) transient stability limits (applicable transient stability limits pre- and post-**contingency**); (iii) voltage stability limits (applicable voltage stability limits pre- and post-**contingency**); and (iv) system voltage limits (applicable system voltage limits pre- and post-**contingency**), for a specified system configuration.	**AltaLink Management Ltd. ("AltaLink")** 8. Can the AESO clarify who determines "system operating limit" (SOL)? If it's determined by the ISO, should this be included in the definition (similar as the definition of equipment/facility rating)? 9. Why is "MVA" not included in the list of "expressed in"? AltaLink suggests adding "etc." at the end of the list. 10. Can the AESO clarify why the wording "to ensure operation within acceptable reliability criteria" is removed from the proposed definition? 11. For bullet (i), as per the previous definitions, facility rating is the normal or emergency rating of the relevant equipment or facility. Normal and emergency ratings are applicable to all system conditions regardless of pre- or post- contingency. Does the bullet mean normal ratings are applicable to pre-contingency and emergency ratings are applicable to post-contingency? Please clarify. 12. For bullet (iv), can the AESO provide an example of "system voltage limits"? Is it a member of the SOL family? If necessary, the AESO may want to include a definition	8. The AESO determines system operating limits and agrees with the recommendation. Please see the revised definition of "system operating limit". 9. The AESO has added "MVA" to the units of measure in the definition of "system operating limit". 10. The wording "to ensure operation within acceptable reliability criteria" was removed because it is not part of the definition of what a "system operating limit" is. Rather, it is related to the purpose of having system operating limits and was therefore deemed unnecessary for this reason. 11. No, bullet (i) does not mean that normal ratings are applicable to pre-contingency conditions and emergency ratings are applicable to post-contingency conditions. Both normal and emergency ratings are applicable to all system conditions. The intent is that system operating limits need to satisfy facility ratings for both pre- and post-contingency conditions. 12. A system voltage limit is a system operating limit. For example the low voltage limit at Sheernes is a system

	post-**contingency** ~~voltage limits~~), (v) for a specified system configuration. limits ~~ratings~~ (applicable voltage stability limits pre- and post-**contingency** ~~voltage stability~~); and (vi) system voltage limits (applicable system voltage limits pre- and post-**contingency** ~~voltage limits~~), for a specified system configuration.		for the term.	operating limit as it is governed by angular stability.