

Stakeholder Comment Form

Rule 6.6 Review – Recommendation Paper

Date of Request for Comment: November 18, 2008
Period of Consultation: October 30, 2008- November 18, 2008

Stakeholder: TransAlta

Any questions on TransAlta’s comments can be directed to Marcy Cochlan at 403-267-4664

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1. Introduction		
2.1 Rule History	A brief history of rule 6.6	<p><i>The normal ISO Rules stakeholder consultation process was employed and topics discussed included the dispatching of units on the margin, price chasing and the price signal. The 10MW or 10% rule was seen as a contributor to problems related to these items and tighter dispatch tolerance was viewed as desirable from both a market and a system operation perspective.</i></p> <p>TransAlta participated in the stakeholder consultation process mentioned above and is on record stating its concerns with the decision to tighten the compliance bands from the 10MWs or 10% to 5MWs.</p> <p>TransAlta believes an important distinction was missed in the tightening of the bands and that this must be rectified in any redesign of the dispatch variance rule. The distinction referred is between intent and operational deviation. The proposed changes continue to confuse these. We have an opportunity here to identify, define, and separate “intent” from “operational deviations”. This distinction could easily be made by including a</p>

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		<p>prohibition on participants intentionally deviating from their dispatch level.</p> <p>With this separation of intentional deviations from operational deviations the rule making process could now be pursued in a cleaner simpler fashion which would allow for robust yet simple rules that would lead to behavior consistent with FEOC but also a technically adequate rule. If this distinction is not made it is very difficult to come up with a rule that appropriately addresses both.</p> <p>Should the AESO wish to pursue this discussion, TransAlta would work with the AESO, MSA, and Market Participants to establish appropriate rules and guidelines around contingency restating and dispatch variance that would balance the AESO's need for accurate up to date information with the time needed for a plant operator to correct whatever unit upset they may be facing.</p>
2.2. The Compliance Monitoring Process	An overview of the current compliance monitoring process	The AESO should build intent into the revised rule. This would result in clear and transparent rules.
2.3 Rationale for Changing the Rule	The drivers and parameters behind the rule change	<p><i>The new legislation places an obligation on the AESO to refer suspected non-compliance events to the MSA. As well, the change in roles and responsibilities has prompted stakeholders to request a review of the Rule since it may be applied differently under this new regime, in which the MSA has the authority to apply discretion and forebear on any non-compliance event.</i></p> <p>TransAlta would agree the AESO's interpretation of the new legislation; however, the rationale for changing the rule is due to its technical deficiency and inconsistency with FEOC. The discretion the AESO previously had simply masked the technical deficiencies in the rule. Prior to January 2008 there was not an adequate process to</p>

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		<p>object to the rule and accordingly, no objections to the rule were filed.</p> <p>As stated in TransAlta’s Complaint with the Alberta Utilities Commission pursuant to s. 25(1) of the Electric Utilities Act (EUA) regarding Independent System Operator (ISO) Rule 6.6, TransAlta has three concerns with Rule 6.6:</p> <ul style="list-style-type: none"> • the +/- 5 MW dispatch tolerance range is unreasonable • the rule is written such that it applies immediately with no recognition for the timing required to receive, evaluate and respond to a dispatch or that operational factors can affect the quantity of energy delivered for brief periods of time • the rule applies equally to all types and sizes of generating assets, resulting in unjust and discriminatory treatment of larger generating assets <p>It is for these reasons that the rule is technically deficient and is contrary to the principles of FEOC.</p>
<p>2.4 Issue Identification</p>	<p>A summary of the issues that participants have raised as well as some identified by the AESO</p>	<p>TransAlta would agree that the list is fairly comprehensive, but other issues include:</p> <p>1) The Rule does not allow a generator sufficient time to adjust and correct temporary fluctuations when it is experiencing operational issues. It is important that a reasonable amount of time be considered for the unit operator to either a) stabilize the unit and issue a restatement of its availability, or b) restore the unit to its dispatch level without having to restate down and, wait for a dispatch down, or restate the availability up and wait for a</p>

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		<p>dispatch up.</p> <p>2) Intent – any rule the AESO puts forward that puts a participant offside the rule due only to an operational upset is technically deficient thus tightening any tolerance bands below the level that allows for these operational upsets is problematic. If intent is addressed head on through a rule that states that any participant not intentionally following a dispatch will be considered offside the dispatch variance rule then the rest of the rule can focus on appropriate tolerance levels including operational upsets.</p>
3 Rule Revision Recommendations	Considerations for developing the rule	<p><i>The following high level considerations underlie the Rule:</i></p> <ul style="list-style-type: none"> • <i>Intentional deviation from dispatch levels as well as dispatch variance as a result of a lack of due diligence must be discouraged.</i> • <i>At the same time, the practical limitations of the generating units must be taken into account and unreasonable expectations should not be placed on participants or their assets.</i> • <i>Appropriate tolerances are required in the Rule to help ensure market integrity and a reliable electric system.</i> <p>TransAlta supports the AESO’s high level recommendations, but suggests that these need not all be accomplished through the dispatch variance rule.</p>
3.1 Pool participants are responsible for compliance with the ISO Rules.	The AESO recommends the Pool Participant remains accountable for compliance	TransAlta agrees with the AESO
3.2 The ±5MW allowable dispatch variance should be increased for units	Recommendation is to change the allowable dispatch variance to 2.5%,	<i>A tight allowable dispatch variances aligns with reliability standards. Control Performance Standard 2 (CPS@), which requires a balancing authority to maintain their inertia schedules with certain tolerances, is better managed if generators comply closely with their dispatch. The Transmission Reliability Margin (TRM) on the inerties can also</i>

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<p>operating at their dispatch level.</p>	<p>minimum of ± 5MW, maximum of ± 10MW</p>	<p><i>be minimized allowing more room fro imports and exports. In short, it makes for more efficient and reliable operations of the system.</i></p> <p>Although TransAlta doesn't disagree with this statement, we question if the AESO has considered how dispatch variances effect the system in comparison to wind variability, loads lack of obligation to bid or offer, load fluctuations, inaccurate metering data and other uncontrollable variances. Can the AESO show that the reduction to 5 MW dispatch tolerance bands has improved reliability excluding the new must offer - must comply obligations?</p> <p><i>Participants have suggested that "considerable tuning and tightening is required" for a large generating asset to operate within the +5MW limit. It seems appropriate that the allowable dispatch variance should encourage good tuning and maintenance of generators, their controls and metering.</i></p> <p>TransAlta has gone further than the above statement and suggested that the current 5 MW tolerance band is technically deficient in that all of our assets fail to comply with the 5 MW dispatch tolerance band for reasons that are operational, not intentional or the result of a lack of due diligence. The current rule does not take into account many of the operational circumstances our facilities find themselves in.</p> <p>TransAlta agrees that all tools related to dispatch variance should be based on accurate metering. We believe that there are metering issues caused by the use of low side meters and technical problems that result in inaccurate data being provided by the AESO's DVN tool to participants. This data is used by many participants to improve their dispatch variance performance. In some cases this inaccurate meter information has resulted in our facilities moving their dispatch such that they move out of compliance when they actually were in compliance. This needs to be addressed in implementation and monitoring of the rule.</p>

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		<p><i>The AESO has undertaken a study of dispatchable units in Alberta. Excluded from the study are any non-dispatchable assets such as wind and generators that have a different meter point for dispatch and energy. The study looked at meter volumes compared to dispatch levels for the period November 1, 2007 through July 31, 2008, a period of nine months. Specific data is not shown here for confidentiality reasons. Also not included in the study were:</i></p> <ol style="list-style-type: none"> <i>1. Any hours where an asset received energy dispatch. This is done to remove any effect of ramping.</i> <i>2. Any hours where an asset is dispatched for TMR. This is done because the dispatched energy may be 0 MW and the actual output of the unit may be > 0 MW due to a TMR dispatch.</i> <i>3. Any hours where an asset was dispatched to provide regulating reserve. This is done to remove any effects that AGC would have.</i> <p>TransAlta has reviewed the analysis provided by the AESO and is pleased that analysis has been undertaken. However, we have some concerns with the use of the analysis to determine timelines or tolerances. Specifically, the development of the ramping tolerances and 7 minutes to respond to a dispatch is troubling. The AESO has used statistical analysis of distributions to determine appropriate levels. The use of 1 standard deviation in a normal distribution would cover off 68% of circumstances. In determining the 7 minute response time the AESO has ensured that 16% of the time units will be considered non compliant with the 7 minutes simply based on math rather than the reason for being over 7 minutes. There may be many circumstances beyond 7 minutes where a facility for strictly operational reasons has not increased its output at the 7 minute mark. Does the AESO intend to consider these non compliant? TransAlta believes operational reasons should always be considered valid reasons for being outside of a tolerance timeline or band. The AESO has not yet clarified if this is the case. The development of a time to ramp suffers from the same problem...it will automatically put facilities outside</p>

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		<p>these ramping bands at least 16% of the time. The number will be higher if a non-standard, truncated distribution was used to determine the tolerance numbers.</p> <p>Specific Concerns</p> <p>During the steady state hours as defined by the AESO there are times when operational issues arise. During periods of unit upset, the AESO wants the Unit Operator to restate the unit MW down so that their dispatch tool is updated and they then re-issue a dispatch to the market participant and subsequently become compliant. During periods of unit upset the unit operator is busy trying to stabilize the unit to prevent its loss of output to the AESO or trying to restore the unit to its dispatch level as quickly as possible and in some cases monitoring or implementing dispatches on the other unit. During these times the Unit Operator's top priority is to focus on unit operations and may not be able to follow the restatement dispatch process required to cause the operator to be in compliance during an upset. These are the most likely situations that the AESO will flag as non-compliance.</p> <p>It is important that a dispatch compliance rule and the above noted process is waived during a unit upset and that a reasonable amount of time be considered for the Unit Operator to either:</p> <ul style="list-style-type: none"> a) stabilize the unit and issue a restatement of its availability b) Restore the unit to its dispatch level without having to restate down, wait for a dispatch down, restate the availability up and wait for a dispatch up. <p>To be clear we are suggesting that the allowances, the AESO is contemplating for certain operating circumstances should include allowing the operator to provide an operational reason for being outside the steady state or ramping tolerance bands. This provision</p>

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		<p>would not require a restatement that would result in the facility receiving a new dispatch.</p> <p>Has the AESO thought of how a participant can notify the AESO without a restatement and the resulting dispatch? TransAlta recommends that a phone call would suffice in these short term situations of 20 minutes or less.</p> <p>Figure 3 – Asset Size versus Asset Age <i>“This chart shows reasonable ability to operate within the +5MW tolerance level but also shows that most units respond within a + 9 MW of dispatch level.”</i></p> <p><i>Figure 4 suggests that +9MW would see almost all units 99% compliant during the test period.</i></p> <p>TransAlta is concerned that the reference to “most units” means that if you are the owner of a unit that does not fall under this umbrella you could be offside this rule due to operational issues regardless of intent. This may mean the rule would be technically deficient or discriminatory if the AESO’s data shows that these units cannot comply with the proposed rule. TransAlta suggests that the use of the tolerance bands is appropriate but that if there is a valid operational reason for being outside the tolerance band, a participant is compliant with rule 6.6. This would imply that in the case of a steady or ramping situation that even if you have crossed the AESO’s tolerance band if you have a valid operational reason for this you would be considered compliant with rule 6.6.</p> <p>In addition, the AESO states that <i>“Based on these results (Figure 4), it appears that a reasonable dispatch tolerance level may be +/- 9MW for a generator that has reached its dispatch level”</i>.</p> <p>TransAlta would like to note that Unit “Q” in the AESO’s data with a 9MW tolerance would run at a 99.1% compliance rate. By the AESO’s own admission, this is considered</p>

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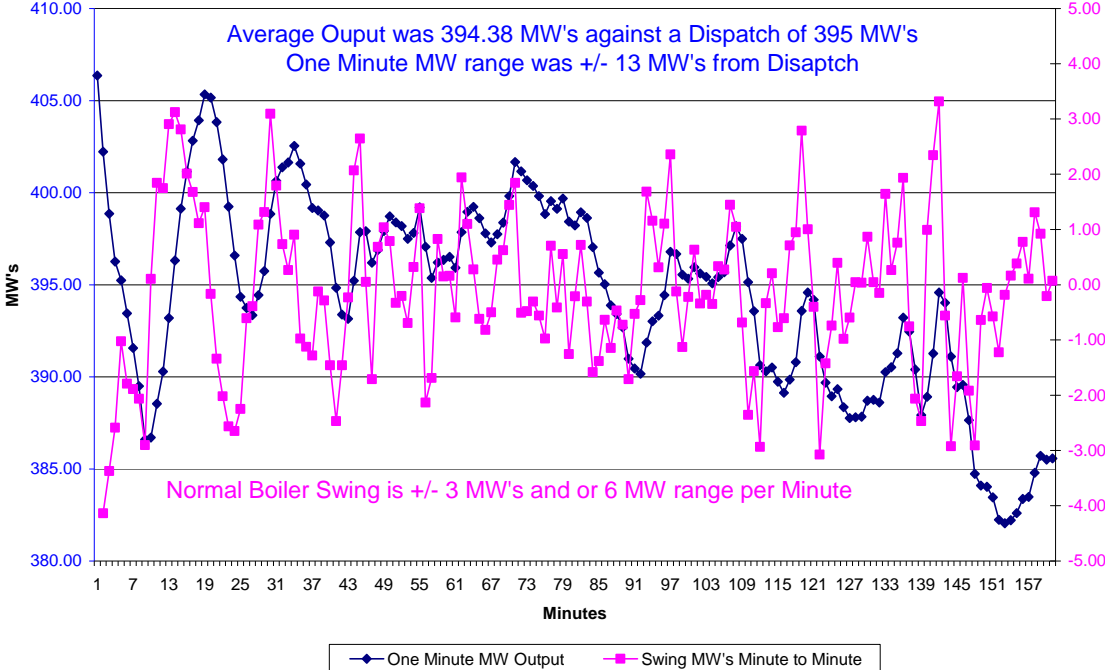
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		<p>reasonable. Is it also reasonable that the same unit, based on 6,164 dispatches would be out of compliance 55 times? Is it also reasonable that a Market Participant could receive 52 letters to its CEO, or an affiliate’s CEO for running a plant with 99.1% success rate?</p>
<p>3.3 The Rule must take into account time required for communication and ramping of a unit in response to a dispatch.</p>	<p>Recommendation is to allow 7 minutes to begin responding and the time to ramp at the ETS ramp rate $\pm 40\%$</p>	<p>TransAlta would like to note that during ramp there is increased fluctuation in the unit’s output by the nature of a ramp. The rule is trying to tackle both communication and performance on the ramp in one rule. We have several concerns with the approach taken in this rule</p> <ol style="list-style-type: none"> 1) communication to the AESO, operators and actual physical ramp can easily take longer than 15 minutes particularly if some operational issue occurs. When an operational issue occurs the time to assess the issue and communicate this back to the AESO could easily fall outside the time tolerances suggested by the AESO. However, if the AESO states that it will accept these operational reasons exposte the event then this would make the tolerances more acceptable. Currently there is not a standard electronic mechanism to do this thus one would have to be created. A phone call stating that there are operational issues may suffice as communication. 2) Small ramps will easily be offside this rule for strictly operational reasons...it is not feasible to communicate this during the ramp and could only be done on an after the fact basis. 3) The percentage tolerance bands suggested by the AESO will result in facilities being offside the ramp tolerances in many circumstances strictly due to operational issues. This will put participants unnecessarily offside the rule. This is discussed in detail in TransAlta’s section 3.2 comments. 4) Ramping Performance and Communication Performance are being addressed by a single time frame.

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		<p>Specific issues for small dispatches created by the ramping tolerance bands</p> <p>+/- 40% ramping tolerances may be workable with large dispatches but does not allow enough time for small dispatches. For example, a 40% tolerance on a 3 minute ramp is only 4 minutes in total. Depending on what level a coal plant was generating at when it received the dispatch, a small 25mw dispatch may require starting another coal mill. In these types of circumstances, 4 minutes will probably not be enough. Further given the short time period required for the ramp, the participant will be unaware of their non-compliance until the event is complete. This does not give time for the participant to rectify the situation or to communicate any issues to the AESO.</p> <p>In light of these circumstances, TransAlta recommends +/- 40% or 10 minutes whichever is greater. This should alleviate concerns about starting mills or similar issues with small ramp times. Further if a facility can provide a valid operational reason for not staying within the ramping tolerance bands this reason should be considered acceptable and the unit would be considered in compliance.</p> <p>Ramping Performance and Communication Performance are being address by a single time frame</p> <p>Again there is an important distinction the AESO needs to make in developing the tolerance bands for both ramping and steady state. The distinction is between operational issue of the unit and communication of this issue to the AESO. A clear separation is required. If the unit has an operation issue it should not be found to be noncompliance with a ramping or steady state tolerance band. However a lack of communication in a timely manner may still put a participant offside the rule. This must be taken into consideration.</p>

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		Further, TransAlta reiterates that if the participant has operational issues and has communicated these to the AESO it should not be considered offside the rule. The current proposal does not ensure this.
<p>3.4 The rule should allow for normal fluctuations in output from generating units.</p>	<p>The new rule should consider momentary operational deviations from the dispatch level.</p>	<p>TransAlta would like to provide the attached chart showing unit fluctuations from one of our coal facilities in steady state. During the 2.5 hours shown the unit had a set dispatch point of 395 MW's. Thus all fluctuations were due to normal fluctuations of output from the generating unit. We are concerned that the deviations shown would be outside the proposed tolerance bands suggested by the AESO for steady state.</p> <p>Regardless of where the AESO sets the bands, there may be valid operational reasons for a unit to be generating outside of the tolerance bands. The rule needs to incorporate these periods of instability and allow unit operators to focus on their most important priority – reliability. Any rule which would consider the above plant, a typical coal plant with typical swings in generation, offside of a dispatch variance rule would in TransAlta's opinion be technically deficient</p> <p>Specific Analysis of TransAlta's coal unit against current and proposed dispatch variance rule</p> <p>This is a random 2 ½ hours from one of TransAlta's coal units with new boiler controls in Steady State. The one minute MW range was +/- 13MW's from dispatch yet the unit averaged 394.38MW's against a dispatch of 395MW's. The unit was within 99.84% of dispatch with a deviation of 0.62 MW's over the 2 ½ hours. The unit appears to be compliant; however, when tested against the current dispatch variance rule the unit is out of compliance a large portion of the 2 ½ hours. When tested against the newly proposed 2.5% or 10mws, the unit performs better, but is still out of compliance 3 times over the 2 ½ hour time period, with the last deviation lasting nearly 15 minutes.</p>

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		<p data-bbox="932 305 1738 337" style="text-align: center;">MW Output and MW Swing with Constant Dispatch of 395 MW's</p>  <p data-bbox="760 1101 1906 1318">The AESO has repeatedly said that they do not support averages because “two wrongs do not make a right”. While TransAlta respectfully acknowledges the AESO’s position on this matter, the reality is that a healthy coal unit has a large degree of minute to minute variance by its very nature and to measure a coal unit against a specific moment in time versus of a rolling average will always result in a dispatch variance regardless of any meaningful band width.</p>

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		<p>TransAlta recommends that the AESO and MSA incorporate a minimum 20 minute rolling average into their rule to smooth out normal minute to minute fluctuations of output. In addition, the AESO needs to be cognizant that any deviation outside this band is not necessarily non-compliance, and that the AESO needs to provide an outlet for participants to communicate these normal fluctuations without the need for a change in dispatch. If the AESO is concerned about participants intentionally averaging their dispatch over the 20 minute rolling average period the suggested inclusion of a prohibition on participants intentionally deviating from their dispatch level should alleviate this concern.</p>
<p>3.5 Preparation to provide Operating Reserves must be considered</p>	<p>The 15 minutes allowed for positioning to provide AS will be considered in the rule.</p>	<p>TransAlta completely agrees.</p> <p>With the dispatch ramp rate requirement, in the event of conflict between the AESO Technical Requirement for Regulating Reserve version 2.0 dated December 10, 2004 Test description for AGC response (Section 4.1) and this new rule, which will take precedence ?</p>
<p>3.6 There must be allowance for governor action during frequency excursions.</p>	<p>Governor action in response to a frequency deviation will be considered in the rule.</p>	<p>This is a circumstance that should clearly require an exemption from the rule and in addition, there should be a reference to the AVR operating in automatic mode and constrained to the limits of the under and over excitation limits.</p>
<p>3.7 The Rule must recognize the operational challenges when ramping between 0 MW and minimum stable output.</p>	<p>The rule will describe specific steps for operating below minimum stable generation level.</p>	<p>TransAlta appreciates the AESO's understanding in this matter and hopes the AESO and MSA also understand that after returning from an outage, we will not be in a position to guarantee a ramp rate until all the equipment has been tested and commissioned. In other words, a machine needs to reach full after an outage to verify all equipment is working, so until we reach full load we could not guarantee our ramp rate, and should not be held to these compliance standards. Thus start up after returning from an outage should be exempt from the tolerance bands or be given specific allowances.</p> <p><i>iv) a generating asset that stops at an output level below minimum stable generation level</i></p>

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		<p><i>for more than 15 minutes for an operational reason has its available capability restated accordingly.</i></p> <p>A participant cannot restate its available capacity (AC) during this time period because it cannot comply with the resulting dispatch. When a unit is below MSG there are only two dispatches that it can accept: a) a zero MW dispatch or b) a dispatch to its minimum stable level. It cannot restate its facility to some other level as this is an unstable level and cannot be maintained. Perhaps a phone call will suffice? To be clear, the original dispatches to go to min stable or full load will not require change.</p>
<p>3.8 Participants must comply with small offer block volumes</p>	<p>More stringent rules for small offer blocks and small units.</p>	<p>TransAlta is unsure how this rule can really be managed. For example on a 400 MW coal facility the movement in output minute by minute will be much greater than the one MW increase in dispatch the facility may receive. As previously shown in TransAlta's section 3.4 comments, normal fluctuations in generator output can be larger than the proposed steady state tolerance bands, we are keenly interested in how the AESO/MSA will differentiate normal fluctuations from compliance with small offer blocks. Further it is not only market participants who create the situation of a small one MW dispatch. This situation is also created through AESO 1 MW dispatches. We have noted that the use of DDS often creates many small one MW dispatches. We have experienced as many as 50 one MW dispatches over the course of an off-peak period on a single large coal facility. This is difficult to manage given the size and normal fluctuations of the unit.</p> <p>We would suggest a simpler solution would be to prohibit a participant from intentionally deviating from their dispatch level. Then if a participant showed a consistent pattern of not following the dispatch, particularly if it was correlated to price, the MSA could deal with them appropriately.</p>
<p>4. Policy Adherence</p>		<p><i>4.1 The recommendations support a fair, efficient and openly competitive market</i></p> <p><i>The Rule must be fair to all generator types and the restriction set out in the Rule must be reasonably attainable by the generators to which it applies. The Rule should promote</i></p>

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		<p><i>proper maintenance and tuning of generating assets. The allowable dispatch variance must be wide enough to allow participants to operate their units properly yet narrow enough to discourage price-chasing and self-dispatching, and result in an inefficient price signal.</i></p> <p>The AESO should not be trying to use this rule to guide this behavior, as this was not the intent of the dispatch variance rule. The issue of price chasing and self dispatch has already been dealt with by Must Offer/Must Comply. If the AESO feels the issue of price chasing has not been adequately dealt with, then it should create a specific rule that prohibits price chasing. It is not useful to create unnecessarily tight compliance bands that have nothing to do with the specific misconduct the AESO is trying to avoid.</p>
<p>5. Implementation Considerations</p>		<p>5.2 Tools</p> <p><i>Compliance monitoring tools would need to be adjusted to accommodate any changes to the rules. In particular the new ramp rate methodology would require revision to the current monitoring tools.</i></p> <p>TransAlta does not support the development of strict time limits for ramping. The majority of deviations from the ramp rates are due to operational reasons. The proposed rule would result in many unnecessary and unproductive communications between participants’ and the AESO. As we are both aware that there are fluctuations during this period and often the operational reason for the fluctuations is not evident until the ramp is completed. Even if the participant is aware that there is an operational issue 10 minutes into a 20 minute ramp in many circumstances it would be uncertain what ramp rate to restate to. Further as pointed out earlier, a restatement at this point would result in many unnecessary actions when it would be more appropriate for the operators to focus on meeting the current dispatch. A restatement requires the following actions:</p>

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		<ol style="list-style-type: none"> 1) the participant to know what the plant is now capable of, 2) time for the participant to complete the restatement to the AESO, 3) time is required for the AESO to provide a new dispatch 4) and time is required for the participant to accept the new dispatch. 5) Time is required for the operator to adjust is set point to the new dispatch <p>The time to communicate, restate and adjust the facility would likely equate to the same amount of time as the participant continuing to try to comply and complete the ramp to the first dispatch.</p> <p>We do not believe that ramp tolerances enforced in real time is the best solution. We would suggest instead that ramp performance be tracked on a quarterly basis and sufficient time be given for a participant to improve this performance.</p>
6. Summary of Recommendations		Please take into consideration the comments above. TransAlta appreciates the opportunity to comment and advise the AESO on this matter.
7, Next steps	The AESO seeks specific input on the timeline and items that might affect the timeline	