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June 19, 2014

Crossed Wires: The AESO-Milner Transmission Loss Saga

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Decision commented on: AUC Decision 2014-110, Application for Review of AUC Decision 2012-104: Complaint by Milner Power Inc. regarding the ISO Transmission Loss Factor Rule and Loss Factor Methodology

On April 16, 2014, an Alberta Utilities Commission panel released Review and Variance Decision 2014-110 (the "R & V Decision") relating to a complaint made by Milner Power Inc. ("Milner") in 2005. Milner is a subsidiary of Maxim Power Corp. and is the general partner of the limited partnership owner of the HR Milner power plant, a 150 megawatt coal-fired generation facility located near Grande Cache, Alberta. Milner's 2005 complaint came on the heels of a change made by the Alberta Electric System Operator (the "AESO") to the rule and methodology employed to determine the allocation among Alberta's electricity generation owners of "transmission losses" resulting from the transmission of electricity from the sources of generation to the locations of consumer load. A lengthy regulatory entanglement has ensued involving each of the province's leading electricity generators, including TransAlta, Capital Power, ATCO, ENMAX and TransCanada, together with Milner and the AESO. Coming nearly a decade after Milner's original complaint, the R & V Decision represents a partial step toward resolution of the transmission losses issue. However, much remains unsettled. This comment will provide some background to the decision, summarize its procedural history, review the R & V Decision itself and consider the path forward.

Transmission Losses

When electricity is transmitted along power lines, some electricity is lost through the dissipation of heat. This lost electricity is referred to as "transmission losses" or "line losses." As an example, if electricity is transmitted from the Edmonton region to the Calgary region, a small (but nevertheless valuable) portion of the electricity introduced into the system at the source of generation in Edmonton is lost in transit to the location of the consumer load in Calgary. The longer the distance the power must be transmitted, the higher the proportion of transmission losses.

Various methods of calculating and allocating transmission losses have been devised, here and in other jurisdictions. The one common characteristic, however, is that each method is mathematically dense and difficult to conceptualize in physical terms. The properties of electricity are a challenge to understand. Transmission losses are all the more challenging because they are a complex non-linear function of electricity generation, length of transmission

lines and a host of other grid characteristics, including each generator's geographic location on the grid (which either increases system-wide transmission losses or in some exceptional cases actually decreases system-wide transmission losses).

In Alberta, by regulation, the cost of transmission losses is to be borne by all generators, and it is the AESO's task to calculate and allocate this very significant cost among the generators (see section 31(1) of the *Transmission Regulation*, Alta Reg 86/2007).

This much is clear. It has been the specific transmission loss rule and methodology employed by the AESO and the resulting allocations that have given rise to a regulatory dust-up of notable proportions.

The Milner Complaint

In early 2004, a group of investors, including Maxim Power Corp., purchased the HR Milner power plant. The investors' calculation of the value of HR Milner leading up to the purchase took into account the plant's annual transmission loss allocation. Under the methodology then being employed by the AESO, rather than being assessed a *charge* the plant was granted a *credit*. This was the case because it was considered that the plant's location on the grid tended to reduce system-wide transmission losses. Rather than being charged for transmission losses, therefore, HR Milner had been receiving an annual credit. In 2004, for example, the credit granted and paid to HR Milner was approximately $3.6 million.

Unfortunately for HR Milner's investors, the AESO introduced a change to its transmission losses methodology in 2005. In place of a credit, the AESO's new methodology resulted in a charge to the HR Milner plant of approximately $2.6 million, a sharp swing in bottom line revenue in the range of $6 million. For a relatively small coal plant, this change significantly affected the financial outlook for Milner. In response, Milner filed a complaint (the "Milner Complaint") with the AUC's predecessor, the Alberta Energy and Utilities Board (the "EUB") objecting to the AESO's change in the transmission losses rule and methodology.

Procedural History

The Milner Complaint was filed with the EUB on August 17th, 2005, and sought relief under those provisions of the Electric Utilities Act, SA 2003, c E-5.1 (the "*EUA*") which empowered the EUB to order the AESO to change an AESO rule that in the opinion of the EUB is "unjust, unreasonable, unduly preferential, arbitrarily or unjustly discriminatory or inconsistent with or in contravention of" the *EUA* or its regulations (under section 25(6)(b) at the time of the complaint). The EUB denied the Milner Complaint and held that the AESO was free to implement the new transmission losses rule and methodology.

Milner appealed the EUB's determination to the Alberta Court of Appeal. On July 29, 2010, the Court of Appeal ruled the EUB's decision was vacated and that further investigation be undertaken or a hearing held to determine the merits of the Milner Complaint (see *Milner Power Inc v. Alberta (Energy and Utilities Board),* 2010 ABCA 236).

On September 20, 2010, the AUC (which by this time had replaced the EUB) issued a notice of proceeding (Proceeding No. 790) concerning the Milner Complaint, and followed up shortly after with a procedural direction bifurcating the hearing into two phases, the first to consider the merits of the Milner Complaint, and the second to decide upon appropriate relief were the Milner

Complaint to be upheld. The first phase of Proceeding No. 790 (AUC Decision 2012-104) was held in October of 2011, and a decision was issued by the hearing panel of the AUC in April of 2012. A majority of the hearing panel upheld the Milner Compliant, finding that AESO's new methodology was not in the public interest and did not support a fair, efficient and openly competitive market (the "2012 Majority Decision"). The majority also found that the rule was unjust, unreasonable, unduly preferential and arbitrary or unjustly discriminatory and ordered that the second phase of the bifurcated hearing be commenced. However, there was a strong dissenting opinion from hearing panel member, Tudor Beattie, who would have deferred to the AESO and denied the Milner Complaint.

During the hearing of Proceeding No. 790, the province's generators lined up behind either the AESO or Milner, presumably based on the impact of the AESO's transmission losses methodology on their various generation facilities. ATCO and ENMAX fell into the Milner camp. Capital Power, TransAlta and TransCanada aligned themselves with the AESO and took on the mantle of the "Generator Group" although of course not representing all generators.

In June of 2012, the AUC received applications from the AESO and the Generator Group seeking a review and variance of the 2012 Majority Decision. In April of 2013, the AUC issued a decision finding that the AESO and the Generator Group had demonstrated sufficient doubt as to the correctness of the 2012 Majority Decision so as to require a review and variance hearing.

As an important aside, in June of 2012, Milner submitted a second complaint to the AUC regarding a further revision by the AESO to the transmission losses rule and methodology. This further revision took effect in January of 2009 and remains in effect to present. The AUC ruled that it would not hear this second complaint at the same time as the review and variance hearing.

The review and variance hearing was held in October of 2013 and, as already noted, the Commission's R & V Decision was released in April. The R &V Decision for the most part affirms the principal aspects of the 2012 Majority Decision and finds in favour of Milner. The R & V Decision also confirms that the second phase of the bifurcated hearing, the phase dealing with remedies, must now proceed. The parties have recently begun making submissions to the AUC with respect to this second phase. In view of the financial consequences of the retroactive application of a transmission losses methodology that the AUC may ultimately find to be acceptable, it would seem that this muddy matter is far from being fully resolved, with an appeal to the Alberta Court of Appeal quite possibly on the horizon. It should be kept in mind, as well, that the R & V Decision does not cover the period after January of 2009, consistent with the Commission's refusal to consider Milner's second complaint as part of the review and variance hearing.

The R & V Decision

The R & V panel agreed with the 2012 Majority Decision that the AESO's 2005 line loss rule does not comply with the requirements in the *Transmission Regulation* and, further, did not meet the standard in the *EUA* as it was when the rule was implemented. Further, the R & V panel quoted the majority (at para 121) in stating that the rule "is also 'unjustly discriminatory as it violates all the principles of rate design that would normally be observed in a regular rate or tariff proceeding." This idea of common law rate-making requirements in the context of transmission loss rule making was discussed in more detail in the 2012 Majority Decision, but the R & V panel also used it as justification. In the 2012 decision (at para 60), the majority took the view that the right of an industry participant such as Milner to challenge, under section 25 of

the *EUA*, a rule of the AESO that may be "unjust, unreasonable, unduly preferential or arbitrarily or unjustly discriminatory" has its roots in the common law requirements concerning common carrier rate-making. One such common law concept that has been especially evident in arguments and decisions throughout this dispute is the principle of cost causation: the idea that users should pay rates proportional to the costs that they individually are responsible for. The fact that the 2005 rule defied this principle is arguably the most significant consideration of the R & V panel's decision (see para 117 of the R & V decision). Unlike the 2012 Majority Decision, the R & V panel avoided making a decision or even commenting on the validity of the rule under the current standard in the *EUA*, a standard that does not share the common law, rate making roots of its predecessor.

The R & V Panel conducted an in-depth analysis of the legislation relevant to line loss rule making, however, only a few sections were directly relevant to the decision. Section 17(e) of the *EUA* requires the AESO to manage and recover the costs of transmission losses. The *Transmission Regulation* more specifically sets out the AESO's duties with respect to transmission losses. Section 19(1)(a) of the regulation stipulates that the AESO must make rules to reasonably recover the cost of transmission losses by establishing and maintaining "loss factors" for each generating unit based on their location and their contribution, if at all, to transmission losses. There are also a number of other more technical requirements in section 19, such as absolute limits on credits and charges as a percentage of generation.

The R & V Decision held that the AESO's 2005 transmission loss methodology unjustly penalized generators that are oriented in a geographically efficient manner relative to the transmission grid. The injustice of the methodology was found to be that it arbitrarily allocated the cost of transmission losses to these "loss savers", as the Commission described them, while at the same time provided a financial benefit for those generators considered "loss causers." The R & V Decision does not prescribe a replacement methodology or make any recommendations to the AESO in this regard, but simply made it clear that it is the view of the Commission that AESO's approach does not adhere to the principle of cost causation.

In defending its rule-making authority, the AESO argued that deference be given, particularly in an area as technically complex as transmission losses. It further argued that conflicting requirements in the *Transmission Regulation* called for the AESO to perform a balancing act to satisfy each of the requirements. The Commission agreed with the AESO that the AESO's rule making authority allows it to adopt a range of valid alternatives, but concluded that the AESO's chosen transmission losses methodology was not one such valid alternative.

The review and variance hearing panel declined to consider the appropriateness of alternative methods of calculating and allocating transmission losses, insisting instead that the ambit of the hearing must be confined to the legality of the AESO's 2005 transmission losses methodology in the context of the legislation and regulations in effect at the time (and confined to the period 2006 to 2008 when that methodology was in effect, see para 12 of the decision).

The review and variance hearing panel also avoided any discussion of the legality of the current AESO transmission loss rule and methodology, which is substantively the same as the now impugned rule and methodology. As expressed in the preliminary review and variance decision:

> [53] The review panel will also not consider in step 2 of the review and variance applications either the 2012 complaints or whether the original complaint by Milner Power Inc. extends beyond 2008. No determination was made in Decision 2012-104 with respect to

> the latter question, and none of the review applicants has asked that this question be determined in this proceeding. The review panel will consider the 2012 complaints and whether the original complaint by Milner Power Inc. survives beyond 2008 at a later date.

The foregoing is of particular interest because the AUC's statutory standard of review of AESO rule making under the *EUA* was amended in 2007. The new standard, which would apply to the current AESO transmission loss rule and methodology, arguably gives more leeway to the AESO. As discussed further below, this new standard is the "fair, efficient, and openly competitive market" or "FEOC" requirement that now appears in a number of places in applicable legislation (see, for example, *Fair, Efficient and Open Competition Regulation,* **Alta Reg 159/2009**).

As just noted, the AESO's 2005 rule and methodology and current rule and methodology are nearly identical and have, together, been in place for the past nine years. According to the 2012 Majority Decision, the difference in the rules and methodologies is more of a minor amendment than an actual rule change. However, the simple fact that the 2005 Line Loss Rule has been rechristened the "2009 Line Loss Rule" seems to have given credence to the AESO's view that the 2009 Line Loss Rule is a new rule for regulatory review purposes.

> The implications of this slight change may prove to be of considerable consequence to Milner and other generators in a similar position. Had the review panel considered the legality of both rules, the financial stakes of the review and variance hearing would have increased dramatically. A conservative estimate of a $5 million annual under-collection by Milner would result in a $45 million shortfall over the period the two rules were in effect (as compared to credits that would be received under a methodology more rewarding to loss "savers," for example, Incremental Loss Factor methodology as described at para 107 of the 2012 Majority Decision). In addition, the review and variance panel of the Commission cited provisions in both the ***Administrative Procedures and Jurisdiction Act*, RSA 2000, c A-3** and the ***Alberta Utilities Commission Act*, SA 2007, c A-37.2** as authority for the proposition that it would be procedurally unfair to make a ruling in relation to the current transmission losses rule and methodology, as Milner's original complaint only referred to the 2005 rule. Nevertheless, in view of the fact that the end does not appear to be in sight for this extended regulatory tussle, one would think that the AUC would want to clear up the uncertainty and controversy in one all-encompassing decision.

Remedies

In the second phase of the bifurcated hearing the Commission will have to decide on remedies for Milner, ATCO, ENMAX, and potentially other generation owners that were adversely affected by the AESO's 2005 transmission loss rule and methodology. Financial compensation would appear to be in order, but giving practical effect to any determination by the Commission in this regard may be difficult.

Under the *Transmission Regulation*, the AUC may direct the AESO to reimburse a market participant for any fee paid to it that is determined to be unjust or unreasonable. Assuming that the transmission losses credit/charge mechanism can be classified as a "fee," this could be a potential avenue. Based on Milner's estimates of their financial losses caused by the implementation of the AESO's 2005 methodology, compounded with those losses suffered by ATCO, ENMAX and others over that three year period, the total amount would be likely be in the tens of millions of dollars. The AESO is a not-for-profit organization and would certainly be

unable to provide that level of compensation. Could the required amounts be extracted from those generation owners who "over-collected" in the years 2006 to 2008? Section 33(2) of the *Transmission Regulation* provides as follows:

> If the actual cost of losses is over-recovered or under-recovered in one year, the over-recovery or under-recovery must be refunded or collected in the next year or subsequent years.

In practice, this section operates to create "calibration factors" that are used to compensate Alberta generators on an aggregate basis for the AESO over-recovering for transmission losses in a particular year. This section could also be interpreted to allow the AESO to collect from those generators who "over collected" on the basis of the impugned 2005 transmission losses rule, given the broad language of the provision. This would, however, be unfair to these "over collectors," because at the time they believed it to be a valid AESO rule, albeit one that was being challenged. In addition, it is unreasonable to expect these owners to have pools of capital set aside in case rules are retroactively struck down. The parties are currently making submissions to the AUC with regards to this very point and the AUC's jurisdiction to award such a remedy.

Still, there may be a solution available through section 33(2) of the *Transmission Regulation*. If, for the operational period of the 2005 rule, the AESO and the AUC are able to recalculate loss charges and credits using a method that is acceptable under the old legislation, there is a potential source for compensation. The AESO makes a habit of over-collecting for transmission losses annually, relying on section 33(2) as its authority for doing so. A rate rider is created for the excess funds wherein the funds are carried over to the next year and each generator is credited a portion of the surplus. The portion of the surplus allocated to each generator is determined by the above mentioned "calibration factors". According to an AESO forecast, there will be close to $4 million in total over-collections for losses in 2014. Over the coming years, these monies could be allocated in full or in part to Milner and the other affected generation owners until they are fully compensated, with appropriate adjustments where required.

Current Transmission Loss Rule

Also of concern in light of the R & V Decision is the status of the AESO's current transmission loss rule and methodology. Milner and the others involved will undoubtedly attempt to have this rule also adjudged by the AUC to be in contravention of the *EUA* and *Transmission Regulation*. But would such an attempt be successful?

In 2007, new grounds for challenging an AESO rule were added to the *EUA*. With the addition of these grounds, the standard of review that was applicable to the 2005 AESO methodology was removed. Section 127 states that the complainant now has the onus of proving that the AESO rule:

> (a) is technically deficient
> (b) does not support the <u>fair, efficient and openly competitive operation of the market</u> ("FEOC"), or
> (c) is not in the public interest (emphasis added).

Although the old standard of review was removed as a direct method of challenging AESO rules, the language was not completely removed from the *EUA*. Section 127, which deals with the

obligations of industry participants and the AESO, says that the AESO in relation to tariffs "shall not act in a manner that is unjust, unreasonable, etc." It could be argued that the common carrier principle of non-discriminatory tolling and the cost-causation described above has survived in the *EUA* in relation to AESO. Despite being in a section related to tariffs, this wording coupled with the nature of the AESO's role as a monopoly provider of a transportation service could be an argument for the continued inclusion of common carrier and rate-making principles in AESO rule making. However, the fact that the standard was specifically changed with respect to AESO rules and replaced with a standard that includes economic efficiency as a factor speaks strongly to the intentions of the legislator. Rules that are the most economically efficient are not necessarily the same as those that are the most fair, non-discriminatory or even reasonable. There is the potential here for the new statutory requirements to conflict with the common carrier principles endorsed by the AUC in the 2012 Majority Decision and the R & V Decision. Of course, in the case of such a conflict, the clear terms of the statute will override the common law.

The apparent upside of current AESO rule and methodology is that fewer generators are being given credits and the cost allocations vary less as between generators. There are limits on both charges and credits in the regulations (i.e. no matter how much a generator causes in losses, there is a maximum percentage charge). It appears that the AESO prefers the current methodology because it does a better job of keeping outliers within these limits without further mathematical manipulation. However, when looking through the lens of the economic efficiency requirement, this approach seems questionable. Encouraging generators to locate themselves closer to loads or in areas that reduce losses would be economically efficient for the Alberta electricity system in the long run because it would reduce the amount of electricity lost due to ineffective generator orientation. This was the view that the majority expressed in the 2012 Decision, that economic efficiency might be attained through the common law lens of cost causation. The majority preferred a method that did not result in cross-subsidization of loss causers.

Whichever way the specific words in the new standard are interpreted, the exercise becomes a balancing act between the competing interests of efficiency and fairness. The standard is no longer simply whether or not the rule itself is unjust or discriminatory. The 2012 Majority Decision noted that the new standard is broader than the old one because of the fact it includes economic efficiency as a factor. This seems to leave more room for AESO prioritizing and points to a more deferential AUC evaluation of AESO rule making.

Moving Forward

After nearly a decade of regulatory sparring, the R & V Decision has dealt with a part of the overall dispute. While it has been determined that for the period 2006 through 2008, the 2005 AESO transmission losses rule and methodology were in contravention of applicable legislation, the consequences to affected parties have yet to be considered. The remedies ultimately imposed by the Commission will need to be fair and practical, and undoubtedly creative.

It also remains unclear what lies ahead for Milner's remaining complaint against the current AESO rule and methodology. Any AUC decision on this would have to answer the question of how much deference should be given to the AESO under the *EUA*'s new FEOC standard. The underlying technicalities of the AESO's transmission losses rule and methodology are highly complex. At the same time, the AESO's activities must comply with legislative requirements, and it is only fair to industry participants that there be recourse if those activities do not comply.

The problem, as we have seen in the string of proceedings set out above, is that the complexity of a matter can test the capacity of a regulator to respond effectively. When this is coupled with the requirement that the AESO's activities comply with overarching and broadly stated principles of market efficiency, fairness and openness, the regulator's task is elevated from one that is difficult to one that may never be completed, notwithstanding honest and consistent effort. Taking into account the twisted path the Milner Complaint has taken to date, and the still to be resolved related aspects of the complaint (as well as any potential further application to the Court of Appeal), perhaps it is time to consider whether there is a better way.

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