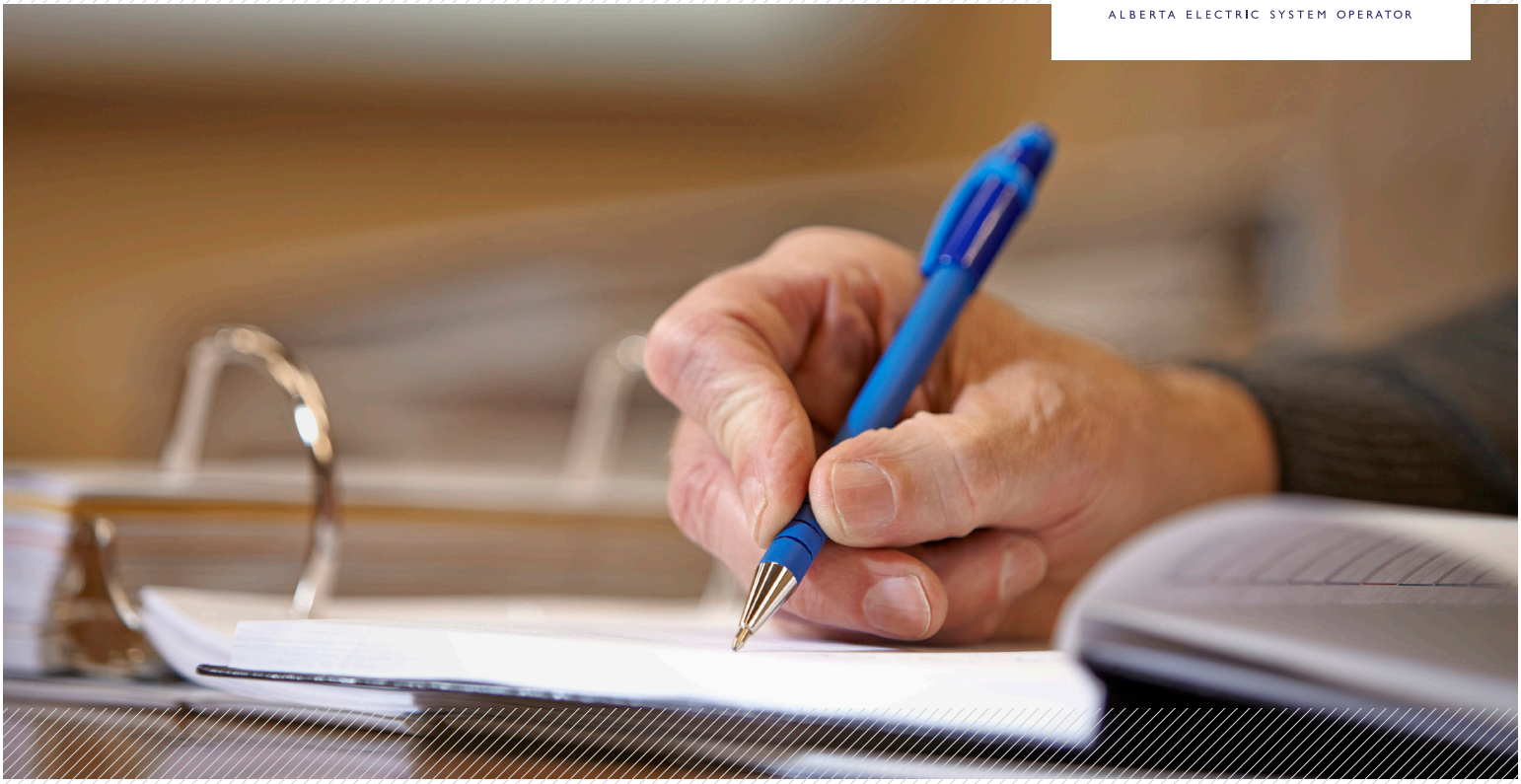
aeso
ALBERTA ELECTRIC SYSTEM OPERATOR



MD&A

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

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

This management's discussion and analysis of financial condition and results of operations (MD&A) as of February 16, 2017, should be read in conjunction with the Alberta Electric System Operator's (AESO) audited financial statements for the years ended December 31, 2016 and 2015 and accompanying notes. This MD&A is intended to provide an understanding of the AESO's business, financial operations, expectations of the future and management of risk. The MD&A and financial statements are reviewed and approved by the AESO Board. The financial statements are expressed in Canadian dollars.

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

The AESO recovers its costs through four separate revenue sources by way of collections from market participants, or owners of electric distribution systems and wires service providers for load settlement; there is no government funding for the operations of the AESO.

Summary Annual Highlights

The AESO, a not-for-profit statutory corporation, recovers its operating, intangible asset and property, plant and equipment (PP&E) costs through four 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,

	2016	2015	Change	% Change
Collections	**1,825.7**	1,895.9	(70.2)	(4)
Revenue	**(46.4)**	12.7	(59.1)	(465)
Other revenue	**0.8**	1.0	(0.2)	(20)
Total revenue	**1,780.1**	1,909.6	(129.5)	(7)
Transmission operating costs	**1,634.9**	1,767.1	(132.2)	(7)
Other industry costs	**22.6**	22.6	(0.0)	(0)
General and administrative costs	**97.5**	93.4	4.1	4
Amortization and depreciation	**24.3**	26.0	(1.7)	(7)
Interest costs	**0.8**	0.5	0.3	60
Total costs	**1,780.1**	1,909.6	(129.5)	(7)

Numbers may not add due to rounding

Total Costs

Transmission Operating Costs

Transmission operating costs represent wires costs, operating reserves, transmission line losses and other ancillary services costs. In 2016, transmission operating costs are $1,634.9 million, which is $132.2 million or seven per cent lower than the 2015 costs of $1,767.1 million. This decrease is associated with lower operating reserves, transmission line losses and wires costs in 2016.

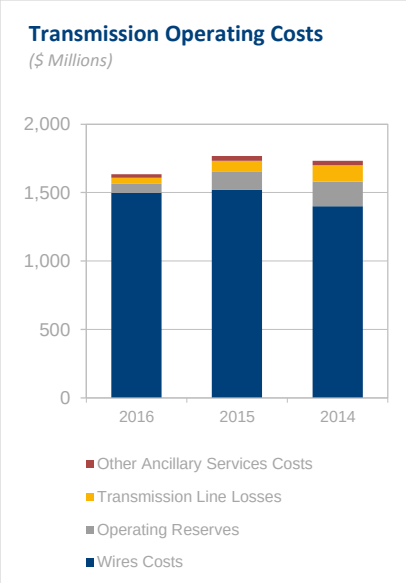
($ Millions) Years ended December 31,

	2016	2015	Change	% Change
Wires costs	**1,497.6**	1,518.5	(20.9)	(1)
Operating reserves	**66.4**	137.3	(70.9)	(52)
Transmission line losses	**43.5**	76.7	(33.2)	(43)
Other ancillary services costs	**27.4**	34.6	(7.2)	(21)
Transmission operating costs	**1,634.9**	1,767.1	(132.2)	(7)

Numbers may not add due to rounding

Wires Costs

Wires costs represent the amounts paid primarily to Transmission Facility Owners (TFOs) in accordance with their Alberta Utilities Commission (AUC)-approved tariffs and are not controllable costs of the AESO. Wires costs in 2016 are $1,497.6 million, which is $20.9 million or one per cent lower than the 2015 costs of $1,518.5 million due to TFO deferral account adjustments from prior years which were offset by higher regulated rates charged by the TFOs for the current year. The AESO understands that the higher TFO tariffs reflect capital and operating costs associated with projects providing additional transmission system capacity, as well as higher costs to operate and maintain existing transmission facilities.



Operating Reserves

Operating reserves are generating capacity or load that is held in reserve and made available to the System Controller to manage the transmission system supply/demand balance in real time. There are three types of operating reserves with the minimum volumes of operating reserves required based on Alberta Reliability Standards:

- **Regulating reserves** – The generation capacity, energy and manoeuverability responsive to the AESO's automatic generation control (AGC) system that is required to automatically balance supply and demand on a minute-to-minute basis in real time.
- **Spinning reserves** – Unloaded generation that is synchronized to the transmission system, automatically responsive to frequency deviation and ready to provide additional energy in response to

an AESO System Controller directive. Spinning reserve suppliers must be able to ramp up their generator within 10 minutes of receiving a System Controller directive.

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

Operating reserves are procured through an online, day-ahead exchange, where offer prices are indexed to the pool price. In exchange for this payment, the AESO obtains the right to utilize the provider's energy and/or capacity as reserves. The procurement of operating reserve volumes is directly correlated to load and generation. While the prices of operating reserves are indexed to the pool price, changes to the average pool price do not result in proportional changes to the operating reserve costs; the pool price for each hour has a significant impact on the operating reserve costs for that hour. Additionally, during periods of high hourly pool prices, the less expensive operating reserve suppliers may not be available, which results in higher operating reserve costs.

Operating reserve costs in 2016 are $66.4 million, which is $70.9 million or 52 per cent lower than the 2015 costs of $137.3 million. The cost of operating reserves is impacted by actual volumes, hourly pool prices and operating reserve prices. The average hourly pool price is $18 per megawatt hour (MWh) in 2016 compared to $33 per MWh in 2015, representing a decrease of 45 per cent. Operating reserve volumes financially settled in 2016 are 7,359 gigawatt hours (GWh) compared to 7,545 GWh in 2015, representing a two per cent decrease. The cost variance is mainly attributable to lower pool prices and changes to offer behavior.

Transmission Line Losses

Transmission line losses represent the volume 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 process 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 imports) 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 based on the hourly pool price.

The cost of transmission line losses in 2016 is $43.5 million, which is $33.2 million or 43 per cent lower than the 2015 cost of $76.7 million due to the impact of a 45 per cent lower average pool price and lower line loss volumes in 2016. Line loss volumes financially settled in 2016 are 2,165 GWh compared to 2,330 GWh in 2015, representing a seven per cent decrease which is associated with higher Southern Alberta generation and various transmission system enhancements that have the effect of reducing transmission line losses.

Other Ancillary Services

The AESO procures other ancillary services for the secure and reliable operation of the AIES. These services are procured through a competitive procurement process where possible, or in instances where such procurement processes may not be feasible, through bilateral negotiations.

In 2016, other ancillary services costs are $27.4 million, which is $7.2 million or 21 per cent lower than the 2015 costs of $34.6 million. The decrease is mainly attributable to lower costs related to transmission must-run operational requirements.

($ Millions) Years ended December 31,

	2016	2015	Change	% Change
Load shed service for imports	**18.2**	17.4	0.8	5
Transmission must-run				
Contracted	**-**	-	-	-
Conscripted	**1.3**	10.4	(9.1)	(88)
Reliability services	**2.9**	2.1	0.8	38
Poplar Hill	**2.8**	2.6	0.2	8
Black start	**2.1**	2.1	(0.0)	-
Transmission constraint rebalancing	**0.0**	-	0.0	-
Total Other Ancillary Services	**27.4**	34.6	(7.2)	(21)

Numbers may not add due to rounding

Load shed service for imports (LSSi) is interruptible load that can be armed to trip, either automatically or manually, on the loss of the Alberta-British Columbia intertie to allow for increased import available transfer capability (ATC). The 2016 costs for LSSi are $18.2 million, which is $0.8 million or five per cent higher than the 2015 costs of $17.4 million. LSSi costs are impacted by volume availability, contract prices and AIES requirements for arming and tripping requirements.

Transmission must-run (TMR) occurs when generation is required to mitigate the overloading of transmission lines associated with line outages, system conditions in real time or the loss of generation in an area. In circumstances when this service is required for an unforeseeable event and there is no contracted TMR, non-contracted generators may be dispatched to provide this service (referred to as conscripted TMR). Conscripted TMR costs in 2016 are $1.3 million, which is $9.1 million or 88 per cent lower than the 2015 costs of $10.4 million. There were two notable events on the transmission system in 2015 that required TMR services and resulted in higher costs.

Reliability services are provided through an agreement with Powerex Corp. for grid restoration balancing support in the event of an Alberta blackout and emergency energy in the event of supply shortfall. The agreement came into effect on April 1, 2015.

The Poplar Hill generator provides voltage support (VArs) in addition to power (MW), to support transmission system reliability in the province. Additional costs were incurred in 2016 due to operational constraints in the Northwest region of Alberta.

Transmission constraint rebalancing costs are incurred when the transmission system is unable to deliver electricity from a generator to a given electricity consuming area without contravening reliability requirements. When this occurs, a market participant downstream of a constraint may be dispatched for purposes of transmission constraint rebalancing under the Independent System Operator (ISO) Rules and would receive a transmission constraint rebalancing payment for energy provided for that purpose. Transmission constraint rebalancing came into effect on November 26, 2015. There were no significant events in 2016.

Other Industry Costs

Other industry costs represent fees or costs paid based on regulatory requirements or membership fees for industry organizations, which are not under the direct control of the AESO. These costs relate to the annual administration fee for the AUC, the AESO's share of Western Electricity Coordinating Council (WECC) and Northwest Power Pool (NWPP) membership fees and regulatory process costs. Regulatory process costs are associated with the AESO's involvement in an AUC proceeding to hear objections and complaints to ISO Rules or a regulatory application and costs incurred to respond to specific agency-related directions or recommendations that are beyond the routine operations of the AESO; this does not include application preparation costs.

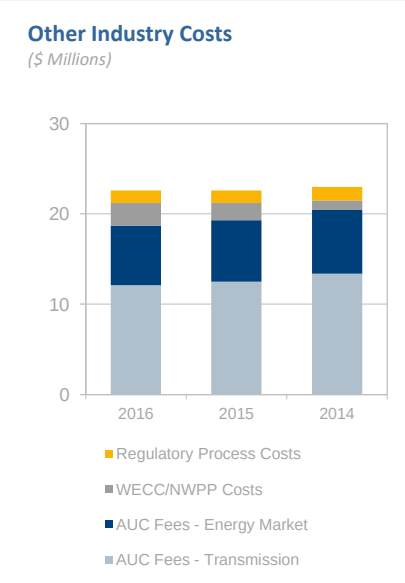
Other industry costs in 2016 are $22.6 million, which is consistent with 2015 costs.

($ Millions) Years ended December 31,

	2016	2015	Change	% Change
AUC Fees – Transmission	**12.1**	12.5	(0.4)	(3)
AUC Fees – Energy Market	**6.6**	6.8	(0.2)	(3)
WECC/NWPP costs	**2.5**	1.9	0.6	32
Regulatory process costs	**1.4**	1.4	0.0	-
Other industry costs	**22.6**	22.6	(0.0)	0

Numbers may not add due to rounding

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



The AESO's share of WECC membership fees in 2016 is $1.6 million, payable in US dollars, which is $0.2 million or 11 per cent higher than the 2015 fees of $1.5 million. The increase in WECC membership fees is the result of an increase in WECC costs which

are allocated to the AESO on a percentage share basis and a weakening of the Canadian dollar in 2016.

Regulatory process costs in 2016 are $1.4 million, which is consistent with the 2015 costs. In 2016, payments to retailers in the Fort McMurray fire-affected area occurred, in addition to the regulatory proceeding costs. The former was an agreed to arrangement between the distribution facility owner, the AUC, affected retailers and the AESO. The payments of $0.6 million to retailers will be passed on to non-industrial customers to offset energy charged during the Fort McMurray area evacuation period. The notable regulatory proceedings during 2016 relate to transmission loss factors ($0.2 million); historical trading report ($0.2 million); and the AESO's participation in the Fort McMurray West 500kV Transmission Project Permit and Licence (P&L) proceeding ($0.2 million).

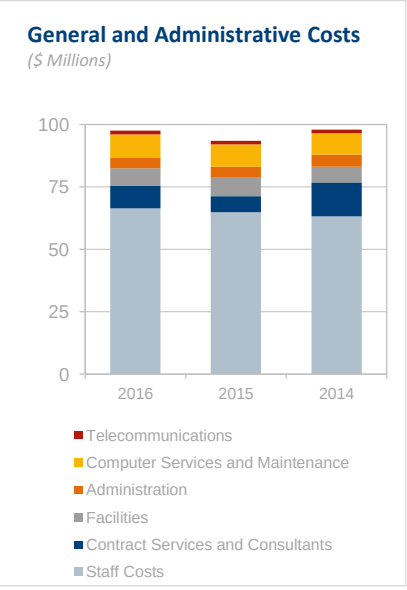
General and Administrative Costs

($ Millions) Years ended December 31,

	2016	2015	Change	% Change
Staff costs	**66.4**	64.8	1.6	2
Contract services and consultants	**9.0**	6.5	2.5	38
Facilities	**7.0**	7.6	(0.6)	(8)
Administration	**4.3**	4.1	0.2	5
Computer services and maintenance	**9.3**	9.0	0.3	3
Telecommunications	**1.5**	1.4	0.1	7
General and administrative costs	**97.5**	93.4	4.1	4

Numbers may not add due to rounding

General and administrative costs in 2016 are $97.5 million, which is $4.1 million or four per cent higher than the 2015 costs of $93.4 million. This increase is mainly associated with an increase in staff and contract services and consultants costs.



Staff Costs

The AESO is committed to the successful delivery of its corporate objectives, and to achieve this, it is supported by knowledgeable and dedicated staff. To retain this strong resource base, a competitive compensation package is offered and a rewarding work environment has been created.

In 2016, staff costs are $66.4 million, which is $1.6 million or two per cent higher than the 2015 costs of $64.8 million.

Contract Services and Consultants

The AESO uses contract services and consultants to supplement staff resources for two general purposes: to provide knowledgeable experts to address specific work assignments and to provide resource support to address workload peaks to maintain seamless operations.

In 2016, contract services and consultants costs are $9.0 million, which is $2.5 million or 38 per cent higher than the 2015 costs of $6.5 million. The AESO has been focused on the delivery and support of two new initiatives in 2016:

- In association with the Government of Alberta's Climate Leadership Plan (CLP), develop the Renewable Electricity Program (REP); support for coal retirement discussions; and assess the market impact with the introduction of renewable electricity to ensure transmission system reliability is not compromised; and
- Debt funding competition for the Fort McMurray West 500kV Transmission Project which is required to obtain financing for the project.

Facilities

In 2016, facilities costs are $7.0 million, which is $0.6 million or eight per cent lower than the 2015 costs of $7.6 million. The decrease in costs is associated with lower operating costs for the downtown office leases in 2016.

Administration

Administration costs include training, travel, insurance, corporate subscriptions, AESO Board fees and office costs. In 2016, administration costs are $4.3 million, which is $0.2 million or five per cent higher than the 2015 costs of $4.1 million. The increase in costs is mainly due to additional corporate training initiatives and corporate subscriptions.

Computer Services and Maintenance

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

In 2016, computer services and maintenance costs are $9.3 million, which is $0.3 million or three per cent higher than the 2015 costs of $9.0 million. The increase in costs is associated with additional licence and maintenance agreements and a weakening of the Canadian dollar in 2016, as several of the AESO's major licence and maintenance agreements are denominated in US dollars.

Telecommunications

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

In 2016, telecommunication costs are $1.5 million, which is consistent with the 2015 costs of $1.4 million.

Amortization and Depreciation and Interest

($ Millions) Years ended December 31,

	2016	2015	Change	% Change
Amortization of intangible assets and depreciation of PP&E	**24.3**	26.0	(1.7)	(7)
Interest costs	**0.8**	0.5	0.3	60

Amortization of Intangible Assets and Depreciation of Property, Plant and Equipment

Intangible assets are amortized and PP&E is depreciated over their estimated useful lives. Intangible assets include the AESO's computer software purchases and development costs.

In 2016, amortization of intangible assets and depreciation of PP&E collectively total $24.3 million, which is $1.7 million or seven per cent lower than the 2015 amortization of $26.0 million. The decrease in 2016 is due to several factors, most notably a reduced depreciable asset base, as $23.6 million of fully depreciated assets were retired in 2016 and only $20.7 million of depreciable assets were added over the course of the year. In addition, the estimated useful lives of the AESO's system coordination facility assets and furniture and office equipment assets were extended in 2016 as a result of operational considerations, resulting in lower depreciation for these assets in 2016 as compared to 2015. The AESO's current operating version of its Energy Management System (EMS) was also fully depreciated as of October, resulting in two less months of amortization in 2016 as compared to 2015.

Interest

Interest costs are associated with borrowing costs for debt financing, portions of which are capitalized when directly incurred during the development or construction of an asset, and financing costs associated with adjustments to the recognized decommissioning liability.

Debt financing occurs to fund intangible asset and PP&E purchases, prepayments of future expenses and working capital deficiencies due to timing differences in the collection of revenues and payment of costs. Intangible assets and PP&E are financed through the AESO's credit facilities and recovered as amortization and depreciation over the useful lives of the assets. Capitalized borrowing costs in 2016 were $0.4 million compared to $0.2 million in 2015.

Interest costs in 2016 are $0.8 million, which is $0.3 million higher than the 2015 costs of $0.4 million. In 2016, the average borrowing requirements increased due to cash shortfalls throughout the year associated with the deferral accounts, most notably the transmission deferral account, and prepayments of future expenses.

Intangible Assets and Property, Plant and Equipment

Intangible asset and PP&E purchases total $31.9 million in 2016 compared to $27.4 million in 2015. The AESO's development and acquisition of intangible assets and PP&E, most significantly the investment in information technology infrastructure and business systems, is a key component of business operations. As with all information technology-intensive organizations, the AESO's challenge is to find the appropriate balance between implementing technology advancements, determining the level of information technology development that can be supported by business operations, and validating the overall

financial requirement. To address these challenges, a vetting and prioritization process occurs to ensure intangible asset and PP&E purchases achieve the most beneficial and cost-effective results, while continuing to meet operating requirements.

In 2016, almost half of the intangible asset and PP&E purchases relate to the EMS Implementation Project. The EMS is a critical control system used by the AESO to manage and operate the AIES. This system will deliver necessary cyber security, technology and functionality, in addition to addressing certain Critical Infrastructure Protection standard requirements. The EMS project was initiated in 2014 and is planned to be complete in 2017, resulting in the implementation of an upgraded EMS (version 3.0).

The Market Systems Replacement and Reengineering (MSR) Implementation Project was initiated in 2013 to secure the reliability and flexibility of the AESO's market systems with the project development and implementation expected to span multiple years. The first system enhancements were commissioned in 2015 with additional intangible and PP&E costs incurred in 2016.

The remainder of the intangible asset and PP&E purchases in both 2016 and 2015 are associated with base system hardware and software application replacements, additions, and continued development and upgrades to operational systems.

The AESO's net book value for intangible assets and PP&E total $88.4 million in 2016 compared to $81.3 million in 2015. As of December 31, 2016, approximately 83 per cent (2015 – 81 per cent) of the net book value relates to computer infrastructure and business systems with the remaining value associated with the AESO's system coordination facility, furniture and office equipment.

Service Area Cost Detail

Allocation of Costs for Revenue Requirements

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

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

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

Allocation and Cost Classifications

General Classification	Cost Categories	AESO Services (%)			
		Trans-mission	Energy Market	Renew-ables	Load Settlement
Operating	• Wires	100	-	-	-
	• Ancillary services	100	-	-	-
	• Transmission line losses	100	-	-	-
Non-operating	• Other industry • General and administrative • Amortization of intangible assets and depreciation of PP&E • Interest	Costs allocated based on established methodology			

Allocation of Non-Operating Costs

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

($ Millions) Years ended December 31,

		Trans-mission	Energy Market	Renew-ables	Load Settlement	Total
Other industry	**2016**	**15.0**	**7.6**	**-**	**-**	**22.6**
	2015	14.8	7.8	-	-	22.6
General and administrative	**2016**	**70.2**	**21.7**	**4.4**	**1.2**	**97.5**
	2015	67.8	24.6	-	1.0	93.4
Amortization and depreciation	**2016**	**15.5**	**8.6**	**-**	**0.2**	**24.3**
	2015	16.3	9.5	-	0.2	26.0
Interest	**2016**	**0.1**	**0.7**	**0.0**	**0.0**	**0.8**
	2015	(0.0)	0.5	-	0.0	0.5
Total	**2016**	**100.8**	**38.6**	**4.4**	**1.4**	**145.2**
	2015	98.8	42.4	-	1.2	142.4

Numbers may not add due to rounding

Other Industry

The percentage allocation of other industry costs to the four services is consistent in 2016 and 2015.

General and Administrative

In 2016, a review of the cost recovery allocations associated with the EMS and AESO facilities resulted in a higher allocation percentage being assigned to the transmission service area and less to energy market. Also impacting the assignment of costs to service areas was the creation of the renewables cost recovery service area.

Amortization and Depreciation

The percentage allocation of amortization and depreciation to the four services is consistent in 2016 and 2015.

Interest

The allocation of interest costs is impacted by cash shortfalls and surpluses from various sources including: net book value of intangible assets and PP&E; deferral account balances; deposits such as generating unit owner's contributions, application fees, security; and prepayments for future expenses. The cash flow sources are associated with each of the service areas to determine the allocation of interest costs and will vary each year.

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 assets and depreciation of PP&E. When revenue collections differ from the annual operating costs, the difference is recorded as an adjustment to revenue, recognized as other accounts receivable or payable and subsequently collected or refunded. The AESO's four revenue sources are from market participants for transmission, energy market and renewables and from owners of electric distribution systems and wires service providers for load settlement; there is no government funding for the operations of the AESO.

Total Revenue

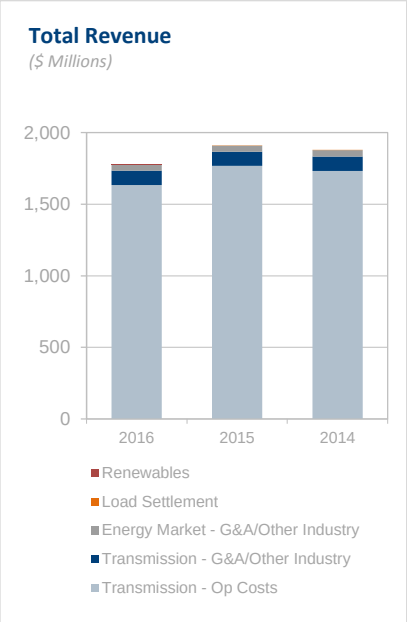
($ Millions) Years ended December 31,

	2016	2015	Change	% Change
Revenue collections				
Transmission	**1,784.9**	1,849.0	(64.1)	(3)
Energy market	**40.6**	46.3	(5.7)	(12)
Renewables	**0.0**	-	-	-
Load settlement	**1.0**	1.5	(0.5)	(33)
Total revenue collections	**1,826.5**	1,896.8	(70.3)	(4)
(Deferred revenue) revenue				
Transmission	**(49.2)**	17.0	(66.1)	(389)
Energy market	**(2.0)**	(4.0)	1.9	48
Renewables	**4.5**	-	4.5	-
Load settlement	**0.3**	(0.3)	0.6	200
Total (deferred revenue) revenue	**(46.4)**	12.7	(59.1)	(465)
Total revenue	**1,780.1**	1,909.5	(129.4)	(7)

Numbers may not add due to rounding

Transmission

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



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

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

When transmission revenue collections are greater than transmission costs, the surplus is recorded as a reduction in revenue, recognized as other accounts payable and subsequently refunded. When transmission revenue collections are less than transmission costs, the shortfall is recorded as revenue, recognized as other accounts receivable and subsequently collected.

TRANSMISSION DEFERRAL SUMMARY

($ Millions) Years ended December 31,

	2016	2015
Revenue collections	**1,784.9**	1,849.0
Costs	**1,735.7**	1,866.0
Transmission (deferred revenue) revenue	**(49.2)**	17.0
Other accounts receivable, beginning of year	**24.7**	7.7
Disbursement (collection) of the deferral account reconciliation applications:		
2015	**6.7**	
2013-2014	**(0.8)**	
Other accounts (payable) receivable, end of year	**(18.6)**	24.7

Numbers may not add due to rounding

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

account balance to zero during the remainder of the calendar year. Rate Rider E is a percentage adjustment to all location-specific loss factors.

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

The transmission settlement deferral account at December 31, 2016 is an $18.6 million payable compared to a $24.7 million receivable at the end of 2015. The change of $43.3 million during 2016 is mainly attributable to a large payment that was received by the AESO in the latter half of 2016 in relation to an AUC Decision on a TFO deferral account application. The significant one-time refund of prior years' costs resulted in transmission revenue collections exceeding transmission costs.

Energy Market

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

For 2016, the AESO's component of the energy market trading charge is 31.5 cents per MWh compared to 30.2 cents per MWh in 2015.

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

When energy market revenue collections are greater than energy market costs, the surplus is recorded as a reduction in revenue, recognized as other accounts payable and subsequently refunded. When energy market revenue collections are less than energy market costs, the shortfall is recorded as revenue, recognized as other accounts receivable and subsequently collected.

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,

	2016	2015
Revenue collections	**40.6**	46.3
Costs	**38.6**	42.4
Energy market deferred revenue	**(2.0)**	(4.0)
Other accounts (payable) receivable, beginning of year	**(0.4)**	3.6
Other accounts payable, end of year	**(2.4)**	(0.4)

Numbers may not add due to rounding

The energy market deferral account at December 31, 2016 is a $2.4 million payable compared to a $0.4 million payable at the end of 2015. The change of $2.0 million is the result of actual costs in 2016 being lower than what was forecast and incorporated into the 2016 energy market trading charge.

Renewables

The AESO is responsible for developing, implementing and administering the Renewable Electricity Program (REP) and recovering the costs through fees charged during each competition and in accordance with renewable electricity support agreements with generators. The renewables service area at the AESO started in 2016 with the Government of Alberta's announcement of the *Climate Leadership Plan*. Revenue collections will start in 2017 with the first competition for renewable attributes under the REP. Currently, the AESO costs associated with renewables include general and administrative and interest costs.

When renewables revenue collections are greater than renewables costs, the surplus is recorded as a reduction in revenue, recognized as other accounts payable and subsequently refunded. When renewables revenue collections are less than renewables costs, the shortfall is recorded as revenue, recognized as other accounts receivable and subsequently collected.

The renewables deferral account is the accumulated difference between revenues collected and costs paid that is receivable from, or payable to, market participants in future competitions for renewable attributes with the deferral balance at the conclusion of the REP settled with the Government of Alberta.

RENEWABLES DEFERRAL SUMMARY

($ Millions) Years ended December 31,

	2016	2015
Revenue collections	**-**	-
Costs	**4.5**	-
Renewables revenue	**4.5**	-
Other accounts receivable, beginning of year	**-**	-
Other accounts receivable, end of year	**4.5**	-

Numbers may not add due to rounding

The renewables deferral account at December 31, 2016 is a $4.5 million receivable.

Load Settlement

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

When load settlement revenue collections are greater than load settlement costs, the surplus is recorded as a reduction in revenue, recognized as other accounts payable and subsequently refunded. When load settlement revenue collections are less than load settlement costs, the shortfall is recorded as revenue, recognized as other accounts receivable and subsequently collected.

The load settlement deferral account is the accumulated difference between revenues collected and costs paid that is receivable from, or payable to, owners of electric distribution systems and wires service providers.

LOAD SETTLEMENT DEFERRAL SUMMARY

($ Millions) Years ended December 31,

	2016	2015
Revenue collections	**1.0**	1.5
Costs	**1.3**	1.2
Load settlement revenue (deferred revenue)	**0.3**	(0.3)
Other accounts payable, beginning of year	**(0.5)**	(0.2)
Other accounts payable, end of year	**(0.2)**	(0.5)

Numbers may not add due to rounding

The load settlement deferral account at December 31, 2016 is a $0.2 million payable compared to a $0.5 million payable at the end of 2015. The change of $0.3 million is the result of load settlement costs exceeding collections; the collections are based on a forecast of 2016 costs.

Market Surveillance Administrator Charge

A portion of the energy market charge collected by the AESO is remitted to the MSA for its revenue requirement in accordance with the *Alberta Utilities Commission Act*. 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 2016, there was no charge for the MSA included in the total energy market trading charge compared to 5.0 cents per MWh in 2015.

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. There is no MSA deferral balance at the end of 2016 or in 2015.

Financial Position and Liquidity

At December 31, 2016, the cash position is $31.6 million, an increase of $30.9 million compared to 2015. Major movements are outlined in the following table:

($ Millions) Years ended December 31,

	2016	2015
Funds provided by operations	**24.3**	26.0
Prepayments for future services	**(11.9)**	(9.9)
Payments for long-term payables	**(6.2)**	(4.0)
Cash provided by (used for) settlements	**77.6**	(44.0)
Cash used for capital expenditures	**(31.5)**	(27.4)
(Repayment)/proceeds from debt financing	**(31.7)**	31.7
Other	**10.3**	(1.5)
Increase (decrease) in cash	**30.9**	(29.1)

Cash Provided By (Used For) Settlements

At December 31, 2015, the net balance of the accounts receivable, accounts payable and accrued liabilities, other accounts receivable and other accounts payable, which are settlement-related was a receivable of $16.3 million. The balances in these accounts are associated with cash collections for the transmission, energy market, load settlement and MSA settlements offset by the cash payments made by the AESO.

During 2016, cash flows for these accounts, amounts related to the new renewables service area and the 2016 transactions resulted in a December 31, 2016 net payable balance of $61.3 million. The change in the cash balance of $77.6 million during the year is primarily associated with transmission settlement.

Debt Financing and Credit Facilities

As at December 31, 2016, the AESO had the following credit facilities available to fund general operating, intangible asset and PP&E purchasing activities:

($ Millions) Year ended December 31, 2016

	Total	Available	**Used**
Demand revolving facility	160.0	150.0	**10.0**
Demand treasury risk management facility	9.0	9.0	**-**

Due to the AESO's cash flow requirements at December 31, 2015, $31.7 million of the available credit facility was utilized for cash borrowings. As a result of a large payment to the AESO in relation to an AUC Decision on a TFO deferral account application, which occurred in the latter half of 2016, no amounts were drawn on the available credit facilities as at December 31, 2016.

The demand facility includes a $10.0 million letter of credit at December 31, 2016 and 2015, which is issued as financial security for the AESO's procurement of operating reserves.

Throughout 2016, the AESO's credit rating has been AA-/Stable from Standard and Poor's (S&P) Ratings Services. S&P is a leading global provider of independent credit risk research and benchmarks.

Future Outlook

During 2016, the Government of Alberta made several announcements associated with the *Climate Leadership Plan* (CLP) to reduce carbon emissions in Alberta; changes which will impact the future focus and operations of the AESO as the electricity industry-related changes are implemented. For 2016, there were three essential AESO work streams which supported the government's initiatives: the development of the Renewable Electricity Program (REP); the market impact assessment which resulted in the decision to transition from an energy market to a new framework that includes an energy market and a capacity market; and assistance with the development of the government's coal retirement program.

The REP is intended to encourage the development of 5,000 MW of renewable electricity generation projects that will be connected to the Alberta grid by 2030, while maintaining the reliability of Alberta's transmission system. This will be done through a series of competitions that will incent the development of renewable electricity generation. The first competition will open in early 2017 with the successful bidder(s) announced at the end of 2017. The AESO is responsible for the development, implementation and administration of REP.

The AESO is also responsible for the design and implementation of a framework that includes an energy market and capacity market. With the proposed framework, generators can compete to receive revenue from a market-determined capacity payment for the ability to provide energy when required by the system (capacity) as well as revenue from selling into the energy and ancillary services markets (energy and ancillary services). The process to design and implement the capacity market is expected to take three years with first delivery of the capacity product expected to start in 2021.

In 2016, the AESO supported the government during the discussions with coal-fired electricity generation owners to establish the coal retirement program as the province is committed to ending coal power emissions and transitioning to cleaner sources of electricity by 2030. The AESO will focus on maintaining reliable operation of the transmission system throughout the transitional phase.

In accordance with the EUA, the AESO Board approves an annual budget to support ongoing operations and to procure transmission services. To recover the costs that are incurred while adhering to the requirement of the EUA for the AESO to operate with no profit or loss on an annual basis, cost recovery mechanisms are established and approved by the AESO Board, and for transmission-related wires costs through TFO tariffs approved by the AUC under Section 37 of the EUA.

As the costs incurred by the AESO are recovered by market participants, the development of the annual budget allows for input and participation by industry and market participants. However, in the fall of 2016 when the AESO was reviewing its business initiatives and operating requirements for 2017 to begin discussions with industry, the uncertainty associated with the CLP initiatives and the potential impacts to the AESO's operations caused the AESO to reconsider its standard annual business planning process. To allow time for further direction on the CLP from the government, the business planning process was

revised and limited to the AESO's own costs[1] for the 6-month period from January to June 2017, at a funding level consistent with the 2016 approved budget. This 6-month budget was approved by the AESO Board in December 2016. With the CLP direction now established, the AESO will proceed with a more detailed 18-month business plan for the period from July 2017 to December 2018, which is scheduled to be approved by the AESO Board in June 2017. As the forecasts for transmission operating and other industry costs were unaffected by the CLP, the full-year forecasts for wires, transmission line losses, ancillary services, and other industry costs for 2017 were approved by the AESO Board in December 2016.

For transmission operating and other industry costs in 2017, the AESO established a cost estimate of $1,937.9 million which is $288.0 million or 18 per cent higher than the 2016 costs of $1,649.9 million. The higher 2017 forecast is associated with higher wires costs based on TFO tariffs approved or applied for by the third quarter of 2016 when the forecast was prepared, in addition to higher ancillary service and transmission line losses costs associated with higher forecast pool prices. The recovery of the AESO's transmission-related costs occurs through approved transmission tariff rates.

For the REP-related initiatives, the actual costs in 2016 were $4.5 million, which will be collected through fees charged during each competition and in accordance with the renewable electricity support agreements.

In December 2014, the AESO executed the first of two contracts in respect of the competitive process for transmission infrastructure. This process was used to select a party to develop, design, construct, finance, own, operate and maintain the Fort McMurray West 500kV Transmission Project. The term of the two contracts will collectively span a period of approximately 38 years. The project will achieve significant project milestones in 2017 including the AUC Decision on the Permit and Licence (P&L) which establishes routing and grant the approval to construct and operate the facilities, the Debt Funding Competition which is required to obtain financing for the project with the culmination through the execution of a long-term contract with the AESO. The construction of the transmission project is anticipated to begin in the summer of 2017 with the targeted in-service date in 2019.

In 2017, two major initiatives originating in 2015 will achieve their final implementation. The first is the commissioning by July 2017 of an upgrade to the AESO's EMS which is the application that enables the real-time operations of the transmission system. This system will deliver necessary cyber security, technology and functionality requirements to meet current and future needs. The total estimated cost for the EMS project is $39 million. The second major initiative is the implementation of the Critical Infrastructure Protection Alberta Reliability Standards. These mandatory Reliability Standards address the security of cyber and physical assets essential to the reliable operation of the transmission system. The AESO and all market participants must be compliant with these new standards by October 2017.

In December 2016, the AESO Board approved the expansion of the AESO's system coordination facility to construct an adjacent office building which will accommodate additional operational staff in close proximity to the real-time operations. The construction will begin in 2018 with plans for occupancy in late 2019; construction costs are estimated at $23 million for an additional 42,000 square feet of space.

[1] General and administrative, capital, interest and amortization

Risk Management

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

The risk management processes that the AESO has developed are designed to proactively identify the risks confronting the AESO, to assess the impact and likelihood of those risks occurring and to determine mitigation strategies to acceptable levels of residual risk. AESO Management is responsible for the ongoing operations of the organization including integrating risk management into operations.

Risk management is a key element of organizational governance and is characterized by a philosophy of continuous improvement. The key features of the AESO's governance and internal control environment, which facilitate the AESO's risk management processes, are as follows:

- The AESO is established by the EUA. The AESO's business and affairs are governed by Members of the AESO (Members). Members are individuals who are independent from any person having a material interest in the Alberta electricity industry and are appointed by the Alberta Minister of Energy. The Members function as a board of directors (AESO Board) and act in the public interest. The *Alberta Public Agencies Governance Act* is legislation applicable to the AESO that addresses certain duties of the AESO as a "public agency" under that Act.

- AESO policies are developed and approved by the AESO Board or the President and Chief Executive Officer as delegated by the AESO Board. AESO policies are communicated to employees and, as appropriate, to contractors. AESO policies are reviewed on a regular basis and are accessible by employees at all times.

- The AESO is committed to maintaining a high level of ethics and integrity. The AESO Board and AESO Management foster these values throughout the organization and maintain an effective *AESO Complaint Policy*. The AESO maintains a code of conduct applicable to its Members, officers, employees and contractors, which serves as a framework for these individuals when they are faced with difficult situations where laws and regulations may not provide sufficient direction and assistance. The *AESO Code of Conduct* 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 Code of Conduct* and similarly provides an annual confirmation of their compliance/non-compliance.

- AESO Management is responsible for establishing and maintaining adequate internal controls over financial reporting. These controls are designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with International Financial Reporting Standards. Internal controls over financial reporting, no matter how well designed, have inherent limitations and provide only reasonable assurance with respect to financial statement preparation. Accordingly, they may not prevent or detect all misstatements or fraud and error.

  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 (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on this

assessment, AESO Management has concluded that, as of December 31, 2016, the AESO maintained effective internal controls over financial reporting.

- The Audit Committee provides oversight, in accordance with the Audit Committee Charter, on the system of internal controls, the systems for managing risk, the external audit process and the AESO's process for monitoring compliance with laws and regulations, with a view to adopt best practices, as appropriate.
- The AESO's Controls and Audit Services function provides the AESO with an objective and independent assessment of internal controls, coordinates and reports on risk management activities and identifies opportunities for improvement. The Controls and Audit Services function reports directly to the Audit Committee and if required, discusses matters with the Audit Committee independent of AESO Management.
- AESO Management identifies and reports any significant risks to the AESO Board and the appropriate AESO Board Committee on a regular basis and provides updates on the implementation of mitigation strategies that are undertaken to address these.
- 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

aeso
ALBERTA ELECTRIC SYSTEM OPERATOR

Financial Statements and Notes

MANAGEMENT'S RESPONSIBILITY FOR FINANCIAL REPORTING

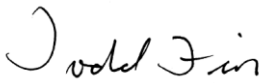
The financial statements of the Alberta Electric System Operator (AESO) are the responsibility of management and have been approved by the AESO Board. These financial statements have been prepared by management in accordance with International Financial Reporting Standards, appropriate in the circumstances, and include the use of estimates and assumptions that have been made using management's best judgment. Financial information contained in the management's discussion and analysis of financial condition and results of operations (MD&A) 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 Code of Conduct*, which set forth the AESO's commitment to conduct business with integrity and to comply with the law.

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

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 International Financial Reporting Standards. The external auditors' report outlines the scope of their examination and states their opinion. Internal and external auditors have access to the Audit Committee, with and without the presence of management.

David Erickson, CPA, CA, ICD.D
President and Chief Executive Officer



Todd D. Fior, CPA, CA
Vice-President, Finance

INDEPENDENT AUDITORS' REPORT

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

We have audited the accompanying financial statements of the Alberta Electric System Operator, which comprise the statements of financial position as at December 31, 2016 and 2015, and the statements of income and comprehensive income and cash flows for the years ended December 31, 2016 and 2015, 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 International Financial Reporting Standards, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' responsibility

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

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

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

Opinion

In our opinion, the financial statements present fairly, in all material respects, the financial position of the Alberta Electric System Operator as at December 31, 2016 and 2015, and its financial performance and its cash flows for the years ended December 31, 2016 and 2015 in accordance with International Financial Reporting Standards.

Ernst & Young LLP

Calgary, Canada

February 16, 2017
Chartered Professional Accountants

STATEMENT OF FINANCIAL POSITION

(in millions of Canadian dollars)

	December 31, 2016	December 31, 2015
Assets		
Current assets		
Cash and cash equivalents	**$ 31.6**	$ 0.7
Accounts receivable *(note 3)*	**89.1**	111.3
Other accounts receivable *(note 4)*	**-**	24.7
Prepaids and deposits	**6.6**	6.5
	127.3	143.2
Non-current assets		
Long-term other accounts receivable *(note 4)*	**4.5**	-
Long-term prepaids *(note 5)*	**26.2**	14.3
Intangible assets, net *(note 6)*	**58.0**	51.9
Property, plant and equipment, net *(note 7)*	**30.5**	29.4
	$ 246.5	$ 238.8
Liabilities		
Current liabilities		
Accounts payable and accrued liabilities (*note 8)*	**$ 157.0**	$ 136.9
Deferred revenue	**5.6**	-
Other accounts payable *(note 9)*	**21.2**	0.9
Security deposits *(note 15)*	**1.4**	1.3
Bank debt *(note 10)*	**-**	31.7
	185.2	170.8
Non-current liabilities		
Long-term payables *(note 11)*	**60.6**	66.8
Asset retirement obligation *(note 12)*	**0.7**	1.2
Equity *(note 1)*	**-**	-
	$ 246.5	$ 238.8

Commitments and contingencies *(notes 13 and 14)*

See accompanying notes to the financial statements.

STATEMENTS OF INCOME AND COMPREHENSIVE INCOME

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

	2016	2015
Revenue		
Transmission tariff	**$ 1,735.3**	$ 1,865.3
Energy market charge	**38.2**	42.0
Renewables charges	**4.5**	-
Load settlement charge	**1.3**	1.2
Interest and other	**0.8**	1.1
	1,780.1	1,909.6
Operating costs and expenses		
Wires costs	**1,497.6**	1,518.5
Ancillary services costs	**93.8**	171.9
Transmission line losses	**43.5**	76.7
General and administrative *(note 19)*	**97.5**	93.4
Amortization and depreciation *(notes 6 and 7)*	**24.3**	26.0
Other industry costs	**22.6**	22.6
Interest expense *(note 20)*	**0.8**	0.5
	1,780.1	1,909.6
Net income and comprehensive income	**$ -**	**$ -**

See accompanying notes to the financial statements.

STATEMENTS OF CASH FLOWS

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

	2016	2015
Operating activities		
Net income	**$ -**	$ -
Items not affecting cash		
Amortization and depreciation *(notes 6 and 7)*	**24.3**	26.0
Accretion of asset retirement provision *(note 12)*	**0.0**	0.0
Change in long-term other accounts receivable *(note 4)*	**(4.5)**	**-**
Change in long-term prepaids *(notes 5 and 13)*	**(11.9)**	(9.9)
Change in long-term payables *(note 11)*	**(6.2)**	(4.0)
Change in non-cash operating working capital balances		
Accounts receivable *(note 3)*	**22.2**	(3.3)
Other accounts receivable *(note 4)*	**24.7**	(10.7)
Prepaids and deposits	**(0.1)**	(2.8)
Accounts payable and accrued liabilities *(note 8)*	**19.6**	(30.3)
Deferred revenues	**5.6**	-
Other accounts payable *(note 9)*	**20.3**	0.7
Security deposits *(note 15)*	**0.1**	(0.9)
Net cash provided by (used in) operating activities	**94.1**	(35.2)
Investing activities		
Additions to intangible assets *(note 6)*	**(24.3)**	(20.9)
Additions to property, plant and equipment *(note 7)*	**(7.7)**	(6.5)
Change in non-cash investing working capital balances		
Accounts payable and accrued liabilities *(note 8)*	**0.5**	1.8
Net cash (used in) investing activities	**(31.5)**	(25.6)
Financing activities		
Change in debt financing *(note 10)*	**(31.7)**	31.7
Net cash (used in) provided by financing activities	**(31.7)**	31.7
Increase (decrease) in cash position	**30.9**	(29.1)
Beginning of year	**0.7**	29.8
End of year	**$ 31.6**	$ 0.7
Cash interest paid *(note 10)*	**$ 1.2**	$ 0.7

See accompanying notes to the financial statements.

NOTES TO THE FINANCIAL STATEMENTS

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

1. Nature of Operations

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

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

The AESO's business is governed by Members of the AESO (Members). Members are individuals who are independent from any person or entity having a material interest in the Alberta electricity industry and are appointed by the Alberta Minister of Energy. The Members function as a board of directors (AESO Board) and act in the public interest. As of December 31, 2016, the AESO Board has four committees: Audit Committee; Human Resources Committee; Governance and Nominations Committee; and Power System Committee.

The EUA requires that charges to industry, including the transmission tariff, energy market charge, renewables charges 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 and accordingly these statements contain no Statement of Changes in Equity.

2. Summary of Significant Accounting Policies

STATEMENT OF COMPLIANCE ►These financial statements have been prepared by management in accordance with International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board (IASB).

The AESO Board authorized these financial statements for issue on February 16, 2017.

BASIS OF MEASUREMENT ► The financial statements have been prepared on the historical cost basis except for financial instruments that are measured at fair value.

FUNCTIONAL AND PRESENTATION CURRENCY ► The financial statements are presented in millions of Canadian dollars, which is the AESO's functional currency.

SIGNIFICANT ACCOUNTING JUDGMENTS AND ESTIMATES ► The preparation of these financial statements requires management to select appropriate accounting policies and to make judgments, estimates, and assumptions that could affect the reported amounts of assets, liabilities, revenues, expenses and disclosures of contingent assets and liabilities during the period. Most often these estimates and judgments concern matters that are inherently complex and uncertain. Judgments and

estimates are reviewed on an on-going basis; changes to accounting estimates are recognized prospectively.

The key judgments and sources of estimation uncertainty are described below:

- **Useful lives of intangible assets and property, plant, and equipment** - Useful lives are determined based on past experience and current facts, taking into account future expected usage and potential for technological obsolescence.
- **Asset retirement obligation** - Measurement of the AESO's asset retirement obligation requires the use of estimates with respect to the amount and timing of the asset retirement; the extent of site remediation required; and related future cash flows, inflation rates and discount rates. The estimated obligation is present valued using a risk-adjusted, market-based discount rate. A change in estimated cash flows, market interest rates, or timing could have a material impact on the carrying amount of the obligation.
- **Impairment of long-lived assets** - The AESO conducts impairment tests on long-lived assets annually and where impairment indicators exist.

CHANGES IN ACCOUNTING ESTIMATES ► As a result of operational considerations, the AESO has reassessed the following estimates, which are not considered to have a material impact:

- Effective December 1, 2016, system coordination facility assets are considered to have a 54-year estimated useful life (previously 19 years). This change of estimate impacts the depreciation of the asset and the corresponding asset retirement obligation (asset and liability).
- Effective January 1, 2016, furniture and office equipment assets are considered to have a 10-year useful life (previously three years).

REVENUE RECOGNITION ► The AESO's revenue is primarily derived through four separate charges: (i) transmission tariff; (ii) energy market charge; (iii) renewables charges; and (iv) load settlement charge. Each of these charges is set to recover the costs directly attributable to a specific service as well as a portion of the shared corporate services costs. Consistent with the requirements of the EUA, which requires the AESO to operate with no annual profit or loss, revenue is recognized equivalent to the aggregate of annual operating costs on a service area basis.

Transmission tariff revenue is recognized on a monthly basis consistent with the billing cycle in which the AESO invoices market participants for transmission system access services. Revenues are calculated based on the metered demand and energy for system access service, as specified in the Alberta Utilities Commission-approved tariff rates.

When a market participant reduces or terminates contract capacity for system access service, a lump sum payment may be required in lieu of notice under the terms of the transmission tariff. A payment received by the AESO in advance of the effective date of a change to a system access service agreement is recognized as deferred revenue and recognized as transmission tariff revenue on the effective date of the change.

Energy market charge revenue is recognized on a monthly basis consistent with the billing cycle in which the AESO invoices market participants to recover the costs of operating the real-time energy market. Revenues are calculated based on the per-megawatt-hour energy market charge and the volume of energy traded through the power pool.

Renewables revenue is recognized as the AESO invoices market participants during each competition

and in accordance with renewable electricity support agreements. Revenues are calculated based on the costs directly attributable to the renewable electricity program services.

Load settlement revenue is recognized as the AESO invoices load settlement agents. Revenues are calculated based on the costs directly attributable to the load settlement services.

The AESO utilizes deferral accounts to record the differences between revenues collected and costs paid with the amounts recognized as other accounts receivable or other accounts payable. On an individual basis for the transmission, energy market, renewables and load settlement services, in circumstances where collections are greater than costs, the surplus is recorded as a reduction in revenue, recognized as other accounts payable and subsequently refunded. In circumstances where collections are less than costs, the shortfall is recorded as revenue, recognized as other accounts receivable and subsequently collected. The refunds or collections are settled with market participants for the transmission, energy market, and renewables services and with the owners of electric distribution systems and wires service providers for load settlement services.

Interest and other revenue represents revenue received from third parties and includes, but is not limited to, bank interest and interest on past due accounts; cost recoveries for training courses, sublease rent and services; market participant fees; and cancellation and performance forfeitures by market participants. Interest and other revenue is recognized on the accrual basis as the revenue is earned.

As directed in the *Alberta Utilities Commission (AUC) Act*, the AESO is required to provide funding for the Market Surveillance Administrator (MSA), a separate statutory corporation. The amounts paid by the AESO are recovered through the energy market charge as directed in the EUA. The energy market charge included in the AESO's statement of income 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.

Revenues are measured at the fair value of the consideration received or receivable.

OTHER ACCOUNTS RECEIVABLE/PAYABLE ► As the EUA requires the AESO to be managed with no profit or loss on an annual basis from its operations, differences in revenues collected and costs paid are: recorded as adjustments to revenue; recognized as other accounts receivable or other accounts payable; and subsequently collected or refunded. The collection of deferral account shortfalls and payment of deferral account surpluses is embodied in the legislative rights granted in the EUA and *Renewable Electricity Act (REA)* to the AESO Board or AUC.

The AESO recognizes amounts as long-term other assets or other liabilities when the collection or refund is expected to occur beyond one year from the date of the statement of financial position.

OFFSETTING FINANCIAL INSTRUMENTS ► Financial assets and financial liabilities are offset and the net amount is reported in the statement of financial position if there is a legally enforceable right to offset the recognized amounts, and if the AESO intends either to settle on a net basis or to realize the assets and settle the liabilities simultaneously.

CASH AND CASH EQUIVALENTS ► Cash and cash equivalents consist of cash and term deposits issued by credit-worthy financial institutions with maturities within three months from the date of acquisition.

INTANGIBLE ASSETS ► Intangible assets are recorded at cost less accumulated amortization. Cost includes the purchase price, plus any additional costs directly attributable to the development of the asset

and preparing the asset for its intended use. Such costs include staff, consulting resources and borrowing costs incurred during the development of qualifying assets.

Maintenance and repair costs which do not enhance or extend the useful life of the asset are expensed as incurred.

Amortization is calculated on a straight-line basis over the estimated useful lives of the assets. No amortization is provided on intangible assets under development. The expected useful lives, amortization method and residual values of the assets are reviewed annually, with any changes accounted for on a prospective basis. Amortization periods for intangible assets are shown in the following table.

Computer software	5 to 7 years; or Over the term of the licence agreement for customization of Software as a Service

Intangible assets are retired when they are fully amortized and derecognized when no future benefits are expected to arise from their use.

PROPERTY, PLANT AND EQUIPMENT ► Property, plant and equipment are recorded at cost less accumulated depreciation. Cost includes the purchase price, plus any additional costs directly attributable to the construction of the asset and preparing the asset for its intended use. Such costs include materials, staff, consulting resources, borrowing costs incurred during construction for qualifying assets and asset retirement costs.

Maintenance and repair costs which do not enhance or extend the useful life of the asset are expensed as incurred.

Depreciation is calculated on a straight-line basis over the estimated useful lives of the assets. No depreciation is provided on assets under construction. The expected useful lives, depreciation method and residual values of the assets are reviewed annually, with any changes accounted for on a prospective basis. Depreciation periods for property, plant and equipment are shown in the following table.

System coordination facility	Over the land lease term ending in 2060
Computer hardware	4 to 7 years
Backup coordination centre	Over the lease term ending in 2033
Leasehold improvements	Over the applicable lease terms ending in 2024
Furniture and office equipment	10 years

Property, plant and equipment are retired when they are fully depreciated and derecognized when no future benefits are expected to arise from their use.

CAPITALIZED BORROWING COSTS ► Borrowing costs directly incurred during a development or construction period of substantial duration are added to the cost of the asset. Qualifying assets are those that take a substantial period of time to develop or construct and are developed over periods of time exceeding 12 months. Borrowing costs are considered to be directly attributable if they could have been avoided if the expenditure on the qualifying asset had not been made. Borrowing cost capitalization

commences when expenditures and borrowing costs are incurred and ceases when the qualifying asset is substantially complete and ready for its intended use.

IMPAIRMENT OF INTANGIBLE ASSETS AND PROPERTY, PLANT AND EQUIPMENT ► Impairment indicators for intangible assets with finite useful lives and property, plant and equipment are reviewed annually or whenever events or changes in circumstance may indicate possible impairment. Impairment is assessed at the cash-generating unit level to which the asset belongs. Based on the legislative requirements associated with the AESO's financial operations, an asset impairment cannot occur as the recoverable amount is equal to its carrying amount.

ASSET RETIREMENT OBLIGATIONS ► Decommissioning liabilities are legal and constructive obligations for decommissioning assets. The fair value approximates the cost a third party would charge to perform the tasks necessary to retire the asset and is recognized at the present value of expected future cash flows. Decommissioning liabilities are added to the carrying amount of the associated asset and depreciated over its estimated useful life. The corresponding liability is accreted over time through charges to earnings and is reduced by actual costs of decommissioning. Decommissioning liabilities may change as a result of a new decommissioning cost estimate or the timing of the obligation.

PROVISIONS AND CONTINGENCIES ► Provisions are recognized when a present obligation (legal or constructive) is a result of a past event, it is probable that an outflow of resources will be required to settle the obligation, and the amount can be reliably estimated. The amount recognized as a provision is the best estimate of the expenditure required to settle the obligation at the end of the reporting period.

If the effect is material, provisions are determined by discounting the expected future cash flows at a risk-adjusted, market-based discount rate. If discounting is used, the increase in the provision due to the passage of time is recognized in interest expense.

A contingent liability is a possible obligation, and a contingent asset is a possible asset, that arises from past events and whose existence will be confirmed only by the occurrence or non-occurrence of one or more uncertain future events not wholly within the control of the AESO. A contingent liability may also be a present obligation that arises from past events that is not recognized because it is not probable that an outflow of economic resources will be required to settle the obligation or the amount of the obligation cannot be measured reliably.

Neither contingent liabilities nor assets are recognized in the financial statements. However, a contingent liability is disclosed, unless the possibility of an outflow of resources is remote. A contingent asset is only disclosed where an inflow of economic benefits is probable.

EMPLOYEE BENEFITS OBLIGATIONS ► A liability is recognized for a present legal or constructive obligation to pay an amount as a result of past service provided by employees, and the obligation can be estimated reliably. The liability recognizes the amount expected to be paid for short-term employee benefits such as the short-term incentive plan, paid annual leave, paid sick leave; post-employment benefits; and termination benefits.

LEASES ► When an arrangement is entered into for the use of capital assets, the arrangement is evaluated to determine whether it contains a lease. A specific asset would qualify as a lease if fulfilment of the arrangement is dependent on the use of the specific asset. An arrangement constitutes the right to use the asset if the AESO has the right to control the use of the underlying asset. When an arrangement is determined to be a lease, the lease is classified as either operating or financing depending on whether substantially all the risks and rewards of the asset have been transferred.

LONG-TERM PREPAIDS ► The AESO recognizes advance cash payments associated with operating leases, information technology licences and ancillary service agreements with terms longer than one year from the statement of financial position date as long-term assets.

LONG-TERM PAYABLES ► A generating unit connected to the Alberta Interconnected Electric System is required to pay the AESO a generating unit owner's contribution which is refundable over a period of not more than 10 years, subject to satisfactory annual performance. The carrying amount of the contributions is measured as the amount required to settle the obligations at the end of the reporting period. The AESO recognizes refundable amounts as long-term liabilities when the refund term is longer than one year from the statement of financial position date.

FINANCIAL INSTRUMENTS ► The AESO classifies financial instruments at their initial recognition. Financial assets are classified as fair value through profit or loss (including held for trading), held-to-maturity investments, loans and receivables or available-for-sale. Financial liabilities are classified as fair value through profit or loss or amortized cost.

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

RECENT ACCOUNTING PRONOUNCEMENTS NOT YET ADOPTED ►

The following standards and interpretations are not yet effective and have not been applied in preparing these financial statements.

- **IFRS 9 Financial Instruments** ► The final standard replaces IAS 39 Financial Instruments: Recognition and Measurement and previous versions of IFRS 9. The entire standard provides guidance and requirements on classification and measurement of financial assets and liabilities, impairment and hedging. The standard is effective for annual periods beginning on or after January 1, 2018, with early adoption permitted. The AESO is currently assessing the impact of adopting this standard.
- **IFRS 15 Revenue From Contracts With Customers** ► The new standard provides a framework that replaces existing revenue recognition guidance. Entities will apply a five-step model to determine when to recognize revenue and at what amount. The model specifies that revenue should be recognized when (or as) an entity transfers control of goods or services to a customer at the amount to which the entity expects to be entitled. The standard is effective for annual periods beginning on or after January 1, 2018, with early adoption permitted. The AESO is currently assessing the impact of adopting this standard.
- **IFRS 16 Leases** ► The standard replaces IAS 17 Leases. The standard provides guidance and requirements for lessees for a single recognition and measurement model for leases with required recognition of assets and liabilities for most leases. The standard is effective for annual periods beginning on or after January 1, 2019, with early adoption permitted when also applying IFRS 15 Revenue from Contracts with Customers.

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

3. Accounts Receivable

The transmission settlement receivables are subject to offsetting *(note 18)*.

As at	**Dec 31, 2016**	Dec 31, 2015
Transmission settlement, net	**82.3**	101.1
Energy market settlement	**5.1**	7.2
Trade	**1.7**	3.0
	89.1	111.3

4. Other Accounts Receivable

As at	**Dec 31, 2016**	Dec 31, 2015
Current portion Transmission receivable	**-**	24.7
Long-term portion Renewables receivable	**4.5**	-

5. Long-term Prepaids

As at	**Dec 31, 2016**	Dec 31, 2015
Licences and maintenance	**1.7**	1.0
Prepaid rent	**3.8**	4.0
Prepaid reliability services agreement (*note 13)*	**20.7**	9.3
	26.2	14.3

6. Intangible Assets

	Computer Software	Intangible Assets Under Development	Total
Cost:			
January 1, 2015	102.6	6.3	108.9
Additions	6.5	14.4	20.9
Transfers	1.0	(1.0)	-
Write-off	-	(0.1)	(0.1)
Retirements	(2.0)	-	(2.0)
December 31, 2015	**108.1**	**19.6**	**127.7**
Additions	9.6	14.7	24.3
Transfers	6.0	(6.0)	-
Write-off	-	(1.3)	(1.3)
Retirements	(21.5)	-	(21.5)
December 31, 2016	**102.2**	**27.0**	**129.2**
Accumulated amortization:			
January 1, 2015	59.6	-	59.6
Amortization	18.2	-	18.2
Retirements	(2.0)	-	(2.0)
December 31, 2015	**75.8**	**-**	**75.8**
Amortization	16.9	-	16.9
Retirements	(21.5)	-	(21.5)
December 31, 2016	**71.2**	**-**	**71.2**
Net Book Value:			
December 31, 2015	32.3	19.6	51.9
December 31, 2016	**31.0**	**27.0**	**58.0**

Intangible assets under development relate to intangible assets associated with various computer software development projects that were not commissioned or operational by the end of the year.

For the 12 months ended December 31, 2016, $5.6 million of payroll costs associated with staff directly involved in preparing intangible assets for their intended use have been capitalized (2015 – $5.0 million).

The additions of intangible assets include $0.3 million (2015 – $0.2 million) of capitalized borrowing costs at an average rate of 1.9 per cent (2015 – 1.6 per cent).

7. Property, Plant and Equipment

	System Coordination Facility	Computer Hardware	Backup Coordination Centre	Leasehold Improvements	Furniture and Office Equipment	Assets Under Construction	Total
Cost:							
January 1, 2015	22.8	31.4	2.0	6.2	0.7	0.8	63.9
Additions	-	0.9	-	(0.5)	0.1	6.0	6.5
Transfers	-	0.2	-	-	-	(0.2)	-
Changes to asset retirement obligation	1.1	-	-	-	-	-	1.1
Retirements	-	(4.4)	-	(4.6)	(0.1)	-	(9.1)
December 31, 2015	**23.9**	**28.1**	**2.0**	**1.2**	**0.7**	**6.6**	**62.5**
Additions	-	4.0	-	0.0	0.4	3.2	7.6
Transfers	-	1.2	-	-	-	(1.2)	-
Changes to asset retirement obligation	(0.4)	-	-	-	-	-	(0.4)
Retirements	-	(2.1)	-	-	(0.0)	-	(2.1)
December 31, 2016	**23.5**	**31.2**	**2.0**	**1.2**	**1.1**	**8.6**	**67.6**
Accumulated depreciation:							
January 1, 2015	9.9	19.1	0.1	4.9	0.4	-	34.4
Depreciation	1.3	6.1	0.1	0.1	0.2	-	7.8
Retirements	-	(4.4)	-	(4.6)	(0.1)	-	(9.1)
December 31, 2015	**11.2**	**20.8**	**0.2**	**0.4**	**0.5**	**-**	**33.1**
Depreciation	1.1	4.8	0.1	0.1	0.0	-	6.1
Retirements	-	(2.1)	-	-	(0.0)	-	(2.1)
December 31, 2016	**12.3**	**23.5**	**0.3**	**0.5**	**0.5**	**-**	**37.1**
Net Book Value:							
December 31, 2015	12.7	7.3	1.8	0.8	0.2	6.6	29.4
December 31, 2016	**11.2**	**7.7**	**1.7**	**0.7**	**0.6**	**8.6**	**30.5**

Assets under construction relate to property, plant and equipment in development that was not commissioned or operational by the end of the year.

For the 12 months ended December 31, 2016, $0.3 million of payroll costs associated with staff directly involved in preparing property, plant and equipment for their intended use have been capitalized (2015 – $0.4 million).

The additions of property, plant and equipment include $0.1 million (2015 – $0.1 million) of capitalized borrowing costs at an average rate of 1.9 per cent (2015 – 1.6 per cent).

8. Accounts Payable and Accrued Liabilities

The transmission settlement payables are subject to offsetting *(note 18)*.

As at	**Dec 31, 2016**	Dec 31, 2015
Transmission settlement, net	**132.0**	115.8
Trade payables	**7.3**	6.4
Generating unit owner's contribution *(note 11)*	**6.4**	4.4
Accrued liabilities	**11.3**	10.3
	157.0	136.9

9. Other Accounts Payable

As at	**Dec 31, 2016**	Dec 31, 2015
Transmission payable	**18.6**	-
Energy market payable	**2.4**	0.4
Load settlement payable	**0.2**	0.5
	21.2	0.9

10. Bank Debt

The AESO has credit facilities of $160 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 million in deemed risk content is available to provide for interest swaps for up to $35 million in notional debt. This facility was not used in 2016 or 2015.

At December 31, 2016, no amounts were drawn on the available credit facilities (2015 – $31.7 million) and a $10.0 million letter of credit was issued as security for operating reserve procurement.

The amount of interest paid during 2016 was $1.2 million (2015 – $0.7 million) at an average interest rate of 1.9 per cent (2015 – 1.9 per cent).

11. Long-term Payables

Under the terms of the transmission tariff, a market participant is required to pay a generating unit owner's contribution. The contribution amount is determined based on variable terms in accordance with the transmission tariff. A market participant is entitled to a refund of the generating unit owner's contribution in annual amounts during the refund period which is not more than 10 years. The eligibility for the annual refund amount is dependent on the generation facility meeting specified performance criteria.

	Total
January 1, 2015	70.8
Contributions received	0.4
Contributions reclassified to current *(note 8)*	(4.4)
December 31, 2015	**66.8**
Contributions received	0.2
Contributions reclassified to current *(note 8)*	(6.4)
December 31, 2016	**60.6**

12. Asset Retirement Obligation

The land on which the AESO's system coordination facility resides must be returned to its original state at the conclusion of the land lease on request by the landlord, the Government of Alberta. The asset retirement obligation recognizes the approximate third party costs for the decommissioning based on the timing of expected cash flows.

The AESO has estimated the net present value of the decommissioning liability based on an independent third party valuation of current costs to dismantle the system coordination facility and restore the land.

On December 1, 2016, the estimated useful life of the system coordination facility was extended by 35 years to 2060 and consistent with this extension, the estimated timing for the decommissioning liability has been revised to 2060 (2015 – estimated to occur in 2025).

In 2016, the present value of the decommissioning liability has been recalculated based on revised estimates for timing, discount rate and inflation rate. The $1.1 million liability recorded in 2015 has been reduced by $0.5 million to $0.6 million. The total undiscounted future liability is estimated to be $5.6 million (2015 – $1.7 million). The AESO has calculated the present value of the obligation using a discount rate of 4.8 per cent (2015 – 3.7 per cent) to reflect the market assessment of the time value of money and an inflation rate of 2.2 per cent (2015 – 2.0 per cent).

	Total
January 1, 2015	**-**
Accretion expense	0.0
Revisions to estimates	1.1
December 31, 2015	**1.2**
Accretion expense	0.0
Revisions to estimates	(0.5)
Revisions to rates	0.0
December 31, 2016	**0.7**

13. Commitments

(i) The AESO is committed to operating leases for real estate that have expiry dates between 2024 and 2033. Renewal options exist to extend certain leases to dates ranging between 2053 and 2060. The estimated future minimum lease payments associated with these non-cancellable operating leases for the initial lease terms are as follows:

	As of December 31, 2016
No later than 1 year	6.0
Later than 1 year and no later than 5 years	25.0
Later than 5 years	26.8
	57.8

The AESO, as the landlord, has entered into a sublease agreement for a portion of the system coordination facility with expiry in 2025 and renewal options to extend the sublease to 2045. The estimated future minimum sublease payments expected to be received under this non-cancellable sublease are $1.2 million.

During the year ended December 31, 2016, $6.2 million (2015 - $6.5 million) was recognized as an expense in respect of these operating leases and $0.1 million (2015 - $0.1 million) was recognized as revenue in respect of the sublease.

(ii) To fulfil the duties of the AESO in accordance with the EUA, the AESO manages the procurement of ancillary services through contracts with third-party suppliers. These ancillary services include operating reserves, reliability services, load shed, system restoration and transmission must-run. The contracts are for future generation capacity and load reduction capabilities with expiry dates ranging from 2019 to 2030, in addition to short-term contracts for operating reserves. The amount to be paid under each contract is dependent on fixed and variable terms. Variable terms include items such as commodity prices, dispatch volumes and frequency of events and are determined when the services are provided. The fixed payments associated with the service contracts are as follows:

	As of December 31, 2016
No later than 1 year	23.3
Later than 1 year and no later than 5 years	23.9
Later than 5 years	1.6
	48.8

(iii) In 2015, the AESO entered into a 15-year reliability services agreement with Powerex Corp. for the provision of certain emergency energy services from British Columbia, including grid restoration balancing support in the event of an Alberta blackout and emergency energy in the event of supply shortfall. The total cost of the agreement is $42.9 million payable in equal amounts in the three-year period from 2015 to 2017. As the payments are made, they are recognized as long-term prepaids on the statement of financial position and amortized on a straight-line basis over the 15-year term of the agreement.

	Total
January 1, 2015	-
Payment made	14.3
Payment reclassified to current	(5.0)
December 31, 2015	**9.3**
Payment made	14.3
Payment reclassified to current	(2.9)
December 31, 2016	**20.7**

(iv) Under the direction of the EUA, the AESO established and executed an AUC-approved competitive process for transmission infrastructure to select the party to develop, design, build, finance, own, operate and maintain the Fort McMurray West 500 kV Transmission Project. In December 2014, the AESO executed the first of two contracts with the counterparty that combined, will span a period of approximately 38 years. As the amounts to be paid under the contracts are dependent on fixed and variable terms and will not be finalized until certain events occur and receive regulatory approval, the value of the obligation cannot be measured with sufficient reliability. Variable terms include, for example, adjustments related to the indexation for inflation, regulatory approval of the route, financing costs that will be the outcome of a debt funding process and the potential occurrence of certain pre-specified relief events.

There are no scheduled financial obligations for the AESO under the contract until 2019 when it is anticipated the facilities will be energized and the AUC will have approved a transmission tariff application with respect to the facilities.

14. Contingencies

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.

15. 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.

16. Key Management Compensation

Key management personnel include members of executive management and the AESO Board, a total of 16 individuals (2015 – 17 individuals). The compensation paid or payable to key management for services are as follows:

As of December 31,	**2016**	2015
Salaries and other short-term employee benefits	**4.3**	4.2

17. Government-Related Entities

The members of the AESO Board are appointed by the Minister of Energy of the Government of Alberta. Based on this relationship, the AESO's transactions and outstanding balances with the Government of Alberta and other entities in a similar related party relationship with the Government of Alberta are reported.

The AESO considers the following entities as government-related:

- **Balancing Pool**: established under the EUA to manage the transition to competition in Alberta's electric industry;
- **Alberta Utilities Commission** (AUC): established under the AUC Act to ensure that the delivery of Alberta's utility service takes place in a manner that is fair, responsible and in the public interest; and
- **Market Surveillance Administrator** (MSA): established under the AUC Act to monitor Alberta's electricity and retail natural gas markets to ensure that they operate in a fair, efficient and openly competitive manner.

Pursuant to the EUA, on an annual basis the Balancing Pool determines an annualized amount to pay distributions from its revenues to eligible consumers or collect shortfalls in its revenues from eligible consumers. Through the transmission tariff, the AESO facilitates the allocation of the annualized amount as directed in the EUA. In 2016, $190.2 million was collected from the Balancing Pool as the annualized amount and paid to eligible customers (2015 – $324.1 million collected).

The Balancing Pool is a market participant and received $137.3 million related to electricity sales in 2016 (2015 – $205.7 million).

The Balancing Pool paid the AESO $3.9 million for contracts related to supply transmission services in 2016 (2015 – nil).

As directed in the AUC Act, the AESO is required to pay an administration fee to the AUC. The amounts paid by the AESO are recovered through the transmission tariff and the energy market charge as directed in the EUA. In 2016, $18.7 million was paid to the AUC (2015 – $19.3 million).

As directed in the AUC Act, the AESO is required to provide funding for the MSA. The amounts paid by the AESO are recovered through the energy market charge as directed in the EUA. In 2016, no payments were made to the MSA (2015 – $3.8 million).

The AESO leases 12 acres of land in the Calgary area from the Minister of Infrastructure of the Government of Alberta. The land lease is for a 55-year term ending in 2060 which is comprised of an initial 20-year term which began in 2005 followed by several renewal options at the discretion of the AESO. In 2016, $0.1 million of costs were incurred (2015 – $0.1 million).

18. Financial Instruments

Financial Instrument	Designated Category	Measurement Basis	Associated Risks	Fair Value at December 31, 2016 and 2015
Cash and cash equivalents	Held for trading	Fair value	Liquidity risk	Carrying value approximates fair value due to short-term nature and variable interest rates
Accounts receivable Other accounts 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 Other accounts payable Deferred revenue	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
Long-term payables	Other financial liabilities	Initially at fair value and subsequently at amortized cost	Liquidity risk	Carrying value approximates fair value due to the nature of the liability

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 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, 2016 and 2015, the amount of financial assets that were past due was not material and there were no material uncollectible receivable balances.

(b) **MARKET RISK** ► The risk of a potential negative impact on the statement of financial position and/or statement of income 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.

Bank debt is comprised of short-term bankers' acceptances or prime rate advances that bear interest at market rates. Accordingly, the exposure to interest rate price risk in relation to the bank debt at the statement of financial position date is not material.

Investments are comprised of short-term bankers' acceptances or term deposits that bear interest at market rates. Accordingly, the exposure to interest rate price risk in relation to the investments at the statement of financial position date is not material.

The AESO conducts less than one per cent of its business in US 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 available to the AESO under the existing credit facilities.

In managing capital, the AESO reviews its cash flows from operations, including the transmission tariff, energy market charge, renewables charges and load settlement charge, to determine whether there are sufficient funds to cover its operating costs and pay for intangible asset and property, plant and equipment 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.

Summarized Quantitative Data Associated with the Above Risks

(a) **CREDIT RISK ►** At December 31, 2016, the AESO's maximum exposure to receivable credit risk was $93.6 million (December 31, 2015 – $136.0 million), which is the aggregate of accounts receivable and other 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, 2016, the amount of financial assets that were past due was not material (December 31, 2015 – not material).

(b) **MARKET RISK ►** The AESO is exposed to currency risk on $0.5 million (December 31, 2015 – $0.2 million) of US dollar denominated financial liabilities at December 31, 2016.

If the Canadian dollar decreases (increases) against the US dollar by five per cent prior to the payment by the AESO, operating costs would increase (decrease) by less than $0.1 million (December 31, 2015 – less than $0.1 million) and intangible asset costs would increase (decrease) by less than $0.1 million (December 31, 2015 – 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. The estimated future undiscounted annual refund amounts associated with long-term payables are as follows:

	As of December 31, 2016
2018	8.3
2019	9.5
2020	9.4
2021	9.8
2022	7.8
2023 and thereafter	15.8
	60.6

Offsetting Financial Assets and Liabilities

The following transmission settlement receivables and payables are subject to offsetting as presented in the statement of financial position. *(notes 3 and 8)*

As at	**Dec 31, 2016**	Dec 31, 2015
Transmission settlement receivables, gross	**117.3**	143.9
Transmission settlement, offsets	**(35.0)**	(42.8)
Transmission settlement receivables, net	**82.3**	101.1

As at	**Dec 31, 2016**	Dec 31, 2015
Transmission settlement payables, gross	**167.0**	158.6
Transmission settlement, offsets	**(35.0)**	(42.8)
Transmission settlement payables, net	**132.0**	115.8

19. General and Administrative Expenses

General and administrative expenses classified by nature are as follows:

As of December 31,

	2016	2015
Salaries and benefits	**66.4**	64.8
Other	**31.1**	28.6
	97.5	93.4

20. Interest Expense

As of December 31,

	2016	2015
Interest on bank debt	**1.2**	0.7
Capitalized interest *(notes 6 and 7)*	**(0.4)**	(0.2)
Accretion of asset retirement obligation *(note 12)*	**0.0**	0.0
	0.8	0.5