aeso
ALBERTA
ELECTRIC
SYSTEM
OPERATOR

keeping current

2011 annual report

Demand for electricity in Alberta has increased 36% since 2000 and is forecast to nearly double by 2032.

2032

The AESO accurately forecast energy consumption to within 1% in 2010 and 2% in 2011.

The backbone of the province's transmission grid hasn't seen a major investment in more than 20 years. Yet, over that same period:

GDP has risen over 295%
from $70 billion to nearly $278 billion

Population has increased 43%
from 2.5 million to 3.6 million

Average demand for electricity grew 84%
from 4,559 MW to 8,402 MW

A reliable provincial grid, operating within a fair, efficient and openly competitive electricity market, is fundamental to the livelihood and lifestyle of all Albertans.

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AESO Vision

The AESO will be seen as a significant contributor to the 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.

AESO 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.

Strategic Objectives

- We will design and 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.
- We will lead the development of a reliable transmission system, including interties to other jurisdictions, which fully enables operation of the competitive market.
- We will consistently meet or exceed customer expectations in the delivery of AESO services.
- We will direct the safe and reliable operation of the Alberta transmission and market system in a fair, efficient, and openly competitive manner.
- We will design a sustainable organization with a high performance culture and provide an environment that makes the AESO an exceptional place to work, learn, succeed and make a difference.
- We will learn and leverage leading technologies.
- We will build appropriate levels of public, industry and government support to ensure effective execution of our mandate.
- We will proactively manage risks and operate the AESO and the Alberta Interconnected Electric System compliantly.

letter

FROM THE CHAIRMAN

The Alberta Electric System Operator (AESO) has delivered on its mandate to represent the best interests of all Albertans. Our purpose is to operate the Alberta Interconnected Electric System to enable the reliable and efficient flow of electricity, develop and operate the wholesale energy market to facilitate fair, efficient and open competition, and plan transmission system development to strengthen the system and to serve current and future needs in Alberta. This report highlights the significant achievements of the past year and provides an overview of important key initiatives for 2012 to meet our objective of continually improving our business.

Alberta is a tremendous province and an economic leader in North America. Our forecasts indicate electricity demand will nearly double in the next 20 years due primarily to projected oilsands development and population growth. While there was much discussion in 2011 about the need for upgrading the transmission system, the AESO's position has remained clear. Upgrading the transmission system is vital to keep up with growth in demand. Business and electricity generation developers are making investment decisions today based upon a long-term reliable grid. It is for the benefit of all Albertans—today and for future generations—that the transmission system is reinforced.

Our expertise and unique insight enable us to develop a long-term plan that sets out a blueprint for the next several decades, to establish a competitive marketplace that motivates investment of billions of dollars in new generation, and to reliably operate the grid, making sure the lights stay on tonight, tomorrow and every day onward.

We expect there to be many challenges and opportunities as we work towards realizing our goals. Global economic conditions, public policies and regulations as well as the rising volume and complexity of customer connection projects are some key influences on our future state. We are focused on an effective approach to planning by integrating risk management, customer responsive delivery of services and technological advances as well as public awareness into our planning activities.

Our strategic objectives are founded in our legislative mandate and corporate bylaws. They tie to our vision and mission, and provide the basis for our business plans. As part of our annual strategic planning process, we review and update our strategic objectives to address these and other factors, including new or modified circumstances which then drive our annual business plan.

Achieving these objectives is fundamentally dependent upon alignment among our mandate, public policy and the AESO's strategic direction. Translating that alignment into effective execution requires a highly talented, motivated and dedicated team. My colleagues on the Board have been supportive, provided great counsel, and are solidly committed to decision-making in Alberta's best interests. The management team and employees at the AESO are dedicated, talented, and in the face of significant opposition, have had their work tested and reaffirmed.

I want to particularly congratulate David Erickson on his development into an outstanding Chief Executive Officer and thank him for his leadership of the organization and the recent infrastructure review. It has been my distinct pleasure to have worked with Dave and I am certain he will continue to skillfully and effectively lead the AESO's evolution.

"The AESO will continue to improve its business, develop innovative and pragmatic solutions to new challenges, provide extraordinary value to Albertans, and help create a strong foundation for Alberta's energy future."

As I move towards the end of my tenure as Chairman, I am extremely proud of the development and achievements of our organization. I am confident that the AESO will continue to improve its business, develop innovative and pragmatic solutions to new challenges, provide extraordinary value to Albertans, and help create a strong foundation for Alberta's energy future.

It has been my honour to serve Alberta in this role.

Harry Hobbs
Chairman
April 2012

letter

FROM THE PRESIDENT & CEO

There was much public discussion and debate in 2011 about electricity—the future of Alberta's transmission system, the energy-only wholesale market, and what is needed for our interconnected electric system to be safely and reliably operated.

Of course, for the AESO, talking about electricity, and how we plan and operate the system to ensure it keeps flowing, is what we do every day. We travel the province throughout the year continuously consulting with Albertans at open houses, stakeholder meetings, industry sessions, trade shows, conferences and community events. We proactively solicit other points of view from industry experts and community leaders. We consider such consultation an essential part of our job. It always helps us make better decisions.

There is no other organization like the AESO. We are experts in electric system development and the development of our fair, efficient and openly competitive marketplace. This is what we do.

The AESO is an organization comprised of dedicated employees, all specialists in their own right and all acting with integrity on behalf of Albertans in planning and operating the province's transmission system and the wholesale electricity market.

We have more visibility, more information, more data and more tools than any other party, a point confirmed in early 2012 by the Critical Transmission Review Committee (CTRC). Established in December 2011 to review the AESO's assessment of the need for north-south transmission reinforcement, the CTRC confirmed the reasonableness of the AESO's plan in their *Powering Our Economy* report. The report also stated that the AESO has "greater specialized knowledge of the Alberta electric demand than any other single organization." This acknowledgement speaks to the expertise of our AESO employees and the strength of our role.

With that expertise, motivated solely by the public interest, we are clear in our thinking and clear in our view on the needs of Alberta's electricity system.

In 2011 we continued building upon years of expert planning by advancing key initiatives to the point of execution and delivering them in an exceptional manner. In the following pages, you will find details on many significant accomplishments of the past year, including:

- Exemplary compliance to Alberta Reliability Standards, earning commendations from our first audit by the Western Electricity Coordinating Council for our preparedness, solid documentation and organizational dedication.
- Development of a new load shed service that enables increased import capability through the service's ability to instantaneously reduce demand on the system and maintain reliability in the event of disruption to the Alberta–B.C. intertie.

- Implementation of an enhanced cost reporting process.
- Filing the Competitive Process Application with the Alberta Utilities Commission (AUC) after extensive stakeholder consultation.
- Filing four major system and 35 customer needs applications with the AUC.
- Advancement of market design improvements to further the integration of intermittent resources and the continued growth of the market.
- Filing the draft *2011 Long-term Transmission Plan* with the AUC.

It is an impressive list of accomplishments, largely due to the hard work of our outstanding team of highly trained and dedicated employees. I am very proud of the AESO team.

Looking to 2012, our priorities include:

- Filing an updated *Long-term Transmission Plan* with the AUC, which will include the most current forecast data available and allow us to incorporate the CTRC's recommendations.
- Actively participating in the AUC's regulatory proceeding on the Competitive Process to allow for AUC approval by yearend.
- Advancing many much-needed transmission projects.
- Collaborating with the Transmission Facility Cost Monitoring Committee and issuing a recommendation paper on the quality of transmission cost estimating and reporting.
- Continuing to improve our customer connection process. Over the last few years, we have significantly reduced connection project cycle times from 36 to 25 months, on average.
- Continuing to facilitate the integration of wind generation.
- Facilitating the development, integration and restoration of interties.

"Moving projects ahead, managing the everyday operation of the grid, evolving the marketplace and planning for the future. That's what the AESO does."

I am proud of our progress in 2011 and look forward to advancing our key initiatives in 2012. Moving projects ahead, managing the everyday operation of the grid, evolving the marketplace and planning for the future. That's what the AESO does.

In closing, let me extend my appreciation to the AESO Board, particularly to Chairman Harry Hobbs who completes his term in 2012. His integrity, leadership, dedication and years of service have greatly benefited both the AESO and Alberta.

David Erickson
President & CEO
April 2012

performance highlights

Our pride is reflected not only in what we achieve, but how we achieve it.

AESO Principles – What We Value

Credible Character

- We proactively serve the interests of all Albertans. We are objective, focused and dependable.

High Performance

- We deliver high-quality work, focus on where we add value and seek to continuously improve. We take pride in effectively executing our mandate.

Service Driven

- We earn the respect and trust of our stakeholders by providing fair, efficient and reliable service and through clear, timely and transparent communication.

Great Teamwork

- We foster an environment of respect, excel at collaboration and have great expectations of one another. Living up to our commitments enables us to be part of a successful team and a great organization.

Strategy	2011 Objectives
Planning and Strategy	▪ File an updated *Long-term Transmission Plan* (LTP) with the Alberta Utilities Commission (AUC) in June 2011 and continue to enhance the system planning process
	▪ Develop a transmission cost reporting and monitoring strategy that ensures compliance with all current obligations, clarifies roles of all participants, and enhances ongoing cost control and oversight
	▪ Implement a corporate portfolio management process that improves discipline and better integrates strategic planning, project management, budget development, resource planning and performance reporting
Program Delivery and Execution	▪ File Competitive Process Application for approval with the AUC
	▪ Continue to prudently advance Critical Transmission Infrastructure (CTI), system and customer projects in accordance with the 2011 LTP
	▪ Continue to improve execution of customer connection projects by use of metrics and process streamlining
	▪ Continue consultation with industry to enhance the intertie framework
	▪ Advance the evolution of the market by developing and implementing market enhancements to enable the integration of intermittent resources and the continued growth of the market
Effective Business Operations 	▪ Manage the customer relationship model to deliver high-quality services that enable success for our customers
	▪ Implement a revised corporate metrics program to facilitate reporting of the AESO's progress against its strategic objectives
Sustainable Organization 	▪ Establish a Human Resources roadmap to support the AESO's business strategy
	▪ Create effective and efficient communication outreach and awareness programs in support of the industry initiative to increase understanding of the electricity industry

2011 Performance Highlights	2012 Objectives
▪ Filed a draft LTP with the AUC in June, giving the public an opportunity to provide additional feedback prior to filing the final document ▪ LTP process enhancements included expanded content integrating seven new review areas	▪ Update and file a revised LTP with the AUC in 2012
▪ Implementation of enhanced cost reporting processes supporting Transmission Facility Cost Monitoring Committee reporting and enhanced stakeholder transparency ▪ Completion of Cost Accountability discussion paper	▪ Continue to focus resources on the Transmission Facility Cost Monitoring Committee to assist in meeting its mandate ▪ Complete Cost Accountability recommendation paper
▪ Identification of required process enhancements and standards and implementation of a revised resource management process	▪ Establish a full-time Enterprise Portfolio Management Office (EPMO) to implement the budget and resource prioritization process
▪ Filed the Competitive Process Application with the AUC in September 2011	▪ Receive AUC approval of the Competitive Process Application and commence execution of the process
▪ Worked with transmission facility owners (TFOs) to advance major projects, resulting in Facilities Application filings for the Heartland, ENMAX 65, WATL and EATL projects	▪ Implement the LTP by advancing the development of major transmission and customer connection projects
▪ Average connection project cycle time reduced from 36 to 25 months ▪ Four system and 35 customer connection needs applications filed; 32 of 35 were approved by the AUC in 2011	▪ Continue to streamline and improve execution of customer connection projects ▪ Further reduce project cycle times
▪ Implementation of Load Shed Service for Imports (LSSi) ▪ Consultation on Available Transfer Capability and Transfer Path Management Rules	▪ Continue to facilitate development, integration and restoration of interties ▪ Implementation of FEOC offer control reporting requirements
▪ AUC approval of updated technical standards for wind power forecasting and wind power management ▪ Completion of Wind Integration recommendation paper by the Industry Working Group	▪ Continue to facilitate integration of wind generation
▪ Zero preventable system disturbances and no market suspensions ▪ Complied with all Alberta Reliability Standards ▪ Consultation and filing of eight Alberta Reliability Standards with the AUC ▪ Successful completion of WECC reliability standards audit ▪ Disaster recovery program tested and look back completed	▪ Zero preventable system disturbances and no market suspensions ▪ Continue to advance Alberta Reliability Standards project requirements with stakeholders ▪ Continue to execute the Transition of Authoritative Documents project
▪ Validated metrics measure recommendations ▪ Completed metrics dashboard and pilot process trial	▪ Formalize corporate metrics reporting and use as a management tool
▪ Developed a three-year roadmap, implemented the AESO's Corporate Constitution, and successfully completed succession and workforce planning	▪ Implement year one of the Human Resources roadmap ▪ Execute first phase of competency profiling and critical role job mapping
▪ Distributed two editions of *Powering Albertans* magazine to 1.3 million Albertans ▪ Hosted or supported TFOs at 60 open houses	▪ Continue education, awareness and consultation programs to contribute to increased public knowledge of the electricity industry

voices

FROM THE REGIONS

Regional Advisors keep a finger on the pulse of the communities they represent and offer insight on issues important to Albertans.

Established in 2008, the Regional Advisors Program was created to help the AESO gather feedback on electricity industry issues from communities around the province.

Chosen as key leaders in their communities through a public process, the AESO's Regional Advisors act as a sounding board for regional issues, and are an essential source of feedback and advice on plans, programs and communications being developed by the AESO.

Left to right: Jim Horsman, Tony Hladun, Ross Risvold, Sandy McDonald and Jim Graham

key initiatives

Alberta's $300 billion economy depends on an adequate and reliable supply of electricity and the AESO is firmly committed to preserving the reliability of Alberta's Interconnected Electric System. Planning and developing the grid in compliance with the *Electric Utilities Act* and the *Transmission Regulation*, we made significant progress in 2011—reinforcing the system for future load growth and generation development and facilitating the wholesale electricity market.

Critical Transmission Review Committee

In December 2011, the Government of Alberta announced the appointment of the Critical Transmission Review Committee, an independent panel assigned to review the AESO's plans for two high-voltage transmission lines between the Edmonton and Calgary regions. Six members of the AESO executive team made presentations over several days, illustrating the depth of information behind its determination of need for the lines. The presentations explained the relevance of the AESO forecasting process, how need for transmission is determined, how the grid operates and is controlled, the advantages of Alberta's market design, the depth of the AESO's public consultation process and more.

The panel sessions concluded in early 2012 and a report supporting the AESO's proposals was filed with the Alberta government. On February 23, the government announced it would accept the committee's recommendations and stated that development of the lines designated in the AESO's north-south transmission reinforcement plan was to proceed.

Validating the AESO's economic, load and generating forecasts for Alberta, the panel recognized the AESO's unique perspective, stating that "the AESO has access to exclusive statistics from real-time data points across the grid" and that the "data, methodology and intellectual rigour used to determine future demand for electrical transmission in Alberta is credible and robust."

In its report, *Powering the Economy*, the panel published several conclusions including the following:

- The committee agrees that the AESO's recommendation to proceed with the development of two 500 kV transmission lines is reasonable.
- The committee has determined that the AESO's decision to use HVDC technology is reasonable.
- The committee finds it reasonable for the Government of Alberta to proceed with the development of the two 500 kV HVDC lines as soon as possible.
- The committee encourages the use of the competitive procurement process for future critical transmission infrastructure projects.

The AESO estimates it will take three to five years to build the lines.

Long-term Transmission Plan

Serving as the blueprint for a strong transmission system that will drive Alberta's economic growth in the years to come, the AESO's draft *2011 Long-term Transmission Plan* (LTP) was filed with the Alberta Utilities Commission (AUC) in June.

The plan establishes the future development of more than 50 regional transmission development projects supporting connection to over 200 customer projects. Components such as design and sustainability of the wholesale market, a long-term telecommunications plan, the impact of transmission congestion and the value of transmission are noteworthy parts of the draft LTP's expanded scope.

The plan outlines a reinforced, connected, integrated and comprehensive transmission system that enables a robust power system and strong economy. It also facilitates customer-requested connections for both load and generation, and ensures the safe and reliable delivery of electricity. The LTP complies with the Alberta Reliability Standards, which became effective in 2010.

Optimizing the Connection Process

Through an ongoing review and revision process that began in 2009 and continued through 2011, the AESO has met great success in optimizing its customer connection process. Fundamental changes to the connection process that were introduced in 2010 and honed through the last year have resulted in significantly reduced cycle times, down from 36 to 25 months. A total of 35 connection Needs Identification Documents (NIDs) were filed with the AUC in 2011. Work to streamline and shorten the process is ongoing, with particular rigour being applied to Stage 1 activities. This stage identifies the project scope, high-level schedule, risks and accountabilities, and also begins the engineering work.

Major Transmission Projects

Heartland Transmission System Reinforcement

The AltaLink Management Ltd. and EPCOR Utilities Inc. Facilities Applications for the Heartland project received AUC approval in 2011. Eliminating many current constraint issues, the project will form the foundation for development of the transmission system into all of northeast Alberta. It will accommodate growth in the Fort Saskatchewan area, provide a strong interconnection system for the Fort McMurray and the East HVDC projects, and will benefit the entire provincial network, supporting all Albertans. Currently, the Heartland Transmission System Reinforcement is scheduled for an in-service date of September 2013.

Edmonton to Calgary Transmission System Reinforcement

An integral part of the province's proposed transmission reinforcements, the Edmonton-to-Calgary lines were deemed reasonable by the Government of Alberta's Critical Transmission Review Committee (CTRC) in February 2012. Both the Western Alberta Transmission Line (WATL) and Eastern Alberta Transmission Line (EATL) will address system reliability issues, maximize the efficiency of the transmission system and lead investment decisions.

ENMAX No. 65 Substation

Providing stronger connections and carrying more electricity to Calgary, ENMAX Power Corporation's new 240 kV substation was approved for construction and operation in November 2011. AltaLink's Facilities Application for interconnection of the substation with the Alberta Interconnected Electric System (AIES) was also approved in November. Construction is expected to begin in spring 2012 with an in-service date of summer 2013.

Fort McMurray Transmission System Reinforcement

With significant growth expected in the oilsands, the Fort McMurray Transmission System Reinforcement will be key infrastructure supporting the backbone of the provincial transmission system. It will consist of two single-circuit 500 kV lines between the Edmonton and Fort McMurray regions and is slated for construction in stages between 2017 and 2020. The AESO was directed in 2010 through a revision to the *Transmission Regulation* to develop a competitive process for the Fort McMurray project. The AESO submitted its Competitive Process Application to the AUC in September 2011, and is positioned to implement the Competitive Process as soon as AUC approval is granted.

Regional System Development

Foothills Area Transmission Development (FATD)

The AESO began a stakeholder engagement program, including public consultation, on transmission upgrades extending from south of Calgary to the vicinity of the Town of High River in November 2010, and continued them throughout 2011. A need has been identified for new 240 kV transmission lines, a new 240/138 kV substation and upgrades and modifications at other area substations. New 138 kV lines are also planned for the Okotoks and High River areas.

Completion of this development will also create the capacity to accommodate both the ENMAX Shepard Energy Centre's maximum generation capacity and other planned generators. FATD will be built in stages, with the NID for the East Calgary upgrades and Shepard Generator connection filed in 2011 and currently under AUC review. The AESO intends to file its next FATD NID with the AUC in 2012.

Red Deer Region Transmission Development

A major step towards mitigating existing constraints and accommodating predicted growth in the Red Deer to Didsbury area, the AESO filed a NID for the Red Deer Region Transmission Development in July 2011 and received AUC approval in April 2012. Much of the 138 kV infrastructure in the area is old. The needed upgrades are scheduled to be in service by 2017. Overall plans include new 240 kV substations near Didsbury, Ponoka and Innisfail, upgrading substations at Benalto and West Lacombe, and the addition of approximately 150 km of new and rebuilt transmission line.

South and West of Edmonton Transmission System Development

Responding to growing demand for electricity due to residential, commercial and industrial growth—as much as 600 MW over the next 10 years—the AESO began consulting on the need for transmission system reinforcement in the areas south and west of Edmonton in late 2011. After receiving stakeholder input, the AESO will seek AUC approval of the need in mid-2012. The AESO has identified this area is already experiencing constraints and upgrades are needed to ensure reliability. The preferred development plan includes two new 240/138 kV substations connecting to existing 240 kV transmission lines, new 138 kV and 240 kV lines and modifications to existing 138 kV substations. AltaLink, the area TFO, is presently in the early stages of siting and routing planning.

Northwest of Fort McMurray Area Transmission System Development

Identifying a need to serve developing industrial demand where there currently is no transmission infrastructure, the AESO filed a NID for the Northwest of Fort McMurray Transmission System Development with the AUC in November 2011. Electricity demand in this area is expected to grow by more than 20 per cent to 450 MW by 2020/21. An AESO stakeholder engagement program was conducted in the area from spring through fall 2011. Originally identified as the Livock–Joslyn project in the AESO's draft 2011 LTP, the development calls for two 240 kV substations and approximately 125 to 175 km of 240 kV transmission lines. It is expected to begin service in 2013 and be completed by 2015. ATCO, the area TFO, is presently developing Facilities Applications.

Christina Lake Area Transmission System Development

With new industrial customers requiring connection to transmission as early as 2013, the AESO filed a NID for the Christina Lake Transmission System Development in October 2011. Located northeast of the town of Lac La Biche with approximately 50 MW of generation at present, the Christina Lake area's electricity demand is forecast to be between 390 and 570 MW by 2018/19. An AESO stakeholder engagement program was conducted throughout the summer of 2011 and both area TFOs, ATCO and AltaLink, are developing Facilities Applications. The proposed development calls for a 240 kV looped transmission system that includes three 240 kV substations, approximately 100 to 150 km of 240 kV transmission line and modification and expansion of existing substations in the area.

Needs Identification Document Filings

In 2011, the AESO exceeded the significantly increased pace it set in 2010, filing 39 Needs Identification Documents (NIDs) with the AUC. Four of those were system NIDs, and 35 were customer connection NIDs. Of the 35 connection NIDs, 32 were approved by the end of 2011 and zero have been declined to date.

Transmission Facility Cost Monitoring Committee

The AESO's participation in and support of the Transmission Facility Cost Monitoring Committee has garnered extensive praise from the industry. The AESO has incorporated the following committee recommendations into its transmission planning processes:

- Improved NID estimates that reflect fully loaded costs.
- Engagement of a third-party consultant to estimate project costs identified in the draft 2011 LTP.
- Development of a cost-benchmarking competency and database to further assess reasonableness of the costs proposed by TFOs in the NID and Proposal to Provide Service phases.
- Enhancement of the compliance monitoring plan for Rule 9.1—the rule by which the AESO directs TFOs to estimate, design and construct transmission facilities.
- Initiation of a discussion paper to solicit comments on the current framework of cost accountability.

The AESO's Transmission Cost Accountability discussion paper released in November 2011 identified challenges with the current cost accountability framework and offered benchmark information from other North American jurisdictions.

The AESO proposes to issue a draft recommendation paper in May 2012 to address stakeholder comments.

Wind Integration

The AESO's efforts to better facilitate the integration of wind generation into the AIES continued in 2011, with measurable progress achieved in a number of different areas. In May, the AUC approved ISO Rule 502.1 that includes requirements for wind power forecasting and wind power management. It went into effect in December 2011.

Another milestone stems from the results of a dedicated industry working group, tapping expertise from across North America, to evolve long-term wind options and solutions. The group's recommendations were released in December 2011 and contemplate a mix of integration solutions including:

- Relying on the Energy Market Merit Order to dispatch the generation sources to offset sudden increases or decreases in wind power output to the grid.
- Procuring larger volumes of regulating reserve to absorb wind variability.
- Developing new, separate market (ancillary) services to replace energy when the wind ramps down and to reduce load when the wind ramps up faster than the Energy Market Merit Order can dispatch.
- Developing a wind-firming service to back up overall wind production.
- Developing must-offer, must-comply rules for wind that obligate wind power generators to offer firm power on a basis similar to other generators.

This work will be followed by the publication of a recommendation paper in 2012. Another notable accomplishment was the two-year extension of the AESO's contract with Denmark-based WEPROG for wind forecasting up to December 2013. As of 2011 yearend, the AESO had rules and tools in place to reliably integrate additional wind power, with approximately 5,500 MW of wind power in the connection queue.

Competitive Process

Following the direction of the *Transmission Regulation* to develop a competitive process for critical infrastructure development, the AESO filed its Competitive Process Application with the AUC in September 2011. The application followed extensive stakeholder consultations from September 2010 through July 2011, three rounds of discussion papers and numerous one-on-one meetings.

By 2011 yearend, the AESO was in the process of identifying expert panel members regarding technical, financial, environmental, and stakeholder consultation considerations in preparation for the first competition. Preliminary work on a web portal for external participant usage was also undertaken. The portal integrates the *MERX private tender service* to help manage Competitive Process opportunities. The portal provides a means of efficiently and accurately tracking the entire process including all document distribution and bid reception. Upon AUC approval, the Competitive Process will facilitate selection of a successful bidder who will assume responsibility for developing, constructing, financing, owning, operating and maintaining major transmission projects.

The Fort McMurray Transmission System Reinforcement will be the first project to use the Competitive Process. The competition is expected to open shortly after receiving approval of the process from the AUC, which is expected in late 2012.

AESO 2011 Tariff

Following its original filing in 2010 and subsequent completion of a hearing and initial decision, the ISO tariff was filed again in 2011, and became effective July 1. System access service is provided by the AESO to customers in accordance with this tariff.

The application followed extensive consultation with stakeholders and included the AESO's revenue requirement, rate design, terms and conditions, responses to directions and supporting appendices. As a result of stakeholder input, an improved transmission rate analysis tool enabling improved calculation of customer bills was also developed and posted to the AESO website in conjunction with the filing of the draft *2011 Long-term Transmission Plan*.

Demand Response—Load Shed Service for Imports (LSSi)

A Request for Proposal for a new load shed service was completed in 2011 to support higher electricity import levels on the interconnection between Alberta and B.C. This new service allows the AESO to contract with load customers to instantaneously reduce demand on the system to maintain reliability in the event of a disruption to the Alberta–B.C. intertie. The new LSSi will increase the available transfer capability of the Alberta–B.C. intertie by approximately 100 to 200 MW.

Transmission Constraint Management

In 2011, the AUC approved the AESO's Transmission Constraint Management Rule (TCM). This new rule prescribes a general protocol for managing real-time constraints on the transmission system. The AESO is converting its operating policies and procedures to align with the TCM protocol in areas of the province experiencing constraints.

Alberta Reliability Standards/WECC Audit

In 2011, the AESO passed the first audit of its compliance to Alberta Reliability Standards with flying colours. The audit was completed by the Western Electricity Coordinating Council (WECC) under the direction of the Market Surveillance Administrator (MSA). Standards within the audit included sabotage reporting, capacity and energy emergencies, load shedding plans, protection system coordination and system performance following loss of either a single element or two or more elements. During the audit, WECC auditors commended the AESO audit team for their preparedness, solid documentation and strong organizational dedication to compliance, as well as the innovative way in which the compliance evidence was provided.

Public Education and Engagement

The AESO maintained its commitment to public engagement last year, contributing to expanded knowledge and understanding of the electricity industry through a wide range of public education initiatives.

From 2007 through 2011, the AESO has hosted or supported 307 open houses on transmission projects, attended 291 meetings with municipalities or stakeholder groups and interacted directly with over 15,000 individuals face-to-face.

The AESO's *Powering Albertans* magazine was delivered to 1.3 million Alberta homes in March and October. In 2011, the magazine saw a 22 per cent increase in readership according to an Ipsos Canada poll.

Two AESO television commercials highlighting the need for transmission reinforcement aired last year along with corresponding newspaper and online advertisements. The AESO also provided numerous fact sheets, industry media coverage, transmission planning documents, video segments and past issues of *Powering Albertans* on its public engagement website **www.poweringalberta.com**—which saw 16,000 visits in 2011 and total visit times more than double the benchmark average.

The AESO's ongoing commitment to educating Alberta's youth was furthered through its involvement with Inside Education and Science Alberta, and a host of initiatives in Alberta communities designed to highlight the importance of electricity in our everyday lives.

Information Technology Improvements

In 2011, Information Technology (IT) implemented major system changes to enable the Wind Integration, Load Shed Service for Imports (LSSi) and Transmission Congestion Management (TCM) market programs.

In the same year, IT completed a major infrastructure upgrade to the databases that underpin critical grid and market applications including the Dispatch Tool (DT) and Energy Trading System (ETS). This upgrade has resulted in improved performance and reliability, and is a key enabler of the ongoing evolution of our market programs such as wind and interties.

Human Resources Achievements

Human Resources undertook a number of important objectives in 2011, most notably the development of a three-year roadmap. Supporting the AESO's business strategy, it establishes an integrated framework for several initiatives including competency profiling and job mapping for critical roles. It also lays the groundwork for improvements in the AESO's learning and development, talent acquisition, performance management, workforce planning, succession planning and compensation management practices and capabilities.

In addition to these accomplishments, Human Resources revised its employee recognition programs, reviewed and adjusted compensation and benefits, implemented the AESO's Corporate Constitution, and completed workforce planning, succession planning and leadership development.

CORPORATE GOVERNANCE

Governance is a philosophy, an approach and a process. The AESO's governance structure, policies and practices are driven by the organization's vision, mission and principles.

Fundamental to governance is the clarity it brings to accountability and the roles of the AESO Board, AESO executive, management and employees.

The AESO's structure provides a strong governance model that promotes best practices, ethical behaviours, accountability and transparency to stakeholders (internal and external) in its business dealings.

AESO Board

The Independent System Operator, 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's mandate is derived from the EUA and related regulations and it is governed by its Board (AESO Board). The AESO Board consists of individuals (Members) appointed by Alberta's Minister of Energy (Minister).

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. The AESO Board conducts oversight of corporate operations, including cost and risk management. The AESO Board's Charter and AESO Bylaws set out the general responsibilities of the AESO Board.

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

[1] *This received Royal Assent on June 4, 2009 but has not yet been proclaimed into law.*

AESO Board Committees and Task Force

The AESO Board has established three standing Committees and one standing Task Force. Each operates in accordance with its own AESO Board-approved charter and with a view to following best practices.

Audit Committee (AC)

The AC 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, Compensation and Nominations Committee (HRCNC)

The HRCNC provides consultation, advice and recommendations to the AESO Board with respect to human resources and management compensation as well as Member compensation and nomination. This includes AESO executive compensation levels, AESO President and Chief Executive Officer's (AESO CEO) performance, the AESO's performance, officer selection, Board and executive succession planning, human resources programs (including salary planning, benefits and incentive design), and human resources practices.

Corporate Governance Committee (CGC)

The CGC provides consultation, advice and recommendations to the AESO Board regarding compliance with government legislation, maintenance and enhancement of the AESO's corporate governance practices. This includes annual review of AESO governance documents and processes, Member orientation and ongoing education, AESO Board performance assessments and best practices in governance matters.

Transmission Advisory Task Force (TATF)

The TATF provides 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 AIES.

Members

The 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 2011:

Member	Member Since	Current AESO Board Position	Committee/Task Force Member
Harry Hobbs	2004	Chair	AC; CGC; HRCNC; TATF
Gordon Ulrich	2009	Vice-Chair	Chair TATF; AC
Nancy Laird[2]	2003	Member	Chair CGC; HRCNC
Hugh Fergusson	2007	Member	Chair HRCNC
Robert McClinton	2007	Member	Chair AC; HRCNC
Jan Carr	2009	Member	AC; TATF
Paul McMillan	2010	Member	AC; TATF
Linda Chambers[3]	2010	Member	CGC/Chair CGC; TATF
J.D. Hole	2010	Member	HRCNC; TATF

[2] *End of term extended from August 31 to November 30, 2011.*

[3] *Appointed Chair of the CGC, effective September 1, 2011.*

AESO Board Effectiveness

AESO Board Assessments

The AESO Board, its Committees and Task Force have performance assessment processes in place. Assessments are conducted annually.

Meeting Attendance and Remuneration

In 2011, the attendance of the Members at AESO Board, Committee and Task Force meetings was as follows:

AESO Board	AESO Board	AC	HRCNC	CGC	TATF	Meeting Attendance	Per cent Attendance	2011 Total Remuneration[4]
Harry Hobbs	8 of 9	5 of 5	4 of 4	3 of 4	5 of 5	25 of 27	93%	$ 115,000
Nancy Laird	9 of 9	N/A	3 of 4	4 of 4	N/A	16 of 17	94%	$ 42,000
Jan Carr	8 of 9	4 of 4	N/A	N/A	4 of 4	16 of 17	94%	$ 41,000
Hugh Fergusson	8 of 9	N/A	4 of 4	4 of 4	N/A	16 of 17	94%	$ 46,000
Robert McClinton	9 of 9	5 of 5	4 of 4	N/A	N/A	18 of 18	100%	$ 48,000
Gordon Ulrich	9 of 9	5 of 5	N/A	N/A	5 of 5	19 of 19	100%	$ 54,000
Paul McMillan	9 of 9	5 of 5	N/A	N/A	4 of 5	18 of 19	95%	$ 43,000
Linda Chambers	9 of 9	N/A	N/A	4 of 4	5 of 5	18 of 18	100%	$ 45,000
J.D. Hole	9 of 9	N/A	4 of 4	N/A	4 of 4	17 of 17	100%	$ 42,000
Attendance	78 of 81	24 of 24	19 of 20	15 of 16	27 of 28	163 of 169		
% Attendance	96%	100%	95%	94%	96%	96%		

[4] *Total includes base retainer, vice-chair retainer, committee and task force chair retainer, and meeting fees.*

Compensation of Members

An independent, third party review of Member compensation is conducted annually, using benchmark comparisons to similar roles in Canadian industry. Member compensation has not increased since the incorporation of the AESO in 2003.

The total compensation provided to the Members in 2011 was $502,000.

A summary of compensation Members are eligible to receive is as follows:

Chair – retainer	$ 90,000/year
Vice-Chair – retainer	$ 5,000/year
Member – retainer	$ 25,000/year
Committee and Task Force Chair – retainer	$ 5,000/year
AESO Board, Committee and Task Force meetings	$ 1,000/meeting
Additional AESO business	$ 1,000/day

Benefits

Members are eligible to receive certain health and insurance benefits including dental, health, life insurance and accidental death & dismemberment insurance.

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 our statutory mandate, corporate vision and business objectives. Accordingly, the compensation philosophy and programs have been built on the following objectives:

- to focus 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 executive must be competitive with industry comparators to attract and retain the skills and competencies necessary to fulfil the AESO's mandate.

Program Governance

The AESO Board delegates the oversight of Program governance to the HRCNC. The HRCNC reviews compensation objectives, policies and programs and makes recommendations to the full AESO Board.

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

Market Comparisons

The AESO regularly benchmarks compensation to similar positions in Canadian industry. The peer group comparators include a mixture of utilities, energy companies and public sector organizations.

Market data is 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[5] of market. There is no long-term incentive plan in place at the AESO.

In addition to the comparisons outlined above, the AESO Board reviews available compensation data for other North American Independent System Operators to determine if broader North American trends should be considered.

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. For analysis and advice on industry comparators, compensation trends and comparator information, the HRCNC obtains the services of an independent expert. The HRCNC reviews the information and confers with the AESO CEO. Pay-for-performance adjustment recommendations are based on demonstrated results and competencies and are then put forward to the AESO Board for review and approval.

Base Pay

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

[5] *The 50th percentile is the benchmark most commonly used by peer group comparators.*

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 CEO to the HRCNC and is subject to approval by the AESO Board. The individual achievement component is recommended by the CEO to the HRCNC and is factored in to the total incentive payment. 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 target STIP is 50 per cent of base pay earnings, with the ability to earn up to 100 per cent of earnings. The Senior Vice-President's target STIP is 35 per cent of earnings with the ability to earn up to 70 per cent and the Vice-Presidents' target STIP is 25 per cent of earnings with the ability to earn up to 50 per cent.

Flexible Benefits

The flexible benefits program for all AESO employees 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 for additional relevant expenses. Perquisites such as parking and fitness allowances are provided.

Registered Retirement and Group Savings Plans

A group plan is provided to all AESO employees in which 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 of nine per cent of base salary by the AESO.

Other Considerations

An employment agreement outlining a severance provision for termination without cause is in place for two executives.

AESO Executive Compensation

The table below details the total compensation for the year ended December 31, 2011 for the executive officers listed.

Position	Name	Base Salary	STIP	Perquisites[6]	Benefits & Savings[7]	Other[8]
President & CEO	David Erickson	$ 416,000	$ 316,160	$ 12,450	$ 46,825	
Senior Vice-President	Cliff Monar	$ 236,718	$ 126,537	$ 5,900	$ 29,382	$ 282,500
SVP Corporate Services & CIO	Sandra Scott	$ 291,312	$ 127,449	$ 6,030	$ 35,579	
Vice-President Operations	Mike Law	$ 239,200	$ 83,720	$ 6,030	$ 29,525	
Vice-President Finance	Todd Fior	$ 219,813	$ 75,561	$ 6,030	$ 28,255	

[6] *Perquisites include car allowance, parking and fitness allowance.*

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

[8] *Other includes retiring allowance.*

Governance Practices

The AESO looks to private, public and not-for-profit sectors of industry to provide best business 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 AESO 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's Code of Conduct – Officers, Employees and Contractors is a policy all new employees are required to review and agree to abide by from their first day of employment. All 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.

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, objectives, strategies and initiatives to day-to-day operations. The strategic plan is reviewed and approved by the AESO Board and forms the foundation for which the AESO's annual business priorities, budgets and forecast costs are established. Individual 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.

As a part of the AESO's development of its business priorities, budgets and forecast costs, 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 business priorities, budgets and forecast costs. The BRP's primary objective is to work with stakeholders to develop a comprehensive business planning document that provides a common understanding of expected deliverables and related costs. Stakeholder input can be provided in a number of ways including submitting written comments on the proposed business priorities, budgets and forecast costs, and meeting with the AESO Board to further explain those comments. At the conclusion of the process, the AESO Board issues a decision on the AESO's business priorities, budgets and forecast costs.

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.

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.

Performance Reporting

The AESO executive updates the status of attaining corporate goals on a regular basis and reports to the AESO Board. Based on its review, the AESO executive can determine which goals are on target to be met and those at risk of not being achieved. 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 has established a Security Policy and Risk Committee, which is an AESO executive committee responsible for development, implementation and ongoing management of the organization's enterprise risk management and corporate security programs. This committee has regularly scheduled meetings.

Regular reports are provided to the Security Policy and Risk Committee, senior management and the AESO Board's Audit Committee, which detail identified risks, their status and related mitigation strategies.

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

Internal Controls

Internal controls have been designed and implemented by the AESO's management. These controls, except those delegated to the AESO CEO, are approved by the AESO Board and its Committees – utilizing policy approval processes, to provide reasonable assurance of achieving the following objectives:

- effectiveness and efficiency of operations;
- reliability of financial reporting; and
- compliance with laws and regulations.

Audits/Reviews/Procedures

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

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 statement audit is performed by an independent audit firm.

AESO Executive

The AESO Board is responsible for appointing the AESO CEO pursuant to the EUA, 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 executive team is as follows:

David Erickson
President and Chief Executive Officer

Sandra Scott
Senior Vice-President, Corporate Services and Chief Information Officer

Bill Baker
Vice-President, Information Technology

Shan Bhattacharya
Vice-President, Transmission

Todd Fior
Vice-President, Finance

Kelly Gunsch
Vice-President, Market Services

Heidi Kirrmaier
Vice-President, Regulatory

Mike Law
Vice-President, Operations

Larry D. Kram
General Counsel and Corporate Secretary

AESO BOARD *as at December 2011*

The AESO Board's objective is to provide effective governance for the AESO organization to achieve its strategic goals and objectives. This includes balancing the interests of a diverse set of stakeholders and fulfilling its public interest mandate.

The AESO's Board Members are independent of market participants and have expertise in several business disciplines, including technology, finance and stakeholder relations, as well as business experience in energy industries.

Seated left to right: Gord Ulrich, Harry Hobbs
Standing left to right: Robert McClinton, J.D. Hole, Jan Carr, Paul McMillan, Hugh Fergusson, Linda Chambers

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) should be read in conjunction with the Alberta Electric System Operator's (AESO) audited financial statements for the years ended December 31, 2011 and 2010 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 and promotion 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 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.

Summary 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	**2011**	2010	Change	% Change
Collections	**1,489.1**	1,046.7	442.4	42
(Deferred revenue)/revenue	**(23.0)**	8.3	(31.3)	(377)
Other revenue	**2.3**	1.0	1.3	130
Total revenue	**1,468.4**	1,056.0	412.4	39
Transmission operating costs	**1,337.3**	944.4	392.9	42
Other industry costs	**22.4**	22.0	0.4	2
General & administrative costs	**88.6**	73.6	15.0	20
Interest costs	**2.6**	2.3	0.3	13
Amortization	**17.5**	13.7	3.8	28
Total costs	**1,468.4**	1,056.0	412.4	39

Total Costs

Transmission Operating Costs

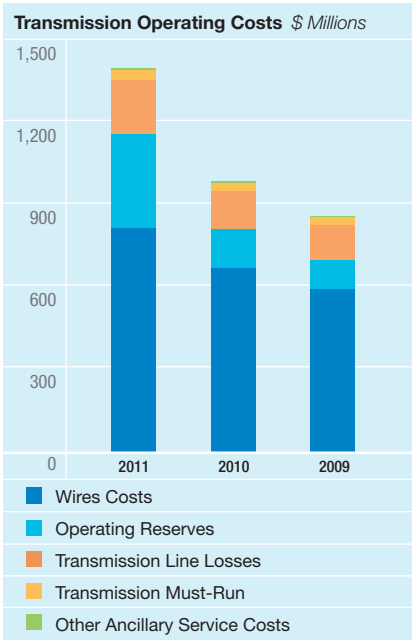
Transmission operating costs represent wires, transmission line losses, operating reserves, transmission must-run and other ancillary services costs. In 2011, transmission operating costs are $1,337.3 million, which is $392.9 million or 42 per cent higher than the 2010 costs of $944.4 million. This variance is associated with higher pool prices in 2011 and the impact these higher pool prices had on the costs of operating reserves and transmission line losses. Changes in wires costs resulting from Alberta Utilities Commission (AUC) decisions on regulated rates charged by transmission facility owners (TFOs) also contributed to the variance.

Transmission Operating Costs

($ Millions) Years ended December 31	**2011**	2010	Change	% Change
Wires costs	**779.7**	640.9	138.8	22
Operating reserves	**324.9**	135.7	189.2	139
Transmission line losses	**190.4**	130.5	59.9	46
Transmission must-run	**32.8**	28.3	4.5	16
Other ancillary service costs	**9.5**	9.0	0.5	6
Transmission operating costs	**1,337.3**	944.4	392.9	42

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 2011 are $779.7 million, which is $138.8 million or 22 per cent higher than the 2010 costs of $640.9 million due to changes in the regulated rates charged by the TFOs.



Operating Reserves

Operating reserves are generating capacity or load that is held in reserve and made available to the AESO system controller to manage the Alberta electric system supply-demand balance in real time. Operating reserves are comprised of three types of active reserves, with the minimum levels of operating reserves required based on standards established by the Western Electricity Coordinating Council (WECC):

- **Regulating reserves –** The provision of generation and load response capability, including capacity, energy and maneuverability, which responds to the AESO's automatic generation control (AGC) system.
- **Spinning reserves –** Unloaded generation that is synchronized to the system, automatically responsive to frequency deviation and ready to serve additional demand following an AESO system controller directive. A supplier offering spinning reserves must be able to ramp up their generator within 10 minutes in response to a system controller directive due to a system contingency.
- **Supplemental reserves –** Similar to spinning reserves except supplemental reserves are not required to respond to frequency deviations; therefore, they include load and generators.

The AESO purchases operating reserves from the ancillary services exchange and through over-the-counter contracts with suppliers. Operating reserve prices are indexed to the hourly pool price.

Operating reserve costs in 2011 are $324.9 million, which is $189.2 million or 139 per cent higher than the 2010 costs of $135.7 million. In 2011, the average hourly pool price was $76 per megawatt hour (MWh) compared to $51 per MWh in 2010 representing an increase of 49 per cent. The increase in the average pool price and the increase in operating reserve costs are not proportional; 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 volumes are 8,067 gigawatt hours (GWh) in 2011 compared to 8,152 GWh in 2010.

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, generation (baseload, peaking units and import) available to serve load, weather conditions and changes in the transmission topology. System maintenance schedules, unexpected failures, dispatch decisions on the Alberta Interconnected Electric System (AIES) and short-term system measures (such as demand response) may also affect the volume of losses. The value of line losses is calculated at the hourly pool price.

The costs of line losses in 2011 are $190.4 million, which is $59.9 million or 46 per cent higher than the 2010 costs of $130.5 million due to the impact of higher average pool prices in 2011 slightly offset by lower volumes of line losses. The average hourly pool price, at which losses are valued, was $76 per MWh in 2011 compared to $51 per MWh in 2010, representing an increase of 49 per cent. The volumes of line losses in 2011 are 2,503 GWh, which is 193 GWh or seven per cent lower than the 2010 volumes of 2,696 GWh. Line loss volumes decreased in 2011 due to more supply from imports and generation in the southern region along with a corresponding decrease in supply from generation in the Wabamun area. An increase in regional transmission capacity also contributes to the loss reduction.

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 to provide system reliability. This service is typically procured through commercial contracts between the AESO and suppliers. TMR service providers are compensated through contracts using fixed and variable payments.

TMR costs in 2011 are $32.8 million, which is $4.5 million or 16 per cent higher than the 2010 costs of $28.3 million due primarily to an increase in TMR volume requirements in northwest Alberta and the need for conscripted TMR in northeast Alberta in the latter part of 2011. The conscripted TMR was due to extensive transmission system construction outages in the area.

Other Ancillary Services

Other ancillary services include the remaining services that the AESO procures for the secure and reliable operation of the AIES such as load shed services and black start services. These services are procured through bilateral contracts with suppliers. In 2011, other ancillary services costs are $9.5 million, which is $0.5 million or six per cent higher than the 2010 costs of $9.0 million. This is mainly attributable to a new demand response service that became operational in the latter part of 2011. The new Load Shed Service for Imports (LSSi) is load that may be interrupted to maintain system reliability when there is a loss of transmission on the British Columbia intertie.

Other Industry Costs

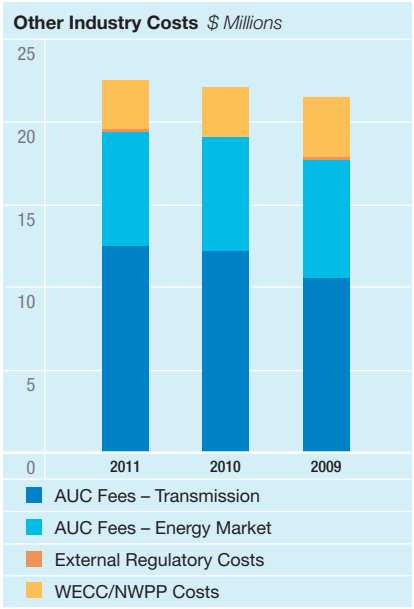
($ Millions) Years ended December 31	**2011**	2010	Change	% Change
AUC fees – Transmission	**12.4**	12.1	0.3	2
AUC fees – Energy Market	**6.9**	6.9	0.0	0
WECC/NWPP costs	**2.9**	3.0	(0.1)	(3)
External regulatory costs	**0.2**	0.0	0.2	–
Balancing Pool	**–**	–	–	–
Other industry costs	**22.4**	22.0	0.4	2

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

Other industry costs in 2011 are $22.4 million, which is $0.4 million or two per cent higher than the 2010 costs of $22.0 million.

Under the provision of the *Alberta Utilities Commission Act* (effective January 1, 2008), 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.

The AESO's share of the WECC membership fees remained consistent in 2011 and 2010 at $2.8 million. As these fees are payable in US dollars, the strengthening of the Canadian dollar has resulted in a slight decrease in costs in 2011.



General and Administrative Costs

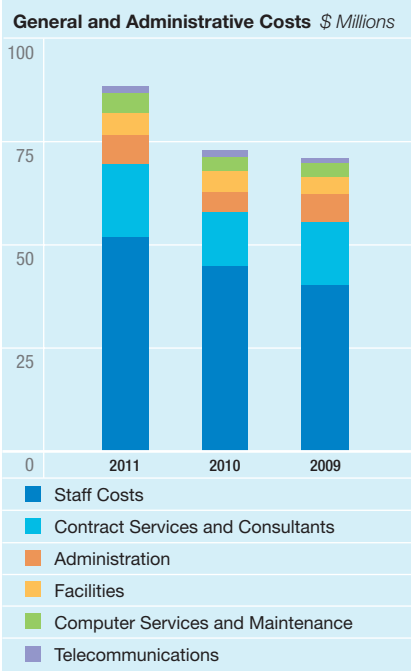
General and administrative costs in 2011 are $88.6 million, which is $15 million or 20 per cent higher than the 2010 costs of $73.6 million. This variance is primarily attributable to an increase in costs for staff, contract services and consultants and administration.

($ Millions) Years ended December 31	**2011**	2010	Change	% Change
Staff costs	**52.6**	45.6	7.0	15
Contract services and consultants	**18.0**	13.3	4.7	35
Administration	**7.0**	5.0	2.0	40
Facilities	**4.7**	4.7	–	–
Computer services and maintenance	**4.9**	3.6	1.3	36
Telecommunications	**1.4**	1.4	0.0	0
General and administrative costs	**88.6**	73.6	15.0	20

Staff Costs

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

In 2011, staff costs are $52.6 million, which is $7.0 million or 15 per cent higher than the 2010 costs of $45.6 million. The increase is attributable to a higher staff complement primarily in the areas of transmission delivery and operations to further enable the AESO to deliver on a number of customer connection projects and its ongoing business initiatives combined with a lower vacancy rate in 2011 compared to 2010.



Contract Services and Consultants

In 2011, contractor and consultant costs are $18.0 million, which is $4.7 million or 35 per cent higher than the 2010 costs of $13.3 million. Several areas of focus in 2011 are:

- To comply with the *Transmission Regulation*, the AESO continued to develop a competitive process as the method to determine who is eligible to apply for the construction and/or operation of certain transmission facilities. Throughout 2011, the focus was on developing the process which included a considerable amount of stakeholder consultation, process definition and document development.
- The maintenance and support of the real-time systems and operations and providing timely responses to industry changes.
- To provide supplementary and technical resources to assist in the AESO's participation in regulatory proceedings for various transmission projects and Independent System Operator (ISO) rules.
- The AESO continues to utilize contracted services for certain corporate information technology (IT) support and technical expertise. To support IT infrastructure and development, contracted services assisted with the implementation of a new IT strategy for the sustainability of the infrastructure support and for ongoing maintenance support for the IT platforms.

Administration

Administration costs include corporate communications, recruiting, travel and training, AESO Board fees and office costs. In 2011, administration costs are $7.0 million, which is $2.0 million or 40 per cent higher than the 2010 costs of $5.0 million. The increase in 2011 is associated with corporate communications, training and recruiting initiatives. After a reduction in these cost areas in 2010 due to the postponement or deferral of several initiatives, the current year's expenditures are re-aligned with those of 2009.

Facilities

In 2011, facilities costs are $4.7 million, which is consistent with 2010 costs.

Computer Services and Maintenance

As the AESO invests in IT infrastructure to support the organization's business operations, ongoing costs are incurred to purchase annual software operating licences and maintenance agreements.

In 2011, computer services and maintenance costs are $4.9 million, which is $1.3 million or 36 per cent higher than the 2010 costs of $3.6 million. In the latter part of 2011, the implementation of a new strategy for the IT infrastructure support began. This involved the transition to a managed services model for IT infrastructure operating support (network, server, database and storage), which will result in increased reliability, sustainability and ability to deliver changes to IT systems to facilitate business initiatives. Annual costs are also affected by the increase in software and hardware operating licences and maintenance agreements resulting from growth in capital investments.

Telecommunications

The AESO incurs costs for the support of real-time operations and the network systems and telecommunications to support general business 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 2011, telecommunication costs are $1.4 million, which is consistent with 2010 costs.

Interest and Amortization

($ Millions) Years ended December 31	**2011**	2010	Change	% Change
Interest costs	**2.6**	2.3	0.3	13
Amortization of intangible and capital assets	**17.5**	13.7	3.8	28

Interest

Interest is 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 expenses. Intangible and capital assets are financed through the AESO's credit facilities and recovered over the useful lives of the assets (included in amortization).

In 2011, interest costs are $2.6 million, which is $0.3 million or 13 per cent higher than the 2010 costs of $2.3 million. While the average monthly borrowing amounts were less in 2011 than in 2010, the increase in interest costs are attributable to a higher average interest rate in 2011.

Amortization of Intangible and Capital Assets

Intangible and capital assets are amortized over their estimated useful lives in accordance with GAAP and reviewed on an annual basis. Intangible assets include the AESO's computer software purchase and development costs.

In 2011, amortization of intangible and capital assets is $17.5 million, which is $3.8 million or 28 per cent higher than the 2010 amortization of $13.7 million, primarily due to $13.6 million in software additions commissioned in 2011.

Intangible and Capital Assets

Intangible and capital asset expenditures totaled $28.6 million in 2011 compared to $23.1 million in 2010. The AESO's development and acquisition of intangible and capital assets, most significantly the investment in IT infrastructure, is a key component of the business operations. As with all IT-intensive organizations, the AESO's challenge is to find the appropriate balance between implementing technology advancements, determining the level of IT 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 to assure intangible and capital asset expenditures achieve the most beneficial and cost-effective results to continue to meet operating requirements.

In 2011, the investment in intangible and capital assets of $28.6 million continued to support software development and upgrades to critical operational systems in addition to base system application infrastructure. Resources were focused on continued development and implementation of wind forecasting and wind power management tools, the implementation of a Load Shed Service for Imports (LSSi) application and upgrades to the AESO's desktop computing workstations, database environments, servers and voice and data networks.

In 2010, intangible and capital asset expenditures of $23.1 million related primarily to the Dispatch Tool to improve the reliability, stability and sustainability of the system, an upgrade to the database management infrastructure, additional data warehouse capacity and strategic storage applications.

The AESO's net book value for intangible and capital assets totaled $88.0 million in 2011 compared to $76.9 million in 2010. As of December 31, 2011, approximately 80 per cent (2010 – 78 per cent) of the net book value relates to computer infrastructure with the remaining value associated with the AESO's system coordination facility.

Service Area Cost Detail

Allocation of Costs for Revenue Requirements

The AESO recovers its operating, intangible and capital costs through three separate revenue sources. Each 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 cost to the specific service that it supports (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 cost has to one of the services. If an operating cost is directly associated with a service, the cost will be assigned directly to that service (i.e., a consultant cost in the Transmission group would be assigned 100 per cent to transmission and recovered through the transmission tariff). Alternatively, if the operating cost is not directly associated with any one service (typical for corporate service areas), the cost will be allocated to all services based on 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.

There are a few exceptions to this general methodology for IT, rent, intangible and capital costs. IT costs are allocated via an activity-based analysis to better reflect the nature of the underlying costs. Rent costs are allocated based on the staff associated with the three services. Intangible and capital 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/operating activities that will be supported by the systems (hardware and software).

Allocation and Cost Classifications

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

	General and Administrative		Amortization		Interest		Total	
($ Millions) Years ended December 31	**2011**	2010	**2011**	2010	**2011**	2010	**2011**	2010
Transmission	**66.3**	52.1	**9.0**	7.2	**1.7**	1.6	**77.0**	60.9
Energy market	**20.6**	19.6	**6.6**	4.8	**0.8**	0.6	**28.0**	25.0
Load settlement	**1.7**	1.9	**1.9**	1.7	**0.1**	0.1	**3.7**	3.7
Total	**88.6**	73.6	**17.5**	13.7	**2.6**	2.3	**108.7**	89.6

General and Administrative

The results of the allocation of general and administrative costs between the three services based on the detailed allocation methodology produces a higher percentage of overall general and administrative costs allocated to transmission in 2011 in comparison to 2010. This increase is based on additional transmission-related business activities that occurred in 2011.

Amortization

The allocation of the 2011 commissioned assets produces a slightly higher percentage of overall amortization allocated to the energy market. During 2011, assets were commissioned that support the operation of the energy market, including wind forecasting and integration management applications and system enhancements to the Dispatch Tool.

Interest

Taking into consideration the business requirements associated with the credit facility borrowings in 2011, the allocation of interest costs between the three services resulted in an increase in the allocation to the energy market with the majority of the corresponding decrease in the allocation to transmission.

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 and recognized in the deferral accounts. The AESO's three revenue sources are transmission, energy market and load settlement.

Total Revenue

($ Millions) Years ended December 31	**2011**	2010	Change	% Change
Revenue collections				
Transmission	**1,451.5**	1,011.1	440.4	44
Energy market	**36.0**	32.5	3.5	11
Load settlement	**3.9**	4.1	(0.2)	(5)
Total collections	**1,491.4**	1,047.7	443.7	42
(Deferred revenue) / revenue				
Transmission	**(21.6)**	9.3	(30.9)	(332)
Energy market	**(1.1)**	(0.7)	(0.4)	57
Load settlement	**(0.3)**	(0.3)	0.0	0
Total (deferred revenue) / revenue	**(23.0)**	8.3	(31.3)	(377)
Total revenue	**1,468.4**	1,056.0	412.4	39

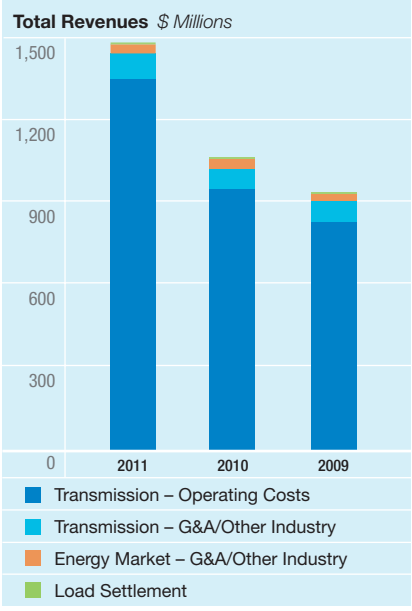
Transmission

The AESO is responsible for paying all of the costs of 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 its 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); and
- 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 recognized in the deferral accounts and refunded to market participants in future periods. In circumstances where collections are less than the transmission costs, the shortfall is recorded as revenue, recognized in the deferral accounts and recovered from market participants in future periods.



Transmission Deferral Summary

($ Millions) Years ended December 31	**2011**	2010
Collections	**1,451.5**	1,011.1
Costs	**1,429.9**	1,020.4
Transmission (deferred revenue) revenue	**(21.6)**	9.3
Deferral account receivable (payable), beginning of year	**11.0**	(0.1)
Disbursement for the Deferral Account Reconciliation Application	**–**	1.8
Deferral account (payable) receivable, end of year	**(10.6)**	11.0

As part of the transmission tariff, Deferral Account Adjustment Rider C is intended to bring the transmission deferral account balance for non-transmission line losses rate categories 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 non-transmission line losses rate categories, 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 receivable of $11.0 million from market participants at December 31, 2010 to a payable of $10.6 million to market participants at December 31, 2011. This change is due to 2011 transmission collections exceeding 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 energy market trading charge is set to recover the operating costs and the amortization of intangible and capital assets and the AUC administration fee during the period. For 2011, the AESO's component of the energy market trading charge is 29.6 cents per MWh to cover operating, intangible and capital costs (23.7 cents per MWh) and the AUC administrative fee (5.9 cents per MWh). For 2010, the AESO's component of the energy market trading charge was 27.2 cents per MWh to cover operating, intangible and capital costs (21.1 cents per MWh) and the AUC administrative fee (6.1 cents per MWh). There is also a component in the energy market trading charge that relates to the operations of the Market Surveillance Administrator (MSA), which is independent of the AESO's operations.

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

In circumstances where annual collections are in excess of energy market costs, the excess amount is recognized in the deferral accounts and incorporated into a reduction in the following year's required energy market trading charge. In circumstances where annual collections are less than the energy market costs, the shortfall is recorded as revenue, recognized in the deferral accounts 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	**2011**	2010
Collections	**36.0**	32.5
Costs	**34.9**	31.8
Energy market deferred revenue	**(1.1)**	(0.7)
Deferral account receivable, beginning of year	**2.5**	3.2
Deferral accounts (payable) receivable, end of year	**(1.4)**	2.5

The energy market deferral account at December 31, 2011 is a $1.4 million payable compared to a $2.5 million receivable at the end of 2010. The change of $1.1 million during 2011 is the result of energy market collections exceeding costs.

Load Settlement

Expenses 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 under ISO rules. The costs associated with load settlement include direct service costs, an allocation of the AESO's corporate shared services and an allocation of amortization for the recovery of intangible and capital asset costs.

The difference in the annual revenue collections and costs incurred associated with load settlement is recorded in the deferral accounts. Load settlement collections are dependent upon the AESO's annual forecast of load settlement costs. On an annual basis, the load settlement deferral account is charged or refunded to the owners of electric distribution systems and wires service providers.

Load Settlement Deferral Summary

($ Millions) Years ended December 31	**2011**	2010
Collections	**3.9**	4.1
Costs	**3.6**	3.8
Load settlement deferred revenue	**(0.3)**	(0.3)
Deferral account payable, beginning of year	**(0.5)**	(0.2)
Deferral account payable, end of year	**(0.8)**	(0.5)

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 2011, the MSA's portion of the total energy market trading charge is 2.3 cents per MWh, which compares to an MSA charge of 2.6 cents per MWh in 2010.

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 2011, the difference between MSA collections and payments is less than $0.1 million.

Financial Position and Liquidity

($ Millions) Years ended December 31	**2011**	2010
Cash, beginning of year	**47.5**	40.2
Operating activities	**12.0**	64.5
Investing activities	**(28.6)**	(23.1)
Financing activities	**(12.2)**	(34.1)
Cash, end of year	**18.7**	47.5

The cash balance as at December 31, 2011 is $18.7 million compared to $47.5 million at December 31, 2010. The decrease is primarily the result of the following:

- **Operating activities** provided cash of $12.0 million in 2011 (2010 – $64.5 million). The increase is mainly attributed to the recovery of capital and intangible asset costs of $17.5 million (2010 – $13.7 million) through amortization of these assets, partially offset by a use of a non-cash working capital of $5.5 million (2010 – $50.8 million).
- **Investing activities** used cash of $28.6 million in 2011 (2010 – $23.1 million) for the purchase of intangible and capital assets.
- **Financing activities** used cash of $12.2 million in 2011 (2010 – used cash of $34.1 million). The primary financing activities are a decrease in bank debt of $35.0 million, slightly offset by a change in the deferral account balance by $23.0 million in 2011.

As at December 31, 2011, the AESO had the following credit facilities available to fund general operating and intangible and capital purchasing activities:

($ Millions) Year ended December 31	**Total**	Available	Used
Demand revolving facility	**160.0**	95.2	64.8
Demand treasury risk management facility	**9.0**	9.0	–

The demand facility includes a $10 million letter of credit at December 31, 2011 and 2010, which is issued as security for the AESO's procurement of operating reserves.

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 2012, the AESO established a revenue requirement of $1,644.5 million through the 2012 Budget Review Process for costs related to wires, ancillary services, line losses, other industry, general and administrative, amortization and interest costs. The total transmission revenue requirement in 2012 is $214.6 million or 15 per cent higher than the 2011 actual costs of $1,429.9 million.

For energy market activities, the annual costs are forecast to increase to $40.0 million in 2012 from the 2011 actual costs of $34.9 million, a $5.1 million or 15 per cent increase. This forecast increase results from increases in general and administrative costs, most notably related to staff and consultant resources. With the combination of this forecast cost increase and the 2011 deferral account balance, the AESO's portion of the 2012 energy market trading charge will increase to 28.1 cents per MWh in 2012 compared to 23.7 cents per MWh in 2011, an increase of 4.4 cents per MWh. In 2012, the total energy market trading charge, which also includes components for the AUC and MSA, will be 36.1 cents per MWh compared to 31.9 cents per MWh in 2011.

As stated in the *Transmission Regulation,* the AESO is required to develop a Competitive Process as the method to determine who is eligible to apply for the construction and/or operation of certain transmission facilities. The first Critical Transmission Infrastructure to which the Competitive Process will apply are the two single circuit 500 kilovolt (kV) alternating current transmission facilities from the Edmonton region to the Fort McMurray region. In 2011, the AESO's focus was on developing the process which included stakeholder consultation, process definition and document development, in addition to the Competitive Process Application being filed with the AUC in September. In 2012, the focus will be on completing the AUC's regulatory process and preparing for the implementation of the first competition.

Over the last year, the industry made considerable advancements to implement the Ministerial Order to facilitate increased transparency and monitoring of TFO costs for large projects prior to their rate hearings. The AESO has assisted in this process through the development of a cost monitoring and reporting process to support the efforts of the industry Cost Monitoring Committee, which included the creation of a benchmarking database of Alberta project information that is being expanded to include other jurisdictions. The AESO will continue to support the committee in 2012.

During 2010, the AESO worked with industry to explore the development of a new demand response product to support higher import levels on the Alberta-B.C. intertie. In late 2011, the Load Shed Service for Imports (LSSi) was operationalized which is interruptible load used to maintain system reliability when there is a loss of transmission on the B.C. intertie. This service allows for an increase of import available transfer capability by 100 to 200 megawatts above current import levels. The forecast cost for this new service is $58.0 million for 2012.

Timely approval and implementation of proposed transmission upgrades remain as priorities for the AESO to maintain reliable operation and to enable the reliable integration of new load and generation connections. The levels of generation constraints will depend on both unplanned outages as well as the coordination of planned transmission and generator outages. The AIES currently meets the industry reliability requirements; however, with increasing loads and generation requests in the queue, the level of congestion on the system is expected to increase until more transmission is built, particularly in the Keephills-Ellerslie-Genesee (KEG), southwest and northeast areas. The northwest area continues to rely on TMR generation, while a number of short-term and long-term transmission developments are expected to reduce TMR requirements in the area. In the operations of the system, some generation constraints will be unavoidable.

The AIES supply margins appear adequate during the next two years as Alberta's economy recovers from the downturn that slowed load growth. Market forces continue to govern generation development in accordance with expected load growth as evidenced by the volume of generation queuing to arrange for connection to the system. The AESO will continue to focus on rules, procedures and system analysis along with the continued emphasis on training and IT development to equip the AESO's system controllers to manage the reliability of the Alberta system.

The AESO, in support of a sustainable, energy-only market design in Alberta, is continuing to focus on the development and implementation of enhancements to the market rules. In 2012, and through the next several years, the AESO will continue to focus on market design initiatives such as wind integration, interties, demand response, transmission system access and operating reserve market redesign and continued analysis of recommendations from the 2010 independent review of the sustainability of the Alberta market design. Many of these projects will require capital investment for new computer systems and applications. A replacement of the existing market IT systems will be assessed in 2012. If this assessment indicates the need for new systems or major upgrades, implementation would begin no earlier than 2013.

Preparation of the updated *Long-term Transmission Plan*, which will be filed with the AUC in the second half of 2012, is ongoing. The AESO has refined its processes with respect to load and generation forecasting, and continues to enhance its system studies and scenario development. Consultation on the *Long-term Transmission Plan* will continue with stakeholders.

International Financial Reporting Standards

Canadian GAAP for publicly accountable entities has been replaced with International Financial Reporting Standards (IFRS) effective January 1, 2011. In September 2010, the Canadian Accounting Standards Board (AcSB) approved an optional deferral of one year to the mandatory date for adoption of IFRS by qualifying entities with rate-regulated activities to January 1, 2012. This deferral is limited to entities that have activities subject to cost-based regulation and that recognize regulatory assets and regulatory liabilities. This deferral resulted from the AcSB's recognition that the IFRS currently do not provide specific guidance on rate-regulated activities.

Following discussions with the AESO's advisory public accounting firm and the Audit Committee, management has opted to transition to IFRS effective January 1, 2012. Based on management's preliminary assessment, there will be no material differences on transition. The Audit Committee and the AESO Board are provided with regular updates as management continues to move forward with the adoption of IFRS.

Risk Management

Similar to other ISOs and wholesale market facilitators, the AESO is exposed to various risks and uncertainties in the normal course of business. The risk management processes the AESO has developed are designed to identify the risks confronting the AESO, assess the impact and likelihood of those risks occurring and determine mitigation strategies to be taken. AESO management is responsible for the ongoing operations of the organization including its risk management programs. Regular reports are provided to the Audit Committee and the AESO Board detailing the status of the identified risks and related mitigation strategies. The AESO prioritizes the identified risks and incorporates this information into the organization's corporate strategies and annual goals and objectives.

While many of the risks identified by the AESO's risk management processes are not directly within the AESO's control, 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 characterized by a philosophy of continuous improvement. The key features of the AESO's internal control environment, which facilitate the AESO's risk management processes, are as follows:

- The AESO is governed by Members of the AESO (Members) who are individuals appointed by the Alberta Minister of Energy. The Members function as a board of directors (AESO Board). Each Member acts in the public interest. In addition, the AESO Board collectively acts in the public interest and independently from any person or entity having a material interest in the electricity industry. The *Alberta Public Agencies Governance Act*[1] clarifies the role of the AESO as a public agency subject to government policies applicable to it, or its activities or functions. The AESO is in a position to comply with this legislation once proclaimed, including the execution of a document describing relevant roles and mandates of both the AESO and the Ministry of Energy.

[1] *Assented to on June 4, 2009; in effect on proclamation.*

- Corporate policies are developed and approved by the AESO Board or the President and Chief Executive Officer as delegated by the AESO Board. Corporate policies are communicated to employees 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 management foster this culture throughout the organization and maintains an effective complaint policy. The AESO maintains Codes of Conduct applicable to its Members and 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.
- The AESO's 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 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 and 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, management concludes that, as of December 31, 2011, the AESO maintains effective internal control 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.
- An internal audit function provides the organization with an objective and independent assessment of internal controls, risk management activities and governance mechanisms.
- Risk assessment is a continuous process. The AESO is committed to proactively identifying and addressing potential risks as well as implementing appropriate mitigation action plans.
- AESO management reports significant risks to 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

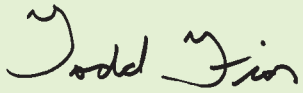
The financial statements of the Alberta Electric System Operator (AESO) are the responsibility of management and have been approved by the AESO Board. These financial statements have been prepared by management in accordance with Canadian generally accepted accounting principles, and include the use 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 complying 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 and the 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 auditors' report outlines the scope of their examination and states their opinion. The auditors have access to the Audit Committee, with and without the presence of management.

David Erickson, CA
President & Chief Executive Officer



Todd D. Fior, CA
Vice-President, Finance

To the Members of the Alberta Electric System Operator Board

We have audited the accompanying financial statements of the Alberta Electric System Operator (AESO) which comprise the balance sheet as at December 31, 2011, and the statements of operations and comprehensive income and cash flows for the year 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 audit. We conducted our audit 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 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, 2011, and the results of its operations and its cash flows for the year then ended in accordance with Canadian generally accepted accounting principles.

Other Matter

The financial statements of the Alberta Electric System Operator for the year ended December 31, 2010 were audited by other auditors who expressed an unmodified opinion on those statements on February 16, 2011.

Ernst & Young LLP

Independent Chartered Accountants
Calgary, Alberta

February 15, 2012

Balance Sheet

As at December 31 (in thousands of Canadian dollars)	**2011**	2010
Assets		
Current assets		
Cash	**$ 18,656**	$ 47,503
Accounts receivable *(note 4)*	**114,274**	100,163
Prepaid expenses and deposits	**3,158**	2,362
MSA deferral account receivable	**86**	59
AESO deferral account receivable *(notes 3 and 8)*	**–**	12,967
	136,174	163,054
Intangible assets, net *(note 5)*	**54,796**	47,816
Capital assets, net *(note 6)*	**33,206**	29,075
	$ 224,176	$ 239,945
Liabilities		
Current liabilities		
Accounts payable and accrued liabilities *(note 7)*	**$ 143,943**	$ 139,950
Security deposits *(note 14)*	**14,500**	9,080
Bank debt *(note 9)*	**54,800**	89,800
AESO deferral account payable *(notes 3 and 8)*	**10,023**	–
	223,266	238,830
Deferred rent	**910**	1,115
Equity *(note 1)*	**–**	–
	$ 224,176	$ 239,945
Asset retirement obligation *(note 11)*		
Contingencies and commitments *(note 12)*		

On behalf of the AESO Board:

Harry Hobbs
AESO Board Chairman

Robert McClinton, CA
Audit Committee Chair

See accompanying notes

Statement of Operations and Comprehensive Income

For the year ended December 31 (in thousands of Canadian dollars)	**2011**	2010
Revenue		
Transmission tariff	**$ 1,427,753**	$ 1,019,706
Energy market charge	**34,668**	31,520
Load settlement charge	**3,582**	3,734
Interest and other	**2,448**	996
	1,468,451	1,055,956
Operating costs and expenses		
Wires costs	**779,706**	640,884
Ancillary services costs	**367,243**	173,005
Line losses	**190,454**	130,550
General and administrative	**88,565**	73,557
Other industry costs	**22,376**	21,977
Amortization *(notes 5 and 6)*	**17,470**	13,698
Interest expense *(note 9)*	**2,637**	2,285
	1,468,451	1,055,956
Net income and comprehensive income	**$ –**	$ –

See accompanying notes

Statement of Cash Flows

For the year ended December 31 (in thousands of Canadian dollars)		**2011**		2010
Operating activities				
Net income	**$**	**–**	$	–
Amortization		**17,470**		13,698
Net change in non-cash working capital items related to operating activities*		**(5,494)**		50,846
Net cash provided by operating activities		**11,976**		64,544
Investing activities				
Intangible asset additions		**(19,932)**		(16,909)
Capital asset additions		**(8,649)**		(6,238)
Net cash used in investing activities		**(28,581)**		(23,147)
Financing activities				
Decrease in bank debt		**(35,000)**		(23,850)
Increase (decrease) in AESO deferral accounts		**(22,900)**		(10,049)
Decrease in deferred rent		**(205)**		(169)
Decrease in MSA deferral account		**(27)**		(17)
Net cash used in financing activities		**(12,242)**		(34,085)
(Decrease) Increase in cash		**(28,847)**		7,312
Cash, beginning of year		**47,503**		40,191
Cash, end of year	**$**	**18,656**	$	47,503
Cash interest paid	**$**	**2,637**	$	2,445

** Consists of changes in accounts receivable, prepaid expenses and deposits, accounts payable and accrued liabilities, and security deposits.*

See accompanying notes

December 31, 2011 and 2010

(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.

Effective June 1, 2003, the AESO assumed responsibility for operating and promoting a 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 is governed by Members of the AESO (Members) who are individuals appointed by the Alberta Minister of Energy. The Members function as a board of directors (AESO Board). Each Member acts in the public interest. In addition, the AESO Board collectively acts in the public interest and independently from any person or entity having a material interest in the electricity industry. The AESO Board has three committees and one task force: Audit Committee, Human Resources, Compensation and Nominations Committee, Corporate Governance Committee and Transmission Advisory Task Force.

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) and approved based upon 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).

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 they are determined.

CHANGE IN ACCOUNTING ESTIMATE – During the year ended December 31, 2010, the estimate for the useful life of a class of capital assets was increased. The change in estimate was due to a reassessment of the period in which facility infrastructure assets would be available and used in the AESO's operations. These assets were combined with the system coordination facility assets, with the useful life extended from a 10-year to a 20-year amortization period ending in July 2025. The impact of this change on 2010 amortization was a decrease of $0.1 million.

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 recognized in the deferral accounts and refunded in the subsequent year. In circumstances where annual collections are less than the costs, the shortfall is recorded as revenue, recognized in the deferral accounts and collected in the subsequent year.

A portion of the energy market charge collected by the AESO is remitted to the Market Surveillance Administrator (MSA), a separate statutory corporation, 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 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 to 7 years or Over the term of the licence agreement for customization of Software as a Service
System coordination computer systems	7 years

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:

Computer hardware, furniture and office equipment	3 to 5 years
System coordination computer systems	7 years
System coordination facility	Over the land lease term ending in 2025
Leasehold improvements	Over the lease term ending in 2014

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.

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 those costs directly attributable to one of the AESO's main functions as well as a portion of 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 function-by-function basis.

The EUA requires the AESO to provide funding for the MSA 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 monthly payments associated with the MSA are recorded in the MSA deferral account.

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.

EMPLOYEE FUTURE BENEFITS – The AESO's employee future benefit program consists of a defined contribution plan. The AESO's contributions to employee future benefit plans 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.

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

RECENT ACCOUNTING PRONOUNCEMENTS ADOPTED –

Canadian Generally Accepted Accounting Principles

The AESO will cease to prepare its financial statements in accordance with Canadian GAAP as set out in Part V of the CICA Handbook – Accounting for the periods beginning on January 1, 2012 when it will start to apply, on a retrospective basis, International Financial Reporting Standards (IFRS) as published by the International Accounting Standards Board as its primary basis of accounting. There are no recently adopted accounting changes to Canadian GAAP, as the focus for changes in accounting standards has shifted to IFRS.

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 IFRS as promulgated by the AcSB. In September 2010, the AcSB approved an optional deferral of one year to the mandatory date for adoption of IFRS by qualifying entities with rate-regulated activities to January 1, 2012. This deferral applies only to entities subject to cost-based regulation. This deferral resulted from the AcSB's recognition that the IFRS currently do not provide specific guidance on rate-regulated activities.

As the AESO is not a publicly accountable entity, there is no requirement for the AESO to transition to IFRS; however, the AESO has opted to transition to IFRS effective January 1, 2012, with a January 1, 2011 transition date. The adoption of these standards will have an impact on the presentation of the AESO's results of operations, financial position, cash flows and accompanying notes. Based on management's preliminary assessment, there will be no material differences on transition.

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 customers 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 customers as a result of the rate-setting process.

As of December 31,	**2011**	2010
Regulatory assets		
Transmission deferral	**$ –**	$ 11,038
Regulatory liabilities		
Transmission deferral	**$ 10,548**	$ –

At December 31, 2011, the transmission deferral liability was $10.5 million based upon an accumulation of variances between transmission revenue collections and costs incurred in 2011 and prior years. The AESO applies to the AUC 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, customers 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, 2011 (note 8).

All transmission-related financial activities of the AESO are subject to the AUC'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 AESO's not-for-profit status.

4. Accounts Receivable

As of December 31,	**2011**	2010
Transmission settlement	**$ 106,848**	$ 92,019
Energy market settlement	**3,382**	3,270
Trade	**4,044**	4,874
	$ 114,274	$ 100,163

5. Intangible Assets

	Cost	Accumulated Amortization	**2011 Net Book Value**
Software development	$ 63,175	$ 29,674	**$ 33,501**
System coordination computer systems	18,855	5,187	**13,668**
Work in progress	7,627	–	**7,627**
	$ 89,657	$ 34,861	**$ 54,796**

	Cost	Accumulated Amortization	2010 Net Book Value
Software development	$ 52,530	$ 22,681	$ 29,849
System coordination computer systems	15,848	2,641	13,207
Work in progress	4,760	–	4,760
	$ 73,138	$ 25,322	$ 47,816

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, 2011, $2.9 million of payroll and payroll-related costs associated with staff directly involved in software development have been capitalized (2010 – $2.0 million) and no interest costs were capitalized in 2011 (2010 – $0.2 million during the design and development phases of a software project).

6. Capital Assets

	Cost	Accumulated Amortization	**2011 Net Book Value**
System coordination facility	$ 22,289	$ 6,252	**$ 16,037**
Computer hardware, furniture and office equipment	9,293	5,057	**4,236**
System coordination computer systems	2,997	797	**2,200**
Leasehold improvements	4,558	2,801	**1,757**
Work in progress	8,976	–	**8,976**
	$ 48,113	$ 14,907	**$ 33,206**

	Cost	Accumulated Amortization	2010 Net Book Value
System coordination facility	$ 21,807	$ 5,088	$ 16,719
Computer hardware, furniture and office equipment	8,604	4,132	4,472
System coordination computer systems	2,392	399	1,993
Leasehold improvements	4,185	2,290	1,895
Work in progress	3,996	–	3,996
	$ 40,984	$ 11,909	$ 29,075

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, 2011, $0.2 million of payroll and payroll-related costs associated with staff directly involved in hardware development have been capitalized (2010 – $0.2 million) and no interest costs were capitalized in 2011 (2010 – nil).

7. Accounts Payable and Accrued Liabilities

As of December 31,	**2011**	2010
Transmission settlement	**$ 93,970**	$ 92,022
Trade	**42,563**	41,429
Accrued liabilities	**7,410**	6,499
	$ 143,943	$ 139,950

8. AESO Deferral Accounts Receivable (Payable)

	Transmission	Energy Market	Load Settlement	Total
Opening balance, January 1, 2010	$ (66)	$ 3,190	$ (206)	$ 2,918
2010 Operations	9,333	(718)	(337)	8,278
Distribution of the 2009 Deferral Account Reconciliation Application	1,771	–	–	1,771
Closing balance, December 31, 2010	11,038	2,472	(543)	12,967
2011 Operations	(21,586)	(1,104)	(300)	(22,990)
Closing balance, December 31, 2011	**$ (10,548)**	**$ 1,368**	**$ (843)**	**$ (10,023)**

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 2011 and 2010.

At December 31, 2011, $54.8 million (2010 – $89.8 million) was drawn on the facilities and a $10.0 million letter of credit was issued as security for operating reserve procurement.

The amount of interest paid during 2011 was $2.6 million (2010 – $2.4 million) at an average interest rate of 1.1 per cent (2010 – 0.7 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 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,	**2011**	2010
Bank debt	**$ 54,800**	$ 89,800

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)*
2012	4.4
2013	3.9
2014	3.1
2015	0.1
2016	0.1
Thereafter	1.1

(ii) To fulfill 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 2011, $2.8 million was paid to the MSA (2010 – $3.1 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 2011, $19.3 million was paid to the AUC (2010 – $19.0 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 $3.4 million in 2011 (2010 – $3.0 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, 2011
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, 2011 and 2010, the amount of financial assets that were past due was not material and there were no 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 slightly 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, 2011, the AESO's maximum exposure to receivable credit risk was $114.3 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, 2011, the amount of financial assets that were past due was not material.

b) **MARKET RISK –** The AESO is exposed to currency risk on $0.5 million of U.S. dollar denominated financial liabilities at December 31, 2011.

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 and intangible asset costs would decrease (increase) by 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.

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