

AESO BOARD DECISION

2020-BRP-001

AESO 2020 Business Plan and Budget Proposal

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1. Introduction

The following information documents the Alberta Electric System Operator (“AESO”) Board decision (“Decision”) on the AESO’s 2020 Business Plan and Budget Proposal (“Business Plan”) which includes the AESO’s 2020 business initiatives and related budgets for general and administrative, interest, amortization, capital and other industry costs, as well as the 2020 forecasts for transmission line losses and ancillary services costs. This Decision should be read in conjunction with the Business Plan, comments from Stakeholders who participated in the process (“Stakeholders”) and AESO Management’s (“Management”) responses to those comments, all of which are available on the AESO’s website at www.aeso.ca

The *Transmission Regulation*¹ (“T-Reg”) includes provisions addressing the process for consultation and approval of the AESO budget for general and administrative, interest, amortization, capital and other industry (collectively referred to as “Own Costs”), as well as forecasts for transmission line losses and ancillary services costs. The T-Reg provides that the AESO must consult with Stakeholders likely to be directly affected by these proposed costs. It also provides that Own Costs, once approved by the AESO Board, are considered as prudent by the Alberta Utilities Commission (“AUC”) unless an interested person satisfies the AUC that such costs are not prudent. Transmission line losses and ancillary services costs, once approved by the AESO Board, are also deemed to be prudent by the AUC. Subsequent to the AESO Board’s Decision, a Stakeholder may dispute that Decision pursuant to the Dispute Resolution provisions of the ISO Rules.

The practice established by the AESO to conduct consultation on these costs is the Budget Review Process (“BRP”). The BRP is an open and transparent process which facilitates a business initiative and cost review with Stakeholders. Consistent with prior years, a recommendation on the AESO’s business initiatives, budgeted Own Costs, and forecasted transmission line losses and ancillary services costs was prepared by Management and outlined in the Business Plan. This information was provided to the AESO Board for review and approval, or to be amended and approved, as appropriate.

¹ AR 86/2007

2. Budget Review Process

The Process

An overview of the 2020 BRP, terms of reference, and proposed process calendar providing the 2020 BRP milestone activities leading up to this Decision can be found in the Business Plan (Section 3). A summary of the key 2020 BRP steps and dates from 2019 and 2020 is provided in the following table:

Key BRP Dates	Purpose
September 30, 2019	Notice to stakeholders – A notice was distributed to stakeholders regarding the initiation of the BRP (i.e., stakeholder consultation process), an overview of the process steps, terms of reference, and proposed process schedule.
October 30, 2019	First stakeholder meeting – Stakeholder meeting to discuss the preliminary list of business initiatives proposed for 2020.
November 29, 2019	Second stakeholder meeting – A technical review meeting to discuss transmission line losses and ancillary services costs forecasts for 2020 and the preliminary own costs budgets (general and administrative, interest and amortization, capital and other industry costs) proposed for 2020.
February 10, 2020	Stakeholder and AESO Board meetings (as required).

2020 BRP

The AESO Board continues to believe that the BRP, which includes multiple stages, regular opportunities for interaction with Stakeholders, the disclosure of Stakeholder and Management positions and comments, and the publishing of this Decision, meets the previously noted key requirements of the T-Reg.

During 2019, nine Stakeholders participated in the 2020 BRP. The AESO Board and Management recognize the importance of Stakeholder participation in the BRP in order for the process to be successful and appreciate Stakeholders' time and effort.

As part of the BRP, three of the Stakeholders - Alberta Direct Connect Consumer Association (ADC), Independent Power Producers Society of Alberta (IPPSA) and Industrial Power Consumers Association of Alberta (IPCAA) - provided the AESO Board with written submissions on the Business Plan and met with

the AESO Board on February 10, 2020 to clarify their submissions. Those Stakeholder submissions and other Stakeholder comments relating to the Business Plan have been considered in reaching this Decision. The written comments received from Stakeholders during the BRP and Management's replies to those comments are documented in the Business Plan (Section 5). The February 10, 2020 stakeholder submissions to the AESO Board, and Management responses to those submissions, can be found on the AESO website at www.aeso.ca

AESO Board Key Findings

The AESO Board received the requisite information on the 2020 BRP, including an overview of the process undertaken, the disclosure of Stakeholder comments with corresponding Management responses and the Business Plan, and has performed a detailed review of the Business Plan with Management to develop this Decision. In addition, it should be noted that Management provides ongoing updates to the AESO Board on a regular basis, through its Audit Committee, on the AESO's actual financial results compared to approved budgets and forecasts.

The AESO Board believes that the BRP has achieved its objectives and has met the requirements of the T-Reg².

3. Strategic Plan and Business Initiatives

Strategic Plan

The business initiatives as set out in the Business Plan are based on the AESO's five-year 2019-2023 *Strategic Plan* ("Strategic Plan"). The Strategic Plan is reviewed annually against the AESO's statutory obligations and current circumstances, and is amended as required as a part of the AESO's annual strategic planning process. The Strategic Plan establishes the AESO's objectives for the five-year 2019-2023 period, and the Business Plan outlines the specific tasks to be focused on in 2020 to meet those objectives. Some initiatives will be completed in 2020; others will require more than one year to be completed. The Business Plan provides transparency as to which initiatives will be focused on in 2020.

² Subsection 3(1)(b)

The Strategic Plan identifies three strategic objectives as areas of focus. The focus of these objectives include the AESO becoming a more dynamic organization with the expertise and agility to adapt to transformative change, delivering a stable electricity framework that provides reliability at lowest cost through competition as the AESO bridges from the current transition to the broader industry transformation, providing optionality for consumers and industry to integrate new technologies and approaches while maintaining the overall reliability of the grid. The Strategic Plan becomes the starting point for the development of the Business Plan. The AESO has, from time to time, amended its objectives on its own initiative or in response to Stakeholder feedback. The three strategic objectives were provided to Stakeholders as part of the Business Plan (Section 4, Appendix A).

Business Initiatives

The AESO's 2020 business initiatives are set out in the Business Plan (Section 4, pages 6-10) and provide Stakeholders with an understanding of the organization's corporate direction for 2020 and beyond, as many of the AESO's business initiatives are multi-year in nature. The business initiatives were discussed with Stakeholders as part of the BRP and the AESO. Management believes the initiatives for 2020 as outlined in the Business Plan meet the objectives of the AESO.

AESO Board Key Findings

The AESO Board has reviewed the Stakeholder submissions on the AESO's proposed business initiatives, listened to Stakeholder clarifications of their submissions by way of presentations to the AESO Board and reviewed the associated replies from Management. The AESO Board finds that the business initiatives as outlined in the Business Plan are comprehensive and necessary to achieve the organization's objectives in 2020. The AESO Board acknowledges that there were various comments by Stakeholders in their submissions to Management during the BRP. The AESO Board has considered the information they were presented and approves the business initiatives for 2020 as outlined in the Business Plan.

4. AESO 2020 Budget and Forecast Cost Summary

The AESO's 2020 budgeted and forecasted costs were reviewed with Stakeholders as part of the 2020 BRP and identified in the Business Plan. The details of the budgeted AESO Own Costs and forecasted Transmission Operating Costs for 2020 can be found in the Business Plan. The AESO's 2020 general and administrative, interest and amortization budgets are discussed in Section 5, the 2020 capital budget costs are discussed in Section 6, the 2020 other industry forecast costs are discussed in Section 7 and the forecasts for transmission line losses and ancillary services costs are discussed in Section 8 of this Decision.

The following table provides a summary of the aggregated budgeted and forecasted costs recommended by Management to the AESO Board for approval:

	Budget Category/Year		Page Reference ³	Revenue Source (\$ million)				
				Transmission	Energy Market	Renewables	Load Settlement	Total
OWN COSTS	General and Administrative	2020	19	63.7	30.9	1.0	0.6	96.2
	Interest	2020	20	3.0	3.3	0.7	0.1	7.1
	Amortization	2020	20	15.9	5.7	0.4	0.1	22.1
	Capital	2020	23					29.3
	Other Industry Costs	2020	15	16.5	8.1	-	-	24.5
TRANSMISSION OPERATING COSTS	Wires	2020	12	1,916.0	-	-	-	1,916.0
	Transmission Line Losses	2020	12	113.5	-	-	-	113.5
	Ancillary Services	2020	12	257.8	-	-	-	257.8
SUMMARY	Own Costs	2020		82.5	39.9	2.1	0.9	125.4
	Transmission Operating Costs	2020		2,287.4	-	-	-	2,287.4

Differences are due to rounding

³ Details provided on the referenced pages in Section 4 of the 2020 Business Plan and Budget Proposal dated January 15, 2020

5. 2020 General and Administrative, Interest and Amortization

General and Administrative

As part of the annual planning process, Management conducted an extensive and iterative review of the AESO's 2020 initiatives, activities and deliverables and corresponding general and administrative costs. Based on this review, the AESO's proposed 2020 general and administrative costs are \$96.2 million, which is a decrease of \$9.8 million or 9 per cent from the 2019 budget of \$106.0 million.

An analysis of the proposed AESO's 2020 general and administrative cost budget was provided to Stakeholders and the AESO Board by Management as part of the BRP and can be found in the Business Plan (Section 4, pages 18-21). The following table provides a summary of the proposed adjustments to the budget cost categories.

	Description of Cost	Amount (\$ million)
1.	Staff Costs	6.1 decrease
2.	Contract Services and Consultants	4.1 decrease
3.	Administration	0.2 increase
4.	Facilities, Computer Services, Maintenance and Telecommunications	0.1 increase
	Change in general and administrative costs 2020 budget versus 2019 budget	9.8 decrease

Differences are due to rounding

The AESO's focus in 2020 will be on the initiatives outlined in the Business Plan, however the AESO will adapt to new and changing initiatives should they occur, while maintaining reliable operations of the transmission system and other core AESO functions. The AESO's general and administrative budgeted costs focus on the delivery of key initiatives which tend to be multi-year in nature.

Subsequent to Government of Alberta ("GoA") decision to not continue with the Renewable Electricity Program (REP) and Capacity Market initiatives, AESO Management undertook a detailed review of its resources (staff and consulting). Department and individual staff positions were reviewed to assess whether any such positions were extraneous as a result of the GoA decision. In addition, a high level assessment of the AESO's organizational structure was undertaken to identify opportunities for efficiencies and potential

options to restructure the organization going forward to better achieve its objectives (e.g. operations and transmission departments were combined to form grid reliability). As a part of Management’s review, resources were assessed to determine if they were appropriate, on an overall basis, to deliver on the AESO’s base business and initiatives for 2020.

The AESO continues to focus on its vision to shape the transformation of Alberta’s electricity future to deliver reliability and enhance the quality of life for Albertans. To deliver on this vision the AESO is driven to be a dynamic organization with the expertise and agility to adapt to transformative change; deliver a stable electricity framework that provides reliability at lowest cost; and provide optionality for consumers and industry to integrate new technologies and approaches.

For 2020, the key initiatives will be focused on:

- Market sustainability and evolution, including conducting supply adequacy assessments to determine what, if any, changes are required to the market structure for long-term sustainability; continuation of flexibility initiatives; and technology integration market design work to align with the Energy Roadmap and the Distributed Energy Resources (DER) Roadmap;
- System developments to provide long-term benefit to Albertans including enabling competitive generation included in the AESO’s published 2020 Long-term Transmission Plan;
- Continued implementation of the DER Roadmap, including engagement activities;
- Finalization of the stakeholder engagement framework and associated implementation activities to provide stakeholders a more transparent and meaningful experience;
- Advancement of the external technology plan for integrating new electricity value chain technologies, including enhancing AESO awareness, engaging industry, and progressing technology integration plans for energy storage and distributed energy resources; and
- Delivery of a sustainable EMS investment plan and a long-term market tools transition plan supporting future energy and Ancillary Services market plans.

The AESO will continue to focus on identifying opportunities to be more efficient and effective in its operations while delivering on its mandate and the key initiatives identified above.

Interest and Amortization

Management also provided Stakeholders with an analysis of the proposed adjustments to the interest and amortization as part of the BRP. This information is also outlined in the Business Plan (Section 4, page 20). A summary of the proposed changes are provided in the table below:

Interest Costs and Amortization (\$ millions)	2020 Budget	2019 Budget	2018 Actual
Interest	7.1	3.6	1.4
Amortization of Intangible and Capital Assets	22.1	21.2	26.1

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

Additional interest costs are budgeted for 2020 related to accumulated working capital deficiencies, of which some will be recovered throughout 2020 and others, such as portions of energy market and REP related deficiencies, will be deferred and recovered in future periods.

Intangible and capital assets are amortized over their estimated useful lives in accordance with generally accepted accounting principles and reviewed on an annual basis. The higher amortization in 2020 is mainly due to a higher depreciable asset base in 2020 over 2019.

AESO Board Key Findings

The AESO Board has reviewed and considered Management's proposed budgeted 2020 Own Costs and associated stakeholder comments and responses from Management. The AESO Board approves the respective 2020 general and administrative, interest and amortization budgeted costs as provided in the Business Plan.

6. 2020 Capital Costs

The AESO Board, as indicated in previous decisions, continues to believe that the AESO's IT systems and related infrastructure represent a central underpinning of the AESO's business, including maintaining the efficacy of the functioning of the market and the interconnected electric system. The AESO budgets its capital costs on a discrete basis, where each budget period is reviewed independently as to the expenditures to be incurred in the budget. The AESO takes into consideration those capital projects which are already in progress and those which will be initiated within the period to determine the budget amount for the upcoming period.

In the Business Plan, Management proposed capital budgets of \$29.3 million for 2020. Further details are provided in the Business Plan (Section 4, Appendix E). A summary of the proposed changes are provided in the table below:

Capital Expenditures (\$ millions)	2020 Budget	2019 Budget	2018 Actual
General Capital	29.3	40.4	17.2
Major Capital	-	9.0	8.1
Total Capital	29.3	49.4	25.3

Differences are due to rounding

The variance between the 2019 and 2020 capital budgets is a decrease of \$20.1 million from \$49.4 million in 2019 to \$29.3 million in 2020. The decrease is mainly attributable to the key capital initiatives related to the capacity market implementation, which were part of the 2019 budget, but not required for the 2020 capital budget due to the Government of Alberta's decision announced on July 24, 2019 that Alberta will not transition to a capacity market and will continue with an energy-only market. The key capital budget also decreased due to lower EMS sustainment budgeted costs in the 2020 budget compared to 2019. Additionally, the capital budget has decreased due to the completion of the SCC Expansion Project in 2019, a major capital project which was completed in October 2019. The AESO continues to utilize a capital projects portfolio management process and, on a quarterly basis, the AESO Board, through the AESO's Audit Committee, reviews the portfolio against the approved budget. Any material changes are communicated to Stakeholders as required as a part of the AESO's quarterly reporting.

AESO Board Key Findings

The AESO Board approves the capital cost budget of \$29.3 million for 2020 as provided in the *Business Plan*.

7. 2020 Other Industry Costs

Management provided a forecast to Stakeholders for 2020 with an analysis of the proposed adjustments to other industry costs forecasts as part of the 2020 BRP. This information is outlined in the Business Plan (Section 4, pages 16 and 17). There is a proposed increase to other industry costs of \$0.7 million from \$23.8 million in the 2019 forecast to \$24.5 million in 2020. This increase is mainly due to both a slight increase in the 2020 forecast for AESO’s costs for WECC/NWPP/NERC fees to \$2.8 million from the 2019 forecast costs as well as an increase in the forecast regulatory process costs for 2020 to \$3.3 million compared to forecast 2019 amounts of \$2.8 million. A summary of the proposed changes are provided in the table below:

Other Industry Costs (\$ millions)	2020 Budget	2019 Budget	2018 Actual
AUC Fees – Transmission	12.0	12.2	11.6
AUC Fees – Energy Market	6.4	6.5	6.3
WECC/NWPP/NERC Costs ⁴	2.8	2.4	2.1
Regulatory Process Costs	3.3	2.8	3.7
Total Other Industry Costs	24.5	23.8	23.8

Differences are due to rounding

AESO Board Key Findings

The AESO Board approves the other industry cost forecast of \$24.5 million for 2020 as provided in the Business Plan.

⁴ Western Electricity Coordinating Council/Northwest Power Pool/North American Electric Reliability Corporation

8. 2020 Transmission Line Losses Costs and Ancillary Services Costs

The AESO's 2020 transmission line losses costs are forecast to be \$113.5 million and the ancillary services costs are forecast to be \$257.8 million. Both of these items are detailed in the Business Plan (Section 4, pages 12-15). The forecasts are based on volume forecasts determined by the AESO and market-based commodity price forecasts developed by a third party. The average pool price used for the 2020 forecast is \$58 per MWh, which is the same average pool price that was used for the 2019 forecast.

The 2020 forecast cost for transmission line losses is \$113.5 million or 10 per cent lower than the 2019 forecast cost of \$126.1 million. The 2020 volume forecast is based on 1.9 terawatt hours of energy, which is 0.2 terawatt hours or 10 per cent lower than the 2019 forecast of 2.1 terawatt hours of energy. The forecasted lower transmission line loss costs are primarily a result of the lower volumes forecasted in 2020 compared to 2019.

The 2020 forecast for ancillary services costs is \$257.8 million which is \$56.0 million or 18 per cent lower than the 2020 forecast of \$313.8 million. This decrease can mainly be attributed the decrease in the operating reserve cost forecast to \$229.1 million in 2020 compared to \$270.6 million in 2019, which is a decrease of \$41.5 million or 15 per cent. The 2020 operating reserves volume forecast, which is the most significant component of the annual ancillary services costs, is 7.8 terawatt hours, which is 0.1 terawatt hours or one per cent lower than the 2019 forecast of 7.9 terawatt hours. Contributing to lower operating reserve costs is the impact of the active operating reserves prices, which are the most significant operating reserve costs, which are derived from pool price and a premium or discount to pool price. During periods of low pool prices, the discounts offered reflect the offer strategies associated with the lower pool prices, which are low or small discounts. In periods of higher pool prices, the discounts will typically increase to correspond with the higher pool prices. While the prices of operating reserves procured are indexed to the pool price, changes to the average pool price do not result in proportional changes to the operating reserve costs. See *Business Plan*, (Section 4, pages 13 and 14) for additional information.

AESO Board Key Findings

The AESO Board understands that it is inherently difficult to forecast these costs as these costs are a function of volume and market-based commodity price forecasts. Volume forecasts tend to be reasonably accurate as volumes (generation and load) can be projected with a higher degree of certainty over time, generally reflecting historical trends. However, commodity price forecasts, specifically pool price forecasts, are subject to greater variability as the forecasts are subject to various underlying factors (e.g., generator offer strategies, unplanned outages, load requirements) which are difficult to estimate. The AESO Board believes the methodologies and assumptions used by Management to forecast these costs are reasonable

and the forecasts are approved. It is recognized that these forecasts are estimates and Management makes reasonable efforts to forecast these costs as accurately as possible using the best information available.

9. Decision Overview

On balance, having regard for all comments provided by Stakeholders and its own assessment, the AESO Board finds the AESO's 2020 budgeted costs for general and administrative, interest, amortization, capital and other industry, and the forecasts for 2020 transmission lines losses and ancillary services costs as identified in the table on page 8 of this Decision, to be reasonable and are hereby approved.

The AESO Board acknowledges that from time to time due to uncertainty in the AESO's planned initiatives, or unplanned initiatives as they arise, the AESO's Own Costs budget as approved by the AESO Board may need to be revised for additional resource requirements to accommodate such uncertainty. If a revised Own Costs budget is required for 2020, the AESO is committed to follow its established BRP process to consult with Stakeholders as required. The AESO will notify Stakeholders of any proposed consultation should the need arise.

In closing, the AESO Board would like to highlight its appreciation to Stakeholders for their valued contributions and participation in the BRP and commends Management for its efforts to inform Stakeholders and to seek their input on the Business Plan.

The AESO Board welcomes any comments from interested parties on improvements to the BRP and has requested that Management continue its discussions with Stakeholders toward ongoing process improvement.

Signed at Calgary, Alberta on February 28, 2020

For the AESO Board,



AESO Board Chair,
Will Bridge