aeso
ALBERTA ELECTRIC SYSTEM OPERATOR

Solid **FOUNDATION**
Secure **FUTURE**

ALBERTA ELECTRIC SYSTEM OPERATOR **2013 ANNUAL REPORT**

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A robust, reliable electricity system and a fair, efficient and openly competitive electricity market will provide a **SOLID FOUNDATION** for future investment and the integration of new facilities, in turn helping to provide competitive pricing, continued prosperity and a **SECURE FUTURE** for all Albertans.

VISION: THE AESO WILL BE SEEN AS A SIGNIFICANT CONTRIBUTOR TO THE ECONOMIC DEVELOPMENT OF ALBERTA AND THE QUALITY OF LIFE FOR ALBERTANS, THROUGH OUR LEADERSHIP ROLE IN THE FACILITATION OF COMPETITIVE ELECTRICITY MARKETS AND THE RELIABLE OPERATION AND DEVELOPMENT OF THE ALBERTA INTERCONNECTED ELECTRIC SYSTEM.

MISSION: THE AESO FACILITATES A FAIR, EFFICIENT AND OPENLY COMPETITIVE MARKET FOR ELECTRICITY AND PROVIDES FOR THE SAFE, RELIABLE AND ECONOMIC OPERATION OF THE ALBERTA INTERCONNECTED ELECTRIC SYSTEM.

Growth

2013
AVERAGE DEMAND*
GREW BY
2.8%
*Alberta Internal Load (AIL)

2013
PEAK DEMAND
GREW BY
5.1%

New Records

2013
SUMMER PEAK
GREW TO
10,063 MW
UP FROM **9,885 MW** IN 2012

2013
WINTER PEAK
GREW TO
11,139 MW
UP FROM **10,609 MW** IN 2012

LETTER FROM THE BOARD CHAIR

Throughout 2013, I have witnessed numerous examples of exceptional performance by the many teams that make up the AESO, and it speaks to the organizational success we have experienced over the previous year. You will read about that success in the pages that follow.

The AESO has shown itself to be the electricity industry leader within the province and both the AESO Board of Directors and I are dedicated to facilitating and supporting that leadership through sound governance, embodying all the best practices that are associated with it.

Our province is now the fastest growing electrical jurisdiction on the continent, and providing electricity at the flick of a switch requires continuous, meticulous planning and constant vigilance in the day-to-day operation of the electrical grid. The AESO has not only delivered in this regard—in a year where our response to environmental factors and growing demand proved the effectiveness of the AESO and its commitment to act in the public interest—it has strengthened the stability of the current electricity market framework.

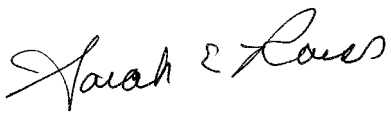
At the centre of this work, there has been extensive stakeholder engagement and dialogue with market participants. This increased discussion and collaboration has been fruitful, with support for the framework growing noticeably. Underpinning this, the AESO has made great strides in reinforcing the system so that it attracts investment in new generation and instills investors with confidence that they can connect to the grid and become part of our electricity market. I truly believe that this work is in the best interest of Albertans. These elements, all

> Our future depends on more than the work we are currently accomplishing however; it requires a vision for the future…

combined, will serve to preserve the fairness and open competition that defines our energy market, and will help maintain Alberta's prosperity in the decades to come.

Our future depends on more than the work we are currently accomplishing however; it requires a vision for the future, a future that is undefined and may present us with any number of scenarios. The AESO prepares for this by creating a new strategic plan every five years and our forthcoming 2014–2018 Strategic Plan is nearing completion. It will outline how the AESO will guide the electricity industry as we move towards the end of this decade, and illustrate how we will both leverage and enhance the value of the current framework. It will affirm our focus on new projects that create further value. And it will detail how the AESO will ensure that its workforce has the capacity and talent to meet both the changing needs of the organization and the province we serve.

In closing, I cannot offer enough gratitude to outgoing Board members J.D. Hole and Hugh Fergusson whose assistance made joining the AESO Board of Directors in 2012 that much more productive and fulfilling. I'd also like to extend the warmest welcome to new Board members Chris Warren and Vince Vavrek. Already, their contributions and commitment are making a difference. I look forward to working with them and our entire board in a manner that takes the province's needs to heart, and contributes to the quality of life of all Albertans.



Sarah E. Raiss
AESO Board Chair

LETTER FROM THE PRESIDENT AND CEO

The AESO's distinct role in the province positions us to be leaders in the facilitation of competitive electricity markets and to reliably develop and operate the Alberta Interconnected Electric System. It is a role that is both challenging and rewarding, and one that I and our 400 employees accept with a great deal of pride.

The AESO is comprised of highly technical and skilled professionals who possess experience, insight, information and tools that uniquely position us to be electricity industry leaders, and I am pleased to report we have had considerable success in this capacity.

At all times, we keep our mandate to operate in the public interest in clear focus. In the process of delivering on this mandate, we have further solidified the electricity market framework, ensuring that it is working well and ready for the integration of new facilities. Over the previous year, the AESO has executed on several key projects and taken numerous steps to place Alberta's future generation and transmission needs upon a firm foundation that prepares the province for future electricity demand.

The AESO has continued to advance bulk system projects at a considerable rate including the Heartland Transmission project, which is now in service. The launch of our Competitive Process is also part of that advancement and has been well received. Not only does it allow for the most competitive qualified bidder to undertake the forthcoming Fort McMurray West 500 kV Transmission Project and cost-effectively deliver needed transmission infrastructure for Albertans, it establishes a repeatable process to be used as new projects are conceived. The high-voltage direct current projects are progressing as well, with work by both transmission facility owners currently underway. This is noteworthy, as these projects reflect many years of hard work by many people, and we are now much closer to having the crucial north-south transmission corridor reinforced.

> The AESO has taken numerous steps to place Alberta's future generation and transmission needs upon a firm foundation…

Significant progress has also been made on the regional initiatives, including construction of the Hanna Region Transmission Development, which is now coming to a close. The AESO has also received approval from the Alberta Utilities Commission (AUC) for over 30 Needs Identification Documents (NIDs) including the Foothills Area Transmission Development and Fidler substation NIDs.

The AESO's goal towards market advancement and evolution moved forward, with two major decisions from the AUC received in 2013. The decision on available transfer capability and transfer path management confirmed the AESO's approach to allocating capacity between interties. In the time since that decision, we have increased overall available transfer capability on the province's interties. The AUC's other major decision, regarding transmission constraint management, provided clear direction regarding the AESO's plans to manage constraints. We will continue to work diligently to implement the AUC's decisions through both short-term operational initiatives and longer-term transmission reinforcement projects, including the Goose Lake to Chapel Rock line of the Southern Alberta Transmission Reinforcement project.

2013 was also a very strong year from an operational standpoint, and our Operations team ably met a variety of challenges. Both the June Alberta flood and the July 2 load shed event demonstrated that the AESO has appropriate policies and procedures in place to mitigate the effects of such events, and the AESO team employed them effectively. The year presented new summer and winter peaks—a five per cent increase in peak load—which were expertly managed from within our System Coordination Centre. All of these drew wide public attention and allowed us to reaffirm our expertise. Amidst this work, the AESO also oversaw the integration of over 120 facilities; at approximately two per week this was an incredible pace.

Building on this, we are moving towards a very productive 2014 and I would like to personally thank our staff and the AESO management team for the part they play in making the AESO an electricity industry leader. As the province's electricity needs continue to grow and evolve, the AESO is poised to adapt to meet those needs, due in large part to the hard work and excellent leadership AESO employees deliver daily, for the benefit of all Albertans.

David Erickson
President and Chief Executive Officer

Our Year In Review

Over the previous year **THE AESO COMPLETED NUMEROUS OBJECTIVES AS SET OUT WITHIN ITS STRATEGIC PLAN AND EXECUTED ITS MANDATE AS A NOT-FOR-PROFIT COMPANY CREATED UNDER THE ELECTRIC UTILITIES ACT.**

In 2013, this involved considerable progress regarding transmission. Laying solid groundwork for Alberta's future, considerable time was spent increasing and improving dialogue with government and industry, and advancing bulk and regional system projects. A strong year from an operational standpoint also, the AESO capably managed a significant increase in overall Alberta load, integrated new facilities at a brisk pace and made considerable headway in the areas of reliability, Energy Management System strategy, and preparation for future energizations. The year was also one of success regarding the electricity market, highlighted by an increase in available transfer capability, a noticeable increase in support for the market framework, and progress towards increased wind generation integration.

Adherence to AESO principles lies at the core of this work; credible character and great teamwork within a high-performance, service-driven culture.

THE AESO'S 2013 ANNUAL REPORT

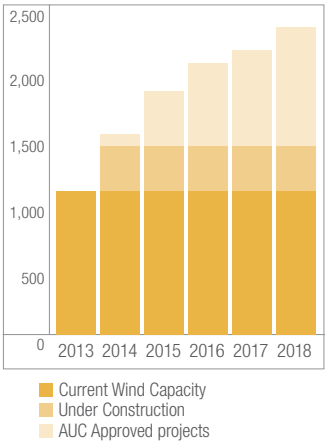
Areas of Key Achievement

- MARKET DEVELOPMENT
- ELECTRIC SYSTEM DEVELOPMENT
- CUSTOMER ACCESS SERVICES
- ELECTRIC SYSTEM OPERATIONS
- TECHNOLOGY
- EMPLOYEES
- COMMUNICATIONS OUTREACH
- RISK MANAGEMENT AND COMPLIANCE

Market Development

We will operate a fair, efficient and openly competitive (FEOC), real-time, energy-only wholesale electricity market where market evolution is driven by participants and the AESO.

WIND GENERATION GROWTH
FOR THE NEXT 6 YEARS *(MW)*



Wind Integration

The AESO published the report *Wind Integration Phase 1 Post-Implementation Review* in July 2013. Stakeholder comments on the recommendation paper for Phase 2 were published as well. The AESO has worked extensively with industry stakeholders to develop long-term wind integration solutions that will facilitate sustainable market development, send clear market signals in the context of Alberta's electricity framework, and increase system flexibility while maintaining reliability of the Alberta Interconnected Electric System. Towards those long-term goals, an implementation plan for wind participation in the merit order was developed based on the learnings from the wind dispatch pilot. 2013 also saw completion of the wind power forecast integration project, which integrates wind power forecast information into AESO systems and extends forecasting capabilities to the AESO's System Controllers.

Interties

In addition to the successful energization of the Montana–Alberta Tie Line (MATL) in September 2013, the AESO also progressed on other initiatives related to the development, integration and restoration of interties. Stakeholders were invited to an intertie restoration information session that outlined current intertie limits and causes, and identified a summary of planned studies and potential alternatives that could help maximize intertie capability. Responses to stakeholder comments on the Real-time Dispatch/Scheduling section of the AESO's 2010 *Intertie Framework* recommendation paper were published in March 2013. The AESO also completed the first phase of intertie operating horizon studies and began a joint AESO-BC Hydro planning horizon study. The AESO also began an assessment of the Load Shed Services for Imports (LSSi) product.

Available Transfer Capability

In February, the AESO received the Alberta Utilities Commission decision on its proposed Rule 203.6 *Available Transfer Capability and Transfer Path Management.* The rule officially came into effect in August 2013 and governs how capacity is allotted on the B.C. and Saskatchewan interties, and the Montana-Alberta Tie Line (MATL). Following the energization of MATL, the AESO launched its intertie total transfer capability restoration project, ultimately increasing simultaneous total transfer capability by 50 MW to 830 MW.

Energy Storage

Building upon the energy storage initiative launched in 2012, which began with discussions of effectiveness, applicability of market rules, and technical standards as they apply to energy storage resources, the AESO issued a paper entitled *Energy Storage Initiative Issue Identification* in 2013. This paper summarizes the issues identified in the initial discussions, and identifies potential changes that may be required to integrate various energy storage technologies into the Alberta market. Subsequent to the release of the paper, the AESO helped

form an industry workgroup to discuss priorities and potential solutions to the issues. The AESO will continue to engage industry to examine methods of integrating storage technologies and mitigate any potential market and operational impacts.

Market Systems Replacement Validation

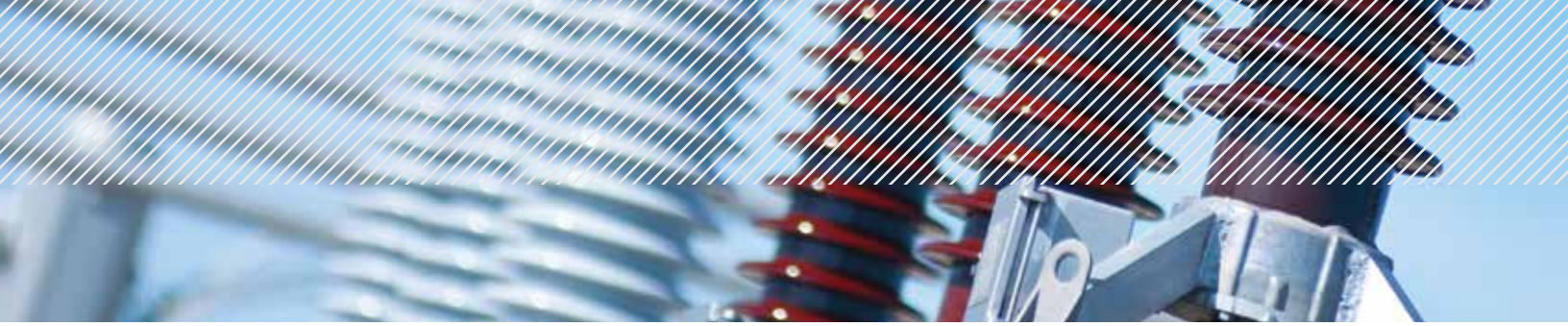
Recognizing that the province's core electricity market systems are well over a decade old and have been periodically modified to adapt to market and technology changes not envisioned at the time of their design, the AESO completed Phase 1 of its Market Systems Replacement Project. Phase 1, the validation phase, confirmed that the need for change to the AESO's market systems is significant and growing. The AESO is now moving into Phase 2, which will examine market evolution scenarios and the means to address technology risks and increasing expectations of reliability for market operations and systems. Stakeholder consultation and market participant input is essential to all phases of this project.

Flood Event/Market Settlement

During June's major flood event—at the same time that AESO System Controllers were ably managing the bulk electric system with no significant impact—the AESO's Market Settlement team took pre-emptive measures against the forthcoming closure of the Calgary downtown area, including the AESO's offices, which could have prevented the electricity market from being settled on time. Despite the catastrophic effects of the flood, regular operation of the operating reserve (OR) market was unaffected and both Watt-Ex—the online trading platform—and AESO OR procurement continued with no interruption to the market. As well, ancillary service procurement was closely monitored during trading days and any issues were quickly investigated and resolved. The AESO has conducted electricity market settlement on time, every time, since the organization's inception.

Transmission Constraint Management

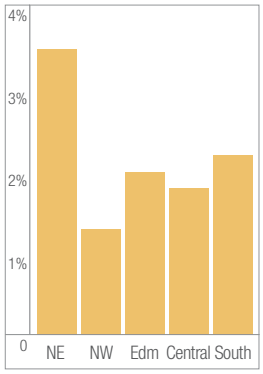
In April 2013, the AUC issued a decision directing the AESO to make changes to ISO Rule Section 302.1 *Real-Time Transmission Constraint Management*. The AESO submitted a revised TCM rule implementation plan to the AUC in June 2013 that outlines how the AESO will proceed with a stakeholder consultation process. An implementation project will follow the consultation process and it will include rule development, IT systems design and implementation, commercial procurement, system controller procedures and training, and business process documents revisions.



Electric System Development

We will lead the development of a reliable transmission system, including interties to other jurisdictions, which fully enables operation of the competitive market.

PERCENTAGE **LOAD GROWTH PER REGION** FOR THE NEXT 20 YEARS



2013 Long-term Transmission Plan

The AESO's *2013 Long-term Transmission Plan* (2013 LTP) was filed in January 2014—the culmination of a two-year cycle of continuous planning, consultation, forecasting and engineering evaluation. The 2013 LTP is the AESO's vision of how Alberta's electric transmission system needs to be developed to secure continued provincial economic growth, and incorporates detailed regional transmission plans and comprehensive forecasts over the next 20-year period. The AESO's transmission planning processes are purposefully staged and flexible to accommodate changes in forecast demand and generation.

The transmission developments proposed in the 2013 LTP will improve operational flexibility and reliability, address existing and anticipated system constraints, and facilitate the connection of new and emerging generation technologies to serve the fastest growing Independent System Operator jurisdiction in North America.

Competitive Process

In February 2013, the AESO received AUC approval for its Competitive Process, a new procurement process that requires companies to compete to build major new transmission projects. The AESO will use the Competitive Process to select a company to build, finance, own and operate two new high-voltage transmission lines in northeastern Alberta.

Last year the AESO launched the competition for the Fort McMurray West 500 kV Transmission Project by issuing a Request for Expressions of Interest in May, and a Request for Qualifications in July. In December, the AESO selected five companies to advance to the Request for Proposals stage of the competition. These five companies are currently developing bids and engaging landowners and other stakeholders about their plans. The AESO expects to announce a successful bidder in early 2015.

Regional Transmission Plans

The AESO completed in-depth study work for the five Alberta regions described in the *2013 Long-term Transmission Plan.* Comprehensive transmission plans were completed for the South, Central, Northwest, Northeast and Edmonton planning regions. The plans provide significant details regarding alternatives, technology choice, planning need dates, projected in-service dates and staging. In order to develop a robust plan over a 20-year study period, the AESO has modelled details for three distinct time intervals; near term (2017), medium term (2022) and long term (2032).

Transmission Cost Benchmarking

The AESO published its Cost Benchmarking report for Alberta transmission projects, utilizing transmission cost data for the 2005–2012 time period. The report establishes a baseline for transmission project cost information and can be used by stakeholders for several types of analyses including identification of cost improvement opportunities and order-of-magnitude cost estimates.

In 2013, the AESO also published its interactive cost-benchmarking dashboards. These dashboards are based on transmission facility owner (TFO) estimates from recent years and allow users to access AESO-created web tools that help determine project cost breakdowns in a variety of ways. These include cost breakdown by project and/or by component, allowing the user to determine a number of different factors such as transmission line facility unit costs, substation major equipment unit costs and more. Using a variety of filters, users can vary layouts, create locational data in map format, and more easily perform a number of tasks that better enable prudent transmission planning and construction from a cost perspective.

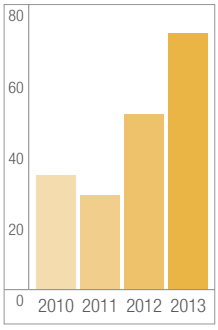
HVDC Optimization

With the Eastern Alberta Transmission Line (EATL) and Western Alberta Transmission Line (WATL) approved and currently under construction, key studies on their distinct attributes—they are the province's first major lines to incorporate high-voltage, direct current technology (HVDC)—were completed in 2013. The AESO investigated simultaneous HVDC line transfer capabilities, as well as critical outages that could limit WATL and EATL dispatch, functional specifications, and recovery from both AC and DC faults.

Customer Access Service

We will consistently meet or exceed customer expectations in the delivery of AESO services.

NUMBER OF **CUSTOMER ENERGIZATIONS** OVER THE PAST 4 YEARS



Enhanced Metrics Reporting

After completing a thorough review of the information gathered from the AESO's 2012 Innovation Workshop, the AESO committed to delivering quarterly reports on the length of time that projects within its Connection Process spend in the process stages. The *Connection Process Performance Metrics Quarterly Report* identifies factors that contribute to stage durations and also provides advice about how to manage the impacts of these factors. The AESO will continue monitoring performance of issues affecting customer access processes to identify ways to further enhance the Connection Process.

Market Participant Choice

The AESO worked with industry and government on the advancement of its Market Participant Choice (MPC) pilot project in 2013. MPC is an alternative to the AESO's standard connection option for connecting to the transmission system. The MPC process will follow similar steps and timelines as the Connection Process, but allows a customer with an eligible facility to plan and build the connection themselves, in consultation with the incumbent TFO. Specific information regarding the MPC initiative is available on the AESO website.

Process Enhancements

The AESO continued to advance enhancements to its Connection Process by implementing new connection process targets. As well, an industry working group was initiated in order to identify further connection process improvements. The AESO continues to present industry workshops aimed at familiarizing customers with Connection Process requirements.

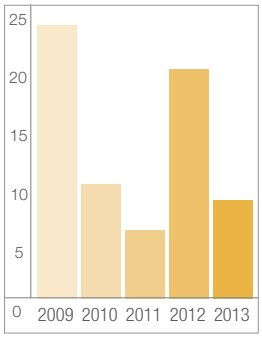
Customer Connections

The AESO filed 29 Needs Identification Documents (NID) on behalf of customers in 2013. Of the 127 energizations completed, 73 were for customer projects.

Electric System Operations

We will direct the economic, safe and reliable operation of the Alberta transmission system and market in a fair, efficient and openly competitive manner.

NUMBER OF **NEW/REVISED ALBERTA RELIABILITY STANDARDS (ARS)** ADOPTED OVER THE PAST 5 YEARS



Reliability Coordinator Duties

The AESO completed preparations in 2013 to take on additional responsibilities related to a reliability coordinator function for Alberta, previously handled by the Western Electricity Coordinating Council (WECC). Concluding that the AESO had the highest degree of knowledge of the Alberta Interconnected Electric System (AIES), the authority to provide reliability coordinator-type services without any changes to existing Alberta legislation, and that efficiencies will be gained including anticipated cost savings of more than $3 million over the first five years, the AESO officially assumed the additional responsibilities on January 1, 2014.

Alberta Reliability Standards and Critical Infrastructure Protection

The AESO progressed on two separate fronts that will continue to ensure reliability of the AIES and protect it in the future. The Alberta Utilities Commission (AUC) approved seven new Alberta Reliability Standards (ARS), as submitted by the AESO in 2013. The AESO also continued consultation with stakeholders and market participants on Alberta Critical Infrastructure Protection (CIP) standards for the industry, and plans to file CIP standards with the AUC in 2014. Once in effect, compliance with these standards will help protect the AIES against physical and cyber-sabotage.

Montana–Alberta Tie Line and EMS Model Changes

A significant milestone, the Montana–Alberta Tie Line (MATL) was energized in September 2013, adding to the diversity of Alberta's electricity supply. MATL is the province's first merchant intertie (owned by private investors) and the first direct interconnection to the U.S. In combination with the

B.C. intertie, MATL completes a loop between Alberta and territory overseen by the Western Electricity Coordinating Council (WECC), necessitating key changes to the AESO's Energy Management System (EMS); Operations extended coverage of the AESO's Supervisory Control and Data Acquisition system further into the WECC system. This allows the AESO to better acquire the real-time information on activity potentially affecting operation of the Alberta grid. Known as the WECC Loop Model Project, its successful completion increased the size of the AESO's EMS operations model by 30 per cent.

July 2 Load Shed Event

Evaluation of the July 2, 2013, load shed event—when system constraints led the AESO to issue directives to shed load to maintain overall reliability—provided confirmation that the AESO effectively managed the event and that effective procedures are in place to respond to similar situations. No recommendations for improvements were identified—in part a reflection of the lessons learned and changes made as a result of a similar load shed event on July 9, 2012. In the case of the July 2, 2013, event, rising temperatures had driven Alberta's electricity demand to a new summer peak of 10,063 megawatts. At the same time, 15 generating plants were offline. Following a subsequent transformer outage due to a faulty gas-detector relay, the resulting need to constrain generators down prompted the AESO to issue directives to shed load in order to maintain system reliability.

Energization/Integrations

The AESO completed 127 energizations of various facilities including transmission lines and substation transformers in 2013, nearly double the number completed in 2012. At more than two per week, these occurred at a rapid pace and included the integration of major projects such as the Montana–Alberta Tie Line and the Heartland Transmission project.

June 2013 Flood Event

Although the June 2013 flood event greatly impacted over 100,000 Albertans in more than 30 communities, with temporary power service disruptions occurring, detailed analysis of the June 2013 flood event showed that overall reliability of the Alberta Interconnected Electric System and the Alberta wholesale electricity market were never truly threatened. Held in conjunction with all involved market participants, the review confirmed that the AESO has adequate policies and procedures in place to mitigate the effects of such events, and that the AESO Operations team employed them capably.

Technology

The AESO continued to invest in information and infrastructure technologies in 2013 and seamlessly relocated the AESO's backup coordination and secondary data centres. One particular highlight of 2013 was the completion of Phase I of the Market Systems Replacement (MSR) project; capturing long-term business needs, determining potential solutions and building the business case to move to MSR Phase II (the Request for Proposals phase) in 2014. These investments position the AESO to better support operations and implement future endeavours—such as market and transmission system initiatives—that will require significant future infrastructure support.

Employees

In a labour market that continues to be extremely competitive, the AESO maintained its focus on engaging the right talent to enable success in 2013, prioritizing the attraction, development and retention of employees. This involved a redesign of the leader and core competencies that underpin both AESO culture and desired behaviours in relation to the four main AESO principles, the development of a retirement transition program, the creation of learning and development programs supporting business needs, and the introduction of a more robust succession management framework.

The AESO also began implementing an integrated talent management system to manage all aspects of the employee life cycle. Enhanced talent management practices and programs have successfully enabled the reduction of employee turnover over the past few years, thereby reducing its impact and associated costs.

Communications Outreach

A strong emphasis was placed on proactive communications in 2013. This included a comprehensive plan that communicated the advantages of the AESO's new Competitive Process to a variety of stakeholders. In addition, the AESO's crisis communications protocols were validated during the June flooding and July 2 outage events, with further refinements made during post-event reviews. Stakeholder communications remained a major priority, encompassing both municipal and regional government consultation and contact with dozens of First Nations communities. Externally accessible information was also added to the AESO websites, including video footage utilized by mainstream media.

Risk Management and Compliance

In 2013, the AESO's risk management program continued its ongoing work pertaining to strategic, operational and reporting objectives. The AESO Internal Compliance Program (ICP) was updated in the ICP reference manual in 2013, part of its continuing diligence to ensure adherence to AESO-applicable Alberta Reliability Standards, Independent System Operator rules and other authoritative documents including key Alberta legislation. Over the past year, this work included the implementation of enhanced and/or revised internal compliance processes. The AESO will continue to seek ways to establish and improve risk management processes, internal compliance processes, and meet reporting timelines in 2014.

Corporate Governance

AESO Board

The AESO Board enhances its governance practices through a continuous improvement approach. The AESO Board and its Committees, as well as individual Members, undertake governance processes and procedures with the view of aligning them with the AESO's vision, mission and principles.

The AESO's structure provides a strong governance model that promotes best practices, ethical behaviours, accountability and transparency to internal and external stakeholders in its business dealings. For example, the AESO Board annually reviews and updates its longstanding AESO Complaint Policy. This policy provides employees and contractors with a confidential and safe method to report activities related to the AESO that may be improper or illegal. Also, the AESO maintains an AESO Ethics Hotline as a means for anyone to anonymously report such behaviour. The AESO Board, as part of its governance practice, regularly retains the advisory services of independent, third-party experts.

The AESO is the business name of a statutory corporation, the Independent System Operator, established on June 1, 2003, under the *Electric Utilities Act* (EUA) of the Province of Alberta. The AESO's mandate is derived from the EUA and related regulations. The AESO is governed by its Board (AESO Board) which is comprised of individuals (Members) appointed by Alberta's Minister of Energy (Minister).

The AESO Bylaws and the *AESO Board Charter and Governance Document* set out the general responsibilities of the AESO Board. The AESO Board is responsible for overseeing the business and affairs of the AESO. The AESO Board is actively involved with the AESO executive in the strategic planning process and approves the AESO's strategic plan and its annual business plan and budget. The AESO Board also oversees succession planning, AESO executive compensation, cost and risk management.

The *Alberta Public Agencies Governance Act*[1] of the Province of Alberta also sets out procedures to formalize the roles and mandate of the AESO in its relationship with the Government of Alberta.

AESO Board Committees and Task Force:

For much of 2013 the AESO Board had the following three standing Committees and one Task Force.

- Audit Committee (AC);
- Human Resources and Compensation Committee (HRCC);
- Corporate Governance and Nominations Committee (CGNC); and
- Transmission Advisory Task Force (TATF).

The TATF provided the AESO Board with assistance and recommendations in fulfilling certain of the AESO Board's governance and oversight responsibilities related to the planning and development of the Alberta Interconnected Electric System (AIES) and the AESO Competitive Process.

In September 2013 the AESO Board dissolved the TATF and replaced it with a new standing Committee, the Power System Committee.

In early 2014 the AESO Board combined the HRCC and CGNC into one Committee. Currently the AESO Board has three Committees:

- Audit Committee (AC);
- Human Resources and Governance Committee (HRGC); and
- Power System Committee (PSC).

Each Committee, as did the TATF, operates in accordance with their AESO Board-approved Charter and follows best practices.

[1] This was proclaimed in force June 12, 2013.

Audit Committee (AC)

The Audit Committee provides consultation, advice and recommendations to the AESO Board on financial reporting matters, systems of internal controls, systems for managing risk, the external and internal audit processes, and the AESO's process for monitoring compliance with laws and regulations.

Human Resources and Governance Committee (HRGC)

The HRGC provides consultation, advice and recommendations to the AESO Board with respect to human resources matters and management compensation. This encompasses AESO executive compensation, including the AESO President and Chief Executive Officer (AESO CEO), officer selection, succession planning, human resources programs and human resources practices.

The HRGC also provides consultation, advice and recommendations to the AESO Board regarding compliance with legislation, Member compensation, AESO Board succession planning and enhancement of the AESO's corporate governance practices as well as nomination recommendations to the Minister. This includes the annual review of AESO governance documents and processes, Member orientation and ongoing education, AESO Board performance assessments, and best practices in governance matters.

Power System Committee (PSC)

The PSC provides advice and makes recommendations to the AESO Board regarding transmission, markets and operations matters, including the AESO Competitive Process. The PSC was established September 11, 2013.

AESO Board Members

Members have extensive professional and business knowledge and experience derived from careers in various fields including energy, utilities, commercial construction, engineering, technology, law, accounting and government. The following are Members who served during 2013:

Member	Member Since	AESO Board Position	Committee/Task Force Member
Jan Carr	2009	Member	AC; CGNC; TATF; PSC
Linda Chambers	2010	Member	Chair, CGNC; HRCC
Hugh Fergusson[2]	2007	Member, Vice-Chair	CGNC; HRCC
J.D. Hole[3]	2010	Member	CGNC; HRCC
Robert McClinton	2007	Member	Chair, AC; TATF; PSC
Paul McMillan[4]	2010	Member	Chair, TATF; AC
Patricia Newson	2012	Member	AC; HRCC; TATF; PSC
Sarah Raiss[5]	2012	Member, Chair	ex officio
Gordon Ulrich	2009	Member	Chair, HRCC; Chair, TATF; Chair, PSC; CGNC
Vince Vavrek[6]	2013	Member	N/A
Chris Warren[7]	2013	Member	N/A

2 Hugh Fergusson's term expired August 31, 2013, but was extended to and expired on November 30, 2013, as per the provisions of the EUA.

3 J.D. Hole's term expired August 31, 2013, but was extended to and expired on November 30, 2013, as per the provisions of the EUA.

4 Paul McMillan resigned from the AESO Board effective June 25, 2013, due to a potential conflict of interest.

5 The Chair is an ex officio member of all Committees and the Task Force and as such is invited to all meetings but not required to attend.

6 Vince Vavrek was appointed as a Member December 18, 2013, and appointed to Committees in January 2014.

7 Chris Warren was appointed as a Member December 18, 2013, and appointed to Committees in January 2014.

AESO Board Effectiveness

AESO Board Assessments

The AESO Board and its Committees have performance assessment processes in place. Assessments are conducted annually and specific follow-up action items are identified and tracked year-over-year. Assessments are completed on the AESO Board as a whole, the AESO Board Chair and the Chairs of each Committee.

Strategy

The AESO Board oversees the strategic planning process including holding an annual strategic planning meeting. In each AESO Board meeting, the AESO CEO provides an update on strategic priorities and accomplishments and the AESO Board engages in a discussion thereof.

Risk Management

The AC reviews risks and mitigation in detail. The AESO Board provides input into the identification and prioritization of risks as well as reviewing and monitoring risk and mitigation processes, plans and actions. Under the direction of the AC, both internal and external auditing activities are planned in the context of overall risks and vulnerabilities.

Financial Management

The AC oversees internal control processes. The Controls & Audit Services group as well as the external auditors report to the AC. This ensures excellence and accuracy in financial reporting. The AESO Board approves the annual audited financial statements including Management's Discussion and Analysis of Financial Condition and Results of Operations.

Succession Planning

The HRGC reviews the succession planning processes and talent management processes for the AESO as a whole and reviews succession and development plans for all AESO executives and key positions. The AESO Board reviews the succession and development plans for the AESO CEO and AESO executives.

In-Camera Sessions

The AESO Board conducts an in-camera session without management at each of the AESO Board and Committee meetings.

Charters and Work Plans

The AESO Board and Committees each have a Charter setting out their detailed mandate and an annual Work Plan. These guide their priorities and work to be completed in any given year and are reviewed not less than annually and updated as required.

Remuneration of Members

An independent, expert, third party review of Member remuneration is conducted every second year, using benchmark comparisons to similar roles in Canadian organizations with an emphasis on Alberta.

A summary of remuneration Members are eligible to receive as at December 31, 2013, is as follows:

- **Chair –** retainer $90,000/year
- **Vice-Chair –** retainer $5,000/year
- **Member –** retainer $25,000/year
- **Committee and Task Force/PSC Chair –** retainer $5,000/year
- **AESO Board, Committee and Task Force/PSC meetings –** $1,000/meeting
- **Additional AESO business –** $1,000/day
- **Benefits –** Members appointed prior to December 1, 2013, are eligible to receive certain benefits. Members who are appointed after that date are not eligible for benefits.

The Chair of the AESO Board does not receive meeting fees for AESO Board or Committee meetings or additional AESO business and is provided with a flat retainer of $90,000.

Meeting Attendance and Remuneration

In 2013, the attendance of the Members at AESO Board, Committee and Task Force/PSC meetings was as follows:

AESO Board Member	AESO Board	AC	HRCC	CGNC	TATF	PSC	Meeting Attendance	Per Cent Attendance	2013 Remuneration[8]
Jan Carr	6 of 6	4 of 4	–	–	3 of 3	1 of 2	14 of 15	93%	$40,000
Linda Chambers	6 of 6	–	4 of 4	4 of 4	1 of 1	–	15 of 15	100%	$49,000
Hugh Fergusson[9]	5 of 5	–	3 of 3	3 of 3	–	–	11 of 11	100%	$39,500
J.D. Hole[9]	4 of 5	–	2 of 2	2 of 3	1 of 1	–	9 of 11	82%	$31,918
Robert McClinton[10]	6 of 6	4 of 4	–	–	3 of 3	2 of 2	15 of 15	100%	$46,000
Paul McMillan[9]	3 of 4	2 of 2	–	–	2 of 2	–	7 of 8	88%	$22,000
Patricia Newson	6 of 6	4 of 4	–	–	3 of 3	2 of 2	15 of 15	100%	$41,000
Sarah Raiss – Chair, AESO Board	6 of 6	–	–	–	–	–	6 of 6	100%	$90,000
Gordon Ulrich	6 of 6	–	4 of 4	4 of 4	2 of 2	2 of 2	18 of 18	100%	$52,000
Attendance	48 of 50	14 of 14	13 of 13	13 of 14	15 of 15	7 of 8	110 of 114	96%	
Per cent Attendance	96%	100%	100%	93%	100%	88%	96%		

AESO Executive Compensation

Program Objectives

The AESO compensation program (Program) is an integrated program designed to attract, retain and motivate the calibre of executives required to support the achievement of the AESO's statutory mandate, corporate vision and business objectives. Accordingly, the compensation philosophy and programs have been built on the following objectives:

- To focus AESO executives on the AESO's business objectives;
- To attract and retain qualified and talented executives to carry out the AESO's mandate; and
- To reward a combination of demonstrated results and competencies.

The philosophy underlying these objectives is that total compensation for the AESO executives must be competitive with industry comparators in total target cash to attract and retain the skills and competencies necessary to fulfil the AESO's mandate.

Program Governance

The HRGC oversees Program governance. The HRGC reviews compensation objectives, policies and programs and makes recommendations to the full AESO Board.

The AESO Board and HRGC, in carrying out their respective mandates, have access to AESO management's perspectives as well as those of expert external consultants. AESO executive compensation is reviewed annually with respect to Program design, industry compensation trends, actual performance, internal existing compensation and external market relativities.

Market Comparisons

The AESO regularly benchmarks compensation to similar positions in Canadian organizations. The peer group comparators include public and private sector utilities and energy companies, with further review and comparisons of the Alberta and Energy Sector Government Organizations and the North American Independent System Operators subsets.

Market data are compared with respect to base pay, total cash compensation (base salary and short-term incentive), and total direct compensation (base salary, short-term incentive, perquisites and long-term incentives). Base compensation is targeted at the 50th percentile of the market comparators. Compensation is therefore targeted at the median of total target cash, and may be between the 50th and 75th percentile based on excellent sustained performance.

[8] 2013 Remuneration includes Chair base retainer, Vice-Chair retainer, Committee and Task Force Chair retainer and Member meeting fees, and excludes benefits. The total remuneration, including benefits, provided to the Members in 2013 was $480,685.

[9] Hugh Fergusson, J.D. Hole and Paul McMillan each left the AESO Board at various times during 2013.

[10] Member participated in one meeting as a consultant pending reappointment as a Member. Remuneration as a Member and as a consultant was as per Member rates.

Roles

The AESO's total compensation program includes base pay, a short-term incentive plan, a flexible benefits program and a group retirement and savings program. There is no defined benefit pension plan. For analysis and advice on market comparators, compensation trends and comparator information, the HRGC obtains the services of an independent external expert. In 2013, the services of Towers Watson were utilized.

The HRGC reviews the information from the independent external experts and confers with the AESO CEO. Recommendations for pay-for-performance adjustment are based on demonstrated results against objectives established at the beginning of the year as well as competencies, and are then put forward to the AESO Board for review and approval.

The Chair of the AESO Board and the Chair of the HRGC make recommendations regarding the AESO CEO's performance and pay based on the AESO CEO's individual performance, corporate performance and market data. The AESO Board approves the final pay.

Base Pay

Base pay is individually determined for each AESO executive position based on comparative market data. In addition to market data, base pay increases are based on individual performance on key accountabilities, achievement of business objectives and demonstration of competencies as recommended by the HRGC and approved by the AESO Board.

Short-term Incentive Plan

The short-term incentive plan (STIP) is an annual program available to all AESO employees and subject to the discretion of the AESO Board. Subject to AESO Board approval, the STIP is a lump sum cash award based on two components; corporate performance and individual performance.

The corporate achievement component is recommended by the AESO CEO to the HRGC and is subject to approval by the AESO Board. The individual achievement component is recommended by the AESO CEO to the HRGC and is factored in to the total incentive payment. The HRGC recommends to the AESO Board, and the AESO Board approves, all AESO executive compensation. In the event a corporate component is awarded by the AESO Board, both components are used to determine resulting incentive payments. The AESO CEO's performance and STIP payment is determined by the Chair of the AESO Board and the Chair of the HRGC and approved by the AESO Board.

The AESO CEO's target STIP is 50 per cent of base pay earnings, with the ability to earn up to 100 per cent of earnings for exceptional individual and corporate performance against pre-established objectives. The other AESO executives' target STIP is 30 per cent of earnings with the ability to earn up to 60 per cent. For the CEO, the allocation of corporate versus individual performance for the STIP is 80/20 per cent and for the other AESO executives it is 70/30 per cent.

Long-term Incentive Plan

The AESO has no long-term incentive plans for any AESO employees, including for any of the AESO executives.

Flexible Benefits

The flexible benefits program for all AESO employees, including the AESO executives, provides for life insurance, dependent life insurance, accidental death and dismemberment, sick leave and short-term disability, group and individual long-term disability, critical illness, dental and health care benefits, as well as a health spending account and personal spending account for additional relevant expenses. Perquisites such as parking and fitness allowances are provided for the AESO executives.

Registered Retirement and Group Savings Plans

A group plan is provided to all AESO employees, including the AESO executives. For this plan the AESO contributes six per cent of base salary to a registered retirement or non-registered savings account. In addition, the AESO will match up to three per cent of salary for any voluntary contributions made. This can result in a total retirement savings contribution by the AESO of nine per cent of base salary.

Other Considerations

An employment agreement including, among other things a severance provision for termination without cause, is in place for the AESO CEO.

AESO Executive Compensation

The table below details the total compensation for the year ended December 31, 2013, for certain AESO executive. The AESO recovers its costs, including employee compensation, through revenue sources from market participants; there is no government funding provided for the operations of the AESO.

Position	Name	Base Salary	STIP	Perquisites[11]	Benefits & Savings[12]	Other[13]
President & CEO	David Erickson	$460,000	$280,000	$ 13,875	$ 51,375	
VP Market Services	Kelly Gunsch[14]	$261,045	0	$ 7,546	$ 33,469	$331,474
VP Operations	Mike Law	$261,206	$ 112,453	$ 6,930	$ 33,484	
VP Regulatory	Heidi Kirrmaier	$248,106	$ 97,881	$ 7,874	$ 32,305	
VP Finance	Todd Fior	$246,982	$ 111,886	$ 6,930	$ 32,203	

AESO Board and Management

Governance Practices

The AESO looks to private, public and not-for-profit sectors of industry to provide best business and governance practices. The following are some pertinent practices the AESO utilizes to provide sound corporate governance within the organization.

AESO Codes of Conduct

The AESO maintains codes of conduct applicable to the Members, officers, employees and contractors, which serve as frameworks for these individuals when they are faced with difficult situations where laws and regulations may not provide sufficient direction and assistance. These codes of conduct form part of the AESO Bylaws.

The *AESO Code of Conduct—Officers, Employees and Contractors* is a policy all new AESO employees and contractors are required to review and agree to abide by from their first day of employment. All AESO employees must, at least annually, review and confirm compliance/non-compliance with and agree to abide by it. Similarly, each Member is bound by the AESO Members' Code of Conduct, and Members must also confirm compliance at least annually.

The results of the annual Code of Conduct process is reported to the AESO Audit Committee.

Strategic Planning and Budget Development

The strategic plan, budget and business plans are key to the AESO's operations.

The strategic plan provides organizational direction for the development of corporate, departmental and individual plans and goals for the current and future years and links the AESO's vision, strategic objectives, strategies and business initiatives to day-to-day operations. The strategic plan is reviewed and approved by the AESO Board and forms the foundation on which the AESO's annual business initiatives, budget and forecasted costs (Business Plan and Budget) are established.

As a part of the AESO's development of its Business Plan and Budget, the AESO undertakes a consultation process with stakeholders that is referred to as the Budget Review Process (BRP). The BRP is an open and transparent process that allows stakeholders the opportunity to provide input into the AESO's proposed Business Plan and Budget for the upcoming year.

The BRP's primary objective is for the AESO to work with stakeholders to develop a comprehensive Business Plan and Budget document that provides a common understanding of expected deliverables and related costs. Stakeholders provide input by submitting written comments on the proposed Business Plan and Budget, and meeting with the AESO Board to further clarify those comments. At the conclusion of the BRP, the AESO Board issues a decision on the AESO's Business Plan and Budget Proposal.

Performance Management

The AESO's salary administration process is pay-for-performance and is designed to align with and attain the goals to be achieved at the corporate level. The corporate goals are initially developed by the AESO executive based on business priorities set out in the strategic plan and the Business Plan. The AESO Board provides oversight and approves annual corporate goals.

[11] Perquisites include car allowance, parking and fitness allowance.

[12] Benefits & Savings include group savings/RRSP, dental, health, accidental death & dismemberment and critical illness insurance.

[13] Other includes retiring allowance and one-time payments.

[14] Kelly Gunsch departed from the AESO effective December 12, 2013.

Department plans and individual goals, which are developed annually, are designed with a view to support achievement of the corporate goals and advance the strategic plan. The individual AESO employee goals and departmental plans are established and approved by the AESO executive and management. The AESO CEO's goals are approved by the AESO Board.

Performance Reporting

The AESO executive updates the status of attaining corporate goals on a regular basis. The AESO executive can determine which goals are on target to be met and those at risk of not being achieved. The CEO reports the status of the corporate goals to the AESO Board on a regular basis. For those goals at risk of not being met, strategies are developed or altered to better achieve the desired goal, including reprioritizing the corporate goals.

Risk Management

The AESO's Controls & Audit Services group is responsible for development, implementation and ongoing maintenance of the organization's enterprise risk management program.

Regular risk management reporting is provided to AESO senior management and the AC, which includes identified risks, related mitigation strategies and status of the strategies. The AESO Board reviews risks as brought forward by the AC.

The AESO prioritizes its risks and incorporates them into the annual goal-setting process as determined appropriate. Risk mitigation includes development and implementation of appropriate corporate policies and procedures, including various financial policies. The policies are communicated to employees and are accessible by employees at all times.

Internal Controls

Internal controls have been designed and implemented by AESO management. These controls occur at varying levels of the organization and provide AESO management and the AC with reasonable assurance of achieving:

- Strategic initiatives and goals;
- Effective and efficient operations;
- Reliability of financial reporting;
- Compliance with laws, regulations, policies and procedures;
- Protection against fraud; and
- Safeguarding of assets.

Audits/Reviews/Procedures

The AESO's Controls & Audit Services group was established in 2010 and reports to the AC. This function is a component of the AESO's governance framework and evaluates the organization's governance, risk management and control processes, as designed and represented by AESO management, to determine they are adequate and functioning as intended.

Various audits, reviews and procedures are performed throughout the year by Controls & Audit Services. When required, third party expertise is engaged to assist or supplement internal resources to execute reviews and assessments. The annual financial statements of the AESO are audited by an independent external audit firm, Ernst & Young LLP.

AESO Executive

The AESO Board is responsible for appointing the AESO CEO pursuant to the Electric Utilities Act, and in accordance with the AESO Bylaws, such other officers as are necessary whose duties and functions are prescribed by the AESO Bylaws or by the AESO CEO.

The AESO CEO leads an executive team that operates the day-to-day business and affairs of the AESO, including running the business and developing corporate practices required to meet best business practices.

The 2013 executive team was as follows:

David Erickson
President and Chief Executive Officer

Bill Baker
Vice-President, Information Technology

Todd Fior
Vice-President, Finance

Kelly Gunsch[15]
Vice-President, Market Services

Heidi Kirrmaier
Vice-President, Regulatory

Mike Law
Vice-President, Operations

Jerry Mossing
Vice-President, Transmission Planning and Performance

Greg Retzer
Vice-President, Transmission Project Delivery

Larry D. Kram
General Counsel and Corporate Secretary

15 Kelly Gunsch departed from the AESO effective December 12, 2013.

Management's Discussion and Analysis of Financial Condition and Results of Operations

This management's discussion and analysis of financial condition and results of operations (MD&A) as of February 13, 2014, should be read in conjunction with the Alberta Electric System Operator's (AESO) audited financial statements for the years ended December 31, 2013, and 2012 and accompanying notes. The MD&A and financial statements are reviewed and approved by the AESO Board. The AESO's financial statements have been prepared in accordance with Canadian generally accepted accounting principles (GAAP) and are expressed in Canadian dollars.

The AESO is responsible for the operation of Alberta's fair, efficient and openly competitive energy-only market for electricity; determining the order of dispatch of electric energy and ancillary services; providing system access service on the transmission system; directing the safe, reliable and economic operation of the interconnected electric system; planning the capability of the transmission system to meet future needs; and administering load settlement.

The AESO recovers its costs through three separate revenue sources from market participants; there is no government funding provided for the operations of the AESO.

Summary of Annual Highlights

The AESO, a not-for-profit statutory corporation, recovers its operating, intangible and capital asset costs through three separate revenue sources, each of which is designed to recover the costs directly related to the provision of a specific service, as well as a portion of the shared corporate services costs.

($ Millions) Years ended December 31

	2013	2012	Change	% Change
Collections	**1,868.4**	1,573.1	295.3	19
Deferred revenue	**(22.0)**	(17.5)	(4.5)	26
Other revenue	**1.6**	1.5	0.1	7
Total revenue	**1,847.9**	1,557.1	290.8	19
Transmission operating costs	**1,702.6**	1,410.9	291.7	21
Other industry costs	**24.9**	26.6	(1.7)	(6)
General and administrative costs	**97.1**	94.3	2.8	3
Interest costs	**0.8**	0.9	(0.1)	(11)
Amortization	**22.6**	24.4	(1.8)	(7)
Total costs	**1,847.9**	1,557.1	290.8	19

Numbers may not add due to rounding

Total Costs

Transmission Operating Costs

Transmission operating costs represent wires costs, operating reserves, transmission line losses, transmission must-run and other ancillary services costs. In 2013, transmission operating costs are $1,702.6 million, which is $291.7 million or 21 per cent higher than the 2012 costs of $1,410.9 million. This increase is mainly associated with higher wires costs in 2013 resulting from Alberta Utilities Commission (AUC) decisions on regulated rates charged by transmission facility owners (TFOs).

($ Millions) Years ended December 31

	2013	2012	Change	% Change
Wires costs	**1,126.4**	889.8	236.6	27
Operating reserves	**362.3**	320.6	41.7	13
Transmission line losses	**178.0**	144.0	34.0	24
Transmission must-run	**11.2**	29.9	(18.7)	(63)
Other ancillary services costs	**24.7**	26.6	(1.9)	(7)
Transmission operating costs	**1,702.6**	1,410.9	291.7	21

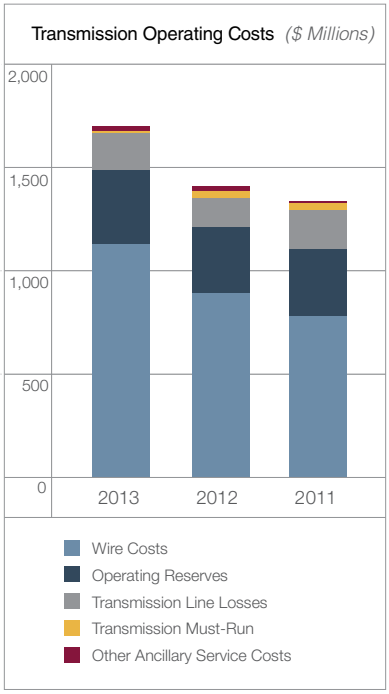
Wires Costs

Wires costs represent the amounts paid primarily to TFOs in accordance with their AUC-approved tariffs and are not controllable costs of the AESO. Wires costs in 2013 are $1,126.4 million, which is $236.6 million or 27 per cent higher than the 2012 costs of $889.8 million due to higher regulated rates charged by the TFOs. The AESO understands that the higher TFO tariffs reflect capital and operating costs associated with projects providing additional transmission system capacity as well as higher costs to operate and maintain existing transmission facilities.

Operating Reserves

Operating reserves are generating capacity or load that is held as standby and made available to the AESO's system controller to manage the electric system supply-demand balance in the event of a sudden unplanned loss of generation. There are three types of operating reserves with the minimum volumes of operating reserves required based on standards established by the Western Electricity Coordinating Council (WECC):

- **Regulating reserves –** The generation capacity, energy and maneuverability responsive to the AESO's automatic generation control (AGC) system that is required to balance supply and demand on a minute-to-minute basis in real time.
- **Spinning reserves –** Unloaded generation that is synchronized to the transmission system, automatically responsive to frequency deviation and ready to provide additional energy in response to an AESO system controller directive. Spinning reserve suppliers must be able to ramp up their generator within 10 minutes of receiving a system controller directive.



- **Supplemental reserves –** While similar to spinning reserves, supplemental reserves are not required to respond to frequency deviations. They include unloaded generation, off-line generation or system load that is ready to serve additional energy (generator) or reduce energy (load) within 10 minutes of receiving a system controller directive.

Operating reserves are procured through an online exchange where offer prices are indexed to the pool price. While the prices of operating reserves procured through the online exchange are indexed to the hourly pool price, changes to the average pool price do not result in proportional changes to the operating reserve costs. The pool price for each hour has a significant impact on the operating reserve costs for that hour. Additionally, during periods of high hourly pool prices, the less expensive operating reserve suppliers may not be available, which results in higher operating reserve costs.

Operating reserve costs in 2013 are $362.3 million, which is $41.7 million or 13 per cent higher than the 2012 costs of $320.6 million primarily due to the impact of the higher hourly pool prices in 2013. The average hourly pool price is $80 per megawatt hour (MWh) in 2013 compared to $64 per MWh in 2012, representing an increase of 25 per cent in 2013. Operating reserve volumes are 8,142 gigawatt hours (GWh) in 2013 compared to 8,092 GWh in 2012, representing less than a one per cent increase.

Transmission Line Losses

Transmission line losses represent the amount of energy that is "lost" as a result of electrical resistance on the transmission lines. Volumes associated with line losses are determined through the energy market settlement as the difference between generation and import volumes less consumption and export volumes. The hourly volumes of line losses vary based on load and export levels, the distance between generation and load, and changes in the transmission topology. Transmission and generation outage schedules, unplanned transmission and generation outages, and market dispatches also affect the volume of losses. The value of line losses is calculated based on the hourly pool price.

The costs of transmission line losses in 2013 are $178.0 million, which is $34.0 million or 24 per cent higher than the 2012 costs of $144.0 million due primarily to the impact of a 25 per cent higher average pool price in 2013. Line loss volumes financially settled in 2013 are 2,276 GWh compared to 2,176 GWh in 2012, representing a five per cent increase.

Transmission Must-run

Transmission must-run (TMR) is generation required to be online and operating to ensure reliability in specific areas of the AIES with insufficient transmission capacity. This service is typically procured through commercial contracts involving fixed and variable payment components.

A market participant may be directed to provide unforeseeable TMR service when they do not have an existing contract for the service. In these circumstances, the Independent System Operator (ISO) transmission tariff specifies how to calculate the amount to be paid to suppliers. Unforeseeable TMR reinforces transmission in areas where the transmission deficiency is not foreseen with sufficient time to negotiate a contract competitively. These conditions arise for a number of reasons including unplanned transmission line outages, system conditions in real time or unexpected loss of generation.

TMR costs in 2013 are $11.2 million, which is $18.7 million or 63 per cent lower than the 2012 costs of $29.9 million. The volumes of contracted TMR in 2013 decreased in addition to lower unforeseeable TMR costs.

Other Ancillary Services Costs

Other ancillary services that the AESO procures for the secure and reliable operation of the AIES include load shed service for imports (LSSi), black start and services provided by the Poplar Hill generator. These services are procured through bilateral contracts with suppliers using competitive procurement processes whenever possible.

In 2013, other ancillary services costs are $24.7 million, which is $1.9 million or seven per cent lower than the 2012 costs of $26.6 million. This decrease is attributable to lower LSSi costs. LSSi is interruptible load that can be armed to trip, either automatically or manually, on the loss of the Alberta–British Columbia intertie. This service allows import available transfer capability (ATC) to be increased by 100 to 200 megawatts. The 2013 costs for LSSi are $21.2 million, which is $1.6 million lower than the 2012 costs of $22.8 million.

Other Industry Costs

Other industry costs represent fees or costs paid based on regulatory requirements or membership fees for industry organizations; the amounts or requirement for the costs are not under the direct control of the AESO. These costs relate to regulatory processes, the annual administration fee for the AUC, and the AESO's share of WECC and Northwest Power Pool (NWPP) membership fees.

For regulatory process costs, there are three categories: (i) objections and complaints to ISO Rules or any regulatory application; (ii) the AESO's regulatory proceedings; and (iii) intervener cost recovery for AESO applications.

Other industry costs in 2013 are $24.9 million, which is $1.7 million or six per cent lower than the 2012 costs of $26.6 million. The decrease is attributable to lower annual administration fees of the AUC and regulatory process costs.

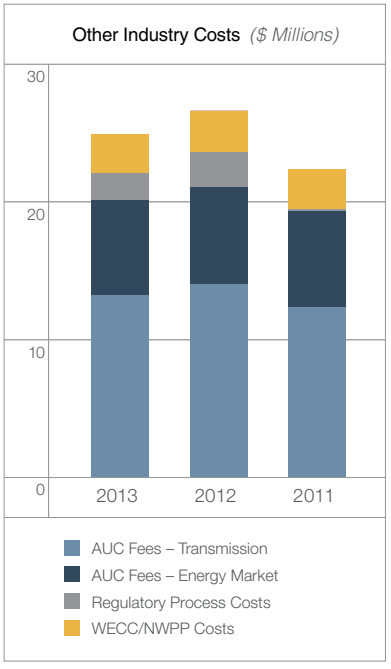
($ Millions) Years ended December 31

	2013	2012	Change	% Change
AUC Fees – Transmission	**13.2**	14.0	(0.8)	(6)
AUC Fees – Energy Market	**6.9**	7.1	(0.2)	(3)
Regulatory process costs	**2.0**	2.5	(0.5)	(20)
WECC/NWPP costs	**2.8**	3.0	(0.2)	(7)
Other industry costs	**24.9**	26.6	(1.7)	(6)

Under the provisions of the *Alberta Utilities Commission Act*, AUC operating and capital costs are recovered from natural gas and electricity market participants under its jurisdiction or any person to whom the AUC provides services. Accordingly, the AUC apportions its costs related to its electricity transmission and wholesale electric market activities to the AESO as an AUC administration fee. The AUC levies two separate administration fees to the AESO; a transmission fee that is recovered through the transmission tariff and an energy market fee that is recovered from market participants through the AESO's energy market trading charge on a per-MWh-traded basis.

Regulatory process costs in 2013 are $2.0 million, which is $0.5 million or 20 per cent lower than the 2012 costs of $2.5 million. The 2013 costs are mainly associated with regulatory proceedings of $0.5 million (most notably the Competitive Process and the 2014 ISO tariff application proceedings) and ISO Rule objections and complaints of $1.5 million (most notably transmission loss factors, Foothills transmission development and transmission constraint management (TCM)). AUC cost awards to interveners for AESO applications were less than $0.1 million in 2013.

The AESO's share of the WECC membership fees in 2013 is $2.7 million, payable in US dollars, which is $0.1 million or four per cent lower than the 2012 fees. Changes in the foreign currency exchange rate have resulted in an additional $0.2 million decrease in costs in 2013.



General and Administrative Costs

($ Millions) Years ended December 31

	2013	2012	Change	% Change
Staff costs	**60.5**	57.9	2.6	4
Contract services and consultants	**14.2**	15.3	(1.1)	(7)
Administration	**5.0**	6.3	(1.3)	(21)
Facilities	**6.9**	5.7	1.2	21
Computer services and maintenance	**8.9**	7.6	1.3	17
Telecommunications	**1.6**	1.5	0.1	7
General and administrative costs	**97.1**	94.3	2.8	3

General and administrative costs in 2013 are $97.1 million, which is $2.8 million or three per cent higher than the 2012 costs of $94.3 million. This variance is associated with increases in staff, facilities and computer services and maintenance costs offset by decreases in other cost areas.

Staff Costs

Staff resources continue to be the foundation for the AESO's operations, requiring ongoing management to ensure that the right people with the right skill sets work to achieve the corporate objectives. The organization focuses on attracting and retaining qualified staff and offering a competitive compensation package and a rewarding work environment.

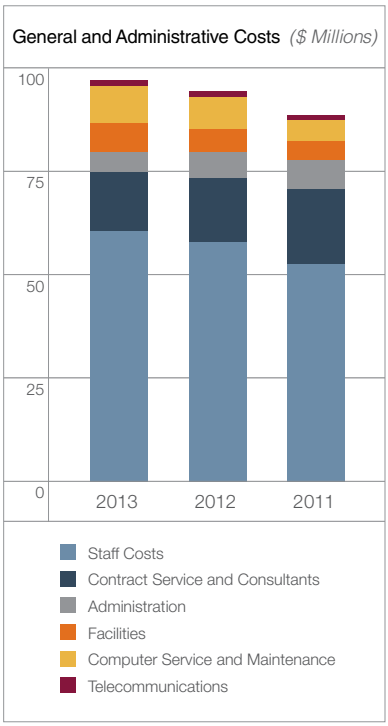
In 2013, staff costs are $60.5 million, which is $2.6 million or four per cent higher than the 2012 costs of $57.9 million. The increase is mainly attributable to annual staff salary adjustments.

Contract Services and Consultants

In 2013, contract services and consultant costs are $14.2 million, which is $1.1 million or seven per cent lower than the 2012 costs of $15.3 million. The change is primarily a result of:

Cost decreases in 2013 associated with:

- Fewer transmission studies for the bulk transmission system, customer connections or issue-specific initiatives undertaken as the AESO focused on updating regional studies to support future transmission needs for customer connections ($1.3 million).
- Non-recurring costs from 2012 in the market design and communications areas associated with changes to the work plans and the contract services ($1.0 million).
- Fewer assessments or validations of potential information technology capital projects ($0.8 million).
- Non-recurring costs in the operations area associated with services to design and implement new processes in 2012 ($0.6 million).
- Converting certain information technology contractors to permanent staff to benefit from lower cost resources and improved human resource management ($0.3 million).



Offset by increases in 2013 for:

- Additional resources for the Competitive Process associated with the development of tendering and commercial documents, retention of various external advisors, and the evaluation process for eligible bidders for the first transmission infrastructure project to which the Competitive Process will apply, as required by legislation; the Fort McMurray West 500 kV Transmission Project ($2.3 million).
- Resources to develop the initial scope of the Market Systems Replacement project, which involves the potential replacement of certain information technology systems to ensure the reliable operations of the energy market systems and allow flexibility for future enhancements ($0.9 million).

Administration

Administration costs include corporate communications, recruiting, travel and training, AESO Board fees and office costs. In 2013, administration costs are $5.0 million, which is $1.3 million or 21 per cent lower than the 2012 costs of $6.3 million. The decrease in costs is attributable to a change in the recruitment strategy, a reduction in the number of system projects requiring stakeholder consultation and lower publication and distribution costs.

Facilities

In 2013, facilities costs are $6.9 million, which is $1.2 million or 21 per cent higher than the 2012 costs of $5.7 million. The increase is associated with additional office space occupied in the latter part of 2012 and an increase in operating costs for existing facility leases.

Computer Services and Maintenance

The AESO's investment in information technology infrastructure to support the organization's business operations requires ongoing costs to purchase annual software operating licences and maintenance agreements.

In 2013, computer services and maintenance costs are $8.9 million, which is $1.3 million or 17 per cent higher than the 2012 costs of $7.6 million. The increase in costs is mainly due to the requirements for additional corporate information technology software and annual licensing requirements. These are associated with new applications and growth in the demand for existing services.

Telecommunications

The AESO incurs costs for network systems and telecommunications to support general business operations and, to a much larger extent, to support real-time operations. The strategy for developing and maintaining the telecommunication infrastructure is based on the requirement for high availability, which necessitates redundancies of services and equipment.

In 2013, telecommunication costs are $1.6 million, which is $0.1 million or seven per cent higher than the 2012 costs of $1.5 million. The increase is associated with one-time installation costs for the relocation of the AESO's backup coordination centre and for duplication of services required during the relocation process.

Interest and Amortization

($ Millions) Years ended December 31

	2013	2012	Change	% Change
Interest costs	**0.8**	0.9	(0.1)	(11)
Amortization of intangible and capital assets	**22.6**	24.4	(1.8)	(7)

Interest

Interest costs are incurred as a result of bank debt held throughout the year and the associated borrowing rate. Bank debt is issued to fund intangible and capital asset purchases and working capital deficiencies due to timing differences in the collection of revenues and payment of costs. Intangible and capital assets are financed through the AESO's credit facilities and recovered as amortization over the useful lives of the assets.

In 2013, interest costs are $0.8 million, which is $0.1 million or 11 per cent lower than the 2012 costs of $0.9 million. The average borrowing requirements in 2013 are lower than 2012 due to available working capital leading to the overall decrease in interest costs.

Amortization of Intangible and Capital Assets

Intangible and capital assets are amortized over their estimated useful lives in accordance with GAAP. Intangible assets include the AESO's computer software purchases and development costs.

In 2013, amortization of intangible and capital assets is $22.6 million, which is $1.8 million or seven per cent lower than the 2012 amortization of $24.4 million. This decrease is primarily due to intangible assets that were associated with the load settlement service being fully amortized at the end of 2012. The change in the estimated useful life of the computer hardware capital assets from three years to four years also contributed to the overall decrease in amortization in 2013.

Intangible and Capital Assets

Intangible and capital asset expenditures totaled $22.0 million in 2013 compared to $25.4 million in 2012. The AESO's development and acquisition of intangible and capital assets, most significantly the investment in information technology infrastructure and business systems, is a key component of the business operations. As with all information technology-intensive organizations, the AESO's challenge is to find the appropriate balance between implementing technology advancements, determining the level of information technology development that can be supported by business operations, and validating the overall financial requirement. To address these challenges, a vetting and prioritization process has been implemented and continues to be enhanced, such that intangible and capital asset expenditures achieve the most beneficial and cost-effective results, while continuing to meet operating requirements.

In 2013, the investment in intangible and capital assets of $22.0 million continued to support software development and upgrades to critical operational systems, in addition to base system application infrastructure. Ongoing development occurred on the information technology tools to advance intertie initiatives, while there was also investment in system enhancements for the integration of the upcoming high-voltage direct current (HVDC) transmission lines into the AESO's critical software applications. The AESO successfully accomplished the relocation of its backup coordination centre to a new facility and completed various upgrade projects to the AESO's servers, networks and data storage applications.

In 2012, intangible and capital asset expenditures of $25.4 million related primarily to software development and upgrades to critical operational systems, in addition to base system application infrastructure. The AESO focused on the development of various information technology tools for intertie initiatives, the development and deployment of tools to assist with the implementation of market protocols in accordance with the *Fair, Efficient and Openly Competitive Regulation* and the completion of various upgrade projects to the AESO's desktop computing workstations, database environments, servers and voice and data networks.

The AESO's net book value for intangible and capital assets totals $88.4 million in 2013 compared to $89.0 million in 2012. As of December 31, 2013, approximately 79 per cent (2012 – 80 per cent) of the net book value relates to computer infrastructure and business systems with the remaining value associated with the AESO's system coordination facility, furniture and office equipment.

Service Area Cost Detail

Allocation of Costs for Revenue Requirements

The AESO recovers its operating, intangible and capital asset costs through three separate revenue sources. Each revenue source is designed to recover the costs directly related to a specific service as well as a portion of the shared corporate services costs. The majority of revenues the AESO collects relate to the recovery of transmission operating costs (wires, line losses and ancillary services costs). The remaining costs (other industry, general and administrative, interest and amortization costs) are recovered through a methodology intended to relate the costs to the specific services that they support (transmission, energy market or load settlement).

The allocation of costs to one of the AESO's three services is based on the direct or indirect relationship the costs have to one of the services. If an operating cost is directly associated with a service, the cost will be assigned directly to that service (e.g., a consultant cost in the transmission group would be assigned 100 per cent to transmission and recovered through the transmission tariff). Alternatively, if an operating cost is not directly associated with any one service (typical for corporate service areas), the cost will be allocated to the services based on the value of the directly assigned costs. This methodology assumes that the service with the higher direct costs would contribute to a higher demand for general costs (such as corporate services) and therefore be assigned a higher percentage allocation.

Exceptions to this general methodology arise for information technology, office rent, other industry costs and intangible and capital asset costs. Information technology costs are allocated based on an activity-based analysis to reflect the nature of the underlying costs. Office rent costs are allocated based on the staff associated with the three services. Other industry costs are allocated based on the nature of the specific regulatory proceeding or the administration or membership fee. Intangible and capital asset purchases made to support one service are recovered from that service or alternatively from multiple services based on management judgment, taking into consideration the business or operating activities that will be supported by the systems (hardware and software).

Allocation and Cost Classifications

		AESO Services (%)		
General Classification	**Cost Categories**	Transmission	Energy Market	Load Settlement
Operating	▪ Wires	100	–	–
	▪ Operating reserves	100	–	–
	▪ Transmission line losses	100	–	–
	▪ Transmission must-run	100	–	–
	▪ Other ancillary services	100	–	–
Non-operating	▪ Other industry ▪ General and administrative ▪ Interest ▪ Amortization of intangible and capital assets	Costs allocated based on established methodology		

Allocation of Non-Operating Costs

Based on the allocation methodology, the AESO recovers the non-operating costs from the three revenue sources.

($ Millions) Years ended December 31

		Transmission	Energy Market	Load Settlement	Total
Other industry	**2013**	**17.0**	**7.9**	**0.0**	**24.9**
	2012	18.6	8.0	0.0	26.6
General and administrative	**2013**	**69.9**	**25.7**	**1.4**	**97.1**
	2012	68.8	24.1	1.4	94.3
Interest	**2013**	**(0.5)**	**1.2**	**0.0**	**0.8**
	2012	(0.5)	1.3	0.1	0.9
Amortization	**2013**	**13.4**	**9.0**	**0.2**	**22.6**
	2012	13.3	9.0	2.1	24.4
Total	**2013**	**99.8**	**43.9**	**1.7**	**145.3**
	2012	100.2	42.4	3.6	146.2

Numbers may not add due to rounding

Other Industry

The percentage allocation of other industry costs to the three services is consistent in 2013 and 2012.

General and Administrative

The percentage allocation of general and administrative costs to the three services is consistent in 2013 and 2012.

Amortization

Intangible assets that were associated with the load settlement service were fully amortized in 2012 after seven years in service. The absence of this amortization in 2013 contributed to a higher overall allocation to transmission with a smaller impact to energy market.

Interest

The allocation of interest costs is impacted by excess funds and the net book value of the intangible and capital assets relating to the three services. The amount of excess funds that are available to offset the amount of required debt financing for the net book value of the assets is primarily related to deferral account balances, as well as generating unit owner's contribution deposits, which are associated with the transmission tariff requirements.

The excess funds relating to the transmission service in 2013 exceed the net book value of its assets, resulting in imputed interest income allocated to the transmission service; this is consistent with 2012.

Total Revenues

The *Electric Utilities Act* (EUA) requires that the AESO operates so that no profit or loss results on an annual basis from its operations. To achieve this, revenue is recognized to the extent of annual operating costs, including the amortization of intangible and capital assets. When the annual sum of collections differs from the annual operating costs, the difference is recorded as revenue or deferred revenue with an offsetting deferred asset or liability. The AESO's three revenue sources are from transmission, energy market and load settlement market participants; there is no government funding provided for AESO operations.

Total Revenue

($ Millions) Years ended December 31

	2013	2012	Change	% Change
Revenue collections				
Transmission	**1,827.8**	1,530.8	297.0	19
Energy market	**39.4**	40.5	(1.1)	(3)
Load settlement	**2.8**	3.3	(0.5)	(15)
Total revenue collections	**1,870.0**	1,574.6	295.4	19
(Deferred revenue) / revenue				
Transmission	**(25.4)**	(19.7)	(5.7)	29
Energy market	**4.5**	2.0	2.5	125
Load settlement	**(1.1)**	0.2	(1.3)	(650)
Total (deferred revenue)	**(22.0)**	(17.5)	(4.5)	26
Total revenue	**1,847.9**	1,557.1	290.8	19

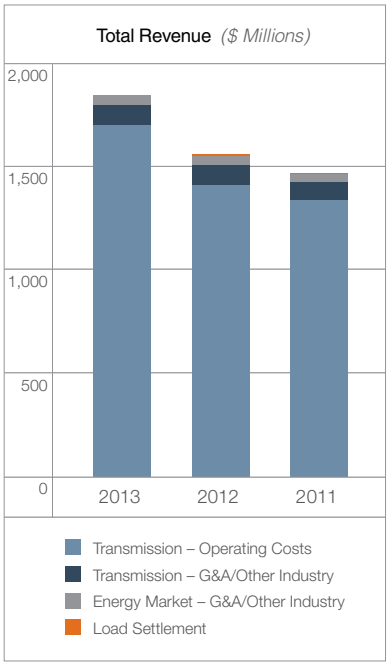
Numbers may not add due to rounding

Transmission

The AESO is responsible for paying all of the costs incurred in managing the provincial transmission system and recovering the costs through a tariff approved by the AUC. The transmission tariff is designed to allocate the costs to all users of the transmission system based on level of usage.

On a monthly basis, the AESO invoices market participants for transmission system access services based on approved tariff rates. The AESO also pays for costs associated with providing system access services. The monthly differences in the revenues collected and the costs incurred are accumulated in the AESO's transmission deferral account and can be attributed to several factors:

- Timing of revenues and costs (monthly fluctuations).
- Forecast variances (pool price volatility, meter volumes and regulatory decisions).
- Any misalignment of approved rates and the current year revenue requirement (delays in having the current year rates approved).



In circumstances where collections are in excess of the transmission costs, the excess amount is recorded as deferred revenue, recognized as a deferred liability and refunded to market participants in future periods. Where collections are less than the transmission costs, the shortfall is recorded as revenue, recognized as a deferred asset and collected from market participants in future periods.

TRANSMISSION DEFERRAL SUMMARY

($ Millions) Years ended December 31

	2013	2012
Collections	**1,827.8**	1,530.8
Costs	**1,802.4**	1,511.1
Transmission deferred revenue	**(25.4)**	(19.7)
Deferral account payable, beginning of year	**(30.3)**	(10.6)
Disbursement (collection) of the deferral account reconciliation applications:		
2012	**7.5**	–
2010-2011	**(1.5)**	–
Deferral account payable, end of year	**(49.7)**	(30.3)

As part of the transmission tariff, Deferral Account Adjustment Rider C is intended to bring the transmission deferral account balance for rate categories other than transmission line losses to zero during the following calendar quarter. It is a dollar-per-MWh collection or payment by rate class and rate component. Losses Calibration Factor Rider E is intended to bring the transmission line losses deferral account balance to zero during the remainder of the calendar year. Rate Rider E is a percentage adjustment to all location-specific loss factors.

For rate categories other than transmission line losses, the AESO files a retrospective deferral account reconciliation application with the AUC for approval of the final settlement amounts. The final reconciliation process associates all revenue and cost adjustments by rate category to the appropriate production month and allocates the corresponding charges and refunds to market participants. For transmission line losses, Rate Rider E is a prospective adjustment for the reconciliation of deferral account balances.

The transmission deferral account balance changed from a payable to market participants of $30.3 million at December 31, 2012 to a payable of $49.7 million at December 31, 2013. The change of $19.4 million during 2013 is the result of transmission collections exceeding costs. The collections are based on an AUC-approved tariff approach under which the AESO collects a portion of wires costs that TFOs have applied for but not yet received approval for. Several of the TFOs in Alberta did not receive final approval of 2013 applied-for costs by the end of the year. Once those applications receive final approval, the excess collections will be used to pay the approved increase for those TFOs related to 2013 costs.

Energy Market

The AESO recovers the costs of operating the real-time energy market through an energy market trading charge on all MWh traded. The AESO's component of the energy market trading charge recovers regulatory process costs, general and administrative costs, interest, and amortization of intangible and capital assets. The energy market trading charge also recovers the AUC administrative fee and the operating costs for the Market Surveillance Administrator (MSA), which are organizations that are independent of the AESO's operations.

For 2013, the AESO's component of the energy market trading charge is 25.9 cents per MWh compared to 27.7 cents per MWh in 2012.

Energy market collections are dependent on the energy market trading charge and the volume of energy traded through the power pool.

In circumstances where collections are in excess of energy market costs, the excess amount is recorded as deferred revenue, recognized as a deferred liability and incorporated into a reduction in the following year's energy market trading charge. Where collections are less than the energy market costs, the shortfall is recorded as revenue, recognized as a deferred asset and collected in the following year.

The energy market deferral account is the accumulated difference between revenues collected and costs paid that is receivable from, or payable to, energy market participants.

ENERGY MARKET DEFERRAL SUMMARY

($ Millions) Years ended December 31

	2013	2012
Collections	**39.4**	40.5
Costs	**43.9**	42.4
Energy market revenue	**4.5**	1.9
Deferral account receivable, beginning of year	**3.3**	1.4
Deferral account receivable, end of year	**7.8**	3.3

The energy market deferral account at December 31, 2013 is a $7.8 million receivable compared to a $3.3 million receivable at the end of 2012. The change of $4.5 million is the result of energy market costs exceeding collections due to a shortfall in collections from 2013 and prior years. This is attributable to actual energy market costs being higher than the amounts incorporated into the annual energy market charge calculation and lower revenue collections.

Load Settlement

Under the ISO Rules, costs that are incurred to provide services related to administering provincial load settlement are charged to the owners of electric distribution systems and wires service providers conducting load settlement. The costs associated with load settlement include general and administrative costs, interest, and amortization of intangible and capital assets.

In circumstances where collections are in excess of the load settlement costs, the excess amount is recorded as deferred revenue, recognized as a deferred liability and refunded to the owners of electric distribution systems and wires service providers in the following year. Where collections are less than the load settlement costs, the shortfall is recorded as revenue, recognized as a deferred asset and collected from the owners of electric distribution systems and wires service providers in the following year.

LOAD SETTLEMENT DEFERRAL SUMMARY

($ Millions) Years ended December 31

	2013	2012
Collections	**2.8**	3.3
Costs	**1.7**	3.5
Load settlement (deferred revenue) revenue	**(1.1)**	0.2
Deferral account payable, beginning of year	**(0.6)**	(0.8)
Deferral account payable, end of year	**(1.8)**	(0.6)

Numbers may not add due to rounding

The load settlement deferral account at December 31, 2013 is a $1.8 million payable compared to a $0.6 million payable at the end of 2012. The change of $1.2 million is the result of load settlement collections exceeding costs. The collections are based on a forecast of 2013 costs which exceeded actual costs.

Market Surveillance Administrator Charge

A portion of the energy market charge collected by the AESO is remitted to the MSA for its revenue requirement in accordance with the EUA. The AESO facilitates the cash collection process for the funding of the MSA through a per-MWh addition to the AESO's energy market trading charge. In 2013, the MSA's portion of the total energy market trading charge is 2.2 cents per MWh compared to 2.7 cents per MWh in 2012.

The MSA's revenue and costs are separate and independent of the AESO's financial records. The AESO records the difference between the payments made to the MSA and the collection on behalf of the MSA in a separate deferral account. At the end of 2013, the MSA payments exceeded the MSA collections, resulting in a deferral account receivable of $0.4 million.

Financial Position and Liquidity

($ Millions) Years ended December 31

	2013	2012
Cash, beginning of year	**85.8**	18.7
Operating activities	**(45.7)**	118.6
Investing activities	**(22.0)**	(25.4)
Financing activities	**(0.8)**	(26.1)
Cash, end of year	**17.3**	85.8

The cash balance as at December 31, 2013 is $17.3 million compared to $85.8 million at December 31, 2012. The decrease is primarily the result of the following:

- **Operating activities** used cash of $45.7 million in 2013 (2012 – provided cash of $118.6 million).

  The decrease is mainly attributable to cash used for non-cash working capital of $68.3 million (2012 – cash provided of $94.1 million).

  - Accounts receivable at December 31, 2013 is $151.1 million compared to $271.7 million at December 31, 2012, a decrease of $120.6 million. Based on the number of business days in December 2012, the cash settlement for the month of November occurred on January 2, 2013. As a result, the accounts receivable balance at the end of 2012 includes two months of accruals compared to one month in 2013 for the transmission settlement and the energy market trading charge.
  - Accounts payable at December 31, 2013 is $217.3 million compared to $407.5 million at December 31, 2012, a decrease of $190.2 million. Similar to accounts receivable, the accounts payable balance at the end of 2012 includes two months of transmission settlement accruals, for the months of November and December. In addition, the AESO received early payment of $71.3 million from certain market participants for the January 2, 2013 cash settlement.
  - Market participants' security deposits balance at December 31, 2013 is $4.7 million compared to $2.7 million at December 31, 2012, an increase of $2.0 million. The balance of security deposits held by the AESO is dependent on how market participants meet the AESO's security requirements.

  The recovery of intangible and capital asset costs through amortization of these assets provided cash of $22.6 million (2012 – provided cash of $24.4 million).

- **Investing activities** used cash of $22.0 million in 2013 (2012 – used cash of $25.4 million) for the purchase of intangible and capital assets.
- **Financing activities** used cash of $0.8 million in 2013 (2012 – used cash of $26.1 million). The primary financing activities are an increase in the deferral accounts payable balances of $16.0 million offset by a decrease in bank debt of $13.2 million and an increase in long-term prepaids of $3.2 million.

As at December 31, 2013, the AESO had the following credit facilities available to fund general operating and intangible and capital asset purchasing activities:

($ Millions) Years ended December 31, 2013

	Total	Available	**Used**
Demand revolving facility	160.0	160.0	**–**
Demand treasury risk management facility	9.0	9.0	**–**

The demand facility includes a $10.0 million letter of credit at December 31, 2013 and 2012, which is issued as financial security for the AESO's procurement of operating reserves.

In 2013, the AESO obtained a credit rating of AA-/Stable from Standard and Poor's (S&P's) Ratings Services. S&P is a leading global provider of independent credit risk research and benchmarks.

Future Outlook

Cost recovery for the AESO's operations is approved on an annual basis by the AESO Board, and for transmission-related wires costs through TFO tariffs approved by the AUC under Section 37 of the EUA.

For transmission-related activities in 2014, the AESO has established a revenue requirement of $1,852.8 million through the 2014 Budget Review Process for costs related to wires, ancillary services, transmission line losses, other industry, general and administrative, amortization and interest. The total transmission revenue requirement in 2014 is $50.4 million or three per cent higher than the 2013 actual costs of $1,802.4 million. This forecast increase results from higher wires costs offset by lower ancillary services costs.

For energy market-related activities, the annual costs are forecast to increase to $44.4 million in 2014 from the 2013 actual costs of $43.9 million, a $0.5 million or one per cent increase. This forecast increase is associated with the project for an information technology system replacement and higher amortization offset by a decrease to the general and administration costs. With the combination of this forecast cost increase and the 2013 deferral account balance, the AESO's portion of the 2014 energy market trading charge will increase to 32.3 cents per MWh in 2014 compared to 25.9 cents per MWh in 2013, an increase of 6.4 cents per MWh. In 2014, the total energy market trading charge, which also includes components for funding the AUC and MSA, will be 41.2 cents per MWh compared to 33.9 cents per MWh in 2013.

Throughout 2013, the AESO continued to focus on enhancing the transmission system in Alberta through the advancement of electric system development plans as referenced in the *2012 Long-term Transmission Plan* (Plan). The 2012 Plan describes the transmission facilities required to connect generation facilities to consumers of electricity, ensure continued reliability, facilitate the fair, efficient and openly competitive operation of the market, and support long-term economic development in Alberta. That advancement includes the construction or commissioning of several major projects across Alberta, including the Heartland and Hanna transmission system reinforcements, and further progress continues in 2014. The latest iteration of the Plan, the *2013 Long-term Transmission Plan* was filed with the Alberta Minister of Energy and the AUC in January 2014 and incorporates changes to regional and system transmission projects.

Construction of the high-voltage direct current (HVDC) transmission project between Edmonton and Calgary, including both the Eastern Alberta Transmission Line and the Western Alberta Transmission Line, is underway. These system enhancements will improve overall transmission system reliability, increase transmission system efficiency, reduce congestion and accommodate long-term growth. The AESO's focus will be on the delivery of these major transmission system projects, as well as other key regional transmission system projects, to maintain safe and reliable operations of the transmission system.

Since 2011, the AESO has focused on the development of a competitive process as a method to contract for the financing, construction and operation of certain transmission facilities. The first transmission system project to which the Competitive Process will apply is a transmission facility from the Edmonton region to the Fort McMurray region; the Fort McMurray West 500 kV Transmission Project. Since the AESO began developing the process three years ago, progress has been made to the point that qualifying bidders were announced in January 2014 with the expectation that a selected owner and operator will be chosen by early 2015. The planned in-service date for this new transmission facility is 2019. The second Competitive Process for the Fort McMurray East 500 kV Transmission Project is expected to begin in 2015.

Decisions to enhance the Alberta transmission system to ensure the ongoing reliability of the system and support economic growth have an impact on costs for ratepayers. The AESO continues to support the Government of Alberta's transmission cost management initiative that is focused on improved cost oversight for large transmission projects; facilitated through the government's Transmission Facilities Cost Monitoring Committee (TFCMC).

On January 1, 2014, the AESO assumed all responsibilities related to the functions of a Reliability Coordinator for the province of Alberta; previously, limited Reliability Coordinator services were provided by the WECC. With this change, the AESO maintains the authority to ensure the efficient, safe and reliable operation of the AIES, in coordination with its neighbouring Reliability Coordinators. This function requires additional monitoring of the transmission system in Alberta, coordinating with market participants to ensure secure operation of the transmission system and, in some instances, issuing directives to market participants. The AESO continues to be an active member of the WECC and supports the overall reliability of the Western Interconnection through that active participation. The timing of this decision to assume all functions of a Reliability Coordinator in Alberta aligned with proposed timelines for changes to the organizational structure of WECC. There are also operational efficiencies and cost savings associated with the change.

The AIES supply margins have increased as market forces continue to govern generation development in accordance with expected load growth as evidenced by the volume of generation commissioned or queuing to arrange for connection to the system. The return to service of the Sundance 1 and 2 units in 2013 expanded the supply margins for the province. The AESO strives to ensure the Alberta market design is stable and predictable while advancing new market enhancements. In 2014, integration of wind and energy storage technologies; advancement of demand-side participation in the energy market; and the restoration of the interties will be the focus of review.

The AESO continues to invest in operating and infrastructure technologies to ensure the availability and reliability of the AESO's information technology systems. Reliable operation of the wholesale electricity market and timely evolution of the energy market both require reliable and flexible AESO market systems. Starting in 2013, and continuing into 2014, the AESO has been in consultation with market participants regarding a project to replace certain information technology systems (the Market Systems Replacement project). The scope, timing and estimated costs will continue to be reviewed in 2014 with the expectation that a replacement plan will be approved by the AESO Board by the end of 2014. This project will involve numerous AESO systems and may take several years for delivery. While it is still in the preliminary stages of the project assessment, the AESO estimates the costs for the market systems replacement could range from $20 to $40 million. The operations of the transmission system are managed with the support of the Energy Management System (EMS). The current system has been in operation for five years with ongoing enhancements to incorporate transmission system changes, such as wind integration and the implementation of HVDC for the planned in-service date in late 2014. The EMS capabilities are currently being assessed for their ability to meet future operational and security requirements, and technology and functionality advancements.

International Financial Reporting Standards

Canadian GAAP for publicly accountable entities has been replaced with International Financial Reporting Standards (IFRS) effective January 1, 2011. In March 2013, the Canadian Accounting Standards Board (AcSB) extended the existing deferral of the mandatory IFRS changeover date for entities with qualifying rate-regulated activities to January 1, 2015. This deferral is limited to entities that have activities subject to cost-based regulation and that recognize regulatory assets and regulatory liabilities.

In January 2014, the International Accounting Standards Board (IASB) issued IFRS 14, *Regulatory Deferral Accounts*, to ease the adoption of IFRS for rate-regulated entities. The AESO is currently considering the impact of adopting IFRS.

Risk Management

The AESO is exposed to various risks in the normal course of business. Many of these are similar to risks faced by other companies including independent electric system operators and wholesale market operators.

The risk management processes that the AESO has developed are designed to identify the risks confronting the AESO, to assess the impact and likelihood of those risks occurring and to determine mitigation strategies to be taken. AESO Management is responsible for the ongoing operations of the organization including its risk management programs.

Many of the risks identified are not directly within the control of the AESO. However, it has adopted several strategies to reduce and mitigate the effects of those risks that are within its control. Risk management is a key element of organizational governance and is characterized by a philosophy of continuous improvement. The key features of the AESO's governance and internal control environment, which facilitate the AESO's risk management processes, are as follows:

- The AESO's business is governed by Members of the AESO (Members). Members are individuals who are independent from any person or entity having a material interest in the Alberta electricity industry and are appointed by the Alberta Minister of Energy. The Members function as a board of directors (AESO Board) and act in the public interest. The *Alberta Public Agencies Governance Act*[1] clarifies the role of the AESO as a public agency subject to government policies applicable to it, and other requirements and processes.
- AESO policies are developed and approved by the AESO Board or the President and Chief Executive Officer as delegated by the AESO Board. AESO policies are communicated to employees and, as appropriate, to contractors. AESO policies are reviewed on a regular basis and are accessible by employees at all times.
- The AESO is committed to maintaining a high level of ethics and integrity. The AESO Board and AESO Management foster these values throughout the organization and maintain an effective whistleblower policy. The AESO maintains codes of conduct applicable to its Members, officers, employees and contractors, which serve as frameworks for these individuals when they are faced with difficult situations where laws and regulations may not provide sufficient direction and assistance. The AESO's *Code of Conduct – Officers, Employees and Contractors* is a policy that all employees must agree to when hired, review at least annually to confirm compliance/non-compliance, and affirm their agreement to abide by the policy. Contractors of the AESO have similar requirements, as appropriate, given the nature of their work for the AESO. Each Member of the AESO Board is bound by the AESO Members' Code of Conduct and similarly provides an annual confirmation of their compliance/non-compliance.
- AESO Management is responsible for establishing and maintaining adequate internal controls over financial reporting. These controls are designed to provide reasonable assurance regarding the reliability of financial reporting and the

[1] Assented to on June 4, 2009; proclaimed in force June 12, 2013.

preparation of financial statements for external purposes in accordance with GAAP. Internal controls over financial reporting, no matter how well designed, have inherent limitations and provide only reasonable assurance with respect to financial statement preparation. Accordingly, they may not prevent or detect all misstatements.

The AESO conducts an annual assessment of the design and effectiveness of its internal controls over financial reporting based on an accepted industry framework. The framework adopted by the AESO for this assessment is the *Internal Control – Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on this assessment, AESO Management concludes that, as of December 31, 2013, the AESO maintains effective internal controls over financial reporting.

- The Audit Committee reviews and monitors the system of internal controls, the systems for managing risk, the external audit process and the AESO's process for monitoring compliance with laws and regulations, with a view to adopt best practices, as appropriate.
- The AESO's Controls and Audit Services function provides the AESO with an objective and independent assessment of internal controls, coordinating and reporting on risk management activities and identifying opportunities for operational improvements. Controls and Audit Services reports directly to the Audit Committee and if required, discusses matters with the Audit Committee independent of AESO Management.
- Risk assessment is a continuous process. The AESO is committed to proactively identifying and addressing potential risks as well as implementing appropriate mitigation strategies.
- AESO Management reports significant risks to the AESO Board and the Audit Committee on a regular basis and provides updates on the implementation of mitigation strategies that are undertaken.
- The AESO, its Members, officers, employees and contractors are extended a degree of statutory liability protection consistent with the AESO's public interest mandate.
- The AESO carries insurance coverage that is reviewed and approved as appropriate by the AESO Board, through the Audit Committee. The insurance coverage may not be adequate to cover all possible risks and the proceeds of any insurance claim may not be adequate to cover all potential losses.

Forward-looking Statements

This MD&A contains forward-looking statements that are subject to certain assumptions and risks that create uncertainties. These assumptions and risks could cause actual results to differ materially from results anticipated by the forward-looking statements.

Additional Information

Additional information relating to the AESO can be found on the corporate website at www.aeso.ca

Financial Statements and Notes

Management's Responsibility for Financial Reporting

The financial statements of the Alberta Electric System Operator (AESO) are the responsibility of management and have been approved by the AESO Board. These financial statements have been prepared by management in accordance with Canadian generally accepted accounting principles, and include the use of estimates and assumptions that have been made using management's best judgment. Financial information contained elsewhere in this annual report is consistent with that in the financial statements.

To discharge its responsibility for financial reporting, management maintains a system of internal controls designed to provide reasonable assurance that the AESO's assets are safeguarded, that transactions are properly authorized and that financial information is relevant, accurate and available on a timely basis. Internal controls are reinforced through the AESO's Codes of Conduct, which set forth the AESO's commitment to conduct business with integrity and to comply with the law.

The AESO Board, through the Audit Committee, is responsible for ensuring management fulfils its responsibility for financial reporting and internal controls. The Audit Committee meets regularly with management, internal auditors and external auditors to discuss any significant accounting, internal control and auditing matters to determine that management is carrying out its responsibilities and to review and recommend the approval of the financial statements.

The financial statements have been examined by Ernst & Young LLP, the AESO's external independent auditors who are engaged by the AESO Board. The responsibility of these external auditors is to examine the financial statements and express their opinion on the fairness of the financial statements in accordance with Canadian generally accepted accounting principles. The external auditors' report outlines the scope of their examination and states their opinion. Internal and external auditors have access to the Audit Committee, with and without the presence of management.

David Erickson, CA
President and Chief Executive Officer

Todd D. Fior, CA
Vice-President, Finance

Independent Auditors' Report

To the Members of the Independent System Operator, operating as Alberta Electric System Operator Board

We have audited the accompanying financial statements of the Alberta Electric System Operator (AESO) which comprise the balance sheets as at December 31, 2013 and 2012 and the statements of operations and comprehensive income and cash flows for the years then ended, and a summary of significant accounting policies and other explanatory information.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with Canadian generally accepted accounting principles, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with Canadian generally accepted auditing standards. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditors consider internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained in our audits is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements present fairly, in all material respects, the financial position of the Alberta Electric System Operator as at December 31, 2013 and 2012 and the results of its operations and its cash flows for the years then ended in accordance with Canadian generally accepted accounting principles.

Ernst & Young LLP

Chartered Accountants
Calgary, Canada

February 13, 2014

Balance Sheets

As at December 31 (in thousands of Canadian dollars)

		2013		2012
Assets				
Current assets				
Cash	**$**	**17,290**	$	85,760
Accounts receivable *(note 4)*		**151,089**		271,719
Prepaids and deposits		**3,579**		2,915
MSA deferral account receivable		**428**		312
		172,386		360,706
Long-term prepaids		**5,129**		1,894
Intangible assets, net *(note 5)*		**55,668**		57,080
Capital assets, net *(note 6)*		**32,706**		31,884
	$	**265,889**	$	451,564
Liabilities				
Current liabilities				
Accounts payable and accrued liabilities *(note 7)*	**$**	**217,290**	$	407,481
Security deposits *(note 14)*		**4,653**		2,714
Bank debt *(note 9)*		**–**		13,200
AESO deferral accounts payable *(notes 3 and 8)*		**43,655**		27,556
		265,598		450,951
Deferred rent		**291**		613
Equity *(note 1)*		**–**		–
	$	**265,889**	$	451,564

Asset retirement obligation *(note 11)*

Contingencies and commitments *(note 12)*

See accompanying notes.

Statements of Operations and Comprehensive Income

For the year ended December 31 (in thousands of Canadian dollars)

	2013	2012
Revenue		
Transmission tariff	**$ 1,801,037**	$ 1,509,872
Energy market charge	**43,571**	42,132
Load settlement charge	**1,640**	3,515
Interest and other	**1,689**	1,580
	1,847,937	1,557,099
Operating costs and expenses		
Wires costs	**1,126,400**	889,790
Ancillary services costs	**398,225**	377,165
Transmission line losses	**177,970**	143,978
General and administrative	**97,069**	94,264
Other industry costs	**24,907**	26,602
Amortization *(notes 5 and 6)*	**22,608**	24,439
Interest expense *(note 9)*	**758**	861
	1,847,937	1,557,099
Net income and comprehensive income	**$ –**	$ –

See accompanying notes.

Statements of Cash Flows

For the year ended December 31 (in thousands of Canadian dollars)

		2013		2012
Operating activities				
Net income	**$**	**–**	$	–
Amortization		**22,608**		24,439
Net change in non-cash working capital items related to operating activities*		**(68,286)**		94,136
Net cash (used in) provided by operating activities		**(45,678)**		118,575
Investing activities				
Intangible asset additions		**(14,454)**		(19,149)
Capital asset additions		**(7,564)**		(6,252)
Net cash used in investing activities		**(22,018)**		(25,401)
Financing activities				
Increase in AESO deferral accounts		**16,099**		17,533
Decrease in bank debt		**(13,200)**		(41,600)
Increase in long-term prepaids		**(3,235)**		(1,480)
Decrease in deferred rent		**(322)**		(297)
Increase in MSA deferral account		**(116)**		(226)
Net cash used in financing activities		**(774)**		(26,070)
(Decrease) increase in cash		**(68,470)**		67,104
Cash, beginning of year		**85,760**		18,656
Cash, end of year	**$**	**17,290**	$	85,760
Cash interest paid	**$**	**877**	$	861

** Consists of changes in accounts receivable, short-term prepaids and deposits, accounts payable and accrued liabilities, and security deposits.*

See accompanying notes.

Notes to the Financial Statements

December 31, 2013 and 2012

(All amounts are in thousands of Canadian dollars unless otherwise indicated)

1. Nature of Operations

The Independent System Operator (ISO), operating as the Alberta Electric System Operator (AESO), is a statutory corporation established on June 1, 2003 under the *Electric Utilities Act* (EUA) of the Province of Alberta.

The AESO is responsible for operating Alberta's fair, efficient and openly competitive energy-only market for electricity; determining the order of dispatch of electric energy and ancillary services; providing system access service on the electric transmission grid; directing the safe, reliable and economic operation of the interconnected electric system; planning the capability of the transmission system to meet future needs; and administering load settlement.

The AESO's business is governed by Members of the AESO (Members). Members are individuals who are independent from any person or entity having a material interest in the Alberta electricity industry and are appointed by the Alberta Minister of Energy. The Members function as a board of directors (AESO Board) and act in the public interest. As of December 31, 2013, the AESO Board had four committees: Audit Committee; Human Resources and Compensation Committee; Corporate Governance and Nominations Committee; and Power System Committee. Subsequent to December 31, 2013, the AESO Board has three committees: Audit Committee; Human Resources and Governance Committee; and Power System Committee.

The EUA requires that charges to industry, including the transmission tariff, energy market charge and load settlement charge, be set to recover the costs required to operate the AESO, and that the AESO be operated so no profit or loss results on an annual basis from its operations. The AESO has no equity.

The AESO's transmission-related financial activities are regulated by the Alberta Utilities Commission (AUC or Regulator) and approved based on the AESO's tariff applications.

2. Summary of Significant Accounting Policies

These financial statements have been prepared by management in accordance with Canadian generally accepted accounting principles (GAAP) as set out in Part V of the Canadian Professional Accountants (CPA) Handbook.

USE OF ESTIMATES – Preparation of these financial statements requires estimates and assumptions that affect the amounts reported and disclosed in the financial statements and related notes. These estimates and assumptions include information, regulatory decisions and other matters that are periodically influenced by third parties that may impact the timing of revenue and/or expense recognition. Actual results may differ from those estimates and assumptions due to factors such as the useful lives and impairment of intangible assets, capital assets, accrued liabilities, settlement of an asset retirement obligation and regulatory decisions. Any changes from current estimates or assumptions are accounted for in the period that they are determined.

CHANGE IN ACCOUNTING ESTIMATE – During the year ended December 31, 2013, the estimate for the useful life of the computer hardware capital assets was increased. The change in estimate was due to an assessment of the period in which the assets would be available and used in the AESO's operations from a three-year to a four-year amortization period. The impact of this change on the 2013 amortization was a decrease of $1.9 million.

REVENUE RECOGNITION – The AESO's revenue is primarily derived through three separate charges: (i) the transmission tariff; (ii) the energy market charge; and (iii) the load settlement charge. Each of these charges is set to recover the costs

directly attributable to a specific service as well as a portion of the shared corporate services costs. Consistent with the requirements of the EUA, which requires the AESO to operate with no annual profit or loss, revenue is recognized equivalent to the aggregate of annual operating costs on a service area basis.

The EUA requires the AESO to provide funding for the Market Surveillance Administrator (MSA), a separate statutory corporation, with the amount to be recovered through the energy market charge. The energy market charge included in the AESO's statement of operations and comprehensive income does not include amounts recovered related to the MSA's funding requirements and the AESO's costs do not include amounts related to the operations of the MSA. The difference in the revenue collections and the payments associated with the MSA are recorded in the MSA deferral account.

DEFERRALS – The AESO utilizes deferral accounts to facilitate a matching of revenues and costs. On an individual basis for the transmission, energy market and load settlement operations, in circumstances where annual collections are in excess of the costs, the excess amount is recorded as deferred revenue, recognized as a deferred liability and refunded in the subsequent years. In circumstances where annual collections are less than the costs, the shortfall is recorded as revenue, recognized as a deferred asset and collected in the subsequent year.

A portion of the energy market charge collected by the AESO is remitted to the MSA according to its revenue requirement as provided in the EUA. When the annual revenue collected on behalf of the MSA through the energy market charge collection process is different than the funding payments made to the MSA, the difference is recognized in the deferral account and is incorporated into the estimated per-megawatt-hour energy market charge for the following year.

INTANGIBLE ASSETS – Intangible assets include computer software and are stated at the cost less accumulated amortization. These assets are amortized on a straight-line basis over their estimated useful lives as follows:

Software development	5 or 7 years; or Over the term of the licence agreement for customization of Software as a Service
System coordination computer systems	7 years ending in 2016

Interest costs attributable to and incurred during the development phase of large projects are capitalized. Capitalization ceases when the projects are substantially complete and ready for productive use. Payroll and payroll-related costs associated with staff directly involved in software development are capitalized as intangible assets.

CAPITAL ASSETS – Capital assets are stated at cost less accumulated amortization. These assets are amortized on a straight-line basis over their estimated useful lives as follows:

Furniture and office equipment	3 years
Computer hardware	4 years
System coordination computer systems	7 years ending in 2016
Leasehold improvements	Over the applicable lease terms ending in 2014 and 2024
System coordination facility	Over the land lease term ending in 2025
Backup coordination centre	Over the lease term ending in 2033

Interest costs attributable to and incurred during the development phase of large capital projects are capitalized. Capitalization ceases when the projects are substantially complete and ready for productive use. Payroll and payroll-related costs associated with staff directly involved in hardware set-up and installation are capitalized.

DEFERRED RENT – The AESO recognizes the benefit of rent-free periods by aggregating the total lease payments over the lease term and allocating the total lease payments on a straight-line basis over the term of the lease.

LONG-TERM PREPAIDS – The AESO recognizes advance cash payments associated with operating leases and information technology licenses with terms in excess of one year from the date of the balance sheet as long-term assets.

EMPLOYEE FUTURE BENEFITS – The AESO's employee future benefit program consists of a defined contribution plan. The AESO's contributions to the defined contribution plan are expensed as incurred.

FINANCIAL INSTRUMENTS – The AESO has evaluated the five classifications of financial instruments, namely; (i) held for trading; (ii) available for sale; (iii) held to maturity; (iv) loans and receivables; and (v) other financial liabilities, and designated its financial instruments as appropriate.

COMPREHENSIVE INCOME – As the AESO does not have any other comprehensive income, net income equals comprehensive income.

RECENT ACCOUNTING PRONOUNCEMENTS NOT YET ADOPTED –

International Financial Reporting Standards

In February 2008, the Canadian Accounting Standards Board (AcSB) confirmed that effective January 1, 2011, Canadian GAAP for publicly accountable entities will be replaced in full with International Financial Reporting Standards (IFRS) as promulgated by the AcSB. In March 2013, the AcSB extended the existing deferral of the mandatory IFRS changeover date for entities with qualifying rate-regulated activities to January 1, 2015. This deferral applies only to entities subject to cost-based regulation.

As the AESO is not a publicly accountable entity, there is no requirement to transition to IFRS. In January 2014, the International Accounting Standards Board (IASB) issued IFRS 14, *Regulatory Deferral Accounts,* to ease the adoption of IFRS for rate-regulated entities. The AESO is currently considering the impact of adopting IFRS.

COMPARATIVE FIGURES – Certain comparative figures have been reclassified to conform to the current period's presentation.

3. Financial Statement Effects of Rate Regulation

Regulatory assets represent certain costs incurred in the current period or in prior periods that are expected to be recovered from market participants in future periods through the rate-setting process. Regulatory liabilities represent future reductions of revenues associated with amounts that are expected to be refunded to market participants as a result of the rate-setting process.

As of December 31,

		2013		2012
Regulatory liabilities				
Transmission deferral	**$**	**49,684**	$	30,236

At December 31, 2013, the transmission deferral liability was $49.7 million based on an accumulation of variances between transmission revenue collections and costs incurred in 2013 and prior years. The AESO applies to the Regulator for the approval and settlement of deferral balances. The transmission deferral balance is a regulatory asset or liability, based upon the expectation that amounts accumulated from one year to the next will be approved for collection from, or refund to, market participants in a subsequent year. In the absence of rate regulation, GAAP would require that such balances be included in operating results in the year in which they are incurred. The regulatory liability is included in the AESO's net deferral accounts payable on the balance sheet at December 31, 2013 (note 8).

All transmission-related financial activities of the AESO are subject to the Regulator's approval, thus the recovery of transmission costs through the transmission tariff is subject to regulatory approval. With the formation of the AESO through the EUA, the AESO must be managed so no profit or loss results on an annual basis from its operations. Management believes that the ultimate recovery is assured due to the not-for-profit status of the AESO.

4. Accounts Receivable

As of December 31,

	2013	2012
Transmission settlement	**$ 143,147**	$ 261,177
Energy market settlement	**4,076**	7,777
Trade	**3,866**	2,765
	$ 151,089	$ 271,719

5. Intangible Assets

As of December 31,

	Cost	Accumulated Amortization	**2013 Net Book Value**
Software development	$ 75,860	$ 34,483	**$ 41,377**
System coordination computer systems	19,736	11,007	**8,729**
Work in progress	5,562	–	**5,562**
	$ 101,158	$ 45,490	**$ 55,668**

As of December 31,

	Cost	Accumulated Amortization	2012 Net Book Value
Software development	$ 79,232	$ 41,609	$ 37,623
System coordination computer systems	19,018	8,034	10,984
Work in progress	8,473	–	8,473
	$ 106,723	$ 49,643	$ 57,080

Work in progress relates to intangible assets associated with various software development projects that were not commissioned or operational by the end of the year.

For the 12 months ended December 31, 2013, $4.5 million of payroll and payroll-related costs associated with staff directly involved in software development have been capitalized (2012 – $4.1 million) and $0.1 million in interest costs were capitalized in 2013 (2012 – nil).

6. Capital Assets

As of December 31,

	Cost	Accumulated Amortization	**2013 Net Book Value**
System coordination facility	$ 22,304	$ 8,615	**$ 13,689**
Computer hardware	23,370	11,627	**11,743**
Leasehold improvements	6,623	4,174	**2,449**
System coordination computer systems	4,070	1,868	**2,202**
Backup coordination centre	2,017	28	**1,989**
Furniture and office equipment	698	247	**451**
Work in progress	183	–	**183**
	$ 59,265	$ 26,559	**$ 32,706**

As of December 31,

	Cost	Accumulated Amortization	2012 Net Book Value
System coordination facility	$ 22,297	$ 7,433	$ 14,864
Computer hardware	20,207	8,454	11,753
Leasehold improvements	5,557	3,428	2,129
System coordination computer systems	2,997	1,252	1,745
Furniture and office equipment	258	130	128
Work in progress	1,265	–	1,265
	$ 52,581	$ 20,697	$ 31,884

Work in progress relates to capital assets associated with hardware that were not commissioned or operational by the end of the year.

For the 12 months ended December 31, 2013, $0.5 million of payroll and payroll-related costs associated with staff directly involved in hardware set-up and installation have been capitalized (2012 – $0.2 million) and less than $0.1 million in interest costs were capitalized in 2013 (2012 – nil).

7. Accounts Payable and Accrued Liabilities

As of December 31,

	2013	2012
Transmission settlement	**$ 135,252**	$ 272,542
Energy market settlement	**–**	71,259
Trade	**71,836**	54,212
Accrued liabilities	**10,202**	9,468
	$ 217,290	$ 407,481

8. AESO Deferral Accounts (Payable) Receivable

As of December 31,

	Transmission	Energy Market	Load Settlement	Total
Opening balance, January 1, 2012	$ (10,548)	$ 1,368	$ (843)	$ (10,023)
2012 Operations	(19,688)	1,953	202	(17,533)
Closing balance, December 31, 2012	(30,236)	3,321	(641)	(27,556)
2013 Operations	(25,384)	4,477	(1,128)	(22,035)
Collection of 2010-2011 Deferral Account Reconciliation	(1,591)	–	–	(1,591)
Distribution of 2012 Deferral Account Reconciliation	7,527	–	–	7,527
Closing balance, December 31, 2013	**$ (49,684)**	**$ 7,798**	**$ (1,769)**	**$ (43,655)**

9. Credit Facilities

The AESO has credit facilities of $160.0 million in unsecured demand revolving loan facilities. The facilities provide that the borrowings may be made by way of fixed rate offer loans, prime loans or bankers' acceptances, which bear interest at the rates specified in fixed rate offer loans, at the bank's prime rates, or at bankers' acceptance rates plus a stamping fee. There is an option to request letters of credit under the credit facilities.

In addition to the credit facilities, a demand treasury risk management facility of $9.0 million in deemed risk content is available to provide for interest swaps for up to $35.0 million in notional debt. This facility was not used in 2013 and 2012.

At December 31, 2013, there were no drawings on the facilities (2012 – $13.2 million) and a $10.0 million letter of credit was issued as security for operating reserve procurement.

The amount of interest paid during 2013 was $0.9 million (2012 – $0.9 million) at an average interest rate of 2.2 per cent (2012 – 2.2 per cent).

10. Capital Disclosure

In managing capital, the AESO reviews its cash flows from operations, including the transmission tariff, energy market charge and load settlement charge, to determine whether there are sufficient funds to cover its operating costs and pay for intangible and capital asset purchases. To the extent that the cash flows are not sufficient to cover these expenditures, the AESO utilizes debt financing. The AESO has no equity or externally imposed capitalization requirements except as described in note 1.

As of December 31,

	2013	2012
Bank debt	**$ –**	$ 13,200

11. Asset Retirement Obligation

The system coordination facility is located on leased land. Under the terms of the lease agreement, the AESO is obligated, at the request of the landlord, to complete site restoration upon termination of the lease. The landlord's intentions are not determinable at this time. As the fair value of the obligation cannot be reasonably estimated due to the broad range of settlement dates and cash flows, any potential liability has not been recognized. Amounts will be accounted for in the period they are determined.

12. Contingencies and Commitments

(i) The AESO leases office space, data processing equipment and land under various operating leases. The minimum lease payments associated with these leases are as follows:

Year	Amount *($ million)*
2014	5.1
2015	6.0
2016	6.1
2017	6.2
2018	6.3
Thereafter	42.5

(ii) To fulfil the duties of the AESO in accordance with the EUA, the AESO manages the procurement of ancillary services through contracts with third-party suppliers. These ancillary services include operating reserves, transmission must-run, load shed and system restoration. The contracts are for generation capacity and load reduction capabilities ranging in contract duration from one day to 20 years. The amount to be paid under each contract is dependent upon fixed and variable terms. The variable terms are based upon commodity prices, dispatch volumes and frequency.

(iii) As a result of events that have occurred, the AESO may become party to a claim or legal action arising in the normal course of business. While the outcome of these matters is uncertain, the AESO does not currently believe that the outcome related to these matters or any amount that the AESO may be required to pay would have a materially adverse effect on the AESO as a whole.

(iv) The EUA requires the AESO to provide funding for the MSA with the amount to be recovered through the energy market charge. In 2013, $2.8 million was paid to the MSA (2012 – $3.5 million).

(v) The *Alberta Utilities Commission Act* requires the AESO to provide funding for the AUC with the amounts to be recovered through the transmission tariff and the energy market charge. In 2013, $20.1 million was paid to the AUC (2012 – $21.1 million).

13. Employee Future Benefits

The contributions to the defined contribution plan are based on a percentage of an employee's salary with the AESO matching employee contributions to a maximum percentage. There is no unfunded obligation related to the plan as contributions are paid to employees when earned. Total expense for the defined contribution plan was $4.1 million in 2013 (2012 – $3.8 million).

14. Security Deposits

Security requirements for market participant financial obligations in excess of their unsecured credit limits are met with cash deposits and letters of credit. All market participants who have financial obligations to the AESO must adhere to the ISO Rules and transmission tariff terms and conditions regarding security requirements. Unsecured credit is granted by the AESO to organizations (or guarantors) with an acceptable credit rating from an AESO-recognized bond rating agency, to organizations that do not have a credit rating if they qualify for an AESO-determined proxy credit rating, and to organizations that have an exempt status as determined through government legislation or AUC rulings. The unsecured credit granted by the AESO to an organization is limited based on the AESO's assessment of the organization's credit worthiness.

15. Financial Instruments

Financial Instrument	Designated Category	Measurement Basis	Associated Risks	Fair Value at December 31, 2013
Cash	Held for trading	Fair value	Liquidity risk	Carrying value approximates fair value due to short-term nature
Accounts receivable MSA deferral account receivable	Loans and receivables	Initially at fair value and subsequently at amortized cost	Credit risk	Carrying value approximates fair value due to short-term nature
Accounts payable and accrued liabilities AESO deferral accounts payable	Other financial liabilities	Initially at fair value and subsequently at amortized cost	Liquidity risk Market risk	Carrying value approximates fair value due to short-term nature
Security deposits	Other financial liabilities	Initially at fair value and subsequently at amortized cost	Liquidity risk	Carrying value approximates fair value due to short-term nature
Bank debt	Other financial liabilities	Initially at fair value and subsequently at amortized cost	Liquidity risk Market risk	Carrying value approximates fair value due to short-term nature and variable interest rates

Nature and Extent of Risks Arising From Financial Instruments

The AESO is exposed to the following types of risks in relation to its financial instruments:

(a) **CREDIT RISK –** The risk that a counterparty may default on its financial obligations to the AESO. Due to the EUA requirement that the AESO be operated with no profit or loss from its operations, credit risk is ultimately borne by market participants, though managed by the AESO.

Counterparties are granted certain levels of unsecured credit with the AESO based on their long-term unsecured debt rating provided by a major reputable corporate rating service satisfactory to the AESO or, in the absence of the availability of such ratings, the AESO has satisfactorily reviewed the counterparty for creditworthiness as appropriate. Letters of credit, cash on deposit and legally enforceable right to set-off are used to mitigate risk where appropriate. As at December 31, 2013 and 2012, the amount of financial assets that were past due was not material and there were no material uncollectible receivable balances.

(b) **MARKET RISK –** The risk of a potential negative impact on the balance sheet and/or statement of operations and comprehensive income resulting from adverse changes in the value of financial instruments as a result of changes in certain market variables. This includes interest rate price and foreign exchange risks.

The AESO's bank debt is comprised of short-term bankers' acceptances that bear interest at market rates. Accordingly, the exposure to interest rate price risk in relation to the bank debt at the balance sheet date is not material.

The AESO conducts less than one per cent of its business in U.S. dollars and accordingly is subject to currency risk associated with changes in foreign exchange rates in relation to payables. The AESO monitors its exposure to currency risk and reviews whether the use of derivative financial instruments is appropriate to manage potential fluctuations in foreign exchange rates. The AESO has not entered into any derivative instruments with respect to currency risk.

(c) **LIQUIDITY RISK –** The risk that the AESO will not be able to meet its obligations associated with financial liabilities. The AESO does not consider this to be a significant risk as the available credit facilities provide financial flexibility to allow the AESO to meet its obligations as they come due. The AESO does not consider there to be a present risk in relation to funds availability to the AESO under the existing credit facilities.

Summarized Quantitative Data Associated with the Above Risks

(a) **CREDIT RISK –** At December 31, 2013, the AESO's maximum exposure to receivable credit risk was $151.1 million (2012 – $271.7 million), which is the aggregate of accounts receivable.

The AESO's receivables are due from counterparties that have provided security to the AESO or have been granted unsecured credit based on satisfactory credit ratings. As at December 31, 2013, the amount of financial assets that were past due was not material (2012 – not material).

(b) **MARKET RISK –** The AESO is exposed to currency risk on $0.8 million (2012 – $0.4 million) of U.S. dollar-denominated financial liabilities at December 31, 2013.

If the Canadian dollar increases (decreases) against the U.S. dollar by five per cent prior to the payment by the AESO, operating costs would decrease (increase) by less than $0.1 million (2012 – less than $0.1 million) and intangible asset costs would decrease (increase) by less than $0.1 million (2012 – less than $0.1 million).

(c) **LIQUIDITY RISK –** The AESO's bank debt and accounts payable and accrued liabilities generally have contractual maturities of six months or less.

IN 2014, the AESO will focus on further securing the future of our province; preserving and enhancing the value of our electricity framework and delivering on initiatives that benefit all **ALBERTANS.**

AESO Board Members

January 2014

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