



## Alberta Electric System Operator

Ancillary Services – Article 11 Negotiated Settlement

February 12, 2008



**ALBERTA UTILITIES COMMISSION**

Decision 2008-014: Alberta Electric System Operator  
Ancillary Services – Article 11 Negotiated Settlement  
Application No. 1549401

February 12, 2008

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**ALBERTA ELECTRIC SYSTEM OPERATOR  
ANCILLARY SERVICES –  
ARTICLE 11 NEGOTIATED SETTLEMENT**

**Decision 2008-014  
Application No. 1549401**

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**1 INTRODUCTION**

On November 26, 2007, the Alberta Electric System Operator (AESO) filed an application (the Application) with the Alberta Energy and Utilities Board (the Board) seeking approval of a negotiated settlement agreement (NSA),<sup>1</sup> the terms of which include amendments to Articles 1 and 11<sup>2</sup> of the AESO's Terms & Conditions of Service (T&C). The proposed amendments relate to the methodology to be used to determine the compensation to be paid by the AESO for the procurement of ancillary services, particularly transmission must run (TMR) services.<sup>3</sup> The amendments were determined through a negotiated settlement process (NSP) that involved a wide cross section of both consumers and generators.

On December 18, 2007, the Board issued a notice of the Application (the NSA Notice) which indicated that the Application may be granted without further process if no bona fide objections were filed by persons or organizations directly or adversely affected by the Application. The NSA Notice also stated that following creation of the Alberta Utilities Commission (the Commission) the Application would be considered by a panel of the Commission rather than by the Board. Effective January 1, 2008, the Commission was created pursuant to the *Alberta Utilities Commission Act*.<sup>4</sup>

The AESO acts as the independent system operator (ISO) in Alberta pursuant to the *Electric Utilities Act* (EUA).<sup>5</sup>

**2 BACKGROUND**

The Application follows a previous application (the Original Application)<sup>6</sup> filed by the AESO with the Board on August 16, 2004, pursuant to Part 2 Division 4 and Part 9 Division 2 of the EUA. The Original Application sought Board approval of proposed amendments to Article 24 (which was later renumbered as Article 11) of the AESO's T&C.

On December 16, 2004, the Board granted an interim order (the 2004 Interim Approval), effective December 17, 2004, approving the existing Article 24 on an interim basis, and directed that all Article 24 payments for service provided on or after December 17, 2004, would be considered interim and subject to adjustment in accordance with the Board's final determination.

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<sup>1</sup> The NSA is attached to this Decision as Appendix 2

<sup>2</sup> The proposed amendments are attached to this Decision as Appendix 3

<sup>3</sup> TMR services arise in circumstances in which the AESO requires a generating unit to operate.

<sup>4</sup> S.A. 2007, c. A-37.2

<sup>5</sup> S.A. 2003, c. E-5.1

<sup>6</sup> Application No. 1357161

The Board also decided to process the Original Application through a separate, stand-alone proceeding rather than considering it as part of the AESO's 2005/2006 General Tariff Application (AESO 2005/2006 GTA).

Section 23(1) of the *Transmission Regulation*<sup>7</sup> in effect in late 2005 (the *2004 Transmission Regulation*) required the AESO to establish a methodology, for the purpose of section 30(2)(a)(ii) of the EUA, to limit the amount of compensation to be paid by the AESO for TMR services. Additionally, pursuant to sections 23(2) and 31(3) of the *2004 Transmission Regulation*, this mechanism was to be set out in the AESO tariff to take effect on January 1, 2006.

On January 31, 2005, the AESO filed an application for Board approval of the AESO 2005/2006 GTA. Included in the AESO 2005/2006 GTA was a proposed definition of maximum TMR compensation pursuant to the *2004 Transmission Regulation*.

At the time of the filing of the AESO 2005/2006 GTA, the Alberta Department of Energy (DOE) was engaged in a market design review, which included consideration of ancillary services matters, including matters pertaining to maximum TMR compensation. In light of the market design review process initiated by the DOE, the Board determined the AESO should continue discussions with its stakeholders of the provisions dealing with ancillary services procurement during May through July 2005, with a view to negotiating a settlement with respect to ancillary services issues.

On August 4, 2005, the Board received a further application from the AESO (Amended Application) seeking an amendment to its proposed ancillary services provisions (previously Article 24, proposed in the Amended Application to be renumbered as Article 11). The Amended Application was submitted so that requirements found in the *2004 Transmission Regulation* governing the maximum compensation amounts for 'must run' services were satisfied and could take effect as of January 1, 2006.

By letter dated October 21, 2005, the Board indicated that it was considering approving Article 11 of the AESO tariff as set out in the Amended Application on an interim and refundable basis, effective January 1, 2006. In Decision 2005-125,<sup>8</sup> effective January 1, 2006, the Board approved Article 11 (as set out in Appendix 1 of Decision 2005-125), and the related definition of maximum TMR compensation (as set out in Appendix 2 of Decision 2005-125), on an interim refundable basis. The Board also ordered, among other things, that:

- all Article 11 settlements for service provided on or after January 1, 2006 will be considered interim and subject to adjustment in accordance with the Board's final determination on the Amended Application;
- the 2004 Interim Approval ceased to be effective (on a going forward basis) as of January 1, 2006, at the time that Decision 2005-125 became effective; and

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<sup>7</sup> A.R. 174/2004

<sup>8</sup> Decision 2005-125, AESO Interim Approval of Article 11 of AESO Terms and Conditions (Maximum TMR Compensation), dated November 15, 2005.

- the AESO was to keep appropriate records to accommodate any changes from 2004 Interim Approval to the final provisions ultimately approved, in order to assure appropriate adjustments are made.

The 2004 Interim Approval continued to be effective for the period prior to January 1, 2006, when Decision 2005-125 became effective.

In correspondence dated December 7, 2005, the hearing process for the Original Application was held in abeyance pending the promulgation of anticipated amendments to the *2004 Transmission Regulation*. In correspondence dated July 26, 2006, the Board indicated that the hearing process for the Original Application would continue to be held in abeyance, based upon a status report received from the AESO dated July 21, 2006. The status report indicated the AESO understood it was the intention of the DOE to proceed with the development of a TMR Regulation, and that it would be promulgated around October 2006. The AESO stated the negotiations between ATCO Power (AP) and the AESO were still on-going.

Following introduction of a new Transmission Regulation in April 2007<sup>9</sup> (*2007 Transmission Regulation*), the Board received on May 4, 2007, an update from the AESO in which it advised that the *2007 Transmission Regulation* did not clarify compensation for TMR services provided pursuant to Article 11.

In correspondence dated July 6, 2007, the AESO requested permission to initiate a NSP concerning the compensation to be paid by the AESO for ancillary services it receives (including TMR services), and to finalize interim Article 11. Following receipt of comments from interested parties, the Board approved of the commencement of the NSP in Decision [2007-062](#),<sup>10</sup> issued on August 8, 2007. The NSA that is the subject of the current Application arose from this NSP.

As stated above, the Application was filed with the Board on November 26, 2007, and the Board issued the NSA Notice on December 18, 2007. The NSA Notice stated that following creation of the Commission, the Application would be considered by a panel of the Commission rather than by the Board. Effective January 1, 2008, the Commission was created pursuant to the *Alberta Utilities Commission Act*.<sup>11</sup>

On January 14, 2008, the Commission issued information requests to the AESO regarding the Application. Responses were received from the AESO on January 21, 2008. As no party had dissented from the NSA or objected to the Application, in accordance with the NSA Notice, the Commission did not call for argument or reply.

The Commission therefore considers the close of record for the Application to be January 21, 2008.

By letter dated January 10, 2008, the AESO advised that the Application succeeds the Original Application, and that it is withdrawing the Original Application.

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<sup>9</sup> A.R. 2007/86

<sup>10</sup> Decision 2007-062 – Alberta Electric System Operator (AESO) Request to Commence Settlement Discussions Article 11, dated August 3, 2007

<sup>11</sup> S.A. 2007, c. A-37.2

### 3 LEGISLATION AND BOARD DIRECTIVES

#### 3.1 Legislation

The Original Application was made pursuant to Part 2 Division 4 and Part 9 Division 2 of the EUA.

In regard to negotiated settlements, it is clear that the Commission has the mandate to encourage settlements of matters arising under the EUA and that it has the authority to consider negotiated settlements, provided that it either approve or reject the settlement in its entirety when it has been negotiated on that basis. Accordingly, the NS Application and NSA are properly before the Commission for consideration and given that the NSA was negotiated on the basis that it must be accepted or rejected in its entirety by the Commission, the Commission will proceed on that basis in this Decision.

#### 3.2 Negotiated Settlement Rules

Section 132 of the EUA requires the Commission, and prior to that required the Board, to establish rules, practices and procedures that facilitate settlements. These rules were established by the Board in *Informational Letter IL 98-04: Negotiated Settlement Guidelines* (Guidelines) issued on May 15, 1998.

The Guidelines have been revised through various amendments and the version<sup>12</sup> in effect at the time of the NSA Application was Board *Directive 018*, released on December 19, 2006 (Board Directive 018).

The AESO requested approval of the Board to commence negotiations on July 6, 2007. On August 3, 2007, the Board issued Decision 2007-062 which granted permission to the AESO to initiate the NSP. The NSA was filed on November 26, 2007.

Given that all the negotiations took place during the period in which the Board Directive 018 were in effect, and prior to the implementation of Commission Rule 018, the Commission is of the view that the Board Directive 018 is applicable in this case.<sup>13</sup>

The Guidelines and subsequent amendments have been considered in several Board and Alberta Court of Appeal decisions. Board Decision 2000-85<sup>14</sup> considered the 1998 version of the Guidelines at page 6 and outlined the approach to be utilized when reviewing a unanimous settlement:

In a consensus settlement, the Board considers that two main questions arise. First, the Board must examine the settlement process to ensure it was fair and in accordance with the criteria set out in the Negotiated Settlement Guidelines. In particular, the Board considers that it should be satisfied that proper notice has been provided, no negative response was received to the notice for objections, due process has been provided to participants by allowing for meaningful participation in the process including the funding

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<sup>12</sup> Directive 018, Negotiated Settlement Rules

<sup>13</sup> The NS Application indicates on p.4 that the NSP was conducted in accordance with Directive 018

<sup>14</sup> Decision 2000-85 – Northwestern Utilities Limited Approval of Rates, Tolls, Charges, and Terms and Conditions Of Service For Core Customers, and Approval of Amendments to the North Core Agreement (Application 2000297) (Released: December 22, 2000) pages 3-8



of interveners' participation, Board staff has participated as an observer in the settlement discussions, and all parties expressing an interest have signed off on the settlement.

Second, the Board must evaluate the settlement to determine whether there are elements which, in the Board's view, could result in rates which are not just and reasonable. In exercising this discretion, the Board believes that it should proceed with caution. The Board is charged with determining whether the settlement will result in rates that are just and reasonable. However, the Board acknowledges that if a settlement is changed in a way that is significant to the parties, it could prove detrimental to that agreement and any future settlements. The Board is mindful that in a package settlement compromises are struck that underpin the acceptability of the agreement among the parties, the importance of which may not be readily apparent to the Board. However, if a review of the settlement, including the possible empanelling of witnesses, reveals provisions that are patently against the public interest, the Board must act to change the agreement. To do otherwise would result in rates that are not just and reasonable. It may do that in a number of ways, including sending the settlement back to enable parties to deal with certain issues before the Board decides, deny the application citing the areas of concern, or direct that the settlement be litigated.

The Board recognizes that when unanimous settlements agreed to by all the interested parties are presented to it, it should restrain any inclination to alter the consensus settlement solely on the basis that it may have done things differently. It is only in circumstances where the settlement is patently against the public interest or contrary to law that the Board should intervene.

The above language is reflected to a certain extent in sections 2, 4, 5 and 6 of Board Directive 018. In particular, section 2.1 indicates that confirmation is required that proper notice was provided by the applicant to all interested parties. Section 4.1 indicates that staff involved in the negotiated settlement process will advise the Board, or the Commission, as to the fairness of the process.

Section 5.2 indicates that the onus is on the applicant to ensure that there is sufficient evidence to support the application, including the settlement agreement, and that the quality and detail of the evidence and the rationale for the settlement of issues are sufficient to enable the Board, or the Commission, to understand and assess the agreement.

As outlined in section 5.3 of Board Directive 018, the applicant must provide material to allow for an assessment of the impact to rates and services, including the text of any changes to the terms and conditions of service with supporting information.

Section 6.3 addresses unanimous or unopposed settlements specifically, and indicates that a settlement will be assessed to determine whether it results in rates and terms and conditions that are just and reasonable. The Commission notes that no objections were received with respect to the NSA in the current proceeding. The participants in the NSP are set forth in Appendix 1 to this Decision.

The items discussed above in Decision 2000-85 and Board Directive 018 can be divided into two main groups:

1. the fairness of the process used in arriving at a negotiated settlement and
2. the degree to which the settlement is in the public interest.

The Alberta Court of Appeal, in *ATCO Electric Limited v. Alberta (Energy and Utilities Board)*, 2004 ABCA 215 commented on the Board’s Guidelines and provided guidance on regulatory review of settlement agreements. At paragraphs 138-139 of that decision, the Court stated:

The ultimate responsibility for approving negotiated settlements – and ensuring that the process operates in a fair and reasonable manner – must rest with an independent body. That body is the Board....

Thus, as long as the distribution and transmission functions of electric utilities remain regulated, the negotiated settlement process does not replace an appropriate and informed review by the Board as to what is in the overall public interest. Otherwise, members of the consuming public may rightly ask: “Who’s protecting our interest?” The answer, at the end of the day, is the Board. That is why negotiated settlements require Board approval. And it is also why the Board’s discretion in controlling rates as mandated by statute cannot be fettered by a negotiated settlement...

The Court of Appeal also provided guidance in defining the nature of the public interest to be considered in assessing whether to approve a negotiated settlement and in assessing whether the resulting proposed tariff is just and reasonable. The Court determined that the public interest to consider with respect to both approval of the settlement and approval of the rates and tariffs is the same.

Accordingly, in assessing whether or not to approve the unanimous NSA, the Commission must accept or reject the NSA in its entirety, and in so doing must consider the fairness and public interest factors with the objectives of determining:

1. If the process resulting in the NSA was fair; and
2. If approval of the NSA will lead to rates and terms and conditions that are just and reasonable. In making this determination the Commission will consider if the NSA is patently contrary to the public interest or contrary to law.

## **4 THE NEGOTIATED SETTLEMENT AGREEMENT**

### **4.1 Fairness of Negotiated Settlement Process**

As noted above, the first question for the Commission is whether the AESO settlement process was fair. In this regard, the Commission notes that proper notice of the NSP was provided as detailed in clause 9 and Appendix A to the settlement brief included in the Application.

The NSA was unopposed by any party and no objections were received in response to the NSA Notice issued by the Commission.

The Commission also notes the participation of a staff observer who, in accordance with section 4.1 of Board Directive 018, has advised the Commission as to the fairness of the negotiated settlement process.

The Commission is satisfied that the materials filed with the NSP, and the attendance of a staff observer provide a level of assurance that interested parties were provided with the opportunity to participate, and participants were afforded due process.

Accordingly, the Commission finds that the AESO settlement process satisfies the factors relating to fairness of the negotiated settlement process.

## **4.2 Public Interest**

### **4.2.1 Basis for Analysis**

The second question for the Commission is whether the NSA contains elements that could lead to terms and conditions that are not just and reasonable.

In conducting its analysis, the Commission has analyzed the information filed by all parties in connection with the Original Application, the NS Application and the NSA.

In conducting its analysis, the Commission considered public interest factors and has considered the public interest from both the AESO's perspective and the perspective of interveners. The Commission also considered whether the effect of the NSA, taken as a whole, could lead to rates and terms and conditions that are just and reasonable and in the public interest.

In addition, by way of further comfort to the Commission in considering the public interest, the Commission has reviewed each of the material provisions of the NSA in order to determine if any of these material provisions, individually, appear contrary to accepted regulatory practices, or could result in undue rate and service impacts to customers.

### **4.2.2 AESO**

The AESO requested approval to negotiate a settlement with its customers, negotiated and executed the NSA, and has applied to the Commission for approval of the NSA. These factors indicate that the NSA, as a whole, is acceptable to the AESO and that approval by the Commission of the NSA is in the best interest of the AESO.

### **4.2.3 General Public Interest Factors**

The Commission notes that there was wide participation in the NSP by representatives from a number of different customer groups<sup>15</sup> that represent a large cross section of customers, both load and supply, have endorsed the settlement. No party has opposed the settlement. The Commission recognizes that the NSA represents an agreement reached as a result of a successful negotiation reflecting a number of compromises respecting the different interests and positions of the parties.

The Commission considers this broad stakeholder participation in the NSA, with its accompanying range of positions and interests and the fact the settlement was unopposed by any party, supports a finding that the NSA is in the public interest.

### **4.2.4 The NSA Taken as a Whole**

As indicated above, the Commission considered whether the effect of the NSA, taken as a whole, could lead to terms and conditions that are just and reasonable and in the public interest.

As noted above, the NSA contains certain amendments to Articles 1 and 11 of the AESO's T&C. The proposed amendments focus on the procurement of and compensation for TMR service. The

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<sup>15</sup> See Attachment C to the NSA

AESO stated that while Article 11 continues to address Ancillary Services other than TMR, those aspects of the Article remain unchanged and are not the subject matter of the NSA.

In clause 15 of the settlement brief included in the Application, the AESO submitted that there were three key components to the NSA which are reflected in the amendments to Article 11 agreed to by the signatories to the NSA:

The first key component identified by the AESO is that TMR services obtained by the AESO pursuant to Article 11 are treated as falling into one of two categories: foreseeable and unforeseeable TMR services. The AESO indicated that the distinction between these categories is factually dependent and based upon the circumstances giving rise to the AESO's underlying need for and timing of such services.

The AESO defined these two categories as follows:

- i. Foreseeable TMR Services – occur when the AESO, taking into account reasonable procurement timing requirements, determines TMR services are required to meet AESO Transmission Reliability Criteria, which includes consideration of expected operating conditions and planned transmission outages.
- ii. Unforeseeable TMR Services – are TMR services that do not constitute Foreseeable TMR Services.

The second key component identified by the AESO is that the AESO's procurement of Foreseeable TMR Services will adhere to a transparent process. The procurement process for these services will be developed and codified in an ISO rule. Until such time as such a rule is finalized, Schedule B to the NSA (also attached to Article 11, as Attachment E) will be adhered to when the AESO procures Foreseeable TMR Service.

The third key component identified by the AESO is that the compensation methodology for Unforeseeable TMR Services is the primary focus of the amendments to Article 11 as reflected in the NSA. The parties have agreed to apply this methodology retrospectively and adjust, where applicable, payments for Unforeseeable TMR Services directed by the AESO which was not under contract and where compensation was provided under either Article 24 or 11 as previously approved on an interim basis from December 17, 2004, until any Board approval of the NSA and thereafter.

In so doing, the interim payments for Unforeseeable TMR Service approved pursuant to the Board's prior Decisions are sought to be treated as final for rate making purposes.

The AESO explained, for clarity, that the TMR services from the generating units in the Rainbow Lake area over this time frame are not considered as Unforeseeable TMR Service, and therefore the interim compensation made for this service pursuant to interim Article 11 and 24 are not subject to finalization as a result of the NSA. The AESO stated that is still finalizing an agreement with AP for those costs.<sup>16</sup>

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<sup>16</sup> Application, clause 15, page 5

While neither the *2004 Transmission Regulation* nor the *2007 Transmission Regulation* specifies a methodology to be used by the AESO when determining compensation for TMR services, the regulation does set out certain factors that are to be considered. In particular, section 51 of the *2007 Transmission Regulation* provides states:

Recovery of must-run costs

51(1) For the purpose of section 30(2)(a)(ii) of the Act, the compensation must be no greater than an amount that would result in the recovery of fixed, operating and maintenance costs, including a reasonable rate of return, using a methodology described in the ISO tariff.

(2) The ISO must include in the ISO tariff a cost determination methodology and related terms and conditions of service for the purposes of subsection (1).

(3) Costs associated with subsection (1) must be included and recovered under the ISO tariff in the same manner as transmission costs under section 47(a)(i).<sup>17</sup>

The above clearly indicates that the methodology contained in the AESO's tariff is to be cost based (in contrast to market based). The proposed amendments to Article 11 of the AESO tariff are attached to the Application as Attachment F. In particular, Article 11.6 specifies the factors to be considered, in effect the formula, to be used by the AESO when calculating the compensation it is to pay for Unforeseen TMR Services. Proposed Article 11.7 states as follows:

The maximum monthly amount to be paid by the AESO for TMR Service results in the recovery of fixed, operating and maintenance costs, including a reasonable rate of return for the service provider, and is equal to the Average Monthly Fixed Cost plus Variable Costs as provided for in Article 11.6.<sup>18</sup>

In the Commission's view, the formula proposed by the AESO is cost based and complies with *2007 Transmission Regulation*.

Additionally, to further complete its due diligence on the settlement the Commission issued Information Requests to the AESO in order to achieve a more complete understanding of how the proposed compensation would be applied in practice. These responses are included as Appendix 4.

Additionally, the Commission wished to clarify its understanding of the application of the NSA to AP in the Rainbow Lake area and to understand the current status of the issues related to AP. Clause 15(c) of the settlement is clear that the agreement does not apply to the Rainbow units, stating as follows:

For clarity, the TMR services from the Rainbow units over this time frame are not considered as Unforeseeable TMR Service, and therefore the interim compensation made for this service pursuant to Interim Article 11 and 24 are not subject to finalization as a result of this Settlement. The AESO is still finalizing an agreement with ATCO for those costs.<sup>19</sup>

Matters relating to the AP Rainbow Lake units are discussed in section 4.2.5 of this Decision.

<sup>17</sup> This provision is similar to section 23 of the *2004 Transmission Regulation*.

<sup>18</sup> Application, Attachment F

<sup>19</sup> Application, Clause 15 (c), page 5

With regard to the compensation issues covered by the NSA, the Commission has examined the sample compensation calculations provided in response to AUC-AESO-1(a) and considers that the compensation derived is cost based and not unfair or unreasonable. The Commission also notes the discussion in AUC-AESO-1(b) regarding the concept of opportunity costs and the relevance to hydro units. The Commission also considers this provision to be reasonable.

The AESO indicated that since December 16, 2004, under Articles 24 and 11, the AESO has incurred costs of approximately \$4.0 million related to five events of Unforeseen TMR Services and that for the three year retrospective period covered by the NSA, the incremental TMR payments are forecast to be approximately \$2 million.<sup>20</sup> When compared to the total ancillary services payments of \$189.9 million for the 2005 year alone,<sup>21</sup> the Commission considers the NSA will result in incremental payments that are not excessive in the context of the total costs that the AESO incurs for ancillary services.

In light of the consensus that has been demonstrated by the AESO with respect to the NSA, the Commission's analysis of the NSA and the additional information supplied by the AESO in its IR responses, the Commission finds that the NSA conforms to the *2004 and 2007 Transmission Regulation*, will result in TMR compensation that is reasonable and that the settlement is generally in the public interest. It is therefore approved as filed.

Given the above analysis, the Commission is of the view that those matters addressed in the NSA, when considered as a whole, are fair and reasonable.

#### **4.2.5 Individual Components of the NSA- Resolution of TMR for AP Rainbow Lake**

The primary individual component of the NSA not yet considered above is the resolution of compensation paid by the AESO for TMR services obtained from AP generating units in the Rainbow Lake area. With respect to these services, the Board observes that AP accepted the AESO's invitation to negotiate, however subsequently withdrew from the settlement process.<sup>22</sup> AP is not a signatory to the NSA. In response to the NSA Notice, AP did not intervene or object to the NSA.

Clause 25 of the NSA provides that costs in respect of TMR services at Rainbow Lake from December 16, 2004, remain interim for the purposes of ratemaking and subject to adjustment and finalization by the Board until any Board approval of the NSA.

In order to clarify the intended process and timelines for resolution of matters relating to the AP generating units in the Rainbow Lake area, the Commission asked an information request of the AESO.<sup>23</sup>

In response to this information request, the AESO stated that it intends to finalize through a commercial agreement with AP the compensation for TMR service provided by the Rainbow Lake units since December 16, 2004, to the date the agreement is in place. The AESO further stated that the agreement between AP and the AESO will also address compensation for future

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<sup>20</sup> Settlement brief, clause 18, page 6

<sup>21</sup> AESO deferral account application, no. 1548908, page 13

<sup>22</sup> Settlement brief, clauses 10 and 11

<sup>23</sup> AUC.AESO-002

foreseeable TMR service from the Rainbow Lake units, beyond the date the agreement is in place.

The AESO stated that it expects a commercial agreement between itself and AP will be in place in the coming weeks. The AESO further indicated that assuming this the case, there will be no need for Commission approval of the agreement, as the ability to enter into such commercial agreements is within the scope of the AESO's authority.

The AESO stated that any adjustment to AP's TMR payments dating back to December 16, 2004, will be included in the AESO's 2007 deferral account process, and the associated reconciliation application is planned to be filed with the Commission in the fall of 2008.

The AESO indicated that if AP and the AESO are not able to arrive at a commercial agreement prior to the approval of proposed Article 11, the AESO is of the view that compensation for Rainbow Lake TMR services (back to December 16, 2004, and going forward) should be resolved through arbitration, consistent with what is specified in the application for "foreseeable" TMR services that can not be addressed through bilateral negotiations (i.e. per Article 11.5 and Schedule B of the NSA).

The Commission observes that the compensation payable to AP, for the use of the Rainbow units, is still outstanding. The Commission notes that in correspondence dated December 3, 2004, the AESO indicated to the Board that it was engaged in negotiations with AP to reach a contractual solution to compensation for the operation of the Rainbow units. In subsequent correspondence dated July 21, 2006, the AESO indicated that negotiations with AP had taken longer than expected, partially due to statements by the DOE that its policy directives may assist in the resolution of these matters. As noted above, the settlement has stated that these matters are still outstanding.

The Commission considers that closure must be brought to the issues related to AP compensation. Therefore, the Commission directs the AESO to, no later than March 20, 2008, either provide notice to the Commission of the completion and execution by both parties of a contract with AP or, in the alternative, advise the Commission of the specific deadline date by which arbitration will be commenced to resolve matters with AP.

Given the above analysis and the Commission's direction, the Commission is of the view that individual material components of the NSA do not appear to be contrary to accepted regulatory practices, or could result in undue rate and service impacts to customers. The Commission also considers that no component provides the Commission with a sufficient degree of concern to conclude that it would merit rejecting the NSA as not being in the public interest. This finding provides additional support for the Commission's conclusion in section 4.2.4 that the NSA as a whole is fair and reasonable.

#### **4.2.6 Conclusion on the NSA**

Based upon the evidence before the Commission and as a result of the above analysis, the Commission finds that the:

- (a) negotiated settlement process was fair; and
- (b) NSA is fair and reasonable and in the public interest.

## 5 ORDER

For and subject to the reasons set out in this Decision, IT IS HEREBY ORDERED, effective February 13, 2008, THAT

- (a) The Negotiated Settlement Agreement is approved in its entirety as filed, and in the form attached as Appendix 2.
- (b) For greater certainty, in accordance with the Negotiated Settlement Agreement, subject to (c) below, for the period December 17, 2004 until February 12, 2008 (inclusive), to the adjustment and to treatment as final for rate making purposes all costs incurred by the AESO for conscripted TMR Services paid pursuant to interim Articles 24 and 11 is hereby approved.
- (c) For greater certainty, in accordance with the Negotiated Settlement Agreement, all costs incurred by the AESO for conscripted TMR services from the Rainbow Lake facilities shall remain interim and are subject to further adjustment.
- (d) Payments falling within (b) above shall be adjusted such that prior period conscripted TMR service is treated as Unforeseen TMR Services and the pricing provisions found in Article 11.6 shall apply.

Dated in Calgary, Alberta on February 12, 2008.

### ALBERTA UTILITIES COMMISSION

*(original signed by)*

A. J. Berg, P.Eng.  
Presiding Member

*(original signed by)*

T. McGee  
Member



**APPENDIX 1 – PARTICIPANTS & SIGNATORIES TO SETTLEMENT AGREEMENT**

The following parties were participants in the NSP:<sup>24</sup>

- Alberta Direct Connect Consumers Association
- ATCO Power
- Alberta Urban Municipalities Association
- City of Medicine Hat
- Consumers Coalition of Alberta
- Direct Energy
- ENMAX Corporation
- EPCOR Utilities Inc.
- Industrial Power Consumers Association of Alberta
- Independent Power Producers Society of Alberta
- Nexen Inc.
- Public Institutional Consumers of Alberta
- Powerex Corp.
- TransAlta Corporation
- TransCanada Energy Ltd
- Office of the Utilities Consumer Advocate<sup>25</sup>

The following participants signed the NSA:<sup>26</sup>

- Alberta Direct Connect Consumers Association
- City of Medicine Hat
- ENMAX Corporation
- EPCOR Utilities Inc.
- Industrial Power Consumers Association of Alberta
- Independent Power Producers Society of Alberta
- Nexen Inc.
- TransAlta Corporation
- TransCanada Energy Ltd.
- Office of the Utilities Consumer Advocate (see footnote)

The following participants neither supported nor opposed the final NSA:<sup>27</sup>

- Consumers Coalition of Alberta
- Direct Energy
- Powerex Corp.
- Public Institutional Consumers of Alberta

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<sup>24</sup> Application, Attachment B

<sup>25</sup> As per its letter of September 21, 2007 the Office of the Utilities Consumer Advocate represents in electricity regulatory proceedings the Alberta Association of Municipal Districts and Councils, the Alberta Federation of Rural Electrification Associations Ltd., the Federation of Alberta Gas Co-ops Limited, the Canadian Federation of Independent Business, and notably the Alberta Urban Municipalities Association.

<sup>26</sup> Application, Attachment C

<sup>27</sup> Application, Attachment D

## **APPENDIX 2 – NEGOTIATED SETTLEMENT AGREEMENT**



Appendix 2 -  
Negotiated Settlement  
(consists of 22 pages)

## **APPENDIX 3 – AMENDMENTS TO THE AESO TARIFF**



Appendix 3 -  
Amendments to AESC  
(consists of 9 pages)

## APPENDIX 4 – INFORMATION RESPONSE 1A AND 1B



Appendix 4  
Information Response

(consists of 1 page)



Appendix 4 -  
Information Response

(consists of 2 pages)

**APPENDIX 2**  
**NEGOTIATED SETTLEMENT AGREEMENT**

**ATTACHMENT “E” TO APPLICATION**

**SETTLEMENT AGREEMENT**

**THIS SETTLEMENT AGREEMENT** dated for reference the 19th day of November, 2007

**BETWEEN:**

THE ALBERTA ELECTRIC SYSTEM OPERATOR, (hereinafter referred to as “**AESO**”)

OF THE FIRST PART

- and -

ALBERTA DIRECT CONNECT CONSUMERS ASSOCIATION, ATCO POWER, ALBERTA URBAN MUNICIPALITIES ASSOCIATION, CITY OF MEDICINE HAT, CONSUMERS COALITION OF ALBERTA, DIRECT ENERGY, ENMAX CORPORATION, EPCOR, INDUSTRIAL POWER CONSUMERS ASSOCIATION OF ALBERTA, INDEPENDENT POWER PRODUCERS SOCIETY OF ALBERTA, NEXEN, PUBLIC INSTITUTIONAL CONSUMERS OF ALBERTA, POWEREX CORP., TRANSALTA CORPORATION, TRANSCANADA ENERGY LTD., UTILITIES CONSUMER ADVOCATE, (hereinafter referred to as the “**NEGOTIATING PARTIES**”)

OF THE SECOND PART

**WHEREAS** The AESO and the Negotiating Parties (collectively “the **Parties**”) wish to enter into the settlement set forth and described in this Agreement.

**NOW THEREFORE THIS AGREEMENT WITNESSES** that in consideration of the premises and the mutual covenants and agreements of the Parties herein set forth, the Parties hereby covenant and agree with one another as follows:

**ARTICLE 1  
DEFINITIONS AND INTERPRETATION**

**1.1 Definitions**

Capitalized terms used in this Agreement including the recitals and Schedules shall have the meanings respectively provided for those terms as set forth below or, where no meaning is specified for a capitalized term below, the meaning provided for that term in the AESO Tariff or in that part of this Agreement where such term is utilized:

- (a) **“AESO”** is the Alberta Electric System Operator who carries out the duties and responsibilities of the Independent System Operator as set out in the *Alberta Electric Utilities Act*.
- (b) **“AESO Tariff”** means the rates and terms and conditions of service approved by the Alberta Energy and Utilities Board, or its successors, and that govern the provision of system access service by the AESO to its customers.
- (c) **“AESO Transmission Reliability Criteria”** means the transmission reliability criteria used by the AESO in the planning and operating of the Alberta Interconnected Electric System and which are available electronically on the AESO internet website.
- (d) **“Alberta Interconnected Electric System”** means interconnected transmission facilities and electric distribution systems, as defined in the *Alberta Electric Utilities Act*.
- (e) **“Ancillary Services”** means those services required to ensure that the Alberta Interconnected Electric System is operated in a manner that provides a satisfactory level of service with acceptable levels of voltage and frequency, as defined in the *Alberta Electric Utilities Act*.
- (f) **“Article 11”** means Article 11 in the AESO Tariff.
- (g) **“Bilateral Negotiation Process”** means negotiations between the AESO and a Customer concerning commercial terms for the provision of TMR Services.
- (h) **“Billing Period”** is as defined in the AESO Tariff.
- (i) **“Binding Arbitration Process”** means the process defined by Schedule B.
- (j) **“Board”** means the Alberta Energy and Utilities Board or its successors.
- (k) **“Customer”** has the definition provided in the AESO Tariff.
- (l) **“Dispute Resolution Process”** means the process administered by Article 19 of the AESO Tariff.
- (m) **“EOI”** means Expression of Interest and is an indication from the AESO to a Customer that provision of TMR Service is desired.
- (n) **“Existing Contract”** has the meaning ascribed to it in Section 11.2 of Schedule A.
- (o) **“Foreseeable TMR Service”** has the meaning ascribed to it in Section 11.4 of Schedule A and, for greater certainty, a TMR Service is a Foreseeable TMR Service if the AESO could both reasonably anticipate the need for and procure the TMR Service (taking into account reasonable procurement timing requirements)

through the Foreseeable TMR Service Procurement Procedure described in Schedule B to this Settlement.

- (p) **“Foreseeable TMR Service Procurement Procedure”** means the procedure found at Schedule B to this Settlement.
- (q) **“Market Surveillance Administrator” (“MSA”)** is as defined under the Alberta *Electric Utilities Act*.
- (r) **“Maximum TMR Price”** means the maximum compensation referred to in Article 11.7 of Schedule A.
- (s) **“PPA”** means Power Purchase Arrangement as defined in the Alberta *Electric Utilities Act*.
- (t) **“Request For Proposal” or “RFP”** refers to a document delivered from the AESO to a Customer for purposes related to the procurement of Foreseeable TMR Service.
- (u) **“TMR Directive”** occurs when the AESO directs a Customer to supply TMR Services.
- (v) **“TMR Services”** and **“Transmission Must Run Services”** are Ancillary Services required by the AESO for the safe and reliable operation of a region of the Alberta Interconnected Electric System.
- (w) **“Unforeseeable TMR Services”** has the meaning ascribed to it in Article 11.4 of Schedule A.
- (x) **“Unforeseeable TMR Service Event”** means the direction(s) of Unforeseeable TMR Service by the AESO to a Customer that result(s) from a single cause.

## 1.2 Agreement Viewed as a Whole

This Agreement is the result of negotiations and the Parties enter into this Agreement with the understanding that no single component of this Agreement is to be construed as representing the position of any Party on the appropriate result that would be obtained in the absence of the Agreement. This Agreement was realized as a result of broad industry negotiations and represents a balancing of interests by the Parties. Therefore no single component can be said to be acceptable to any Party independent of the entire Agreement. All components of this Agreement are inextricably linked and must be treated as such.

## 1.3 Schedules to Agreement

The following Schedules are attached to and forms part of this Agreement, are incorporated by reference in this Agreement, and are deemed to form a part hereof:

Schedule “A”: AESO Tariff, Article 11 – Ancillary Services



Schedule “B”: Foreseeable TMR Service Procurement Procedure

**ARTICLE 2**

**AESO TARIFF, ARTICLE 11 – ANCILLARY SERVICES**

**2.1 Interim Tariff Replaced with Schedule A**

- (a) The Parties agree Interim Article 11 as currently included in the AESO Tariff shall be replaced with the attached Schedule A: Article 11 – Ancillary Services.
- (b) The Parties agree that Article 1 of the AESO Tariff shall be amended by replacing the definition of “**Maximum TMR Compensation**” with:

“**Maximum TMR Compensation**” means the description found in Article 11.7.

and by adding in alphabetical order within Article 1 the following:

“**AESO Transmission Reliability Criteria**” means the transmission reliability criteria used by the AESO in the planning and operating of the Alberta Interconnected Electric System and which are available electronically on the AESO internet website.

**2.2 Foreseeable TMR Service Procurement Procedure – Schedule B**

The Parties agree the attached Schedule B:

- (a) Shall be incorporated by reference into and form part of the AESO Tariff until such time as a formal AESO Rule has been developed.
- (b) Sets forth the process that the AESO shall follow for the procurement of all Foreseeable TMR Services.
- (c) Shall be posted on the AESO website and, upon request, made available to any person.

**2.3 Effective Date**

The Parties agree that Schedules A and B shall take effect immediately upon approval by the Board.

**2.4 Costs Treatment for Unforeseeable TMR Services in the Period December 16, 2004 to Present**

Subject to Article 2.5, for the period in which interim approved Articles 24 and 11 were in effect (i.e., from December 16, 2004 until Board approval of this Agreement):

- (a) Any conscripted TMR Service paid pursuant to Articles 24.3 (as it was then in effect) and 11.3 shall be considered as Unforeseeable TMR Service; and

(b) The payments made by the AESO for such TMR Services shall be adjusted retrospectively using the methodology described in Article 11.6 of Schedule A to this Agreement. Any and all adjusted amounts shall be final for rate making purposes.

## **2.5 Costs Treatment for Foreseeable TMR Services in the Period December 16, 2004 to Present**

In any event of Article 2.4, costs in respect of TMR Services at Rainbow Lake from December 16, 2004 until Board approval of this Agreement, pursuant to Articles 24.3 (as it was then in effect) and 11.3, remain interim for purposes of ratemaking and subject to adjustment and finalization by the Board.

## **2.6 Transmission Regulation Compliance**

The Parties acknowledge and agree that the Maximum TMR Services Compensation determined in accordance with Article 11.7 accords with the maximum compensation described in Section 23 of the *Transmission Regulation*, A.R. 174/2004 or Section 51 of the *Transmission Regulation*, A.R. 86/2007, whichever is applicable.

## **2.7 Competitive Procurement Process**

For greater certainty, the proposed Article 11 Tariff provision in Schedule A reflects the commitment of the AESO to procure Foreseeable TMR Services through competitive EOI and RFP procurement processes. The AESO will only conscript TMR Services in the event of an unforeseeable contingency.

# **ARTICLE 3 APPLICATION TO THE EUB**

## **3.1 Regulatory Approval of this Agreement**

The terms and conditions contained in this Agreement are subject to approval of the EUB and if this Agreement is not approved in its entirety by the EUB, this Agreement shall immediately terminate and shall be of no further force or effect. If this Agreement terminates in this manner, then this Agreement will not prejudice the position of any of the Parties in any regulatory proceeding following such termination.

## **3.2 AESO to Seek Regulatory Approval**

AESO shall immediately commence the preparation of an application to be submitted for approval to the EUB, which shall reflect the terms and conditions of this Agreement, including all necessary and consequential amendments to the AESO Tariff in order to properly effect the terms and conditions of this Agreement. Negotiating Parties agree to support such application to the EUB.

## **ARTICLE 4 MISCELLANEOUS**

### **4.1 Corresponding Changes to AESO Rules**

The AESO agrees to develop, following reasonable efforts by all Parties hereto, a formal AESO Rule to revise or replace Schedule B.

### **4.2 Expanded Meanings**

Unless the context otherwise necessarily requires, the following provisions shall govern the interpretation of this Agreement:

- (a) words used herein importing the singular number only shall include the plural and vice versa;
- (b) the terms “in writing” or “written” include printing, typewritten, or any electronic means of communication by which words are capable of being visually reproduced at a distant point of reception, including by telecopier, but for greater certainty shall not include e-mail;
- (c) “this Agreement”, “the Agreement”, “hereto”, “herein”, “hereby”, “hereunder”, “hereof” and similar expressions refer to this agreement and includes each Schedule attached hereto, and not to any particular Article, Section or other subdivision or portion hereof and includes each and every instrument varying, amending, modifying or supplementing this agreement;
- (d) references herein to any agreement, including this Agreement, shall be deemed to be references to the agreement as varied, amended, modified, supplemented or replaced from time to time;
- (e) the word “including”, “includes” or, “include” wherever used in this Agreement, means “including, without limitation”, “includes, without limitation” or “include, without limitation”, as the case may be;
- (f) unless otherwise specified, all references to “Articles”, “Sections”, “subsections” and “Schedules” are references to Articles or Sections and subsections of, and Schedules to and forming part of, this Agreement; and
- (g) the division of this Agreement into Articles, Sections and other subdivisions, the provision of a table of contents and the insertion of headings are for convenience of reference only and shall not affect the construction or interpretation of this Agreement.

### **4.3 Statutory References**

Any reference to a statute shall include and shall be deemed to be a reference to such statute and to the regulations made pursuant thereto, and all amendments made thereto and enforced from time to time, and to any statute or regulation that may be passed which has the effect of

supplementing the statute so referred to or the regulations made pursuant thereto, and any reference to an order, ruling or decision shall be deemed to be references to such order, ruling or decision as the same may be varied, amended, modified, supplemented or replaced from time to time unless the context dictates otherwise.

**4.4 Amendment of Agreement**

No supplement, modification or waiver or termination of this Agreement shall be binding unless executed in writing by the Party to be bound thereby.

**4.5 Waiver**

No waiver of any of the provisions of this Agreement shall be valid unless in writing and unless otherwise expressly provided no such waiver shall constitute or be deemed to constitute a waiver of any other provisions (whether or not similar) nor shall such waiver constitute a continuing waiver.

**4.6 Enurement**

This Agreement shall enure to the benefit of and be binding upon the Parties hereto and their respective successors and assigns.

**4.7 Counterpart Execution**

This Agreement may be executed in one or more counterparts. Each counterpart shall constitute an original and all counterparts together shall constitute one and the same agreement.

**IN WITNESS WHEREOF** the Parties have duly executed this Agreement as of the date first above written.

**ALBERTA ELECTRIC SYSTEM  
OPERATOR**

By: \_\_\_\_\_

Name:

Title:

By: \_\_\_\_\_

Name:

Title:

**ALBERTA DIRECT CONNECT  
CONSUMERS ASSOCIATION**

By: \_\_\_\_\_

Name:

Title:

By: \_\_\_\_\_

Name:

Title:

**ATCO POWER**

By: \_\_\_\_\_

Name:

Title:

By: \_\_\_\_\_

Name:

Title:

**ALBERTA URBAN MUNICIPALITIES  
ASSOCIATION**

By: \_\_\_\_\_

Name:

Title:

By: \_\_\_\_\_

Name:

Title:

**CITY OF MEDICINE HAT**

By: \_\_\_\_\_

Name:

Title:

By: \_\_\_\_\_

Name:

Title:

**CONSUMERS COALITION OF ALBERTA**

By: \_\_\_\_\_

Name:

Title:

By: \_\_\_\_\_

Name:

Title:

**DIRECT ENERGY**

By: \_\_\_\_\_

Name:

Title:

By: \_\_\_\_\_

Name:

Title:

**ENMAX CORPORATION**

By: \_\_\_\_\_

Name:

Title:

By: \_\_\_\_\_

Name:

Title:

**EPCOR UTILITIES INC.**

By: \_\_\_\_\_

Name:

Title:

By: \_\_\_\_\_

Name:

Title:

**INDUSTRIAL POWER CONSUMERS  
ASSOCIATION OF ALBERTA**

By: \_\_\_\_\_

Name:

Title:

By: \_\_\_\_\_

Name:

Title:

**INDEPENDENT POWER PRODUCERS  
SOCIETY OF ALBERTA**

By: \_\_\_\_\_

Name:

Title:

By: \_\_\_\_\_

Name:

Title:

**NEXEN**

By: \_\_\_\_\_

Name:

Title:

By: \_\_\_\_\_

Name:

Title:

**PUBLIC INSTITUTIONAL CONSUMERS  
OF ALBERTA**

By: \_\_\_\_\_

Name:

Title:

By: \_\_\_\_\_

Name:

Title:



**POWEREX CORP.**

By: \_\_\_\_\_  
Name:  
Title:

By: \_\_\_\_\_  
Name:  
Title:

**TRANSALTA CORPORATION**

By: \_\_\_\_\_  
Name:  
Title:

By: \_\_\_\_\_  
Name:  
Title:

**TRANSCANADA ENERGY LTD.**

By: \_\_\_\_\_  
Name:  
Title:

By: \_\_\_\_\_  
Name:  
Title:

**UTILITIES CONSUMER ADVOCATE**

By: \_\_\_\_\_

Name:

Title:

By: \_\_\_\_\_

Name:

Title:

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## SCHEDULE A

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### ARTICLE 11 ANCILLARY SERVICES

#### 11.1 General

Ancillary Services are provided by Customers when the AESO determines there is a need for such services to maintain system security and ensure the reliable operation of the Alberta Interconnected Electric System. Customers required by the AESO to provide Ancillary Services shall be directed to do so in accordance with AESO Operating Policies and Procedures and will be compensated as provided in Articles 11.2 – 11.7, as applicable.

#### 11.2 Contracted Ancillary Services

If at the time the Customer is directed to provide Ancillary Services the Customer has an existing contract with the AESO to provide the Ancillary Services in question from the directed facility (the “Existing Contract”), then the amount to be paid to the Customer by the AESO for the Ancillary Services shall be determined according to the terms of the Existing Contract.

#### 11.3 Directed Ancillary Services other than Transmission Must Run Services

If at the time the Customer is directed to provide an Ancillary Service other than TMR Service, the Customer does not have an Existing Contract, then the amount to be paid to the Customer by the AESO in respect of each Ancillary Service provided shall be the greater of the following monthly amounts. Each amount is the sum for the month of hourly compensation amounts.

- (a) The product of the MW hour directed and the highest price paid in the hour to Customers providing the same Ancillary Service pursuant to Article 11.2 and that the Existing Contract was the result of a competitive process conducted in the prior 12 months; or
- (b) The verifiable net opportunity cost related to foregone electricity sales incurred by the Customer to supply the directed Ancillary Service, taking into account offsetting pool energy receipts.

#### 11.4 Transmission Must Run Services

TMR Services are Ancillary Services provided by Customers with generating units in response to a direction provided by the AESO to ensure safe and reliable electrical service for a region of the Alberta Interconnected Electric System.

TMR Services are Foreseeable if the AESO, taking into account reasonable procurement timing requirements, determines TMR Services are required to meet AESO Transmission

Reliability Criteria which includes consideration of expected operating conditions and planned transmission outages. TMR Services are Unforeseeable TMR Services if they do not constitute Foreseeable TMR Services.

### **11.5 Arrangements and Compensation for Foreseeable TMR Services**

Arrangements and compensation for Foreseeable TMR Services will be made in accordance with the Foreseeable TMR Service Procurement Procedure (Schedule B).

### **11.6 Compensation for Unforeseeable TMR Services**

If at the time the Customer is directed to provide Unforeseeable TMR Service the Customer does not have an Existing Contract, then the amount to be paid to the Customer in the applicable Billing Period for Unforeseeable TMR Service is equal to Variable Costs plus Fixed Costs, where:

- (a) Variable Costs means the hourly difference of the pool price subtracted from the Energy Price, which shall not be less than zero, multiplied by the corresponding hourly energy generated (MW.h) by the specific directed generating unit in compliance with the directive to provide Unforeseeable TMR Service, where:
  - (i) Energy Price (\$/MW.h) is the product of the Heat Rate multiplied by the Fuel Cost, added to the sum of the Variable STS Charges and Variable O&M Charge.
  - (ii) Heat Rate (GJ/MW.h) is the actual heat rate of the Customer's generating unit during the period when the unit was complying with the directive.
  - (iii) Fuel Cost for a gas generating unit is the natural gas market price (\$/GJ), being the "Daily Spot Price at AECO-C and NIT", excluding weekends, as published in the Canadian Gas Price Reporter, for natural gas on the applicable day. The Fuel Cost for a coal generating unit shall be provided by the Customer.
  - (iv) Variable STS Charges (\$/MW.h) is the actual cost of all variable charges from Rate Schedule STS of the AESO Tariff, including the applicable loss factor charge or credit.
  - (v) Variable O&M Charge (\$/MW.h) is the all-in cost (including major/minor overhauls), fixed at \$4/MWh, of providing incremental output from the unit, excluding Fuel Costs and Variable STS charges.
- (b) Fixed Costs are equal to the Average Monthly Fixed Cost multiplied by the greater of the Must Run Ratio (MRR) or the Minimum MRR, where:
  - (i) Average Monthly Fixed Cost is equal to one-twelfth of the sum of the annual costs in items (A) through (H) as follows:

- (A) annual amortization and depreciation amounts for the Customer's investment or for the PPA acquisition cost related to the specific directed generating unit, consistent with amounts reported in the Customer's audited financial statements, and adjusted for cogeneration infrastructure not utilized for generation purposes;
  - (B) the product of the unamortized or undepreciated capital investment (UCI) multiplied by a deemed debt percentage of 70% and multiplied by a debt interest rate that is equal to the current 10-year Government of Canada Bond interest rate plus 0.5%, and where UCI is the greater of
    - (1) the Customer's initial cost of property, plant, and equipment for the specific directed generating unit, or the Customer's initial PPA acquisition cost related to the specific directed generating unit, less accumulated depreciation or amortization, as the case may be, related to the specific directed generating unit; or
    - (2) 25% of the Customer's initial cost of property, plant, and equipment for the specific directed generating unit, or the Customer's initial PPA acquisition cost related to the specific directed generating unit.
  - (C) the product of UCI, as described in (B) above, multiplied by a deemed 30% common equity percentage of capital structure multiplied by a deemed 12% rate of return on equity;
  - (D) if the Customer provides verifiable actual values for the items in both (B) and (C) then those will be used instead of the deemed values;
  - (E) the product of the tax rates multiplied by the rate of return on equity amount determined in (C), where income tax costs reflect the marginal income tax rates for both federal and provincial portions of income tax;
  - (F) total annual direct fixed operation and maintenance costs associated with the specific directed generating unit;
  - (G) total annual direct fixed fuel costs associated with the specific directed generating unit; and
  - (H) fixed charges from applicable PPAs associated with the specific directed generating unit.
- (ii) Must Run Ratio (MRR) is the ratio of the number of hours in the month when Unforeseeable TMR Services were provided to the total number of hours in the month;

- (iii) Minimum MRR is:
- (A) 12% for the first or second Unforeseeable TMR Service Event within a rolling 12-month period in which TMR Service is directed by the AESO;
  - (B) 20% for the third Unforeseeable TMR Service Event within a rolling 12-month period in which TMR Service is directed by the AESO;
  - (C) 30% for the fourth Unforeseeable TMR Service Event within a rolling 12-month period in which TMR Service is directed by the AESO;
  - (D) 40% for the fifth Unforeseeable TMR Service Event within a rolling 12-month period in which TMR Service is directed by the AESO; or
  - (E) 50% for the sixth or any additional Unforeseeable TMR Service Event within a rolling 12-month period in which TMR Service is directed by the AESO.

If there is more than one Unforeseeable TMR Service Event in a Billing Period, the Minimum MRR shall be the highest applicable percentage described in (A) through (E) above.

In lieu of the Variable and Fixed Costs in (a) and (b) above, if a Customer can demonstrate foregone future energy sales due to a TMR directive, then the verifiable net opportunity cost related to foregone electricity sales incurred by the Customer to supply the directed TMR Service, taking into account offsetting pool energy receipts. This applies only to Customers that have responded to a TMR direction from using hydro-electric generation units.

### **11.7 Maximum TMR Services Compensation**

The maximum monthly amount to be paid by the AESO for TMR Service results in the recovery of fixed, operating and maintenance costs, including a reasonable rate of return for the service provider, and is equal to the Average Monthly Fixed Cost plus Variable Costs as provided for in Article 11.6.

### **11.8 Invoicing**

Customers that provide Unforeseeable TMR Service in response to a direction from the AESO will submit an invoice to the AESO within 15 business days after the later of (i) the end of the month in which the service was provided or (ii) the coming into effect of this Article 11. The amount of the invoice shall be determined in accordance with the method in 11.6 of this Article, and will separately itemize the values used for each component specified (Fixed and Variable Costs).

## **11.9 Audit Rights**

The AESO has the right to audit Customer's invoices and source information related thereto for TMR Services, provided that any such audit is (i) conducted only on reasonable prior notice to the Customer, (ii) conducted on the Customer's premises during normal business hours, (iii) not conducted by, or the information gathered made available to, those persons at the AESO that determine Contestability for purposes of the AESO procuring TMR competitively, (iv) conducted subject to Article 20 of this Tariff, and that (v) no copies of records reviewed during the audit shall be made without the Customer's prior written consent.

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## SCHEDULE B

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### PROCEDURE FOR FORESEEABLE TMR SERVICE

1. This Schedule shall come into force upon the approval of the Settlement Agreement by the Board and remain in force until replaced or revised through the creation of an AESO Rule following reasonable efforts by all Parties hereto to develop same.
2. The AESO shall issue an EOI inviting eligible Customers to express interest in contracting with the AESO for the supply of TMR Service, where an Existing Contract is not in effect. (Reference #1 in below diagram)
3. Based on Customer response to the EOI, the AESO shall fairly and reasonably determine if the EOI is Contestable (Reference #2 in below diagram). The advice and direction of the Market Surveillance Administrator will be sought in all such matters and, should the subsequent determination be disputed the issue of whether the EOI is Contestable may be determined by the Board. (Reference #4 in below diagram)
4. Upon determination by the AESO that the EOI is Contestable a RFP shall be issued by the AESO (Reference #3 in below diagram). The AESO shall fairly and reasonably determine if the RFP is Contestable, again after seeking the advice and direction of the MSA. (Reference #5 in below diagram)
5. If either of the EOI or RFP is deemed by the AESO not to be Contestable the AESO shall issue written reasons in that regard and a Bilateral Negotiation Process shall commence. The Bilateral Negotiation Process:
  - (a) shall be subject to the Maximum TMR Price specified by Article 11.7 of the AESO Tariff,
  - (b) may include all Customers who are effective providers of the required TMR service, although preference will be given to those who responded to the EOI/RFP, and
  - (c) shall not be limited by the pricing provisions of Article 11.6 of the AESO Tariff in respect of Unforeseeable TMR service.(Reference #6 in below diagram)
6. Any party to the Bilateral Negotiation Process may declare it unsuccessful after 30 days, at which time a Binding Arbitration Process shall commence between the AESO and the Customer (Reference #7 in below diagram). In circumstances where multiple Customers may provide TMR Services to the AESO, the AESO shall act fairly and reasonably in its selection as to the party that is subject to Binding Arbitration. The Binding Arbitration Process shall:

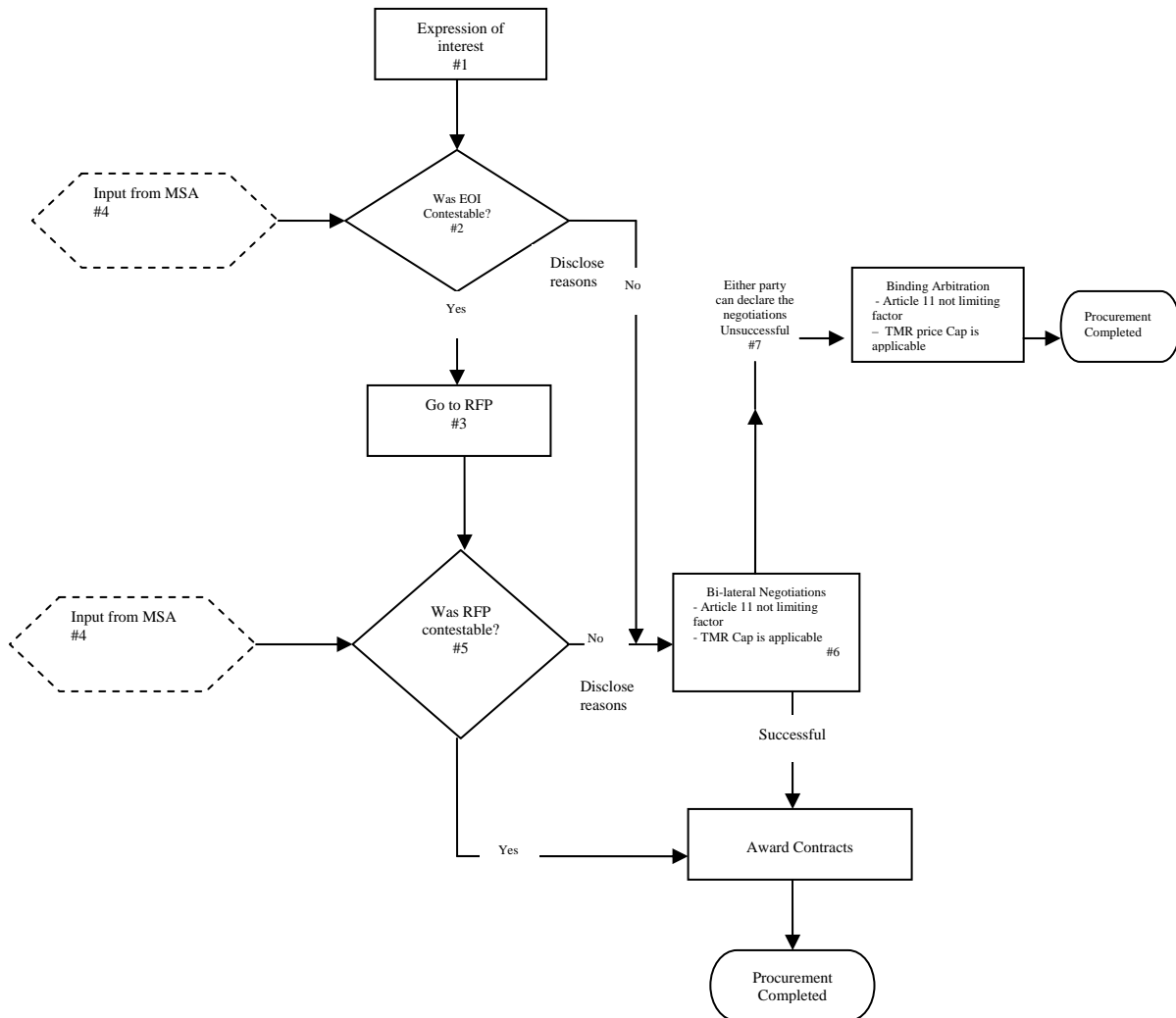


- (d) be subject to the Maximum TMR Price specified by Article 11.7 of the AESO Tariff, and
- (e) not be limited by the pricing provisions of Article 11.6 of the AESO Tariff in respect of Unforeseeable TMR Service.

(Reference #8 in below diagram)

7. The Binding Arbitration Process shall employ the Dispute Resolution Process established under Article 19 of the AESO Tariff and proceed directly to Arbitration as per Article 19.3 of the AESO Tariff. Any arbitrator appointed pursuant to that Dispute Resolution Process shall have an expert understanding and knowledge of the Alberta electricity marketplace. (Reference #8 in below diagram)

### PROCEDURE FOR FORESEEABLE TMR SERVICE DIAGRAM



**APPENDIX 3**

**AMENDMENTS TO THE AESO TARIFF**

**ATTACHMENT “F” TO APPLICATION**

**ATTACHMENT F**  
**AMENDMENTS TO THE AESO TARIFF**

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1. The following shall be added to Article 1 in alphabetical order:

**“AESO Transmission Reliability Criteria”** means the transmission reliability criteria used by the AESO in the planning and operating of the Alberta Interconnected Electric System and which are available electronically on the AESO internet website.

2. The definition of **“Maximum TMR Compensation”** in Article 1 shall be replaced with:

The maximum monthly amount to be paid by the AESO for TMR Service results in the recovery of fixed, operating and maintenance costs, including a reasonable rate of return for the service provider, and is equal to the Average Monthly Fixed Cost plus Variable Costs as provided for in Article 11.6.

3. Article 11 shall be replaced by the following:

**ARTICLE 11**  
**ANCILLARY SERVICES**

**11.1 General**

Ancillary Services are provided by Customers when the AESO determines there is a need for such services to maintain system security and ensure the reliable operation of the Alberta Interconnected Electric System. Customers required by the AESO to provide Ancillary Services shall be directed to do so in accordance with AESO Operating Policies and Procedures and will be compensated as provided in Articles 11.2 – 11.7, as applicable.

**11.2 Contracted Ancillary Services**

If at the time the Customer is directed to provide Ancillary Services the Customer has an existing contract with the AESO to provide the Ancillary Services in question from the directed facility (the “Existing Contract”), then the amount to be paid to the Customer by the AESO for the Ancillary Services shall be determined according to the terms of the Existing Contract.

**11.3 Directed Ancillary Services other than Transmission Must Run Services**

If at the time the Customer is directed to provide an Ancillary Service other than TMR Service, the Customer does not have an Existing Contract, then the amount to be paid to the Customer by the AESO in respect of each Ancillary Service provided shall be the greater of the following monthly amounts. Each amount is the sum for the month of hourly compensation amounts.

- (a) The product of the MW hour directed and the highest price paid in the hour to Customers providing the same Ancillary Service pursuant to Article 11.2 and that the Existing Contract was the result of a competitive process conducted in the prior 12 months; or
- (b) The verifiable net opportunity cost related to foregone electricity sales incurred by the Customer to supply the directed Ancillary Service, taking into account offsetting pool energy receipts.

#### **11.4 Transmission Must Run Services**

TMR Services are Ancillary Services provided by Customers with generating units in response to a direction provided by the AESO to ensure safe and reliable electrical service for a region of the Alberta Interconnected Electric System.

TMR Services are Foreseeable if the AESO, taking into account reasonable procurement timing requirements, determines TMR Services are required to meet AESO Transmission Reliability Criteria which includes consideration of expected operating conditions and planned transmission outages. TMR Services are Unforeseeable TMR Services if they do not constitute Foreseeable TMR Services.

#### **11.5 Arrangements and Compensation for Foreseeable TMR Services**

Arrangements and compensation for Foreseeable TMR Services will be made in accordance with the Foreseeable TMR Service Procurement Procedure (Appendix D).

#### **11.6 Compensation for Unforeseeable TMR Services**

If at the time the Customer is directed to provide Unforeseeable TMR Service the Customer does not have an Existing Contract, then the amount to be paid to the Customer in the applicable Billing Period for Unforeseeable TMR Service is equal to Variable Costs plus Fixed Costs, where:

- (a) Variable Costs means the hourly difference of the pool price subtracted from the Energy Price, which shall not be less than zero, multiplied by the corresponding hourly energy generated (MW.h) by the specific directed generating unit in compliance with the directive to provide Unforeseeable TMR Service, where:
  - (i) Energy Price (\$/MW.h) is the product of the Heat Rate multiplied by the Fuel Cost, added to the sum of the Variable STS Charges and Variable O&M Charge.
  - (ii) Heat Rate (GJ/MW.h) is the actual heat rate of the Customer's generating unit during the period when the unit was complying with the directive.
  - (iii) Fuel Cost for a gas generating unit is the natural gas market price (\$/GJ), being the "Daily Spot Price at AECO-C and NIT", excluding weekends, as published in the Canadian Gas Price Reporter, for natural gas on the

applicable day. The Fuel Cost for a coal generating unit shall be provided by the Customer.

- (iv) Variable STS Charges (\$/MW.h) is the actual cost of all variable charges from Rate Schedule STS of the AESO Tariff, including the applicable loss factor charge or credit.
  - (v) Variable O&M Charge (\$/MW.h) is the all-in cost (including major/minor overhauls), fixed at \$4/MWh, of providing incremental output from the unit, excluding Fuel Costs and Variable STS charges.
- (b) Fixed Costs are equal to the Average Monthly Fixed Cost multiplied by the greater of the Must Run Ratio (MRR) or the Minimum MRR, where:
- (i) Average Monthly Fixed Cost is equal to one-twelfth of the sum of the annual costs in items (A) through (H) as follows:
    - (A) annual amortization and depreciation amounts for the Customer's investment or for the PPA acquisition cost related to the specific directed generating unit, consistent with amounts reported in the Customer's audited financial statements, and adjusted for cogeneration infrastructure not utilized for generation purposes;
    - (B) the product of the unamortized or undepreciated capital investment (UCI) multiplied by a deemed debt percentage of 70% and multiplied by a debt interest rate that is equal to the current 10-year Government of Canada Bond interest rate plus 0.5%, and where UCI is the greater of
      - (1) the Customer's initial cost of property, plant, and equipment for the specific directed generating unit, or the Customer's initial PPA acquisition cost related to the specific directed generating unit, less accumulated depreciation or amortization, as the case may be, related to the specific directed generating unit; or
      - (2) 25% of the Customer's initial cost of property, plant, and equipment for the specific directed generating unit, or the Customer's initial PPA acquisition cost related to the specific directed generating unit.
    - (C) the product of UCI, as described in (B) above, multiplied by a deemed 30% common equity percentage of capital structure multiplied by a deemed 12% rate of return on equity;
    - (D) if the Customer provides verifiable actual values for the items in both (B) and (C) then those will be used instead of the deemed values;

- (E) the product of the tax rates multiplied by the rate of return on equity amount determined in (C), where income tax costs reflect the marginal income tax rates for both federal and provincial portions of income tax;
  - (F) total annual direct fixed operation and maintenance costs associated with the specific directed generating unit;
  - (G) total annual direct fixed fuel costs associated with the specific directed generating unit; and
  - (H) fixed charges from applicable PPAs associated with the specific directed generating unit.
- (ii) Must Run Ratio (MRR) is the ratio of the number of hours in the month when Unforeseeable TMR Services were provided to the total number of hours in the month;
- (iii) Minimum MRR is:
- (A) 12% for the first or second Unforeseeable TMR Service Event within a rolling 12-month period in which TMR Service is directed by the AESO;
  - (B) 20% for the third Unforeseeable TMR Service Event within a rolling 12-month period in which TMR Service is directed by the AESO;
  - (C) 30% for the fourth Unforeseeable TMR Service Event within a rolling 12-month period in which TMR Service is directed by the AESO;
  - (D) 40% for the fifth Unforeseeable TMR Service Event within a rolling 12-month period in which TMR Service is directed by the AESO; or
  - (E) 50% for the sixth or any additional Unforeseeable TMR Service Event within a rolling 12-month period in which TMR Service is directed by the AESO.

If there is more than one Unforeseeable TMR Service Event in a Billing Period, the Minimum MRR shall be the highest applicable percentage described in (A) through (E) above.

In lieu of the Variable and Fixed Costs in (a) and (b) above, if a Customer can demonstrate foregone future energy sales due to a TMR directive, then the verifiable net opportunity cost related to foregone electricity sales incurred by the Customer to supply the directed TMR Service, taking into account offsetting pool energy receipts. This

applies only to Customers that have responded to a TMR direction from using hydro-electric generation units.

### **11.7 Maximum TMR Services Compensation**

The maximum monthly amount to be paid by the AESO for TMR Service results in the recovery of fixed, operating and maintenance costs, including a reasonable rate of return for the service provider, and is equal to the Average Monthly Fixed Cost plus Variable Costs as provided for in Article 11.6.

### **11.8 Invoicing**

Customers that provide Unforeseeable TMR Service in response to a direction from the AESO will submit an invoice to the AESO within 15 business days after the later of (i) the end of the month in which the service was provided or (ii) the coming into effect of this Article 11. The amount of the invoice shall be determined in accordance with the method in 11.6 of this Article, and will separately itemize the values used for each component specified (Fixed and Variable Costs).

### **11.9 Audit Rights**

The AESO has the right to audit Customer's invoices and source information related thereto for TMR Services, provided that any such audit is (i) conducted only on reasonable prior notice to the Customer, (ii) conducted on the Customer's premises during normal business hours, (iii) not conducted by, or the information gathered made available to, those persons at the AESO that determine Contestability for purposes of the AESO procuring TMR competitively, (iv) conducted subject to Article 20 of this Tariff, and that (v) no copies of records reviewed during the audit shall be made without the Customer's prior written consent.



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## APPENDIX D

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### PROCEDURE FOR FORESEEABLE TMR SERVICE

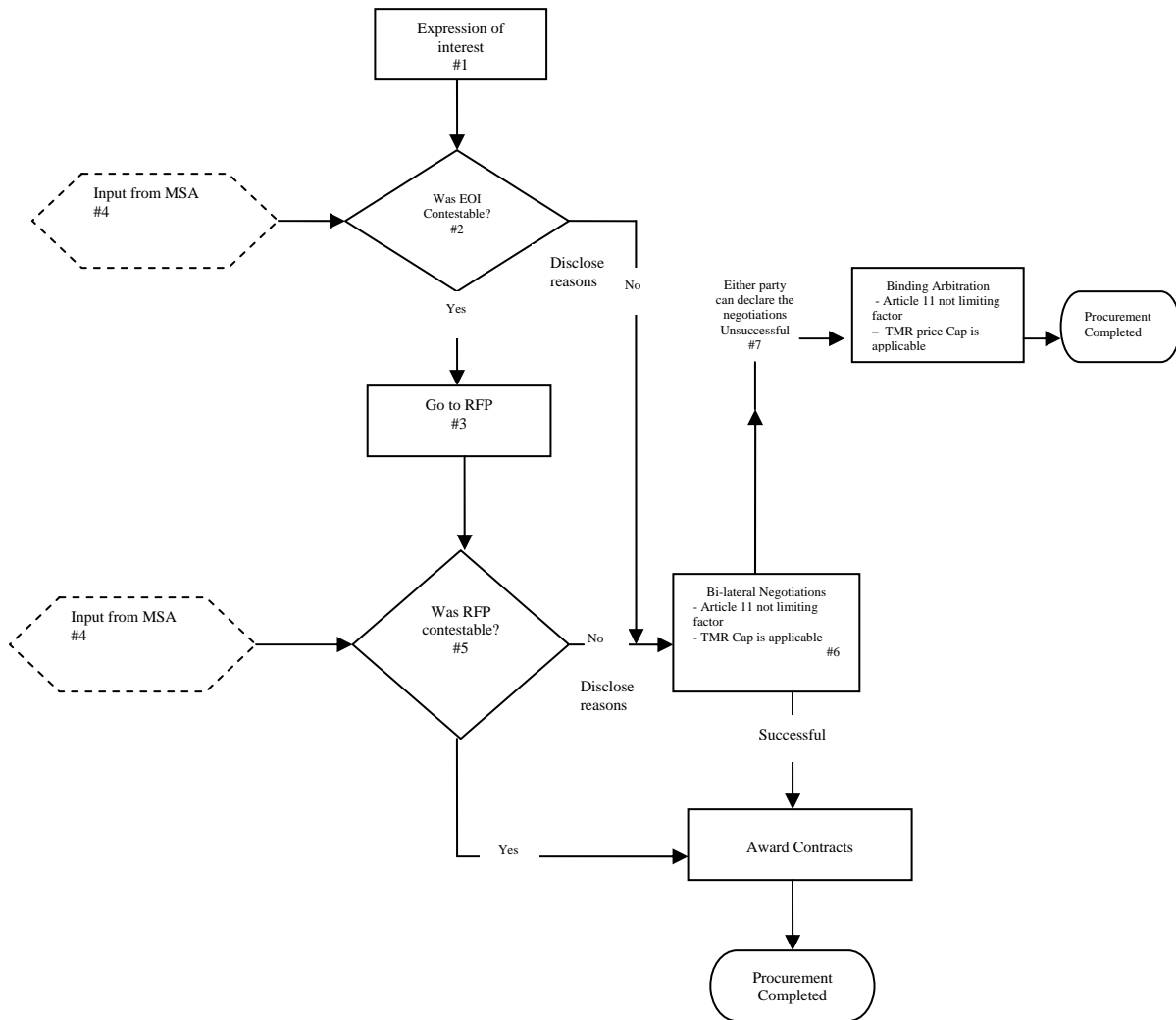
1. This Schedule shall come into force upon the approval of the Settlement Agreement by the Board and remain in force until replaced or revised through the creation of an AESO Rule following reasonable efforts by all Parties hereto to develop same.
2. The AESO shall issue an EOI inviting eligible Customers to express interest in contracting with the AESO for the supply of TMR Service, where an Existing Contract is not in effect. (Reference #1 in below diagram)
3. Based on Customer response to the EOI, the AESO shall fairly and reasonably determine if the EOI is Contestable (Reference #2 in below diagram). The advice and direction of the Market Surveillance Administrator will be sought in all such matters and, should the subsequent determination be disputed the issue of whether the EOI is Contestable may be determined by the Board. (Reference #4 in below diagram)
4. Upon determination by the AESO that the EOI is Contestable a RFP shall be issued by the AESO (Reference #3 in below diagram). The AESO shall fairly and reasonably determine if the RFP is Contestable, again after seeking the advice and direction of the MSA. (Reference #5 in below diagram)
5. If either of the EOI or RFP is deemed by the AESO not to be Contestable the AESO shall issue written reasons in that regard and a Bilateral Negotiation Process shall commence. The Bilateral Negotiation Process:
  - (a) shall be subject to the Maximum TMR Price specified by Article 11.7 of the AESO Tariff,
  - (b) may include all Customers who are effective providers of the required TMR service, although preference will be given to those who responded to the EOI/RFP, and
  - (c) shall not be limited by the pricing provisions of Article 11.6 of the AESO Tariff in respect of Unforeseeable TMR service.(Reference #6 in below diagram)
6. Any party to the Bilateral Negotiation Process may declare it unsuccessful after 30 days, at which time a Binding Arbitration Process shall commence between the AESO and the Customer (Reference #7 in below diagram). In circumstances where multiple Customers may provide TMR Services to the AESO, the AESO shall act fairly and reasonably in its selection as to the party that is subject to Binding Arbitration. The Binding Arbitration Process shall:

- (d) be subject to the Maximum TMR Price specified by Article 11.7 of the AESO Tariff, and
- (e) not be limited by the pricing provisions of Article 11.6 of the AESO Tariff in respect of Unforeseeable TMR Service.

(Reference #8 in below diagram)

7. The Binding Arbitration Process shall employ the Dispute Resolution Process established under Article 19 of the AESO Tariff and proceed directly to Arbitration as per Article 19.3 of the AESO Tariff. Any arbitrator appointed pursuant to that Dispute Resolution Process shall have an expert understanding and knowledge of the Alberta electricity marketplace. (Reference #8 in below diagram)

### PROCEDURE FOR FORESEEABLE TMR SERVICE DIAGRAM



**Title: Proposed Article 11 Amendments**

**Request:**

Please provide at least three representative samples which illustrate how compensation will be determined:

- (a) utilizing the proposed formula set forth in proposed Article 11.6(a) and (b); and
- (b) In circumstances where a customer can demonstrate foregone energy sales due to a TMR directive as contemplated in the last paragraph of proposed Article 11.6, as well as a narrative explanation clarifying proposed Article 11.6.

**Response:**

- (a) Please refer to Attachment AUC.AESO-001. Examples provided are as follows:

Scenario A:

- Coal generator is directed to provide 5 hours of TMR service

Scenario B:

- A gas generating unit is directed to provide 5 hours of TMR service
- The generating unit is fully depreciated therefore 25% of the initial cost of property plant and equipment is utilized in the calculation as per Article 11.6 (b)(i)(B)(2)

Scenario C:

- A gas generating unit is directed to provide 5 hours of TMR service
- This is the generator's third TMR directive in the rolling 12 month period, and as such, Article 11.6 (b)(iii)(B) applies

Scenario D:

- A hydro generating unit is directed to provide 5 hours of TMR service
- TMR compensation is the maximum of the TMR compensation calculated as per Article 11.6 (a & b) or the net opportunity cost related to foregone electricity sales as per the last paragraph in Article 11.6,

- (b) The last paragraph of Article 11.6 is intended to capture the situation where a hydro unit is directed to provide TMR service. Unlike thermal units, a hydro unit has the ability to save stored water for future generation opportunities. If the hydro unit is directed to provide TMR service, thereby using the hydro storage, the generator may be foregoing future generation opportunities. For instance, if a hydro unit was directed to provide TMR service when the pool price was \$30/MWh and provision of the TMR service caused a verifiable lost opportunity to generate in another period when pool price was \$50, the verifiable net opportunity cost would be \$50 less \$30 or \$20/MWh. The AESO considers compensation for verifiable net opportunity costs related to foregone electricity sales to be permitted under the Transmission Regulation. Please refer to Attachment AUC.AESO-001 for a representative sample.

Article Reference:	Line No.:	Description:	AUC.AESO-001 (a)				AUC.AESO-001 (b)	Calculation Reference	Other Assumptions & Notes
			Scenario A	Scenario B	Scenario C	Scenario D	Scenario D		
<b>Assumptions:</b>									
		Generating Unit Type	Coal Plant	Gas Plant	Gas Plant	Hydro Plant			
11.6 (a)	1	No. of Directed TMR Hours (hr)	5	5	5	5		Input Field	
11.6 (a)	2	Pool Price During TMR Direction (\$/MWh)	50	50	50	50		Input Field	For illustration purposes, Pool Price is assumed to be the same for all directed hours
11.6 (a)	3	Directed TMR Volume (MW)	300	80	50	30		Input Field	
11.6 (a) (ii)	4	Heat Rate (GJ/MWh)	10	11	8	0		Input Field	
11.6 (a) (iii)	5	Fuel Cost (\$/GJ)	0.5	8.0	8.0	0.0		Input Field	For illustration purposes, fuel cost is assumed to be the same for all directed hours
11.6 (a) (iv)	6	Variable STS Charges (\$/MWh)	3.50% x PP	3.50% x PP	3.50% x PP	3.50% x PP		Input Field	Losses charges assumed to be the same for all units
11.6 (a) (v)	7	Variable O&M Charge (\$/MWh)	4.0	4.0	4.0	4.0		Input Field	
11.6 (b)	8	Generating Unit Size (MW)	300	100	80	80		Input Field	
11.6 (b) (iii)	9	No. of TMR Directions in 12 Months	1	2	3	1		Input Field	
11.6 (b) (ii)	10	No. of Hours in Month (hr)	720	720	720	720		Input Field	
11.6	11	Mean Pool Price (\$/MWh)	N/A	N/A	N/A	150		Input Field	Gather the highest 25% of pool prices from a reasonable period, pre & post to the TMR direction. The mean pool price from the sample is then used for purposes of calculating the Net Opportunity Cost.
<b>Variable Cost Contribution Calculation:</b>									
11.6 (a) (ii-iii)	11	Heat Rate x Fuel Cost (\$/MWh)	\$ 5.00	\$ 88.00	\$ 64.00	\$ -		= L4 x L5	
11.6 (a) (iv)	12	Variable STS Charges (\$/MWh)	1.75	1.75	1.75	1.75		= L2 x L6	
11.6 (a) (v)	13	Variable O&M Charge (\$/MWh)	4.00	4.00	4.00	4.00		= L7	
11.6 (a) (i)	14	Energy Price (\$/MWh)	\$ 10.75	\$ 93.75	\$ 69.75	\$ 5.75		= Sum L11, L12, L13	
11.6 (a)	15	Pool Price (\$/MWh)	50.00	50.00	50.00	50.00		= L2	
11.6 (a)	16	Hourly Difference (Not < 0) (\$/MWh)	\$ -	\$ 43.75	\$ 19.75	\$ -		=IF(L14<L15 then 0, if not (L14 - L15))	Note: this must be completed for each hour of directed TMR service. Generator keeps PP receipts.
11.6 (a)	17	Energy Generated (MWh)	1,500	400	250	150		= L1 x L3	
11.6 (a)	18	Total Variable Cost Contribution	\$ -	\$ 17,500	\$ 4,938	\$ -		= L16 x L18	
<b>Fixed Cost Contribution Calculation:</b>									
<b>Assumptions:</b>									
<b>Original Undepreciated Capital Investment (UCI)</b>									
11.6 (b)(i)(B)	19	Property Plant and Equipment (\$)	\$ 500,000,000	\$ 170,000,000	\$ 110,000,000	\$ 70,000,000		Input Field	
11.6 (b)(i)(A)	20	Accumulated Depreciation (\$)	160,000,000	170,000,000	16,500,000	35,000,000		Input Field	
11.6 (b)(i)(B)(1)	21	Cost Less Accumulated Depreciation (\$)	\$ 340,000,000	\$ -	\$ 93,500,000	\$ 35,000,000		= L19 - L20	
11.6 (b)(i)(B)(2)	22	25% of Initial Cost	\$ 125,000,000	\$ 42,500,000	\$ 27,500,000	\$ 17,500,000		= 25% x L19	
11.6 (b)(i)(B)	23	Undepreciated Capital Investment (UCI)	\$ 340,000,000	\$ 42,500,000	\$ 93,500,000	\$ 35,000,000		= Greater of L21 or L22	
11.6 (b)(i)(A)	25	Annual Depreciation provision	\$ 20,000,000	\$ -	\$ 5,500,000	\$ 1,400,000		Input Field	
<b>Capital Structure (deemed 70/30)</b>									
11.6 (b)(i)(B)	26	Debt (%)	70%	70%	70%	70%		Input Field	
11.6 (b)(i)(C)	27	Equity (%)	30%	30%	30%	30%		= 1 - L26	
<b>Debt Cost</b>									
11.6 (b)(i)(B)	28	Debt Capital	\$ 238,000,000	\$ 29,750,000	\$ 65,450,000	\$ 24,500,000		= L23 x L26	
11.6 (b)(i)(B)	29	10 year Government of Canada bond rate	4.23%	4.23%	4.23%	4.23%		Input Field	
11.6 (b)(i)(B)	30	0.5% addition (%)	0.50%	0.50%	0.50%	0.50%		As per 11.6 (b)(i)(B)	
11.6 (b)(i)(B)	31	Debt Rate (%)	4.73%	4.73%	4.73%	4.73%		= SUM L29, L30	
11.6 (b)(i)(B)	32	Annual Debt Cost	\$ 11,257,400	\$ 1,407,175	\$ 3,095,785	\$ 1,158,850		= L28 x L31	
<b>Equity Return</b>									
11.6 (b)(i)(B)	33	Equity Capital	\$ 102,000,000	\$ 12,750,000	\$ 28,050,000	\$ 10,500,000		= L23 x L27	
11.6 (b)(i)(C)	34	Rate of return on equity (%)	12.0%	12.0%	12.0%	12.0%		Input Field or 11.6 (b)(i)(C)	
11.6 (b)(i)(C)	35	Annual Return on Equity	\$ 12,240,000	\$ 1,530,000	\$ 3,366,000	\$ 1,260,000		= L33 x L34	
<b>Income Tax</b>									
11.6 (b)(i)(E)	36	Federal Income Tax Rate (%)	22%	22%	22%	22%		Input Field	
11.6 (b)(i)(E)	37	Provincial Income Tax Rate (%)	10%	10%	10%	10%		Input Field	
11.6 (b)(i)(E)	38	Income tax rate (%)	32%	32%	32%	32%		= SUM L36, L37	
11.6 (b)(i)(E)	39	Annual Income tax cost	\$ 3,916,800	\$ 489,600	\$ 1,077,120	\$ 403,200		= L35 x L38	
<b>Annual Direct Fixed O&amp;M Costs</b>									
11.6 (b)(i)(F)	40	Total Annual Fixed O&M costs	\$ -	\$ 5,000,000	\$ 1,000,000	\$ 4,000,000		Input Field	
<b>Annual Direct Fixed Fuel Costs</b>									
11.6 (b)(i)(G)	41	Total Annual Fixed Fuel costs	\$ -	\$ 250,000	\$ 100,000	\$ -		Input Field	
<b>Fixed Charges From Applicable PPAs</b>									
11.6 (b)(i)(H)	42	Total Annual Fixed PPA Charges	\$ 11,000,000	\$ -	\$ -	\$ -		Input Field	
<b>Calculation:</b>									
11.6 (b)(i)	43	Total Annual Fixed Costs	\$ 58,414,200	\$ 8,676,775	\$ 14,138,905	\$ 8,222,050		= SUM L25, L32, L39, L40, L41, L42	
11.6 (b)(i)	44	Average Monthly Fixed Cost	\$ 4,867,850	\$ 723,065	\$ 1,178,242	\$ 685,171		= L43 / 12	
11.6 (b)(ii)	45	Must Run Ratio (MRR)	1%	1%	1%	1%		= L1 / L10	
11.6 (b)(ii)	46	No. of TMR Directions in 12 Months	1	2	3	1		= L9	
11.6 (b)(iii)	47	Minimum MRR	12%	12%	20%	12%		=IF(L46<=2,MAX(L45,12%),IF(L46=3,MAX(L45,20%),IF(L46=4,MAX(L45,30%),IF(L46=5,MAX(L45,40%),IF(L46>=6,50%))))	
11.6 (b)(iii)	48	Greater of MRR or Minimum MRR	12%	12%	20%	12%		= MAX (L45, L47)	
11.6 (b)	49	Total TMR Fixed Cost Contribution	\$ 584,142	\$ 86,768	\$ 235,648	\$ 82,221		= L44 x L48	
11.6	50	Total TMR Compensation	\$ 584,142	\$ 104,268	\$ 240,586	\$ 82,221		= L18 + L49	
<b>Net Opportunity Cost</b>									
11.6	51	Net Opportunity Cost (\$/MWh)	\$ -	\$ -	\$ -	\$ 100.00		= L11 - L2	
11.6	52	Energy Generated (MWh)	1,500	400	250	150		= L17	
11.6	53	Total Net Opportunity Cost	\$ -	\$ -	\$ -	\$ 15,000.00		= L51 x L52	
11.6	54	Total TMR Compensation	\$ 584,142	\$ 104,268	\$ 240,586	\$ 82,221		= MAX (L50, L53)	

Ancillary Services - Article 11 Negotiated Settlement

Number of Directed Hours                    **A**                    **B**                    **C**

Date (HE)	Pool Price (\$)
05/15/2007 01	10.08
05/15/2007 02	12.6
05/15/2007 03	7.79
05/15/2007 04	5.52
05/15/2007 05	5.25
05/15/2007 06	5.25
05/15/2007 07	8.53
05/15/2007 08	22.47
05/15/2007 09	26.68
05/15/2007 10	52.92
05/15/2007 11	122.16
05/15/2007 12	153.29
05/15/2007 13	58.92
05/15/2007 14	81.92
05/15/2007 15	90.58
05/15/2007 16	88.74
05/15/2007 17	27.43
05/15/2007 18	177.72
05/15/2007 19	5.18
05/15/2007 20	5.25
05/15/2007 21	5.25
05/15/2007 22	5.25
05/15/2007 23	5.25
05/15/2007 24	5.18
05/16/2007 01	5.01
05/16/2007 02	5
05/16/2007 03	5.18
05/16/2007 04	5.25
05/16/2007 05	5.08
05/16/2007 06	5.03
05/16/2007 07	4.8
05/16/2007 08	5.25
05/16/2007 09	7.19
05/16/2007 10	14.59
05/16/2007 11	21.21
05/16/2007 12	34.04
05/16/2007 13	42.26
05/16/2007 14	77.27
05/16/2007 15	89.87
05/16/2007 16	65.47
05/16/2007 17	209.62
05/16/2007 18	30.04
05/16/2007 19	23.92
05/16/2007 20	247.19
05/16/2007 21	198.89
05/16/2007 22	42.8
05/16/2007 23	60.9
05/16/2007 24	41.14