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Alberta Utilities Commission,  
Fifth Avenue Place,  
4th Floor, 425 - 1 Street SW  
Calgary, Alberta T2P 3L8

Attention: Jamie Cameron, Application Officer

Dear Jamie:

Re: **Electric Rates – Miscellaneous Order U2008-2 regarding Alberta Electric System Operator Fort Nelson Rider H Application**

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This letter is a request by Husky Oil Operations Limited (Husky) to the Alberta Utilities Commission (AUC) to review the **Electricity Rates - Miscellaneous Order U2008-2** regarding Alberta **Electric System Operator (AESO) Fort Nelson Rider H Application** to the Alberta Energy and Utilities Board (EUB). Husky intended to be an intervenor in this application and had indicated as such to you via electronic mail on the 20th December 2007. Due to the application being approved without provision of notice we are providing our concerns under the appropriate section of the *Public Utilities Act* indicated in the Order. This request is made in compliance with Section 58(2) of the *Public Utilities Act*. Husky believes AESO's Application 1552173 has understated the potential impacts of the new BC load on Rainbow Area System Reliability.

Husky Oil Operations Limited has significant industrial load in the Rainbow Area including the Rainbow Lake Gas Plant, with a 35-40MW demand. Given the isolated location of the facilities, the requirement for sufficient, reliable, TMR generation in the Rainbow Lake area has always been vital to reliable plant operations. Loss of power for an extended period in the middle of winter could be catastrophic to Husky's operations. Due to these and other area considerations, Rainbow TMR generation governed by AESO Operating Policies and Procedures (OPP) 501 has historically been operated with at least one generator available for standby operation.

At present the Rainbow Lake area normally operates with 3 generators running all the time when area load is below 130 MW (generally Rainbow 4, 5 and Fort Nelson with Rainbow 2 shutdown). If one unit trips, no load is lost, and the fourth standby unit generally Rainbow 2 is started. Also, if one unit is unavailable, again Rainbow 2 is started to re-establish the normal operational status of 3 running units. This scenario provides a secure power supply

to the Rainbow Lake area and subsequently to Husky's Rainbow Lake operations. It would take a loss of a further 2 units before the area would suffer load loss. A possible, but fortunately, rare event.

The AESO application 1552173 indicates that when area load is greater than 130MW, the Rainbow Lake area requires all 4 generation units (Rainbow 2, 4, 5 and Fort Nelson) to be running, leaving no standby unit available. The trip or unavailability of one unit will not lose load, but the loss of a second unit will. The lack of standby generation to cover unit maintenance periods as well as unplanned unit outages provides a greater exposure to risk of area load loss. AESO have indicated to Husky that historically, area load has only been greater than 130MW for about 20 hours annually. Husky would prefer there was no additional exposure, but, given this relative short period, the risk is tolerable. We, at Husky, are, very concerned however, by AESO's application which indicated that due to the additional BC load connecting to the AIES, the Rainbow Lake area load could operate above 130MW for up to 30% of the time or 2600 hours a year. The duration of this additional exposure we believe, is completely unacceptable and will compromise the historical operating regime of the Rainbow Lake area.

This potential loss of standby generation the Rainbow Lake area is now facing is similar to that which occurred in late 2005 and again in late 2006. In 2005 AESO, ATCO Electric and Husky had discussions about the possibility that Rainbow 2 TMR agreement may not be renewed. There were concerns about the extent of load shedding when there was loss or outage of one unit followed by the loss of a second unit, leaving only one area unit running. The proposed plan by AESO was to maintain load shed until one of the units could come back on line. ATCO Electric and Husky were concerned about the potential to 'freeze up' customers equipment if this load loss occurred in the depths of winter. AESO helped to alleviate these concerns by promising to evaluate each generator outage individually and dispatch one the non TMR units prior to the loss of a second generator if this was warranted.

In December of 2006 it appeared there were plans to decommission Rainbow 1, 2 & 3 generators, at the time the Rainbow 2 was the only original unit still running. Units 1&3 were houred out and not immediately available to run. Unit 1 was to be available to be used as a load remedial unit only, in the event of catastrophic load loss to the area. If these units had been removed at Rainbow, AESO would have had no flexibility to startup units to either reduce the risk of load shedding in warranted situations or restore load after the loss of two units. AESO responded to this dilemma by extending the TMR agreement of Rainbow 2.

Husky accepts that the operation proposed by AESO when all 4 units are running meets the strictest application of the WECC Reliability Criteria. AESO have indicated that the operation of generation in the Rainbow Lake area is more an historic norm than a requirement to meet reliability standards. We suggest however, that the historic operation of this area ensuring more generation than strictly required by the WECC Criteria was deliberate, primarily due to the major dependency on generation for area reliability. Generators differ from transmission lines significantly both in terms of their availability as well their potential for extended outages.

Husky is also concerned with several specific issues which will effect the reliability of supply in the Rainbow Lake area that were not addressed in the application.

- The extended running time of these generating units particularly Rainbow 2. Most maintenance both minor and major is planned around the extent of expected running time. Rainbow 2 is an old unit and scheduling maintenance could be a major issue.
- What are AESO's plans if a generating unit suffers a catastrophic failure resulting in a long term outage?
- Are the maintenance schedules of all units coordinated to ensure a forced outage of a running unit does not result in load shed?
- In the event of load shed what are AESO's plans for restoration particularly if the outage is expected to be extended?
- What is the area load shed methodology and how is it prioritized?

Husky, AESO and ATCO Electric have in the past worked extremely closely to maintain the reliability of the power supply to the Rainbow Lake area. AESO have always responded positively in order to preserve the historical operational methodology of the system in this area. We believe there are mitigating solutions to maintain the existing area reliability. These could include but not limited be to an additional TMR unit by life extension of Rainbow 1 or 3

Rainbow Lake area will be served with new transmission lines in the future and load growth in the area will not create the same immediate concerns. In the interim, if load continues to grow, whether that load is in BC or Alberta a more suitable solution needs to be developed, albeit short term..

If you have any questions on this response or need additional information, please contact Geoff Martin at (403) 298-6443 or by email at [geoffrey.martin@huskyenergy.com](mailto:geoffrey.martin@huskyenergy.com).

Yours truly,

**HUSKY OIL OPERATIONS LIMITED**



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