



**2007 AESO Loss Factor Questions
Milner Power Questions/Comments and AESO Responses
November 1, 2006**

Below are responses to a John MacCormack email, on behalf of Milner Power, received October 31 2006 regarding the loss factors for 2007.

Stakeholder Question/Comment	AESO Response
<p>In 2007, many of the generators in the NW have been modeled differently than for the 2006 base cases. In many instances the generator is modeled at a higher dispatch level than what is shown in the GSO. An offsetting parallel load is then added. In theory, the offsetting parallel load results in the net MW output to the system equaling the amount shown in the GSO. However, in several instances it appears that the generation is modelled at a higher dispatch level than what is shown in the GSO but the offsetting load is shown as out of service (Status Code 0). This would result in net generation to the transmission system that is higher than the what is in the GSO. The higher generation levels would also decrease the loss factor credits or increase the loss factor charges to NW generators in general. The attached spreadsheet NW_Dispatch_2007 illustrates the potential overdispatch of the Rainbow Generators and some generators in the Grande Prairie area. This is illustrative of my concern only. I have not yet reviewed all of the NW generators. Can you review your base cases to see if an over dispatch has mistakenly occurred?</p>	<p>Modeling of the base cases is done in similar way for the 2007 cases, but the inputs are demonstrably different in the 2006 and 2007 cases, as expected.</p> <p>The AESO has reviewed the 2007 base cases (PSSE and RAWD format) posted on our web site in early October 2006. The AESO checked the twelve cases and confirmed the Net-To-Grid (NTG) dispatches matches the 2007 Generic Stacking Order (GSO) (published September 2006) within the tolerance limit of 1 MW.</p> <p>The AESO did not find any anomalies in the cases as stated in the email by Maxim. The spreadsheet sent by Maxim showed two parameters for loads (MW and Status) and only one parameter for generators (MW only).</p>
<p>In many instances the generator output is shown as 0 in the GSO but is modelled at a higher level in the Base Cases and a parallel offsetting load is indicated. This is true for the Rainbow 1, 2, 3 Sturgeon and Valleyview generators. However, I am not aware that there is any behind the fence load at these sites - so I don't know why these generators were modelled this way. This is a change from last year. The attached spreadsheet NW_Dispatch_2007.xls shows the way the</p>	<p>The base cases are modeled based on the 2007 GSO information, TASMO data and the 2007 AESO load forecast. In some cases, there are non-transmission load added based on TASMO and forecast data, but the Net-To-Grid (NTG) dispatches matches with the 2007 GSO.</p> <p>The GSO provides an average NTG generation value which may be in some cases lower than the Pmin of a generator. In such cases, a type</p>



<p>Rainbow area generators were modelled in 2006 and how they are modelled in 2007.</p>	<p>35 load (station service load) is added and the generator is dispatched at Pmin. The added load offsets the extra generation and maintains the NTG equal to the number as specified in the GSO (within a one MW tolerance). For example, the 2007 GSO specifies 12.0 MW for Valleyview for the winter peak scenario and the Pmin for Valleyview generator is 9.0 MW. So, there is no need to add any type 35 load in parallel with Valleyview generator in this case. In another example, the 2007 GSO specifies 0.4 MW for Valleyview for the spring medium scenario which is obviously below the Pmin. Hence a type 35 load of 8.2 MW is added in parallel with the Valleyview generator which is dispatched at Pmin or 9.0 MW.</p>
<p>I am also concerned that modelling a generator at some higher level of output with an offsetting parallel MW load is not the same as dispatching the generator off line. This is because even at a net 0 MW the generators are showing that they are providing MVAR (or in some cases absorbing MVAR) to the system. This is similiar to adding a capacitor bank or reactor at the generator location. If these generators were to be available to provide MVARs to the system I expect the requirements for TMR on the system would reduce. Modelling all of these generators as available to provide MVAR support changes the impedance of the system and changes MVAR flows and will affect the transmission losses.</p>	<p>The AESO did not discover any occurrences of load completely offsetting generation. The AESO expresses it concern to Milner about the interpretation of the case data. Regarding the comment on the MVAR provision due to adding load, the AESO realizes there may be an effect. The AESO considers the effect small as the amounts used are small and the NTG is not affected.</p>
<p>When I was reviewing the historic generation from the Rainbow unit (from June 1, 2005 to May 31, 2006) I noticed that the historic dispatch of Rainbow 2 in the spring of 2006 does not seem to show up in the GSO. This is illustrated in the attached spreadsheet Rainbow_Dispatch_2006and2007.xls. Is this in recognition that these dispatches were TMR dispatches?</p>	<p>The AESO has re-examined the billing data and found there is no generation of RB2 in the spring of 2006. The amounts were accurately reflected in the 2007 GSO and subsequently in the 2007 cases.</p>
<p>I remain concerned that generation dispatch in the NW may be overstated. To avoid overdispatching generation in the NW I would expect the following process.</p> <p>a.) Since the AESO's forecast of TMR replaces the historic TMR, the first step should be to remove all TMR dispatches from the historical generation records.</p>	<p>The AESO treated the TMR output as per the OPPs. The AESO has mentioned this on several occasions to Milner Power.</p>



<p>b.) After removing the historic TMR dispatches, the AESO could then calculate the volumes of the remaining in-merit dispatches and enter these into the stacking order as per the AESO's normal process.</p> <p>c.) The AESO then adds in a forecast of TMR dispatch to the GSO based on the AESO's OPP and the NW area loads. (Note that for 2007 the loads were scaled down to meet available generation, so the scaled load should be used to determine TMR requirements)</p> <p>d.) Since TMR is only dispatched when the required generation is not in merit, the forecast of TMR in the GSO should be reduced by the amount of in merit generation that is dispatched in the GSO. In 2007 all of the GSO generation is dispatched in 10 of the 12 cases. Therefore the forecast TMR should be reduced by the amount of the in-merit generation from generators who are eligible to provide TMR.</p>	
<p>Can the AESO review the base cases to ensure that the AES's forecast of TMR is actually replacing the historical TMR and not in addition to the historic TMR and that the forecast of TMR is appropriately reduced to account for in-merit dispatches from generators who are eligible to provide TMR?</p>	<p>Please refer to the previous answer.</p>