



2500, 330 – 5 Ave SW  
Calgary, Alberta T2P 0L4  
Bus: (403) 539-2450  
Fax: (403) 539-2949

[www.aeso.ca](http://www.aeso.ca)

**DATE:** September 29, 2008  
**TO:** AESO Board Members  
**FROM:** Todd Fior  
**SUBJECT:** AESO Board Decision Document

# M E M O

---

Attached, please find the AESO Board Decision Document for the Amended 2009 Business Plan and Budget. The document was prepared by AESO Management in consultation with stakeholders and outlines the following:

- The process to develop this document;
- The Amended 2009 Business Plan and Budget;
- The forecasted 2009 line loss and ancillary services costs; and
- Any stakeholder comments on the above information with AESO responses.

This information will be discussed at the October 23, 2008 Board meeting at which time you will be asked to approve, or amend and approve, as appropriate, the items outlined in Section 1 of this document.

Prior to your meeting on October 23, 2008, some stakeholder may request the opportunity to meet with the AESO Board to discuss their written comments related to the information provided. As you are aware, these meetings will be scheduled on October 8, 2008.

Should you have any questions, please let me know.

Yours truly,

Todd D. Fior  
Vice-President, Finance

- c. M. Dale McMaster, President and CEO  
David Erickson, Senior Vice President and Chief Operating Officer  
Carol Moline, Director, Accounting and Treasury  
Jason Doering, Director, Commercial Services  
Rob Baker, Manager, Forecasting  
Industry Stakeholders

## **Table of Contents**

Section 1	Board Decision Items
Section 2	Stakeholder Presentations to the AESO Board
Section 3	Stakeholder Consultation Undertaken
Section 4	Business Plan / G & A / Other Industry Costs
Section 5	Line Losses and Ancillary Services
Section 6	Stakeholder Comments and AESO Responses

## ***Section 1 – Board Decision Items***

### **Executive Summary**

This AESO Board Decision Document is for the purpose of providing the AESO Board with the necessary information to approve the AESO's Amended 2009 Business Plan and Budget and forecasted 2009 Line Loss and Ancillary Services Costs. In addition, this document provides the supporting rationale for the amendments to the approved 2008-2009 Business Plan and Budget as it relates to 2009 as well as an overview of the process undertaken by AESO management to arrive at the recommendation. Ultimately, this document requests the AESO Board for approval of the items listed below.

It should be noted that during 2007, the AESO developed, consulted with stakeholders on and obtained AESO Board approval of a multi-year budget for the AESO's fiscal years ended December 31, 2008 and 2009. To allow for multi-year budgets to be an effective planning tool and to gain the efficiencies of a multi-year budget, a multi-year budget process was consulted on with stakeholders as a part of the 2007 Budget Review Process (BRP). As indicated in the multi-year budget process, prior to the beginning of a fiscal year the AESO will reforecast its budget for the year. The multi-year budget process outlines the various processes required to be followed by AESO management should a variance arise between the original budgeted amount and the forecasted amount. The multi-year budget process is located in Appendix D of the AESO's 2008-2009 Business Plan and Budget.

AESO Management has reviewed the business priorities in the 2008-2009 Business Plan and Budget and amended them as determined appropriate to reflect the organization's direction for 2009. In addition, AESO Management conducted a review and assessment of its financial results and the current staff complement when assessing the approved 2009 budget for sufficient funding. This is an ongoing assessment performed by Management with the understanding of the deliverables that can be achieved with existing staff and how budget amounts are spent to ensure that business priorities are delivered in a prudent and efficient manner.

The 2008 BRP is an abbreviated process and is intended to assist the AESO Board in approving the AESO's forecast of Ancillary Services (AS) and Line Loss Costs and the AESO's Amended 2009 Business Plan and Budget.

The AESO continues to believe that the process has achieved the goal of working with stakeholders to enable a transparent and comprehensive business planning document that ensures a common understanding on the expectations of the AESO's deliverables in 2009.

The AESO will review with stakeholders the continuing validity of a multi-year budget process for the AESO prior to the start of the 2009 BRP and work with stakeholders on how the multi-year budget process can be improved upon.

Based on the contents within this document, AESO management requests the AESO Board to:

1. Rule on the disagreements between AESO management and stakeholders found in Section 2, if any.
2. Accept the AESO's Business Priorities for 2009.
3. Approve as reasonable the AESO's Amended Administrative Costs found in Section 4 of \$69.7 million for 2009.
  - Transmission Costs Recovery
    - \$52.3 million (2009)
  - Energy Market Recovery
    - \$14.9 million (2009)
  - Load Settlement Recovery
    - \$2.5 million (2009)
4. Approve as reasonable the AESO's Amended Other Industry Costs found in Section 4 of \$25.8 million for 2009.
5. Approve as reasonable the AESO's forecasted Line Loss Costs found in Section 5 of \$238.0 million for 2009.
6. Approve as reasonable the AESO's forecasted Ancillary Service Costs found in Section 5 of \$289.7 million for 2009.

AESO Management will provide to stakeholders the AESO Board's Decision together with their rationale when completed by the AESO Board.

## ***Section 2 – Stakeholder Presentations***

Stakeholder presentations to the AESO Board to be inserted when received.

## **Section 3 – Stakeholder Consultation Process Undertaken**

### **Budget Review Process**

On April 11, 2007, the Government of Alberta issued a new *Transmission Regulation 86/2007* (the “T-Reg”) which included provisions addressing the consultation and approval of the AESO’s own administrative costs, ancillary services costs and line loss costs. The T-Reg provides that the AESO must consult with market participants with respect to proposed administrative costs (General and Administrative, Capital, and Other Industry Costs) to be approved by the AESO Board. It also provides that these costs, once approved by the AESO Board, must be considered by the Alberta Utilities Commission (“AUC”) as “prudent” unless an interested person satisfies the AUC otherwise.

The practice established by the AESO to carry out this consultation is the Budget Review Process (BRP). The BRP is a transparent stakeholder process which provides a first level of prudence review with input from stakeholders. At the conclusion of the BRP, a recommendation with respect to the AESO’s own administrative costs, ancillary services costs and line loss costs is provided by AESO Management to the AESO Board for approval.

The AESO continuously refines the BRP based on feedback received from stakeholders. One of the items of feedback identified by stakeholders was a request to have the AESO develop, consult on and receive AESO Board approval of multi-year budgets. In 2007 the AESO responded to this by developing a multi-year business plan and budget for the years ended December 31, 2008 and 2009 as part of its BRP.

To gain the efficiencies of a multi-year business plan and budget, an abbreviated BRP process (“Abbreviated BRP”) was developed to address any proposed amendments to the multi-year budgets. The elements of the Abbreviated BRP, at a high level, are as follows:

- 1.0 Notice to Stakeholders;
- 2.0 AESO Update on 2009 Business Priorities;
- 3.0 AESO Forecast Own Costs, Ancillary Services Costs and Line Loss Costs;
- 4.0 Technical Meeting to Review Forecasted Costs; and
- 5.0 AESO Board Decision.

The 2008 Abbreviated BRP, as with the prior year’s BRPs, has been open to all stakeholders. This Abbreviated BRP has been transparent and stakeholders may appeal the ultimate AESO Board approval using the dispute mechanism outlined in the ISO Rules. All written material for this Abbreviated BRP has been posted to the AESO’s website and communicated to stakeholders in the AESO’s stakeholder newsletter. All stakeholders have an opportunity to provide input. The Abbreviated BRP will be re-evaluated with stakeholders at its conclusion and refinements made if necessary going forward.

## ***'Terms of Reference' for AESO Budget Review Process (BRP)***

Transparency is the overarching principle in the BRP. The following will ensure transparency to stakeholders during this process.

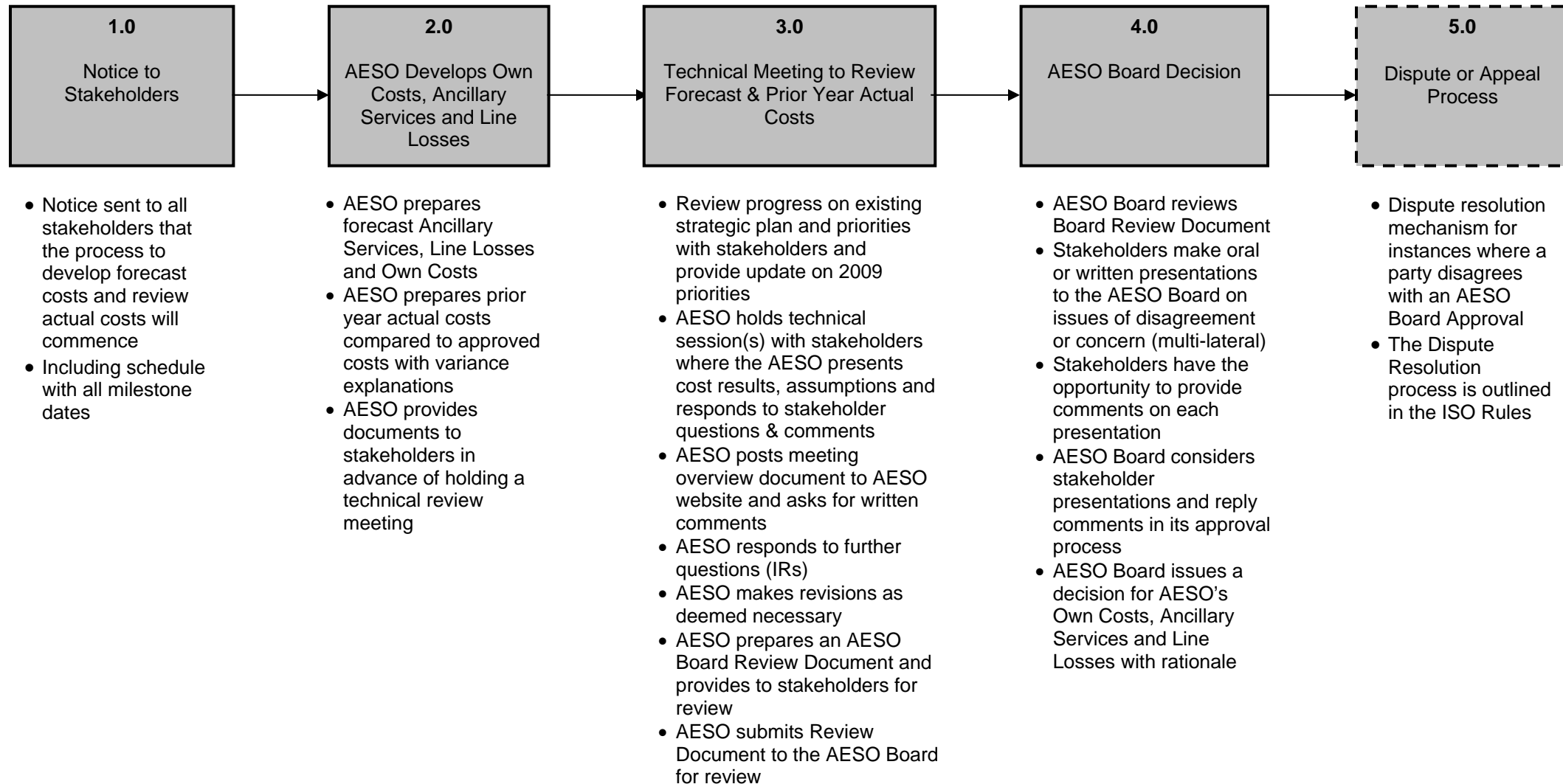
- The process should be open to all stakeholders that are interested.
- The size of the group should not be limited.
- Stakeholders are encouraged to register as participants at the outset of each year's process in order to ensure a consistent understanding and to minimize inefficiencies.
- Comments will be collected in written form, and be shared with all stakeholders (i.e. posted to AESO Website). As well stakeholders will have the opportunity to comment on each others comments.
- The decision rendered by the AESO Board on these matters, will contain reasons / rationale.
- Throughout the process, the AESO will endeavour to provide as much information as reasonably possible to ensure stakeholders have all information relevant to the subject matters under review. However, the AESO and stakeholders will need to agree on the level of detail to discuss (including confidential information), on an issue by issue basis, in an effort to be most effective and efficient.
- At the end of each AESO budget process review cycle, the AESO and stakeholders will evaluate the effectiveness of the process and make appropriate changes if required for the following year.

In Addition:

- Everyone is able to present their views.
- Everyone must work within the timeline agreed upon at the start of the process.
- This process is not a negotiated settlement.
- The material to be delivered to the AESO Board in order to prepare a decision does not have to be agreed upon unanimously.
- Information will be provided to all stakeholders in a timely manner.
- Stakeholders will have a reasonable time period to review and respond to AESO material.
- Nothing will preclude the opportunity for stakeholders to ultimately appeal any decision using the dispute mechanism outlined in the ISO Rules.

**Process to Approve Forecasted Ancillary Services & Transmission Line Losses and Update Stakeholders on 2009 Priorities and Budget  
(AESO Budget Review Process – ABRP)**

---



**Business Review Process  
2008 Calendar  
August 25, 2008**

Stakeholder Meetings
Meeting Material Distributed
Stakeholder Comments Received
AESO Posting
AESO Board Meeting with Stakeholders

**SEPTEMBER**

**OCTOBER**

	Mon	Tues	Wed	Thurs	Fri		Mon	Tues	Wed	Thurs	Fri	
	1 Labour Day	2	3	4 Provide Losses, Ancillary Services Forecast and 2008 Costs and Priorities Update Materials for Sept. 17 Technical Meeting	5				1	2	3 Presentations from Stakeholders sent to AESO re Own Costs Forecast Update, Losses and Ancillary Service Costs Forecast	
	8	9	10	11 Provide Stakeholders Business Priorities and Own Costs Forecast Update Materials for Sept. 17 Technical Meeting	12 Initial Comments from Stakeholders on Materials Provided September 4, 2008		6	7	8 AESO Board Meeting with Stakeholders	9	10	
	15	16	17 Technical meeting - Own Costs Forecast Update, Ancillary Services and Losses Forecast	18	19		13 Thanksgiving Day	14	15	16	17	
	22	23 Stakeholder Comments on Technical Meeting	24	25	26 Respond to Stakeholder Comments on Technical Meeting		20	21	22	23	24	
	29 Provide AESO Board Decision Document re: Own Costs Update, Losses and Ancillary Services Cost Forecast	30					27	28	29	30	31	



---

---

# **Alberta Electric System Operator**

## **Amended 2009 Business Plan and Budget**

---

---

**September 2008**

## Table of Contents

<b>1.</b>	<b>INTRODUCTION.....</b>	<b>1</b>
<b>2.</b>	<b>AESO OPERATIONAL MANDATE.....</b>	<b>2</b>
<b>3.</b>	<b>CURRENT INDUSTRY AND AESO ISSUES .....</b>	<b>3</b>
<b>4.</b>	<b>STRATEGIC PLAN SUMMARY .....</b>	<b>4</b>
4.1	VISION.....	4
4.2	STRATEGIC OBJECTIVES.....	4
<b>5.</b>	<b>2009 BUSINESS PRIORITIES .....</b>	<b>5</b>
5.1	OVERARCHING OBJECTIVE.....	5
5.2	STABILIZE THE MARKET AND REGULATORY FRAMEWORKS.....	6
5.3	BUILD APPROPRIATE TRANSMISSION CAPACITY .....	7
5.4	COMPREHENSIVE RISK MANAGEMENT STRATEGY .....	10
5.5	ATTRACT AND RETAIN SKILLED PEOPLE.....	11
5.6	OPERATE WITHIN TIGHT SYSTEM CONDITIONS AND ENHANCE SYSTEM RESTORATION PLANS..	13
5.7	MONITOR, INTERPRET AND PREPARE FOR EMERGING ENVIRONMENTAL ISSUES.....	15
5.8	PRIORITIES RELATED TO DAY-TO-DAY ACTIVITIES.....	15
<b>6.</b>	<b>AESO BUDGET OVERVIEW .....</b>	<b>16</b>
6.1	BUDGET PROCESS .....	16
6.2	2009 FORECAST .....	17
<b>7.</b>	<b>SALARIES AND BENEFITS .....</b>	<b>18</b>
7.1	STAFF COMPLEMENT.....	19
7.2	STAFF VACANCY RATE .....	19
7.3	COMPENSATION METHODOLOGY .....	19
<b>8.</b>	<b>CONSULTING .....</b>	<b>20</b>
<b>9.</b>	<b>LEGAL .....</b>	<b>20</b>
<b>10.</b>	<b>MISCELLEANOUS .....</b>	<b>21</b>
<b>11.</b>	<b>OTHER INDUSTRY COSTS.....</b>	<b>21</b>
<b>12.</b>	<b>ALLOCATION OF COSTS .....</b>	<b>22</b>

## 1. INTRODUCTION

In 2007, the Alberta Electric System Operator (AESO) developed a Business Plan and related budgets for the fiscal years ending December 31, 2008 and 2009 (2008-2009 Business Plan and Budget). The purpose of this document is to amend the AESO's 2009 Business Plan and Budget to reflect changes that have occurred since the 2008-2009 Business Plan was approved by the AESO Board in December 2007.

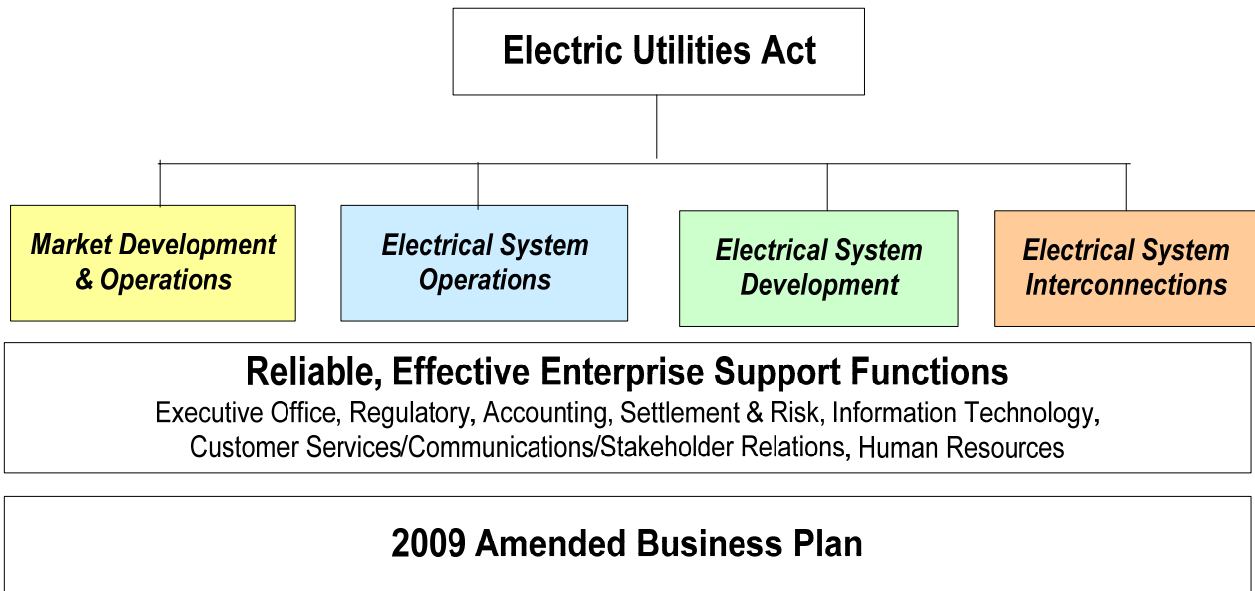
This Business Plan outlines how the AESO intends to go about its work, along with the required resources, to achieve the AESO's objectives and realize on its vision.

The AESO's five year Strategic Plan 2006-2011 dated June 30, 2006 (the "Strategic Plan") was validated by the AESO in 2007 to ensure that the AESO's corporate direction was appropriate in relation to the state of the electricity industry at the time. In addition, the Strategic Plan was reviewed with stakeholders as a part of the 2007 Budget Review Process (BRP) which formed the foundation for the AESO's 2008-2009 Business Plan and Budget. The business priorities as set out in this amended business plan are based on the AESO's approved Strategic Plan.

AESO Management has reviewed the business priorities in the 2008-2009 Business Plan and Budget and has updated the priorities as required to reflect the organization's direction for 2009.

This document should be read in conjunction with the AESO's approved 2008-2009 Business Plan and Budget which can be located at [www.aeso.ca/About AESO/Our Company/Business Plan and Budget](http://www.aeso.ca/About%20AESO/Our%20Company/Business%20Plan%20and%20Budget).

## 2. AESO OPERATIONAL MANDATE



The *Electric Utilities Act (EUA)* establishes the AESO's public interest mandate. As such, the AESO operates as a not-for-profit organization and has no commercial interest in the market, power facilities or the electricity industry. The AESO funds its operations through three means, a trading charge levied on pool participants for each MWh of electricity traded in the energy market, charges levied on transmission customers under the AESO's Transmission tariff and a recovery of costs from Load Settlement Agents. The AESO's mandate is outlined in the EUA and related regulations. The AESO's operations can be divided into four core functions, which have not varied from the prior year: Market Development and Operations, Electric System Operations, Electric System Development, and Electric System Interconnections.

### 3. CURRENT INDUSTRY AND AESO ISSUES

While progress continues to be made on the challenges that were outlined in the AESO's 2008-2009 Business Plan and Budget, additional challenges and changes have been identified since the completion of the 2008-2009 Business Plan and Budget and are summarized as follows:

- The volume and complexity of customer interconnection projects is increasing -- the amount of wind projects in the interconnection queue alone has increased from about 6,000 MW to approximately 12,000 MW. To better meet this increased demand, we are re-evaluating how we manage projects and provide customer service.
- The Alberta Utilities Commission Act became effective January 1, 2008 which resulted in the creation of the Alberta Utilities Commission (AUC) and subsequent changes to the roles, responsibilities and relationships between the AESO, AUC and the Market Surveillance Administrator (MSA).
- There is currently uncertainty related to evolving environmental policy and legislation. In early 2008 both the federal and provincial governments released frameworks for air emissions, however, the related plans for these frameworks continue to be developed. Due to this uncertainty, it is unknown as to the impact these plans will have on the types of generation that will be developed in the future (i.e. wind versus gas versus coal). As a result, it is increasingly complex to plan the transmission system without a clear understanding of the impact these plans will have on generation development.

## 4. STRATEGIC PLAN SUMMARY

The vision statement as outlined in the AESO's Strategic Plan is as follows:

### 4.1 Vision

*The AESO will be seen as a key contributor to the development of Alberta and the quality of life for Albertans, through our leadership role in the facilitation of fair, efficient and openly competitive electricity markets and the reliable operation and development of the Alberta Interconnected Electric System.*

### 4.2 Strategic Objectives

The strategic objectives as outlined in the AESO Strategic Plan are as follows:

- *Stabilize the market and regulatory frameworks to enhance confidence of investors and market participants.*
- *To build appropriate transmission capacity in a timely manner to meet the forecasted needs of Alberta, facilitate competitive markets and meet the challenges of provincial economic aspirations, extreme weather, expanding markets and disaster avoidance.*
- *Fully define, design and implement a comprehensive risk management strategy that identifies, monitors and mitigates all risks to the extent feasible.*
- *Attract and retain the appropriately skilled people at the AESO to ensure that we have the resource capacity and expertise required to meet our objectives.*
- *Ensure that the Alberta Interconnected Electric System (AIES) continues to be operated in a safe, reliable and economic manner.*

## 5. 2009 BUSINESS PRIORITIES

The following section discusses the business priorities the AESO will focus on in 2009. Our 2009 business priorities continue to be designed to permit the AESO to maintain system reliability and market functionality within the complexity of the current operating conditions and in a dynamic business environment. The business priorities listed have been selected as they permit the AESO to progress toward the attainment of our strategic objectives while addressing industry issues from within the AESO's role and mandate. The AESO also pursues certain ongoing priorities that enable it to better complete the day-to-day aspects of our operations. These matters may not be directly linked to a strategic objective, yet they are essential to the ongoing success of the AESO.

The highlighted business priorities contained within this document are new for 2009.

### 5.1 Overarching Objective

The AESO occupies an important and unique role in the electricity industry. The considerable mandate given to it under the EUA, the often central role it plays in almost all aspects of the industry and the Government of Alberta's reliance on it to implement policy, places the overall success of the electricity industry, to an extent, in the hands of the AESO.

The AESO's business priorities for the overarching objective are as follows:

Overarching Objective	
Be viewed by its stakeholders as a leader and facilitator of Alberta's competitive electricity market and the reliable operation and development of the interconnected electric system, and preserve, protect and enhance the AESO reputation.	
Program	Business Priorities
<b>Enhance AESO Reputation and Credibility</b>	<p>Develop and deliver multiple broad-based initiatives including publications, regional advisory program, engagement with stakeholders and government officials to increase public, consumer and political awareness of AESO, the Alberta infrastructure gap and the electric industry.</p> <p><b>Enhance working relationships with stakeholders, government and related agencies to improve communications, and to gain procedural efficiencies and improve effectiveness.</b></p> <p>Increase customer satisfaction levels by achieving specific performance goals and enabling customer business objectives through the facilitation of standard customer interconnections as well as out-of-the-ordinary interconnection requests. Monitor satisfaction levels through proactive customer visits and customer satisfaction metrics.</p>

**Revisions to Business Priorities for Overarching Objective:**

**Addition:** Enhance working relationships with stakeholders, government and related agencies to improve communications, and to gain procedural efficiencies and improve effectiveness.

The AESO continuously focuses on opportunities to expand and strengthen its relationships with stakeholders, various levels of government and related agencies. Because of the AESO’s role in the industry, the AESO frequently requires coordinating actions in the public interest. For example, the AESO is unable to single-handedly implement all aspects of a transmission project. Instead, the AESO is accountable for the development of the “need”, and a Transmission Facility Owner (TFO) for implementing the facilities to meet the “need”. The AUC plays an important role in this process as it approves the “need” and the “facilities”. This example points to the importance of effective working relationships between the AESO and other agencies and organizations. The AESO will continue to focus its efforts on these relationships and look for opportunities where procedural efficiencies and effectiveness can be gained.

**5.2 Stabilize the Market and Regulatory Frameworks**

It continues to be imperative that the market and regulatory frameworks be stable. Stable frameworks will create participant confidence in the market place and potentially lead to additional participation in the market place (i.e. investment in generation). Market participants need to have the opportunity to compete in a market that allows for invested capital to earn a reasonable rate of return and allows load customers the opportunity to procure electricity at a competitive price.

In 2009, the AESO will continue to focus on the implementation of the Government of Alberta’s Electricity Policy Framework (2005) as outlined in the AESO’s Market Roadmap.

The AESO’s business priorities in this strategic objective are as follows:

<b>Strategic Objective #1</b>
Stabilize the market and regulatory frameworks to enhance confidence of investors and market participants.

Program	Business Priorities
<b>Market Road Map</b>	<p>To implement the Market Policy (Electricity Policy Framework) as outlined in the Market Roadmap. The initiatives for 2009 are as follows:</p> <ul style="list-style-type: none"> <li>• Implement the Congestion Management protocols following confirmation of ISO Rules by the AUC.</li> <li>• Redesign the Operating Reserve market to remove the AESO as a participant and to improve convergence with the energy market.</li> </ul>

	<ul style="list-style-type: none"> <li>• Implement the responsibilities given the AESO as part of the Section 6 (market power mitigation) recommendations.</li> <li>• Monitor market performance metrics to determine whether or not market design changes are producing desired results and whether or not the overall market is working as intended.</li> <li>• Implement changes arising from the review of market rules made in December 2007 to correct any unintended adverse consequences.</li> </ul> <p><b>Initiate a multi-year project to improve and standardize the AESO’s “authoritative documents” including ISO Rules, Standards, AESO Tariff and Business Practices.</b></p>
<b>Transmission Regulation Implementation</b>	<p>Complete the implementations of Mandatory Reliability Standards framework including a review of North American Electric Reliability Council (NERC) standards for appropriate application of practices, procedures, processes roles, agreements and tools.</p> <p>Implement rules for related out-of-market actions for reliability including reliability unit commitment, outage coordination, and load curtailment priority plan.</p>
<b>Interties</b>	<p>Develop and implement market rules, operating policies &amp; procedures, and systems to facilitate dispatchable imports and exports.</p> <p>Advance intertie policy, legislation and/or regulation to increase import/export capacity.</p>

**Revisions to Business Priorities for Strategic Objective #1:**

**Addition:** Initiate a multi-year project to improve and standardize the AESO’s “authoritative documents” including the ISO Rules, Standards, AESO Tariff and Business Practices.

The purpose of this business priority is to develop a fully functional framework for all AESO authoritative documents and then transition existing authoritative documents into the new format/structure as necessary. The high level outcome is for stakeholders to have clarity and transparency around ISO Rules, Standards and Business Practices in regards to the accountability of the AESO, obligations of market participants and impacts to market participants for non-compliance with such Rules, Standards and Practices.

**5.3 Build Appropriate Transmission Capacity**

One of the AESO’s highest priorities continues to be the expansion and reinforcement of the transmission system to ensure reliability of the system, facilitation of the competitive market for electricity and to meet the interconnection needs of customers, both load and generation. The AESO continues to focus on the

Calgary-Edmonton reinforcement which was delayed as a result of the Alberta Energy and Utilities Board's decision in September 2007 to rescind its approval of the "need". In addition, the AESO has a number of other transmission projects at varying stages of development in the province. A robust transmission system is required to maintain reliable service to Albertans and facilitate the competitive electricity market in Alberta. Approval and implementation of these projects are essential to help ensure the ongoing success of the economy of Alberta and reliability of electricity supply.

The AESO's business priorities for this strategic objective are as follows:

Strategic Objective #2
To build appropriate transmission capacity in a timely manner to meet the forecasted needs of Alberta, facilitate competitive markets, and meet the challenges of provincial economic aspirations, extreme weather, expanding markets and disaster avoidance.

Program	Business Priorities
<b>System Backbone Reinforcement</b>	<p>Create the operating tools, processes and procedures to address system conditions now that the 500kV north-south line has been significantly delayed.</p> <p>Obtain approval for the revised Need Application for the Edmonton-Calgary reinforcement.</p>
<b>Customer Interconnection</b>	<p>Interconnect customers with an expectation of improving measured levels of customer satisfaction.</p> <p><b>Refine customer interconnection and related processes so as to increase efficiency and effectiveness and be clearly understood by participants.</b></p>
<b>Regional and Whole System Planning Projects</b>	<p>Obtain approval of the need for system reinforcement in the Northwest and Northeast to meet load growth in the Fort McMurray area and the South to facilitate the interconnection of wind generation.</p> <p>Expand the system north of Fort McMurray to provide service to various oilsands developments.</p> <p>Expand the system to serve the needs of proposed bitumen upgrading and refining facilities in the Fort Saskatchewan area (Industrial Heartland).</p> <p>Develop Need Application for Southern Alberta to facilitate wind integration and implementation of the Market Operations Framework.</p> <p><b>Expand the system in the central-east area to meet the increasing needs to supply growing pipeline loads.</b></p> <p><b>Continue the development of a more fulsome vision of the</b></p>

	<p>transmission system incorporating further assessments of land use impacts, environmental, economics and market forces.</p> <p>Participate in the development of supportive land use policy and policy implementation frameworks.</p>
--	---

**Revisions to Business Priorities for Strategic Objective #2:**

**Addition:** Refine customer interconnection and related processes so as to increase efficiency and effectiveness and be clearly understood by participants.

As a part of the AESO’s desire to continuously improve its processes, the AESO will continue to focus on ways to improve the efficiency and effectiveness of customer interconnection processes. In addition, providing stakeholders with clarity of the interconnection processes will allow customers to better understand the impact the various variables within the process will have on their projects.

**Addition:** Expand the system in the central-east area to meet the increasing needs to supply growing pipeline loads.

There has been a significant increase in the load requirements of pipelines as result of current and expected pipeline expansions in the central-eastern part of the province. In order to meet this expanding load requirement, the current transmission system in this region needs to be expanded.

**Addition:** Continue the development of a more fulsome vision of the transmission system incorporating assessments of land use impacts, environmental factors, economics and market forces.

The AESO is responsible for the development of a 10-Year Transmission Development Plan and a 20-Year Outlook which provides insight into the transmission requirements of the province over these time periods. A natural extension of 10-Year Plan and 20-Year Outlook is the development of a more extensive review that would incorporate such factors as land use impacts, environmental factors, economics and market forces. This will provide stakeholders with a clearer view of the future and more insight into the evolution of the transmission system.

**Addition:** Participate in the development of supportive land use policy and policy implementation frameworks.

A significant hurdle in the development of the transmission system is land use issues (i.e. right-of-way procurement). The AESO believes it is important to be an active participant in the development of the land use policy and frameworks currently being developed by the Government.

**Removed (completions/deferrals):** Prepare the 20-Year Transmission Outlook and the 10-Year Transmission Development Plan.

The priority is expected to be completed by 2008 year-end and has been removed as a result.

#### 5.4 Comprehensive Risk Management Strategy

The AESO's decisions and actions impact all Albertans. These decisions can impact the services that consumers receive or have a financial impact on. With this view, it is important the AESO understand the impact of its decisions and determine the best approach to mitigate any resulting risks to the AESO's operations and impacts to the AESO's customers.

The AESO's business priorities in this strategic objective are as follows:

Strategic Objective #3
Fully define, design and implement a comprehensive risk management strategy that identifies, monitors and mitigates all risks to the extent feasible.

Program	Business Priorities
<p><b>Manage Security and Risk to IT Infrastructure</b></p>	<p>Develop a set of AESO Security Policies that will allow the organization to implement appropriate safeguards based on defined, consistent policies, and to identify resources necessary to implement these policies.</p> <p>Refresh the aging storage and backup/recovery infrastructure used by critical and essential applications including an upgrade to improve reliability, availability, maintenance and reporting.</p> <p>Implement tools and processes to improve reliability and quality of IT production changes.</p> <p>Continue with the development and implementation of a replacement for the SCC Energy Management System (EMS).</p> <p><b>Initiate a review of the AESO's market system requirements and establish a plan to replace existing aging market systems.</b></p> <p><b>Assess and determine customer needs for access to AESO information and develop a long-term information management solution to meet customer needs.</b></p> <p><b>Continue with further enhancements to the Dispatch Tool architecture to stabilize system performance and to enable future advancements of Market initiatives.</b></p>

### Revisions to Business Priorities for Strategic Objective #3:

**Addition:** Initiate a review of the AESO's high level IT architecture and develop requirements for a new set of market systems to replace existing aging architecture.

The AESO's Energy Trading System and related systems are the information technology infrastructure that allows for the competitive wholesale electricity market to function. These systems are currently nearing the end of their useful life and will require replacement over the next few years. In anticipation of the replacement of these systems, an assessment of the future IT architectural and system needs is required.

**Addition:** Assess and determine customer needs for access to AESO information and develop a long-term information management solution to meet customer needs.

Implicit in any market construct is the capability and availability of customers to access market information. Given the increasing demands of customers to access and obtain market information, it is important that the AESO have an information solution and strategy that meets customer needs.

**Addition:** Continue with further enhancements to the Dispatch Tool architecture to stabilize system performance and to enable future advancements of Market initiatives.

After the Quick Hits Release in December 2007, there were a number of deficiencies identified in both the business logic and system functionality related to the AESO's Dispatch Tool (DT). DT is one of the primary business systems used to operate Alberta's restructured energy market. In 2008, the AESO initiated the development of a new DT based on an improved architecture which is targeted for release in the first quarter of 2009. Subsequent to the initial implementation, additional enhancements and functionality to the DT will be required. These requirements will be defined and assessed in early 2009.

**Removed (completions/deferrals):** Maintain credibility as an effective market operator by managing risks (various operating audits).

This is an ongoing risk as the AESO is continuously managing various risks in its day to day activities. The current operating audit plan is expected to be completed by 2008 year end and has been removed as a priority as a result.

## 5.5 Attract and Retain Skilled People

The AESO's ability to attract and retain staff continues to be key to the organization achieving its objectives and business priorities. The current general conditions for

retaining and attracting staff continues to be challenging, especially in technical areas such as transmission planning, information technology and project management. The AESO needs to continue to be a preferred employer to succeed in the current challenging marketplace for skills and talent.

The AESO's business priorities in this strategic objective are as follows:

<b>Strategic Objective #4</b>
Attract and retain the appropriately skilled people at the AESO to ensure that we have the resource capacity and expertise required to meet our objectives.

Program	Business Priorities
<p><b>Initiate and Implement a Comprehensive HR Strategy to Attract and Retain Quality Staff</b></p>	<p>Enhance and expand partnerships with educational institutions to create greater awareness of the AESO as a preferred career choice.</p> <p>Develop comprehensive AESO employee training and development initiatives as a key element of retention planning. Program emphasis to begin concentrates on Leadership development for executives, directors and managers.</p> <p>Review and ensure compensation packages are consistent with current market levels.</p> <p><b>Initiate the development of a comprehensive work force plan that includes an effective succession planning process for AESO employees.</b></p>

**Revisions to Business Priorities for Strategic Objective #4:**

**Addition:** Initiate the development of a comprehensive workforce plan that includes an effective succession planning process for AESO employees.

For the AESO to achieve its strategic objectives and business priorities, the appropriate complement of human resources is essential. The development of a comprehensive work force plan is important, particularly as the Calgary marketplace continues to be a challenging location for attraction and retention of highly skilled people. Our approach builds on the work that has been done including leadership development, and internal HR systems and processes, which will serve as a framework for the comprehensive workforce plan. This plan will include various human resource considerations including employees versus contractor requirements, employee demographics, and succession.

**Removed (completions/deferrals):** Create an effective succession planning process for the AESO employees to assure employees have a clear path for progression and the AESO can optimize talent in all strategic areas.

The 2008 initial framework component of this business priority is expected to be completed by 2008 year-end. The initiative has been rolled into a broader initiative to develop a comprehensive work force plan which will include succession planning elements that will be developed in 2009 and beyond.

## 5.6 Operate within Tight System Conditions and Enhance System Restoration Plans

As indicated in Strategic Objective #3, transmission system conditions continue to tighten as transmission expansions and reinforcements are not yet completed. As a result, the goal of reliable system operation has become increasingly difficult to attain. AESO is continuing to seek solutions to the existing transmission concerns while providing the AESO's System Operators with the tools to manage a more complex system under tightening conditions.

The AESO's business priorities in this strategic objective are as follows:

Strategic Objective #5
Ensure that the Alberta Interconnected Electric System (AIES) is operated in a safe, reliable and economic manner.

Program	Business Priorities
<b>Effectively Operate Within Tight Electric System Conditions</b>	<p>Conduct studies to refine transfer limits for BC Tie, MATL and SaskPower tie in preparation of MATL inter tie.</p> <p>Analyze requirements to support high import and export scenarios and necessary supporting remedial action schemes/programs (ILRAS/LSS/Brazeau fast ramp)</p> <p>Evaluate additional dynamic thermal line rating projects for key transmission lines to address thermal overload conditions while facilitating capacity increases under certain operating conditions.</p> <p><b>Conduct area operating studies with particular focus on congested areas in order to be able to make timely modifications to operating policies and procedures and accommodate customer interconnections and system upgrades.</b></p>
<b>System Disaster Recovery</b>	Conduct electro-magnetic transient studies and motor starting studies to verify the AIES restoration plan.
<b>Operational Efficiency &amp; Excellence</b>	<p>Review and update seasonal reliability assessments twice a year to identify required changes to operating policies and procedures (OPPs).</p> <p><b>Build and enhance simulation tools to enhance operator training.</b></p>
<b>IT Infrastructure to Enhance System Operations</b>	Develop and implement a replacement for the SCC Energy Management System (EMS) to address system obsolescence.

## Revisions to Business Priorities for Strategic Objective #5:

**Addition:** Conduct area operating studies with particular focus on congested areas in order to make timely modifications to operating policies and procedures and accommodate customer interconnection and system upgrades.

The transmission system is currently being pushed to its physical limits resulting in congested areas on the system. With the requirement to accommodate customer interconnections, integrate new facilities and perform planned maintenance in these areas, comprehensive area studies are required to ensure that these activities occur in a reliable, effective and efficient manner. These studies may result in changes to operating policies and procedures or it may be necessary to design and implement remedial action schemes to interconnect a number of proposed generation additions in advance of the proposed transmission reinforcements.

**Addition:** Build and enhance simulation tools to enhance operator training.

With the implementation of the new Energy Management System and tightening of the transmission system, operator training and the enhancement of operator training tools to simulate these conditions will assist the operators in dealing with real world situations as they arise.

**Removed (completions/deferrals):** Conduct blackout restoration drill in fall 2008 and implement new restoration training simulator.

The priority is expected to be completed by 2008 year-end and has been removed as a priority as a result. Ongoing drills are now part of the ongoing operations of the AESO.

**Removed (completions/deferrals):** Develop and implement tools to support real time reliability assessments by the System Control Center (Generation Dispatch Forecast Tool/Voltage Stability Tool).

Voltage Stability Tool is expected to be completed by 2008 year-end and the Generation Dispatch Forecast Tool is being deferred until 2010 (after the Energy Management System is implemented in 2009).

**Removed (completions/deferrals):** Undergo 2008 NERC Readiness Audit to identify gaps.

The priority was completed in June 2008 and has been removed.

## 5.7 Monitor, Interpret and Prepare for Emerging Environmental Issues

The environment continues to be an area of focus for the public, government and the electricity industry. As this continues to be an evolving area, the AESO's business priorities in this area also continue to develop and evolve.

The AESO's business priorities for this strategic objective are as follows:

<b>Strategic Objective #6</b>
Develop the capability to address government policy initiatives and work with industry employing new technologies in the area of environmental issues.

Program	Business Priorities
<b>Monitor and be Prepared to Respond to Emerging Environmental Issues Which Might Impact the AESO with an Emphasis on Technology, Emissions Trading and Government Policy Initiatives</b>	<p>Develop capability to evaluate new technologies and be fully responsive in implementing technological initiatives.</p> <p>Develop a comprehensive implementation plan to meet government policy initiatives in a timely manner.</p> <p>Implement the full market and operational framework for wind integration including: advancement of transmission plans, creation of rules and operating practices, creation of power management technical requirements, wind forecasting and operating tools.</p>

## 5.8 Priorities Related to Day-to-Day Activities

In addition to the Strategic Objectives and related Projects outlined in the preceding section, the AESO will continue to pursue certain Projects and Work Initiatives that enable it to successfully carry out the day-to-day aspects of its mandate. While these Projects or Work Initiatives are not specifically related to any one strategic objective they are vital to the ongoing success of the AESO and the electricity industry as a whole. These business priorities are shown in Appendix B.

## **6. AESO BUDGET OVERVIEW**

### **6.1 Budget Process**

The Strategic Plan forms the basis of establishing the business priorities on an annual basis, which are in addition to the day-to-day operational activities. The development of these plans and activities is a coordinated effort with all senior management (executives and directors) who then assess the required budget funding required to deliver on the priority areas.

Underlying the annual budget process is the ongoing review and assessment of the monthly financial reporting and the current staff complement. This ongoing assessment provides the understanding of the deliverables that can be achieved with existing staff and how the budget amounts are to be spent to ensure efficient and value-added expenditures are made.

At the beginning of the annual budget process, senior management are provided with the overall corporate direction on the budgetary assumptions and are asked to submit their budget requests based upon the ongoing operations and priorities for the coming years. These requests are consolidated and reviewed for consistency of approach, gaps and overlaps, and alignment with the corporate direction. The determination of the annual budgets is an iterative process whereby feedback is provided to department management as the budget requests are prioritized by the executive. At the end of the budget process, not all requests are met but the process ensures that sufficient resources (human and financial) are available to permit the AESO to deliver on key priorities.

For this 2009 budget update, the process was similar to a typical annual or multi-year budget process though the request to management was to confirm the approved 2009 budget amounts and identify any new budget requirements to support the updated business priorities or for costs that were unanticipated when preparing the 2009 budget in the fall of 2007.

As part of the multi-year budget process that was initiated with the approval of the 2008-2009 Business Plan and Budget, the 2009 budget was reviewed in detail with stakeholders and received AESO Board approval in December 2007. Under the principles of the multi-year budget process, prior to the start of each budget year approved in a multi-year budget, a forecast is prepared to assess any budget changes that management anticipates are required to deliver on the business priorities. The following table describes the three different processes that would be initiated depending on the results of the forecasted budget requirements.

	<b>Results of Forecast</b>	<b>Related Budget Process</b>
1.	If the forecast is <b><u>below or in-line</u></b> with the previously approved budget amount	At management's discretion, any under-budget amounts will be used to advance future year business priorities or be accumulated in the deferral accounts.
2.	If the forecast is <b><u>above</u></b> the previously approved budgeted amount and the amount is <b><i>determined to be a 'manageable variance'</i></b>	Management would request approval from AESO Board and subsequently issue a stakeholder communication.
3.	If the forecast is <b><u>above</u></b> the previously approved budgeted amount and the amount is <b><i>in excess of a 'manageable variance'</i></b>	Management will review the new funding requirements with stakeholders, followed by a request for approval from the AESO Board.

A 'manageable variance' is a forecast to actual variance that would be:

- less than 10% of budgeted G&A expenditures,
- less than 20% of budgeted general capital, and
- less than 20% of an individual capital project.

During the year, the AESO compares the approved budget to monthly actual expenditures to ensure the human and financial resources are being allocated to the appropriate business priorities and that costs are being managed in a prudent fashion.

## 6.2 2009 Forecast

The AESO's 2009 forecast has been prepared through a review and estimation of expenditures on an individual cost category basis. Based on this review, the forecasted funding requirements for 2009 are \$69.7 million, an increase of 9% or \$6.0 million compared to the \$63.7 million budget that was approved in the initial 2009 budget. This proposed budget increase is a 'manageable variance' of less than 10% and will be proposed to the AESO Board for approval. Management has decided to take an additional step in the budget process for a 'manageable variance' and has communicated the proposed 2009 budget changes to stakeholders to ensure transparency and open communication is maintained and has asked stakeholders to provide any questions or comments on the proposed changes which will be provided to the AESO Board in advance of their decision on the proposed 2009 budget changes.

The following tables provide a high level summary of the budget changes proposed for 2009. Further details are provided in the following sections.

<b>2009 Approved AESO Budget (\$ millions)</b>	<b>63.7</b>
<b>Salary &amp; Benefits</b> (↑ staff, ↑ vacancy rate, ↓ in salary adjustment)	<b>(0.3)</b>
<b>Consulting:</b>	
Interconnections	1.5
HVDC/New Interties	0.6
Transition of Authoritative Documents (TOAD)	0.8
AUC Hearing Costs	0.3
IT Initiatives	2.1
<b>Total Consulting</b>	<b>5.3</b>
<b>External Legal Costs</b>	<b>0.4</b>
<b>Miscellaneous adjustments</b>	<b>0.6</b>
<b>2009 AESO Forecast (\$ millions)</b>	<b>69.7</b>

Appendix A provides a detailed cost category summary for 2009 with comparative information to the 2009 budget and prior year information.

## 7. SALARIES AND BENEFITS

In assessing the 2009 forecast salaries and benefits, three components contribute to the proposed budget changes. Management is proposing to increase the staff complement by 14 permanent staff positions with the resulting additional costs in 2009 (\$1.5 million) being offset by an increase to the staff vacancy rate (\$1.4 million) and a reduction to the 2009 annual salary adjustment for existing staff based on current labor market information (\$0.4 million).

There has been no change to the overall compensation structure for AESO staff and executive in the 2009 forecast.

	2009 Forecast	2009 Budget	2008 Forecast	2008 Budget
Staff Count:				
G&A	301	287	274	274
Capital	<u>18</u>	<u>18</u>	<u>18</u>	<u>18</u>
Total	319	305	292	292
Salaries and Benefits (\$M)	43.4	43.9	34.2	39.1

## **7.1 Staff Complement**

On an ongoing basis, the AESO manages resources to ensure that staff are deployed in the most effective manner possible and that there are sufficient resources to support the successful completion of the corporate priorities and goals.

Included in the 2009 approved budget were 13 staff positions for 2009. As part of the 2009 forecast, considering both the new business priorities and day-to-day operations, management is proposing to increase the staff complement by an additional 14 permanent positions.

Appendix B provides the position descriptions for the proposed new staff additions in 2009.

## **7.2 Staff Vacancy Rate**

For the 2009 budget, in addition to forecasting which quarter in 2009 the 13 new staff additions would be hired, a 5% vacancy rate was used to account for normal attrition of existing employees. At that time, management planned to use the cost savings that would result if the actual vacancy rate was higher than 5% to obtain consulting assistance to ensure continual progress on the AESO's priorities. Based on an additional year of experience which has shown actual vacancy rates to be higher than 5%, management has determined that this budget assumption should be adjusted. The 2009 forecast incorporates a vacancy rate of 8% which is inline with the prior year average vacancy rate of 8% and the current year monthly vacancy rates which have ranged between 8% and 12%.

## **7.3 Compensation Methodology**

To determine the annual salary adjustments for existing staff, the AESO considers the reported average salary adjustments as presented by Mercer Human Resource Consulting (Mercer) in each year. Based on the information available for 2009 when preparing the 2009 budget in the fall of 2007, the 2009 salary costs (and associated benefits) reflected a 7% increase from 2008. Using recently available information from Mercer to assess the salary adjustments for 2009, management is anticipating a 6% increase over 2008, a net reduction of 1%.

At the end of each year during the company's annual performance review process, the AESO Board's Human Resources, Compensation and Governance Committee reviews all relevant market information available at that time to determine the final corporate base pay adjustment. This final review, which occurs in the latter part of the year, may result in an adjustment to the budgeted increase; however, AESO Management is not anticipating a material change

from the current salary adjustment percentage at this time as a result of this review.

## 8. CONSULTING

(\$ million)	2009 Forecast	2009 Budget	2008 Forecast	2008 Budget
Consulting	10.9	5.6	11.0	7.5

In preparing an annual budget or forecast, day-to-day operations along with one-time and multi-year initiatives are considered in assessing resource requirements. To supplement staff due to the volume of work or to provide a specific technical skill set, the AESO relies on consulting resources.

The 2009 forecast includes an additional \$5.3 million compared to the 2009 budget for consulting resources associated with the following major initiatives. These initiatives are supported by changes to the 2009 business priorities or are a result of changes in the AESO's ongoing operations that occurred after the 2009 budget was approved by the AESO Board in December 2007:

- IT initiatives to maintain older systems and to assist in gathering business requirements for new IT systems - \$2.1 million increase
- To support an increase in the number of customer interconnection applications and projects - \$1.5 million
- New AESO initiative for the Transition of Authoritative Documents (TOAD) - \$0.8 million
- Regulated intertie initiative / HVDC technology integration - \$0.6 million
- Alberta Utilities Commission ISO Rules approval process - \$0.25 million

Appendix C provides additional details on the proposed 2009 forecasted consulting changes.

## 9. LEGAL

(\$ million)	2009 Forecast	2009 Budget	2008 Forecast	2008 Budget
External Legal	0.9	0.5	0.6	0.6

Corporate legal costs are for non-recoverable legal costs from regulatory processes and general business matters. The 2009 forecast has incorporated additional legal costs associated with the new AUC ISO Rules process that had not been considered in the

2009 budget and additional non-recoverable legal costs related to transmission applications.

## 10. MISCELLEANOUS

The following table highlights the four cost categories that were adjusted for the 2009 forecast (adjustments greater than \$0.1 million).

(\$ million)	2009 Forecast	2009 Budget	2008 Forecast	2008 Budget
Training and Conferences	0.9	0.7	0.8	0.8
Audits	0.7	0.8	0.6	0.7
Rent	3.3	2.9	2.8	2.8
IT Telecomm & Maintenance Costs	3.9	3.8	3.7	3.5

**Training and Conferences** - An increase to continue the management leadership training initiative for new staff.

**Audits** - A decrease as a result of reassigning a staff position to assist in the compliance review of ISO Rule 9.1.5, which is the TFO competitive procurement of materials and construction labour for transmission facility projects assigned by the AESO.

**Rent** - An increase to the operating costs of the System Coordination Centre to increase security and for acquiring additional office space to accommodate IT project teams.

**IT Telecomm & Maintenance Costs** - An increase for the software and license costs to conduct system restoration drills.

## 11. OTHER INDUSTRY COSTS

(\$ million)	2009 Forecast	2009 Budget	2008 Forecast	2008 Budget
Share of AUC Overhead				
Transmission	9.9	2.5	8.8	2.5
Energy Market	7.2	0	5.4	0

With the establishment of the AUC in 2008, the AUC allocates their operating and capital costs through fees levied to natural gas and electricity market participants that it

has jurisdiction over or any person to whom the Commission provides services to. This resulted in an increase in the fees levied to the AESO.

The AESO will recover the transmission component of the AUC administrative fee from transmission customers in accordance with the AESO's tariff. This is not a new component to the tariff, only a revised estimate of an existing component of Other Industry Costs.

The AESO will recover the energy market component of the administration fee from energy market participants through the energy market trading charge. This is a new component to the trading charge that is levied to market participants.

## 12. ALLOCATION OF COSTS

The AESO recovers its costs from three sources, the transmission tariff, energy market trading charge and the load settlement charge. As a result of the proposed changes to the 2009 budget, the overall cost recovery from these sources will be impacted in the following manner.

Funding	Recovery Basis
Transmission Tariff	Charge to transmission customers in accordance with tariff rate design
Energy Market Trading Charge	Charge to energy market participants based upon MWh exchanged through the power pool
Load Settlement Charge	Charge to Load Settlement Agents based upon service area MWh

Funding <sup>1</sup>	2009 Forecast	2009 Budget	2008 Forecast	2008 Budget
Transmission Tariff	\$61.4M	\$55.0M	\$51.1M	\$51.8M
Energy Market Trading Charge	\$19.3M	\$18.3M	\$16.4M	\$16.5M
Load Settlement Charge	\$4.9M	\$6.5M	\$4.9M	\$6.4M
Total G&A	\$85.6M	\$79.8M	\$72.5M	\$74.7M

Totals may not add due to rounding

<sup>1</sup> including interest and amortization and excluding interconnection application fees for transmission and AUC fees for transmission (\$9.9 million – 2009 forecast) and energy market (\$7.2 million – 2009 forecast)

# APPENDIX A Budget Summary

(\$ thousand)	2009 Forecast	2009 Budget	2008 Forecast	2008 Budget	2007 Actual	2006 Actual	2005 Actual	2004 Actuals	2003 Actuals
<b>ADMINISTRATIVE COSTS</b>									
Staff Costs	32,026	32,404	25,196	28,850	23,801	20,047	20,380	17,424	16,524
Benefit Costs	7,155	7,241	5,614	6,429	5,051	4,599	4,385	3,842	2,720
Incentive Costs	4,236	4,297	3,364	3,849	3,488	3,072	2,619	2,158	0
Staff and Benefits	43,416	43,942	34,173	39,128	32,340	27,718	27,385	23,425	19,244
Consultants	10,932	5,607	10,968	7,537	6,571	3,943	3,269	4,782	5,598
Board Member Fees	703	703	703	703	336	481	554	440	385
Travel and Meetings	868	868	877	877	550	491	353	517	454
Training and Conferences	890	675	848	848	688	424	428	546	482
Meals	456	435	487	487	326	243	253	351	282
Travel & Training	2,214	1,978	2,212	2,212	1,565	1,158	1,034	1,414	1,218
External Legal Costs	897	512	625	578	1,044	469	659	481	1,071
Audits	725	795	631	681	563	402	240	128	286
Rent	3,328	2,946	2,834	2,843	2,470	1,956	1,955	2,538	1,431
Insurance	561	575	539	553	557	510	490	441	428
Office Costs	779	779	792	792	936	642	676	495	338
Subscriptions, Memberships & Dues	510	510	492	492	367	343	272	281	288
Recruiting	475	475	776	450	322	205	299	166	308
Corporate Relations and Consultation	900	865	1,402	1,183	97	112	41	115	87
External Printing	287	287	627	252	181	83	78	243	3
Bank Charges and Interest	92	92	48	48	82	41	79	70	179
Other Admin Costs	3,043	3,008	4,136	3,217	1,966	1,426	1,446	1,370	1,203
IT Telecomm & Maintenance Costs	3,877	3,788	3,658	3,523	3,609	2,373	2,191	2,073	1,519
<b>TOTAL ADMINISTRATIVE</b>	<b>69,696</b>	<b>63,853</b>	<b>60,478</b>	<b>60,975</b>	<b>51,021</b>	<b>40,436</b>	<b>39,223</b>	<b>37,090</b>	<b>32,383</b>
<b>GENERAL COSTS</b>									
Interest Expense	2,869	2,869	2,958	2,861	2,190	449	980	607	1,003
Amortization of Capital Assets	13,000	13,000	9,056	10,800	9,190	9,234	6,631	5,569	10,357
Taxes	0	0	0	0	0	0	0	(412)	519
ISO Merger Costs	0	0	0	0	0	0	0	0	2,325
Total Interconn App Fees	0	0	0	0	(37)	(489)	(592)	(1,113)	(567)
<b>TOTAL GENERAL</b>	<b>15,869</b>	<b>15,869</b>	<b>12,014</b>	<b>13,661</b>	<b>11,343</b>	<b>9,194</b>	<b>7,019</b>	<b>4,651</b>	<b>13,637</b>
<b>TOTAL GENERAL &amp; ADMINISTRATIVE</b>	<b>85,565</b>	<b>79,722</b>	<b>72,492</b>	<b>74,636</b>	<b>62,364</b>	<b>49,630</b>	<b>46,243</b>	<b>41,741</b>	<b>46,020</b>
<b>OTHER INDUSTRY COSTS</b>									
External Regulatory Costs	5,863	5,863	4,050	4,050	315	5,000	2,628	2,320	7,618
WECC/NWPP	2,802	2,802	2,223	2,548	1,300	1,000	973	808	726
AUC Overhead - Transmission	9,926	2,523	8,847	2,523	1,970	1,970	1,744	1,833	828
AUC Overhead - Market	7,206	0	5,405	0	0	0	0	0	0
<b>OTHER INDUSTRY COSTS</b>	<b>25,797</b>	<b>11,188</b>	<b>20,525</b>	<b>9,121</b>	<b>1,615</b>	<b>7,970</b>	<b>5,345</b>	<b>4,961</b>	<b>9,172</b>
<b>GENERAL CAPITAL EXPENDITURES</b>	<b>7,300</b>	<b>7,300</b>	<b>8,170</b>	<b>8,170</b>	<b>4,483</b>	<b>3,513</b>	<b>4,646</b>	<b>6,845</b>	<b>3,731</b>

Department	Staff Additions	# of Additions	
		Additional Position Requests	Staff Positions included in 2009 Budget
<b>OPERATIONS</b>			
Operations Integration	Intermediate Engineer, Ops. Coordination		√
	Energy Market Operations Services (EMOS)	√	
	Manager, Operations Integration Services (OIS)	√	
	Incident Reporting Analyst	√	
	Specialist, SCC Applications	√	
Grid & Market Operations	System Controller in Training		√
	Mandatory Reliability Compliance Analyst		√
	Manager, Real Time Operations	√	
Operations Planning	Operations Planning and Analysis Engineer		√
Engineering	Project Manager	√	
	Sr. Project Manager	√	
Regional Planning	Engineer	√	
	Engineer	√	
	Transmission Engineer	√	
Technical Services	Modeling Engineer	√	
		<b>11</b>	<b>4</b>
<b>Total 2009 Operations Positions</b>		<b>15</b>	
<b>CORPORATE INFRASTRUCTURE</b>			
Stakeholder Relations/ Communications	Community Relations Advisor	√	
Executive Office	Legal Counsel		√
	Load Settlement Analyst (previously Electronic Security Specialist)		√
Settlement & Credit	Risk Management Analyst		√
Information Technology	Senior Java Developer		√√√
	Project Manager		√
	EMS Application Support	√	√
	Senior Infrastructure Analyst		√
	Data Architect	√	
		<b>3</b>	<b>9</b>
<b>Total 2009 Corporate Infrastructure Positions</b>		<b>12</b>	
<b>TOTAL</b>		<b>14</b>	<b>13</b>
<b>Total 2009 Positions</b>		<b>27</b>	

## OPERATIONS INTEGRATION

### 1. **Analyst, Energy Market Operations Services**

This position will be responsible for providing ongoing customer support services to energy market participants including managing customer enquiries. In addition this position will be responsible for providing training to market participants on the use of new technology tools including ETS and market systems and the requirements of new ISO Rules and Operating Policies and Procedures. This position is required to provide additional support to the AESO's Energy Market Services Group to manage current and additional workload requirements.

### 2. **Manager, Operations Integration Services**

This position is required to manage the market system change management process for internal and external projects that impact the operation of the competitive electricity market. This position will also be responsible for managing the SCC operations input into reliability rules and standards as well as managing operations incident reporting. This position is required in order to ensure changes made to the energy market systems meet the needs of market participants and the AESO's System Controllers.

### 3. **Analyst, Incident Reporting Analyst**

This position is required to perform tasks related to the Operations Integration Incident Reporting process including event monitoring, detailed data analysis, report preparation, action item tracking, issue follow-up, and recommendation implementation. This position will allow incident reporting to be used as a tool to improve operations at the AESO which will give us a higher standard of operational excellence and will improve guidelines, procedures and process at the AESO.

### 4. **Specialist, SCC Applications**

This position is required to ensure that the System Controllers have the required business tools and functionality to operate the energy management and market systems. This position includes providing input/support to the Energy Management System project and enhancements to wholesale market systems, enhancements to numerous existing applications/functionality (congestion management, dynamic scheduling, wind integration) and the providing of support to other existing applications.

## GRID AND MARKET OPERATIONS

### 5. **Manager, Real-Time Operations**

This position will be responsible for the operation of the AESO system coordination centre in real time under both normal and emergency conditions by providing supervision and support to the System Controllers in operating the AIES grid and the electricity market. This position is required as a result of the increased complexity in real time grid and market operations protocols and procedures along with the increased knowledge and skill sets required to utilize real time tools and operating systems.

## ENGINEERING

### 6. **Project Manager, Transmission Engineering**

This position is required to supplement the existing complement of project managers involved in management of transmission projects for both customer interconnections and system projects. This position will enhance the AESO's ability to manage projects and meet the increasing demands on AESO with respect to the increasing number of customer interconnections, major system projects and the growing complexity of these projects.

### 7. **Senior Project Manager, Transmission Engineering**

The position is required to manage major customer interconnection projects. This position will enhance the AESO's ability to manage major interconnection projects and the meet customer requirements. There are several major projects which are complex and require senior project management skills. This position is required to expand the AESO's capability to meet the requirements of major projects.

## REGIONAL PLANNING

### 8. & 9. **Engineers, Transmission Regional Planning (2 Positions)**

These positions are required to provide system plans and customer interconnection proposals. The position will assume responsibility for all aspects of the preparation of Needs Applications, Interconnection Proposals, and Regional plans including supervision of, and/or preparation of system studies. The position is required due to the increase in the number and complexity of interconnection applications received by the AESO.

### 10. **Transmission Engineer, Transmission Regional Planning**

The position is required to assist in the planning and development of transmission system plans. The position will also provide support for all aspects of the preparation of Needs Applications, Interconnection Proposals, and Regional plans including supervision of, and/or preparation of system studies. The position is required due to the increase in the number and complexity of interconnection applications received by the AESO.

## TECHNICAL SERVICES

### 11. **Modeling Engineer, Transmission Technical Services**

This position will be required to provide support for the production of loss factor base cases, operations base case training and data audits. This position will also support maintenance of modeling data, support the integration of operational modeling data and planning modeling data and to maintain a standard suite of Base Case solution macros while ensuring consistent information exists within the various data models.

## STAKEHOLDER RELATIONS / COMMUNICATIONS

### 12. **Community Relations Advisor, Stakeholder Relations**

This position is required to assist with transmission consultation. With the increased requirement to consult on major transmission projects and with the significant number of transmission projects expected to be consulted on in 2009 and beyond, additional resources are required to ensure appropriate consultation is performed by the AESO. This cannot be deferred due to the sensitive and critical nature of the transmission projects.

## INFORMATION TECHNOLOGY

### 13. **Data Architect, Information Technology**

The primary function of the Data Architect is to ensure an organization's strategic goals are supported through the use of enterprise data standards and information. The position incumbent will provide architectural guidance, technological recommendations and transition strategies that support the development and implementation of the Data Architecture for the Enterprise. The AESO's data warehouse is becoming increasingly important as the foundation for supporting stakeholder requirements for timely, accurate information regarding market operations.

### 14. **EMS Application Support, Information Technology**

This position is responsible for working with the EMS team in supporting the operation of the AESO's System Coordination Center and real time information systems. This involves supporting SCADA functions with internal and external parties and the implementation of real-time data transfers to and from field locations. The current Energy Management System is being replaced by a new system and requires a different set of skills than those that currently reside within the AESO.

Consulting Project	Description	Change (\$)
<p><b>1. Interconnections</b></p>	<ul style="list-style-type: none"> <li>• During 2007 and 2008 there has been a significant increase in the number of interconnection applications received by the AESO primarily as a result of wind development in the province.</li> <li>• The amount of wind projects, based on MWs, in the interconnection queue has increased from 6,000 MW to approximately 12,000 MW resulting in the significant increase in interconnection applications. As well, growing complexity with new load and generation applications and the associated regulatory processes are also increasing the interconnection process workload. At the time of preparation of the AESO's 2008 and 2009 budgets, the increase in interconnection application workload was not anticipated.</li> <li>• As a result, Regional Planning is requiring additional consulting resources to manage the increased number of interconnection projects and Transmission Engineering will require additional consulting resources to project manage the customer applications.</li> <li>• AESO Management is proposing a budget amendment of \$1.45 million to meet the increased demand from customers for interconnection services.</li> </ul>	<p>\$1.5 million increase</p> <p>(an increase from \$0.65 million to \$2.1 million)</p>
<p><b>2. Regulated Inertie Initiative / HVDC Technology Integration</b></p>	<p><b><u>Regulated Inertie Initiative</u></b></p> <ul style="list-style-type: none"> <li>• To take the study on the benefits of additional interconnections to the next level, senior consulting resources are required to coordinate activities inside the AESO with Alberta electricity industry stakeholders and with BC industry participants and stakeholders.</li> <li>• AESO Management is requesting a budget amendment of \$450,000 to retain senior consulting resources to coordinate the activities related to this initiative.</li> </ul> <p><b><u>HVDC Technology Integration</u></b></p> <ul style="list-style-type: none"> <li>• HVDC technology has the ability to transmit large amounts of power over long distances with lower capital costs and with lower losses than current AC technology.</li> <li>• As this is an emerging technology, the AESO must develop an understanding of how to integrate HVDC technology into the current transmission system.</li> </ul>	<p>\$0.6 million increase</p>

Consulting Project	Description	Change (\$)
	<ul style="list-style-type: none"> <li>AESO Management is requesting a budget amendment of \$150,000 to retain a consultant to help the AESO better understand the requirements and impact of HVDC technology on the current transmission system.</li> </ul>	
<b>3. Transition of Authoritative Documents (TOAD)</b>	<ul style="list-style-type: none"> <li>The purpose of this initiative is to develop a framework for the AESO's authoritative documents, prepare a plan to implement a fully functional framework for all AESO authoritative documents with creation/conversion of new/existing authoritative documents into the new format/structure as necessary.</li> <li>The scope of the TOAD implementation includes:               <ul style="list-style-type: none"> <li>Re-writing ISO Rules, Operating Policies and Procedures, and any other documents determined to be authoritative into the new structure (Rule-Manual)</li> <li>Creating new documents which are required; for example, there may be some movement between the Tariff and the ISO Rules</li> <li>Implementing new corporate processes to support the authoritative document framework</li> <li>Document revision process</li> <li>Document control process</li> <li>Transition process – how do we work with our documents during transition</li> <li>Implementing a tool to support document control, including modifying the AESO website as required</li> <li>New processes and development of document control tools as required</li> <li>Stakeholder Consultation – as required throughout the process</li> </ul> </li> <li>High level outcome is for stakeholders to have clarity and transparency around the AESO rules in regards to accountability of the AESO, obligations of market participants and impacts to market participants for non-compliance.</li> <li>Project was initially scheduled for 2010 resulting in no amount being budgeted for in 2009; however, with the recent review of the AESO's initiatives, as well as changes to ISO Rules approval process and enforcement requirements, it has</li> </ul>	\$0.8 million increase

Consulting Project	Description	Change (\$)
	<p>been decided the project should be advanced. Stakeholders have expressed support for the initiative as well.</p>	
<p><b>4. Alberta Utilities Commission ISO Rules Approval Process</b></p>	<ul style="list-style-type: none"> <li>• From January 1, 2008, as a part of the Alberta Utilities Commission’s (AUC) responsibilities under the <i>Electric Utilities Act</i>, new and amended ISO Rules are required to be filed with the AUC before becoming effective. As a result of the requirement, market participants can object to a proposed ISO Rule or an amendment to an ISO Rule before it becomes effective.</li> <li>• It was anticipated that there would be objections to proposed/amended ISO Rules as a result of the new legislation but that very few objections would proceed to a hearing as a result of the new process. Experience to date this year indicates that more ISO Rules will require a hearing than was anticipated given the number of proceedings that are currently under way relating to ISO Rules objections.</li> <li>• No amounts were budgeted in 2009 for the AUC ISO Rules objection process.</li> </ul>	<p>\$0.5 million increase (includes legal costs of \$.25 million)</p>
<p><b>5. IT Initiatives</b></p>	<p>Many of the AESO systems are aging and consequently require increased support and maintenance to keep them running effectively and efficiently. We are in the process of assessing and making considerable investments in replacing and upgrading several of these systems. During this time we have augmented the support and delivery teams with additional consulting expertise to ensure the older systems are maintained effectively at the same time new development is underway.</p> <p>Additionally, several new IT projects are being anticipated. We are utilizing consultant assistance to aid in the early definition of the business case and related high level business requirements.</p>	<p>\$ 2.1 million increase</p>

## **Section 5 – Line Losses and Ancillary Services**

### **Transmission Losses**

The 2009 forecast costs for Losses are based on:

- The latest 2009 forecast of Alberta Internal Load (includes behind the fence loads and new DTS contracts),
- The 2009 grid facility profiles of transmission and generation (existing, new, decommissioned),
- TMR forecasts as per the latest Operational Policies and Procedures, updated generation stacking order based on the latest 12 months of actual dispatch behaviour (generators, import and export),
- Current export ATC limits, and
- A loss forecast based on the Alberta Interconnected Electric System (“AIES”) hourly net to grid levels from the settlement system.

An hourly model forecasts loss volumes. The losses are calculated based on historical actual volumes, generation, interchange, transmission patterns, and historical and forecasted AIL load. The annual forecasted loss volume is computed by summing hourly forecasted loss volumes. The hourly forecasted loss cost is:

$$\Sigma (\text{forecasted loss volume} \times \text{forecasted pool price})_{\text{hourly}}$$

The losses have been established at 2.7593 TWhr’s and is estimated at \$238.0 million (based on the July 28 2008 EDC hourly pool price forecast) for 2009.

### **Ancillary Services**

The AESO is responsible for the procurement of ancillary services (“AS”). Operating Reserves are necessary for the secure and reliable operation of the Alberta Interconnected Electric System (“AIES”). Reserve requirements are set by the WECC and NWPP. Other AS are also required for regional reliability (Transmission Must Run (TMR), Brazeau Fast Ramp, etc. The AESO operating reserves include both the active and standby components of regulating, spinning and supplemental reserves. Reserves are described in detail in OPP 401 and 402.

For the 2009 AS forecast an AESO forecast of ancillary service volumes, historical costs for AS and the July 28, 2008, EDC Associates Ltd. independent commodity price forecast (ESP Volume 8 Issue 30) are used.

The 2009 Operating Reserve cost is determined using AESO forecasted volume requirements and twenty four months of historical net prices paid to the end of July,

2008. The 2009 TMR forecast is determined by applying forecast volumes and commodity prices to the respective terms of each contract.

The 2009 forecasts for Black Start, Under-Frequency Mitigation, and Poplar Hill are determined using forecast volumes and historical or contract prices paid for each service. Each is described further in this document.

### Key 2009 Forecast Inputs

The AESO's forecast for AS and Losses are largely dependent upon volume forecasts and market-based commodity pricing forecasts. The AESO utilizes the most recent independent commodity price forecasts prepared by EDC Associates Ltd. to determine the cost forecasts for AS and Losses.

The 2008 actual average year to date (up to the end of July) pool and gas prices are higher than the year to date 2007 independent forecasts prepared by EDC Associates Ltd. A summary is provided below. The market heat rate expressed below is the average pool price in \$/MWh divided by the average natural gas price in \$/GJ.

	2009 Forecast (full year)	2008 Approved Forecast (full year)	Variance Under (Over)	2008 Actual (up to July)	2008 Approved Forecast (up to July)	Variance Under (Over)
Average Pool Price (\$/MWh)	84.61	84.81	0.20	88.18	77.35	(10.80)
Average Gas Price (\$/GJ)	8.55	7.51	(1.04)	8.69	7.36	(1.33)
Average Market Heat Rate (GJ/MWh)	9.92	11.29	1.37	10.23	10.56	0.33

Forecasts Provided by EDC Associates Ltd.

### Overview and Analysis of Ancillary Service Costs

The 2009 forecast for AS costs (including IBOC and LBC SO) is \$289.7 million which represents an increase of \$15.0 million from the 2008 forecast of \$274.7 million. Compared to the 2008 forecast, operating reserve costs are forecast to increase by 9% while other AS costs are forecast to decrease by 9% due to several contracts expiring in 2008 and slightly lower TMR volume forecasts for several units. The combined effect is a 5% increase in the overall AS cost forecast for 2009 over 2008.

The actual AS costs year to date (to the end of July) of \$177 million represents an 11% increase of \$17 million from the 2008 year to date forecast of \$160 million. This is primarily due to operating reserve prices being higher than forecasted.

## **Operating Reserves**

Actual operating reserve costs year to date (up to the end of July) are 14% higher than forecast, \$141.5 million versus \$124.5 million, due primarily to higher than forecasted operating reserve costs in April (81% over forecast) as a result of significant transmission system outages which increased average pool prices and resulted in greater than forecasted standby activations.

Operating reserve costs are forecast to increase in 2009 by \$20.4 million, from the 2008 approved forecast of \$215.1 million, to the 2009 forecast of \$235.5 million. The operating reserve forecast is calculated using the last twenty four months of historical net prices paid. Average prices paid have increased in 2008 as compared to 2007 and, since forecast operating reserve volumes for 2009 are similar to those forecasted for 2008, the increase in the 2009 operating reserve cost forecast over the 2008 forecast is due to increased average operating reserve prices as compared to those assumed in the 2008 forecast.

## **Transmission Must-Run (TMR) Service**

Actual TMR costs year to date (up to the end of July) of \$26.6 million are 9% greater than the forecast amount of \$24.4 million, due to more hours of out of merit TMR operation being required than was forecasted.

TMR costs are forecast to decrease by 8% in 2009 to \$37.2 million, from the 2008 approved forecast of \$40.2 million. This is due to the expiration of the Rossdale contract and less hours of out of merit operation being forecasted for TMR Units as compared to the 2008 forecast.

## Other Ancillary Services

Actual costs year to date (up to the end of July) for all other ancillary services are \$10.0 million, 10% lower than the forecast amount of \$11.1 million. This is due to no Interruptible Load Remedial Action Scheme (ILRAS) arming in 2008 thus far, lower fast ramp costs than forecast, and Load Shedding costs being less than the budgeted amount for 2008.

	2009 Forecast (full year)	2008 Approved Forecast (full year)	Variance Under (Over)	2008 Actual (up to July)	2008 Approved Forecast (up to July)	Variance Under (Over)
<b>Operating Reserves</b> (not incl. Trading fees & related charges)						
<b>\$millions</b>	235.5	215.1	(20.4)	141.5	124.5	(17.1)
<b>Volume (000's MWh)</b>	8,350	8,350	0	4,690	4,839	149
<b>Transmission Must Run (\$millions)</b>	37.2	40.2	3.0	26.2	24.4	(1.7)
<b>Other Ancillary Services (\$millions)</b> (includes IBOC and LBC SO)	17.0	19.4	2.4	10.0	11.1	1.1
<b>Total Ancillary Services (\$millions)</b>	<b>289.7</b>	<b>274.7</b>	<b>(15.0)</b>	<b>177.7</b>	<b>160.0</b>	<b>(17.7)</b>

## Descriptions of Ancillary Services

### Operating Reserves

Operating Reserves are unloaded megawatt capacity, available to respond to temporary shortfalls in supply caused by the loss of a generating unit, intertie capabilities, or moment-to-moment fluctuations in load. Operating Reserves comprise Regulating Reserve and Contingency Reserves (including Spinning and Supplemental).

### Regulating Reserve

Regulating Reserve refers to the amount of synchronized generation that responds to Automatic Generation Control ("AGC") signals that track moment-to-moment fluctuations in the supply and/or demand. In Alberta, Regulating Reserves track variations in the load that cannot be met with energy dispatches.

Because variations in supply and demand can be either positive or negative, Regulating Reserves have a range with an upper and lower limit. The volumes of Regulating Reserve are specified as a range in MW over which a level of control is required by the AGC system.

### Spinning Reserve

Spinning Reserve is unloaded generation that is synchronized to the system and is automatically responsive to deviations in frequency and is ready to serve additional demand following a System Controller directive within 10 minutes.

Spinning and Supplemental Reserves are required in order to restore frequency following the loss of generation in Alberta or in the Western Electricity Coordinating Council (“WECC”). Alberta must comply with WECC policies for maintaining specific volumes of Spinning and Supplemental Reserves in order to maintain reliability.

### Supplemental Reserve

Supplemental Reserve is unloaded generation, off-line generation or system load that is ready to serve additional demand (generator), or reduce demand (load), within 10 minutes of a directive from the System Controller.

Operating reserves are procured through the Alberta Watt Exchange or directly from suppliers through Over-The-Counter transactions.

### Active Operating Reserves

Active Operating Reserves are the operating reserves that are forecast by the AESO as necessary to operate the AIES securely and meet the AESO’s reliability obligations to the WECC.

### Standby Reserves

Standby Reserves are additional reserves available to the System Controller in the event an active provider fails to provide Active Reserves, or if actual requirements are higher than the Active Reserve capability. Payments for Standby Reserves include a premium for the option to activate the Standby Reserves and a price that is paid if the reserves are activated.

### Transmission Must-Run (TMR)

Transmission Must-Run (TMR) is generation required to be on-line and operating at specific levels in particular parts of the AIES in order to ensure system security. TMR agreements provide the AESO with dispatch rights to generation to ensure adequate voltages are maintained following transmission or generation contingencies on the

system. In Alberta, TMR service is required in the North West, Edmonton and Calgary areas.

The structure of TMR agreements compensates the TMR provider using fixed and variable payments. Variable payments are based upon keeping a generator whole up to an established heat rate (gas price multiplied by heat rate) when dispatched for TMR, in the event the market heat rate (pool price divided by gas price) is below the established heat rate. In an hour where a TMR provider is dispatched to provide service, if the market heat rate is above the established heat rate, no variable cost is incurred; if the market heat rate is below the established heat rate, a variable cost is incurred, equal to the difference between the established heat rate and the market heat rate.

The relationship between variable TMR costs, market heat rate and gas price generally are:

- The lower the market heat rate, the higher the variable TMR costs;
- The higher the market heat rate, the lower the variable TMR costs;
- The lower the gas price, the lower the variable TMR cost; and
- The higher the gas price, the higher the variable TMR cost.

The majority of TMR costs are variable. The fixed payment the AESO makes to a TMR provider does not change with heat rate, gas price or usage, but allows the AESO to call upon the facility for TMR, if required.

### Other Ancillary Services

Other Ancillary Services include the remaining services that the AESO procures for the secure and reliable operation of the AIES. These services are procured either through competitive processes or bilateral contract negotiations with one or more suppliers, and include Invitation to Bid on Credits (IBOC), Location Based Credit Standing Offer (LBC SO), Brazeau Fast Ramp (BFR), Black Start, Under-Frequency Mitigation, Poplar Hill, Import Load Remedial Action Scheme (ILRAS) and Generation Remedial Action Scheme (GRAS), which are each described further in the following sections.

#### Invitation to Bid on Credits (IBOC)

The IBOC program provides a financial credit to the Carseland facility (in the Calgary area) based on the volume of megawatt-hours they generate each month.

#### Location Based Credit Standing Offer (LBC SO)

The LBC SO program provides increased system security, whereby the AESO retains dispatch rights to location-specific generation in return for location-based credits. Those credits are up of fixed and variable payments.

### Brazeau Fast Ramp (BFR)

The BFR initiative involves the automatic adjustment of generator operation in order to restore and maintain power system frequency at acceptable levels. This service was identified as Generation Remedial Action Scheme (“GRAS”) in previous general tariff applications.

This service is required to respond to the sudden loss of supply and is used to stabilize system frequency following a disturbance to avoid shedding firm load. This service requires the Brazeau facility to fast ramp in the event system frequency goes too low. The AESO procures this service through an agreement with TransAlta.

### Black Start

Black Start service is provided by suppliers that have the ability to self-start, energize transmission lines and provide start up power to other generators. This service is integral to the AESO’s system restoration plan and enables timely restoration of electrical supply on the AES in the unlikely event of a blackout.

### Under-Frequency Mitigation

Under-Frequency Mitigation is configured to automatically trip a specified amount of load if the system frequency drops below 59.5 Hz following a system disturbance. The service mitigates the need to trip firm load following an under-frequency event and works together with ILRAS to increase the capacity of the Alberta-BC interconnection. The AESO conducted a competitive procurement process and now procures these services by way of competitive contracts with service providers. Prior to this competitive process the AESO acquired this service by way of bi-laterally negotiated contracts.

### Poplar Hill

The Poplar Hill generator provides TMR services, which provides voltage support in the North West part of the province. The provision of this service is secured through a long-term contract between the AESO and ATCO Power (successor in interest to CU Power Canada Limited). Although this is a TMR service, because of how the contract is structured, the majority of the payment is fixed (i.e. not subject to heat rates).

### Import Load Remedial Action Scheme (ILRAS)

ILRAS supports the import capability of the Alberta–BC interconnection. If the Alberta-BC interconnection trips concurrent with high levels of import, the system will become generation deficient, system frequency will decline and the AESO will be required to shed load quickly in Alberta to arrest the frequency decline and maintain system reliability. The AESO contracts for loads to automatically trip in these situations to limit the frequency decline and attempt to prevent shedding of additional system load.

## Generation Remedial Action Scheme (GRAS)

For the 2007 forecast the AESO has included an additional ancillary service, Generation Remedial Action Scheme (GRAS). This service is required to respond to the sudden loss of the Alberta/British Columbia tie line during high exports and is used to stabilize system frequency. This service requires a generator to trip off instantaneously in the event a system contingency occurs. The AESO conducted an Expression of Interest (EOI) for GRAS in November/December 2005. However the EOI determined to be non-contestable due to only one party responding. For purposes of the 2009 forecast, no costs have been included for GRAS.

## **Section 6 – Stakeholder Comments and AESO Responses**

The following stakeholder comments and AESO responses were compiled through the abbreviated 2009 Budget Review Process (BRP) that occurred during September and October 2008. The AESO held a BRP meeting on September 17, 2008 with stakeholders to discuss materials and provide opportunities for stakeholders to provide comments. The following summarizes the stakeholders that had participated in the 2009 abbreviated Budget Review Process.

<b>September 17, 2008 Meeting</b>		
<b>Participant</b>	<b>Attended</b>	<b>Comments</b>
ADC (1)	X	X
TCE (2)	X	
Cities (3)	X	X
UCA (4)		X

- (1) Alberta Direct Connects (ADC)
- (2) TransCanada Energy (TCE)
- (3) Cities of Red Deer and Lethbridge (Cities)
- (4) Office of the Utilities Consumer Advocate (UCA)

AESO responses have been provided in the blue text following each comment.

Following a stakeholder meeting or information posted to the AESO's website, the AESO asked stakeholders for their comments. This occurred on two occasions.

On September 17, 2008, the AESO held a technical meeting with stakeholders to review AESO's Updated 2009 Business Priorities, 2009 Own Costs Forecast, Forecasted Ancillary Services Costs and Forecasted Line Losses Costs. Stakeholder comments were received by September 23, 2008.

On September 29, 2008, the AESO distributed the 2009 AESO Board Decision Document to stakeholders. Stakeholders will be required to provide written submissions on October 3, 2008 for the AESO Board presentations on October 8, 2008.

**AESO 2008 Budget Review Process – Response Matrix**

**Stakeholder Comments from September 17, 2008 Meeting**

<b>Stakeholder Comment</b>	<b>AESO Response</b>
<b>Cities – Lethbridge and Red Deer</b>	
<p>That no new financial or accounting policies are anticipated nor has any impact been included in the 2008 Forecast or the 2009 Budget Update</p>	<p>The AESO has not adopted or implemented any new financial or accounting policies that would impact the 2008 or 2009 forecasts. The AESO is not anticipating any changes in either financial or accounting policies at this time, however, we are monitoring and evaluating the applicability and impact of the adoption of International Financial Reporting Standards (IFRS) as it relates to the AESO's financial results.</p>
<p>That the incremental 2009 AUC charges for transmission of some \$7.4 million and for markets of some \$7.2 million will not be offset in charges from other cost budgets (AUC, MSA, TFOs, etc)</p>	<p>The AESO will collect the AUC fees through an increase to the trading charge (for the energy market) and through Other Industry Costs (for transmission). The AUC costs will not be included in any larger cost/budget categories where they would not be transparent to stakeholders.</p>
<p>The Cities request that the AESO undertake a comprehensive review of the forecast of power pool prices being used to calculate ancillary services budget costs. Rider C volatility, as a result of the ancillary services cost variances is becoming a greater burden on DTS customers. It is very difficult to manage and flow through the cost changes to their customers either as a result of timing or specific regulator requirements. The methodology for the volume forecasts are calibrated and updated from time to time and it would be prudent to do the same for the power pool prices being used.</p>	<p>The volatility in Rider C is the result of the relationship between pool price and the prices paid for operating reserves, particularly when there are significant changes in pool prices which have an impact on operating reserve prices during these periods. It is extremely difficult for the AESO to forecast the timing and magnitude of pool price spikes and the related impact on ancillary services costs. The AESO is reviewing the design of the DTS operating reserve charge to create a better matching of tariff collections and operating reserve costs which would result in a reduction in Rider C volatility.</p>

Stakeholder Comment	AESO Response																																								
<b>Utilities Consumer Advocate (UCA)</b>																																									
<p>Losses should play a part in system design and be explicitly factored into the Business Cases for Capital. When choices are made in designing capital assets, the impact of losses on the choices should be factored into the choice. The AESO is best situated to play a leadership role in its dealings with TFO's to ensure losses are properly factored in to the design choices.</p>	<p>The AESO can confirm that the value of transmission line losses are considered in its transmission planning activities, and the AESO also expects the value of transmission losses are to be considered by the Transmission Facility Owner's in their engineering activities as well.</p>																																								
<p>TMR forecasts are increasing as a result of forecast declines in heat rates. Forecast declines in heat rates are a result of forecasts of higher natural gas prices in 2009. Given the state of the economy, there is reason to expect natural gas prices not to rise. The UCA submits that a revised natural gas price forecast would increase heat rates and reduce TMR costs.</p>	<p>The AESO is of the opinion that the use of a natural gas price forecast from a different forecast provider may compromise the alignment of the gas and pool price forecasts that are provided through the EDC model of the AES that the AESO uses. The 2009 TMR cost forecast has been developed in consideration of experience with past TMR costs and are considered reasonable when viewed in the context of the 2009 forecasts of gas and pool prices.</p>																																								
<p>The UCA understands that the AESO management continues to work on the prioritization of initiatives and on developing performance indicators. The UCA looks forward to their presentation of this material in the next BRC process for the 2010 budget.</p>	<p>Noted.</p>																																								
<p>Costs remain reasonably stable until 2006 and then demonstrate a significant increase each year. The following table summarizes the AESO Administrative costs from the BRC presentations of the last few years.</p> <table border="1" data-bbox="178 1198 1119 1352"> <thead> <tr> <th>(\$million)</th> <th>2003A</th> <th>2004A</th> <th>2005A</th> <th>2006A</th> <th>2007A</th> <th>2008F</th> <th>2009F</th> </tr> </thead> <tbody> <tr> <td>Labour and Related</td> <td>19.2</td> <td>23.4</td> <td>27.4</td> <td>27.7</td> <td>32.3</td> <td>34.2</td> <td>43.5</td> </tr> <tr> <td>Contractors</td> <td>5.6</td> <td>4.8</td> <td>3.3</td> <td>3.9</td> <td>6.6</td> <td>11.0</td> <td>10.9</td> </tr> <tr> <td>Other</td> <td>7.6</td> <td>8.9</td> <td>8.5</td> <td>8.8</td> <td>12.2</td> <td>15.3</td> <td>15.1</td> </tr> <tr> <td>Total</td> <td>32.4</td> <td>37.1</td> <td>39.2</td> <td>40.4</td> <td>51.1</td> <td>60.5</td> <td>69.5</td> </tr> </tbody> </table> <p>The UCA understands that the AESO undertakes a detailed budgeting exercise and commends management for such diligence. Having said</p>	(\$million)	2003A	2004A	2005A	2006A	2007A	2008F	2009F	Labour and Related	19.2	23.4	27.4	27.7	32.3	34.2	43.5	Contractors	5.6	4.8	3.3	3.9	6.6	11.0	10.9	Other	7.6	8.9	8.5	8.8	12.2	15.3	15.1	Total	32.4	37.1	39.2	40.4	51.1	60.5	69.5	<p>As indicated by UCA's comment, the AESO does go through a detailed and rigorous budgeting exercise where costs are aligned with business priorities and initiatives. The Budget Review Process is also a cost control mechanism in that the AESO consults with stakeholders on the AESO's business priorities and related budget each year prior to the AESO Board approving the AESO's annual budget.</p> <p>On an ongoing basis, AESO Management continually performs reviews and assessments of monthly financial results in order to achieve the organization's business initiatives. The AESO also maintains a number of cost control mechanisms. These include, but not limited to:</p>
(\$million)	2003A	2004A	2005A	2006A	2007A	2008F	2009F																																		
Labour and Related	19.2	23.4	27.4	27.7	32.3	34.2	43.5																																		
Contractors	5.6	4.8	3.3	3.9	6.6	11.0	10.9																																		
Other	7.6	8.9	8.5	8.8	12.2	15.3	15.1																																		
Total	32.4	37.1	39.2	40.4	51.1	60.5	69.5																																		

Stakeholder Comment	AESO Response
<b>Utilities Consumer Advocate (UCA)</b>	
<p>that, at a macro level, there appear to be concerns around cost controls.</p>	<ul style="list-style-type: none"> <li>• Monthly reporting on costs (general and administrative, ancillary services, line losses and capital costs) internally and to the AESO Board;</li> <li>• Quarterly reporting on costs and performance of priorities to stakeholders;</li> <li>• External audit of the AESO's annual financial results;</li> <li>• Corporate financial policies and authority guidelines approved by the AESO Board;</li> <li>• Regular monitoring and measuring of performance including reporting to the AESO Board; and</li> <li>• Regular reporting of financial results to the AESO Board.</li> </ul> <p>Also, as a part of the 2007 Budget Review Process, the AESO provided stakeholders with the AESO's Cost Accountability Framework. The Framework integrates the components of planning, performance, reporting and control activities. The Framework can be found in Appendix C of the AESO's 2008-2009 Business Plan and Budget.</p>
<p>The UCA is dealing with TFOs in a number of proceedings. A recurring theme is the lack of cost oversight for AESO direct assign projects. There does not seem to be a rigorous and consistent approach to cost oversight. The AESO defines a need, assigns a project and approves the project based on very broad budget estimates. The TFO then uses this approval to justify the project and forecast costs before the regulator. Forecast construction costs are ultimately trued up to actual costs through a deferral account for each TFO.</p> <p>The AESO does not provide a rigorous process reviews related to the costs of direct assign projects. In discussion, the AESO suggested that the proper place is in facilities hearings. The UCA will be playing a more active role in the facility and deferral account proceedings related to AESO direct assign projects.</p> <p>Having said that, the UCA sees a more active role for the AESO to</p>	<p>As per the legislation, the AUC has clear accountability to establish the prudence of TFO expenditures; including those expenditures incurred as a result of a direction by the AESO. The AESO is not required to make any statement as to the prudence of the TFO's costs (reference Sec 25(5) of the Transmission Legislation). Having said that, the AESO has developed rules for Transmission Facility Projects that are consistent with "Part 4-Transmission Facility Projects" of the Transmission Legislation part of which include the requirement for competitive tendering of construction and material costs. The AESO works closely with the TFOs to ensure that the scope for a transmission expansion is managed and meets the need identified by the AESO. To this end the AESO prepares a functional specification for each project to which the TFO responds with a proposal (referred to as a Proposal to Provide Service; accompanied by a +20/-10 % cost estimate) that the AESO reviews prior to issuing a direction to the TFO to file an</p>

Stakeholder Comment	AESO Response
<p data-bbox="197 240 688 272"><b>Utilities Consumer Advocate (UCA)</b></p> <p data-bbox="191 289 1073 386">lead the development of revisions to processes and avoid the “finger pointing” where no one takes responsibility for costs and customers ultimately pay.</p> <p data-bbox="191 423 1104 553">A parallel issue is the prioritization and ability of TFOs to complete direct assign projects. The UCA has concern that the number and scope of projects may be beyond the ability of TFOs to complete in the timelines suggested by the AESO.</p>	<p data-bbox="1142 289 1864 321">application with the AUC (under Section 35 of the EUA).</p> <p data-bbox="1142 423 1965 886">The AESO is also concerned about the TFO's capacity to deliver projects in the time lines requested by the AESO and the AESO's customers. To that end, the AESO is in regular discussions with the TFOs regarding upcoming projects, including customer interconnection requests, to ensure that the TFOs can adequately prepare for the forecast project volumes. The AESO notes that ATCO Electric has entered into an arrangement with two EPC firms (reference ATCO Electric's GRA application, Section 10) to increase ATCO's capability to engineer and construct new transmission facilities. The AESO is encouraged by such initiatives in that it increases the AESO's confidence that TFOs will have the capacity to deliver project volumes. The AESO's 10-year plan also provides industry an indication of future transmission requirements.</p>

Stakeholder Comment	AESO Response
<p><b>Alberta Direct Connects (ADC)</b></p> <p>There is a significant concern for ADC members on the magnitude of the increase to the trading charges. Could you clarify the origin of the AUC costs in terms of if they were collected previously through another means and if so, the rationale for the AESO now including them in the trading charge. If they are new costs, can you describe in more detail what they include?</p>	<p>The AUC recovers its operating and capital costs through an administration fee imposed on the natural gas and electricity market participants that it has jurisdiction over or any person to whom the Commission provides services. The administration fees payable to the AUC are pursuant to section 70 of the <i>Alberta Utilities Commission Act</i> and AUC Rule 025. A cost assessment model is being used by the Commission to allocate its costs to the various classes and categories of utilities and persons and to determine the amount of the administration fee imposed on each class and category.</p> <p>The AESO will recover the transmission component of the AUC administrative fee from transmission customers in accordance with the AESO's tariff. This is not a new component to the tariff, only a revised estimate of an existing component of Other Industry Costs.</p> <p>The AESO will recover the energy market component administration fee from energy market participants through the AESO's portion of the energy market trading charge. This is a new component to the trading charge that is levied to market participants.</p> <p>A description of the costs can be found in AUC Rule 25 which is located on the AUC's website at <a href="http://www.auc.ab.ca">www.auc.ab.ca</a>.</p>
<p>Can you provide the capital costs for the Keg Upgrade and the resulting losses volume reduction attributed to the project?</p>	<p>The TFO forecasted cost for the 500kv KEG Conversion is \$77.8 million and can be found in the AESO's Q2 2008 - Transmission System Projects Quarterly Report located on the AESO's website.</p> <p>Based on preliminary information that the AESO has received to date since the completion of the project, the estimated energy loss savings are approximately 2% on an annual</p>

	<p>adjusted basis. It should be noted this is an estimate and that generator maintenance, generator commissioning and other ongoing operational activities may have had an impact on the estimated loss savings provided.</p>
<p>The current budget does not include any consideration for additional reserves for wind power or the OR redesign project. As there are changes to the forecast costs for changes to reserves, the ADC would appreciate advance notice of these.</p>	<p>The AESO is presently holding stakeholder meetings on the Operating Reserve Market Redesign and the ADC is welcome to participate. Any significant changes in the forecasted costs for reserves based on the Operating Reserve Market Redesign process or as a result of the wind power process enhancements will be communicated to stakeholders through the Budget Review Process or through other communications with stakeholders. Information on the Operating Reserve Market Redesign can be found on the AESO's website at the following link <a href="http://www.aeso.ca/market/14138.html">http://www.aeso.ca/market/14138.html</a></p>