ALBERTA GRID RISK SHARING POOL

MARCH 2022 OPERATIONAL REPORT

ACTUARIAL HIGHLIGHTS

Related Bulletin: F2022-026_AB_RSP_March_2022_Operational_Report

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FACILITY ASSOCIATION

ACTUARIAL HIGHLIGHTS
RSP ALBERTA GRID
OPERATIONAL REPORT
MARCH 2022

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1 Summary

Note to members: this is the quarterly Actuarial Highlights we will release going forward to replace the monthly Actuarial Highlights. The next report will be available for reporting month May 2022 in July 2022, in line with the valuation implementation schedule. Please contact us with any questions or concerns in regards to this matter.

1.1 Valuation Schedule (Fiscal Year 2022)

The March 2022 Operational Report incorporates the results of an updated valuation (as at December 30, 2021) – the impact of the implementation of the valuation is discussed in section 1.2. The following table summarizes the valuation implementations scheduled for fiscal year 2022.

ALBERTA GRID RISK SHARING POOL
FISCAL YEAR 2021 – SCHEDULE OF VALUATIONS

Valuation Date	Discount Rate (per annum)	Operational Report	Description of Changes
Sep. 30, 2021 (completed)	0.81% mfad[1] 25 bp	Oct. 2021	update valuation (roll-forward): accident year 2021 loss ratio decreased 0.8 points to 65.5%; discount rate increased 9 basis points; no change to selected margins for adverse deviations
Dec. 31, 2021	1.04% mfad 25 bp	Mar. 2022	update valuation: accident year 2021 loss ratio increased 1.2 points to 66.7% and accident year 2022 loss ratio increased 3.3 points to 82.3%; discount rate increased 23 basis points; no change to selected margins for adverse deviations
Mar. 31, 2022	% mfad - bp	May. 2022	update valuation (roll-forward):
Jun. 30, 2022	% mfad -- bp	Aug. 2022	update valuation:
Sep. 30, 2022	% mfad -- bp	Oct. 2022	update valuation (roll-forward):

Under the proposed schedule for fiscal year 2022, the off-half valuation quarters ending March 31, 2022 and September 30, 2022 would not reflect a full valuation update of assumptions, but would rather roll-forward key assumptions from the previous valuation.

1.2 New Valuation

A valuation of the Alberta Grid Risk Sharing Pool ("RSP") as at December 31, 2021 has been completed since last month's Operational Report and the results of that valuation have been incorporated into

[1] The selected interest rate margin is limited to reducing the selected discount rate to 0%; the approach is that if the net impact is negative, the discount rate will be capped at 0%.

this month's Report. The valuation was completed by the Facility Association's internal actuarial group in conjunction with, and approved by, the Appointed Actuary, under the hybrid model for actuarial services.

The valuation implementation impact is summarized in the following two tables, where the abbreviations PAYs refers to prior accident years, CAY refers to the current accident year (2022), and "Prem Def" refers to premium deficiency / deferred acquisition costs impacts.

Summary of Impact ($000s) of Implementing Result of Valuation as at December. 31, 2021[2]

AB Grid	unfav / (fav) for the month and ytd					
	IMPACT in $000s from changes in:					
	ults & payout patterns			dsct rate	margins	
	Nominal [1]	apv adj. [2]	sub-tot [3]	apv adj. [4]	apv adj. [5]	TOTAL [6]
PAYs	(7,538)	(79)	(7,617)	(1,683)	-	(9,300)
CAY	1,928	234	2,162	(301)	-	1,861
Prem Def	4,276	427	4,703	(726)	-	3,977
TOTAL	(1,334)	582	(752)	(2,710)	-	(3,462)

As indicated in the preceding table, the incorporation of the new valuation had an estimated ***$3.5 million favourable impact*** on the month's net result from operations, subtracting an estimated 5.8 points (see following table) from the **year-to-date Combined Operating Ratio** to end at **110.2%.** The favourable valuation impact is driven by the reduction in prior year nominal ultimate losses and the increase in discounting, partially offset by increases in the current year ultimate loss ratio estimate.

Summary of Impact (% YTD EP) of Implementing Result of Valuation as at December. *30, 2021*

AB Grid	ytd EP 59,228 (actual)					
	IMPACT unfav / (fav) as % ytd EP from changes in:					
	ults & payout patterns			dsct rate	margins	
	Nominal [1]	apv adj. [2]	sub-tot [3]	apv adj. [4]	apv adj. [5]	TOTAL [6]
PAYs	(12.7%)	(0.1%)	(12.9%)	(2.8%)	-	(15.7%)
CAY	3.3%	0.4%	3.7%	(0.5%)	-	3.1%
Prem Def	7.2%	0.7%	7.9%	(1.2%)	-	6.7%
TOTAL	(2.3%)	1.0%	(1.3%)	(4.6%)	-	(5.8%)

The impact of the **nominal changes** is shown in column [1] of the two preceding summary tables. The change in the selected nominal ultimates was **favourable by $1.3 million** overall. This reflects the impact attributable to the changes in the selected ultimate loss ratios (i.e. for each accident year, it is the product of life-to-date earned premium for the accident year and the change in the selected

[2]In these tables, "PAYs" refers to prior accident years, "CAY" refers to the current accident year, and "Prem Def" refers to the provision for premium deficiency or the deferred policy acquisition asset (as applicable). "Nominal" refers to changes excluding any actuarial present value adjustments, whereas "apv adj." refers to actuarial present value adjustments.

The columns under the heading "ults & payout patterns" reflect the impact of changes in the valuation selected ultimates and claims payment patterns (i.e. based on unchanged selection of discount rates and margins for adverse deviation). The column "dsct rate" reflects the impact of the change in the selected discount rate and the column "margins" reflects the impact of any changes in selected margins for adverse deviations.

ultimate loss ratio).

The **PAYs** overall showed a **$7.4 million favourable** nominal variance or 2.5% of the PAYs nominal unpaid balance of $291.5 million determined at the end of last month (February 2022), due to favourable development on PAY BI claims along with valuation method selection changes resulting in favourable impacts.

The CAY and premium deficiency impacts are a result of the change in the selected loss for accident year **2022** (increased 2.7 points to 82.3%). This change is a result of the valuation expected loss ratio update, which incorporates updated loss and premium trends and updated prior year ultimate loss ratios.

The impacts related to actuarial present value ("apv") adjustments are split into the impact prior to any change in the selected discount rate and selected margins for adverse deviations or "MfADs" (at the level they were selected i.e. coverage and accident half-year), the impact of then updating the discount rate, and finally the impact of any changes to the MfADs (at the level they were selected). The changes in actuarial present value adjustments are shown in the preceding summary tables in columns [2], [4], and [5].

Column [2] recognizes that changing the nominal selections also changed the unpaid estimates (including changes to the relative mix by coverage, which had an impact on the weighted-average MfADs). It also reflects the fact that we updated the projected emergence of claims payments, resulting in a change in the projected cash flows. These changes generated an unfavourable change of $0.6 million in the actuarial present value adjustments, prior to any changes in the selected discount rate and/or MfADs.

Updated projected cash flows were reviewed against the selected risk-free yield curve, derived from Government of Canada benchmark bond yields monthly series using values for December 2021. Column [4] accounts for the change in the **discount rate** selected (increased 23 basis point to **1.04%**), indicating a favourable impact of $2.7 million. The impact *related only to claims liabilities* (i.e. PAYs plus CAY) was $2.0 million at March 2022 – this compares to the $2.0 million change one would estimate as the impact by interpolation using the interest rate sensitivity table provided in last month's Actuarial Highlights.

Column [5] accounts for any changes to selected MfADs. The selected **investment rate MfAD** was **left unchanged at 25 basis points** and the selected **claims development MfADs** at the coverage and accident year level were also left unchanged (as per our usual practice, development margins are reviewed with the June 30 valuation).

Consideration was given to recent legal decisions and changes in legislation / regulation as noted above and outlined in section 1.4.

1.3 Appointed Actuary and Hybrid Actuarial Services Model

The Annual General Meeting of the members of Facility Association ("FA") appointed Mr. Cosimo Pantaleo as the Appointed Actuary at its meeting on March 4, 2021.

Facility Association operates under a hybrid model in relation to the management and provision of actuarial services. Under this model, actuarial services are performed by both Facility Association's

internal staff and its external actuarial consulting firm. The hybrid model approach maximizes the efficiency of resource allocation while providing access to additional expertise and capacity as needed.

1.4 Consideration of Recent Legal Decisions and Changes in Legislation / Regulation

There have been no changes in these descriptions since last Highlights, other than updated references to reflect the new valuation.

Consideration and assessment of potential impacts of legal decisions and changes in legislation / regulation constitutes a regular part of the valuation process. Descriptions of some of the more recent (i.e. within the last five years) changes are provided below.

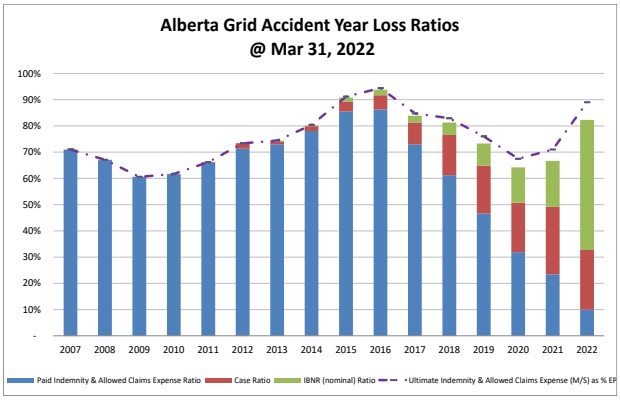
In the **Alberta Treasury Board and Finance Notice 04-2018** (Clarification of Minor Injury Regulation), dated **October 17, 2018**, the Alberta Superintendent of Insurance advised that clarifying amendments have been made to the definition of minor injuries under the Minor Injury Regulation (MIR). Consideration of these changes were included in the industry trend analysis supporting the calculation of our valuation expected loss ratios.

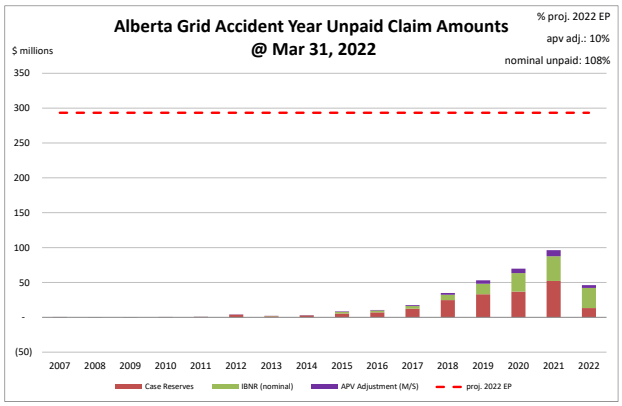
Amendments to the **Alberta Automobile Accident Insurance Benefits Regulation, Diagnostic and Treatment Protocols Regulation, and Minor Injury Regulation** came into force effective November 1, 2020, amending definitions and various benefit maximums defined in these regulations. **Alberta Bill 41** (Insurance (Enhancing Driver Affordability and Care) Amendment Act, 2020) **received royal assent on December 9, 2020**. Bill 41 amends the Insurance Act to: 1) control the use of expert witnesses in Court of Queen's Bench proceedings where damages for bodily injury or death arising from use or operation of a motor vehicle as defined in the Traffic Safety Act are claimed; 2) introduce direct compensation for property damage (DCPD) into the province; 3) amend the calculation of pre-judgment interest on damages awarded for bodily injury or death arising directly or indirectly form the use or operation of an automobile; and 4) amend provisions regarding the regulation of auto insurance rates by the Alberta Automobile Insurance Rate Board. Consideration of these changes were included in the industry trend analysis supporting the calculation of our valuation expected loss ratios. There is an estimated 20% reduction to loss costs for Bodily Injury claims in Alberta, as well as an estimated 8% increase in accident benefits loss costs, effective Jan. 1, 2021, which have been reflected in our estimates.

1.5 Current Provision Summary

The following charts show the current levels of claim liabilities[3] booked by accident year. The left chart displays life-to-date payments, case reserves, IBNR, and the total including actuarial present value adjustments against accident year earned premium. The right chart shows the associated dollar amounts for the components of the claim liabilities and the current projected amount of 2021 full year earned premium (the red hash-mark line) to provide some perspective.

[3]Claim liabilities refer to provision for unpaid indemnity and allowed claims expenses. Allowed claims expenses are first party legal and other expenes as listed in the RSP Claims Guide. Claims expenses paid through the member company expense allowance are NOT included in this discussion.





"M/S" refers to "Member Statement" values – that is, actuarial present value adjustments at the selected discount rate.

The current actuarial present value adjustments balance ($30.2 million – see the following table) represents 10% of the earned premium projected for the full year 2022 (see the upper right corner of the preceding chart on the right). If our current estimates of the nominal unpaid amounts prove to match actual claims payments, the actuarial present value adjustments will be released into the net operating result over future periods.

claim liabilities ($000s)

	amt	%
case	195,057	56.1%
ibnr	122,675	35.3%
M/S apv adjust.	30,239	8.7%
M/S total	347,971	100.0%

The table to the left breaks down the Member Statement (M/S) claim liabilities total into component parts, showing that the majority of the claim liabilities for this RSP is in case reserves. Approximately 52% of the IBNR balance relates to accident years 2021 and 2022 (see Exhibit B). Approximately 86% of the M/S total claim liabilities are related to accident years 2018-2022 inclusive (i.e. the most recent 5 accident years), and approximately 2% is related to accident years 2012 and prior (i.e. prior to the most recent 10 accident years).

The following tables summarize the premium liabilities and the total policy liabilities.

premium liabilities ($000s)

	amt	%
unearned prem	132,440	111.3%
prem def/(dpac)	(22,640)	(19.0%)
M/S apv adjust.	9,148	7.7%
M/S total	118,948	100.0%

policy liabilities ($000s)

	amt	%
claim	317,732	68.0%
premium	109,800	23.5%
M/S apv adjust.	39,387	8.4%
M/S total	466,919	100.0%

2 Activity since previous valuation implementation

2.1 Recorded Premium and Claims Activity

The following table summarizes the extent to which premiums and claims amounts recorded since the prior implementation differ from the prior projection.

Alberta Grid RSP Actual vs Projected Summary: Recorded Transaction Amounts ($ thousands)

AY Group	Share Year	Share Month	Actual Earned Premium (000s)	Actual minus Projected Earned Premium (000s)	Actual Paid Claims (000s)	Actual minus Projected Paid Claims (000s)	Actual Recorded Claims (000s)	Actual minus Projected Recorded Claims (000s)
PAY	2021	November	(39)	(39)	7,234	1,835	2,737	646
		December	(28)	(28)	8,964	3,455	1,721	(274)
	2022	January	(387)	(387)	9,143	4,275	6,215	1,502
		February	(100)	(100)	5,816	(782)	5,717	(667)
		March	(107)	(107)	8,440	2,130	4,358	709
PAY Total			**(661)**	**(661)**	**39,597**	**10,913**	**20,748**	**1,916**
CAY	2021	November	18,150	(1,067)	4,188	823	9,952	(847)
		December	18,894	(7)	4,693	2,232	12,459	4,375
	2022	January	19,365	(677)	615	(177)	4,277	(473)
		February	18,090	(1,285)	1,656	(24)	5,769	161
		March	20,978	(1,830)	3,562	1,929	9,035	3,466
CAY Total			**95,477**	**(4,866)**	**14,714**	**4,783**	**41,492**	**6,682**
Grand Total			**94,816**	**(5,527)**	**54,311**	**15,696**	**62,240**	**8,598**

(Recorded transaction amounts exclude IBNR & other actuarial provisions)

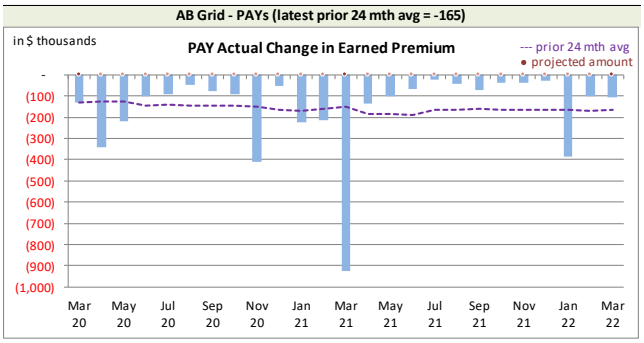
Claims transaction activity is generally volatile; changes from one month to the next are anticipated due to this natural "process variance" (i.e. random variation). Each month, the projection variances are reviewed for signs of projection bias and to identify potential ways to reduce the level of the variance. The variances are also reviewed as part of the quarterly valuation process, as an indicator of changes in the claims development process or potential bias in ultimate claims estimates.

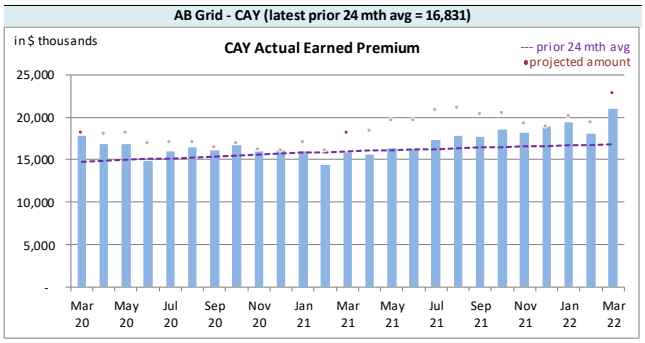
More detailed analysis and commentary on actual vs. projected for the most recent reporting months is provided below.

2.1.a Actual vs. Projected (AvsP): Earned Premium

The following charts show actual **earned premium**[4] activity in each of the most recent 25 calendar months, along with a "prior 24-month average" to show how each month's actual compares with the average amount of the preceding 24 calendar months.

*Alberta Grid RSP Actual **Earned Premium** by Calendar Month*





Earned premium changes during a given calendar month in relation to prior accident years tend to

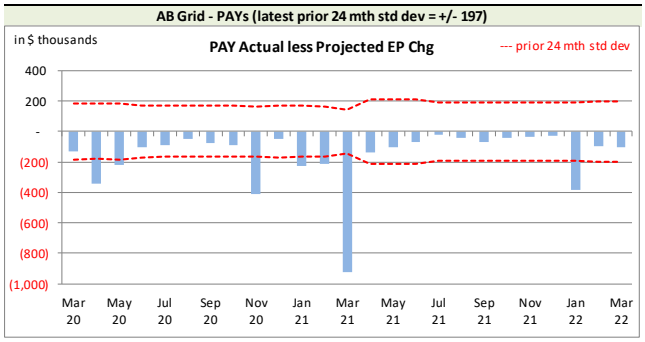
[4]Premium is earned on a daily basis based on the transaction term measured in days. As a result, months with 31 days earned relatively more than those with 30 days, and February earns the least.

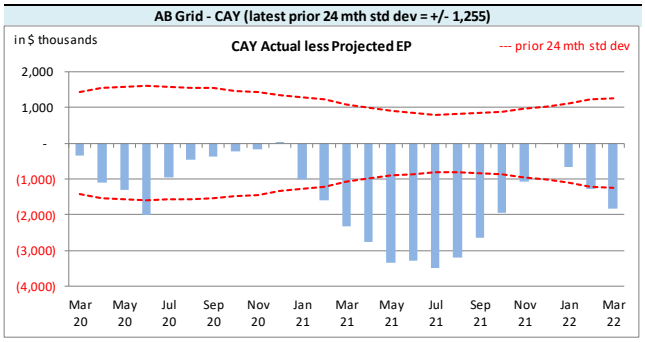
be at modest levels, although relatively high levels generally occur at the beginning of each year.

On Latest $ thousands		
Earned Premium	PAYs	CAY
Mthly Avg EP Chg (prior 24 mths)	(165)	16,831
std dev	197	1,255
A-P <> std dev	7	13
% <> std dev	28.0%	52.0%
norm <> std dev	31.7%	31.7%
performance vs 24-mth avg:	no better	worse

The associated variances between the actual changes and the projections from the previous month are shown in the following charts. **Earned premium** change projections are all attributed to the current accident year, as the projection upload does not accept earned premium changes for other accident years. We do not see this limitation as being significant for our purposes, but it does mean that the actual less projection variance will equal the actual **earned premium** change in relation to prior accident years.

*Alberta Grid RSP Actual vs. Projected Summary: **Earned Premium** Variances by Calendar Month*





We project **earned premium** changes from known unearned premium balances and projected written premium levels, but upload the total projections as current accident year (CAY). This process has generated prior accident years' (PAYs) bias[5], with actuals generally lower than projected, although the magnitude is not high relative to monthly premium. In addition to the PAYs' bias, the CAY has also shown bias[6], with actuals being generally lower than projected, and while we modified our projections processes in response, bias still exists. Over time, we may consider other projection approaches to address the bias issue, but it has not currently deemed as a priority.

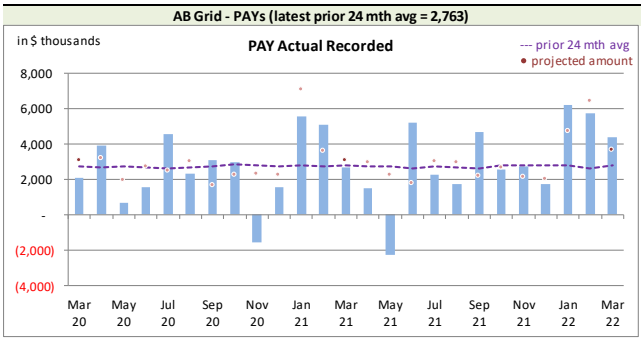
2.1.b AvsP: Recorded Indemnity & Allowed Claims Expense

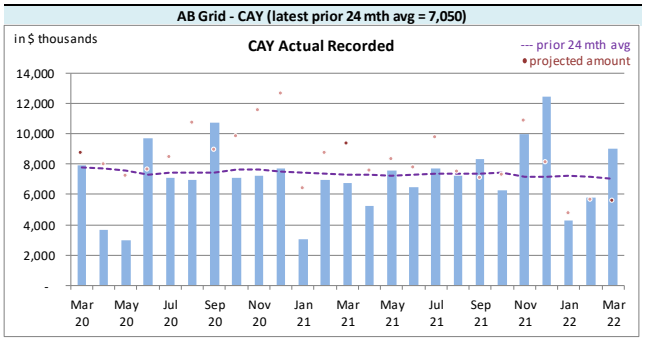
The following charts show actual **recorded** activity (**paid** and case reserve changes), in each of the most recent 25 calendar months, along with a "prior 24-month average" to show how each month's actual compares with the average amount of the preceding 24 calendar months.

[5]The PAYs' variances will show bias as the projection upload forces all earned premium projections to be attributed to the CAY.

[6]We measure bias based on a 95% confidence range for a binominal distribution with trials based on the range being considered (25 in this case) and 50% probability of success. The rolling 25-month CAY variances at March 2022 has only 2 months where the actuals were higher than projected, and as the 95% confidence range is 8 to 17, bias continues to be indicated.

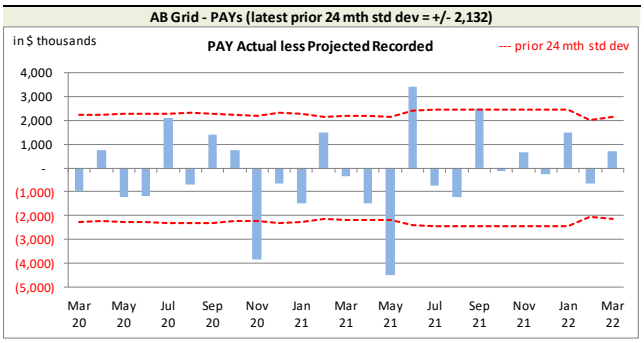
Alberta Grid RSP Actual **Recorded** *by Calendar Month*

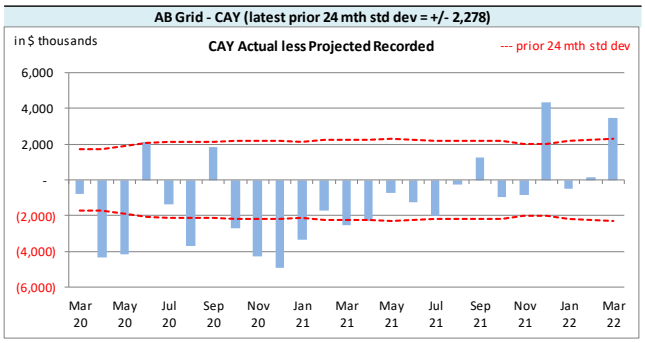




Recorded activity variances from the previous month's projections shown in the following charts, including the "prior 24-month standard deviation" levels to show how the variances from projection compare with historical standard deviations.

Alberta Grid RSP Actual vs Projected Summary: ***Recorded*** *Variances by Calendar Month*





On Latest $ thousands		
Recorded	PAYs	CAY
Mthly Avg Recorded (prior 24 mths)	2,763	7,050
std dev	2,132	2,278
A-P <> std dev	4	12
% <> std dev	16.0%	48.0%
norm <> std dev	31.7%	31.7%
performance vs 24-mth avg:	better	worse

With respect to **recorded** indemnity & allowed claims expense activity, 20% of the prior accident years' (PAYs) variances over the last 25 calendar months have fallen outside of one standard deviation of the actual **recorded** amounts (see table on left), suggesting the projection process has performed better than simply projecting the prior 24-month average amount (assuming it follows a normal distribution). Bias[7] has been indicated at a 95% confidence level on a rolling 25-month basis (5 of 25 variances were positive).

The current accident year (CAY) **recorded** variances fell outside of one standard deviation 44% of the time over the last 25 calendar months (see preceding table on the left), suggesting that the projection process has performed better than simply projecting the prior 24-month average amount. Bias has not been indicated at a 95% confidence level on a lagging 24-month basis (8 of 25 variances were positive).

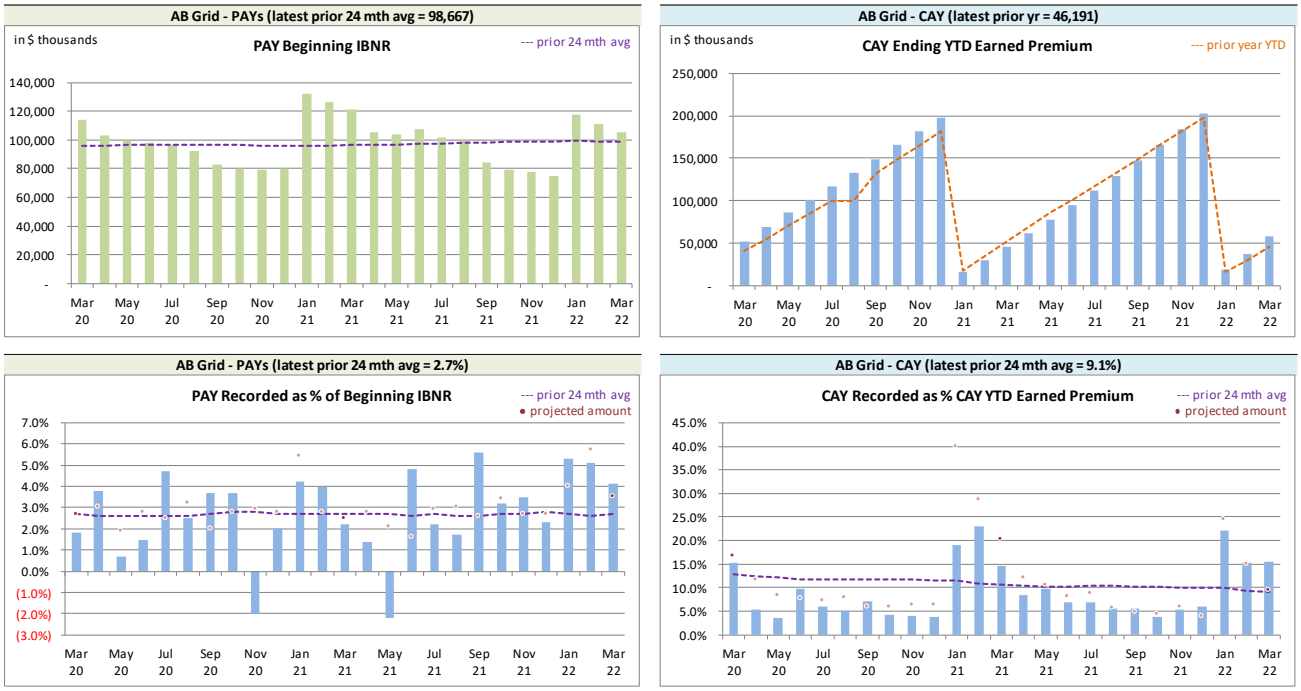
The method for establishing IBNR adjusts automatically for changes in **earned premium** and **recorded**

[7] For the binomial distribution with 25 trials and an assumed 50% success probability, the 95% confidence range is 8 to 17 successes. That is, favourable or unfavourable counts of 0 to 7 or 18 to 25 out of 25 outcomes would suggest bias.

claims activity level (see sections 2.2 and 3).

We have included, for reference, additional charts below related to levels influencing **recorded** activity. Note in particular the changes in the level of PAY beginning IBNR over the months, as a response to valuations and showing up as a beginning IBNR change one month after the valuation is implemented (i.e. April, June, September, and November).

*Alberta Grid RSP Levels that influence[8] **Recorded** activity by Calendar Month*



We track PAY beginning IBNR as **recorded** activity comes out of IBNR. Changes in the PAY beginning IBNR (see upper left of the preceding group of charts) occur for several possible reasons:

- to offset actual **recorded** activity (through loss ratio matching);
- the annual switchover as a CAY becomes a PAY (occurs in January); and
- when a new valuation is implemented, where the valuation resulted in changes to the selection of PAYs' ultimates (will show up as a beginning IBNR change one month after the valuation is implemented, i.e. the change will generally show in April, June, September, and November).

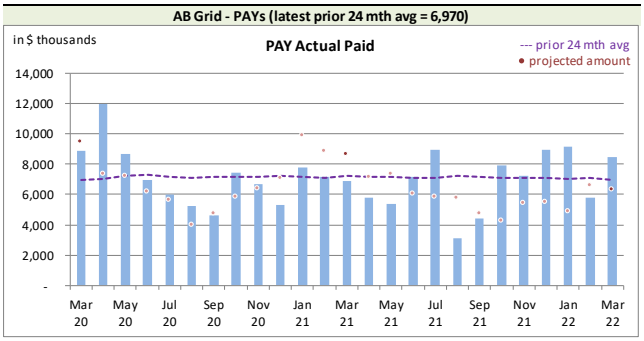
2.1.c AvsP: Paid Indemnity & Allowed Claims Expense

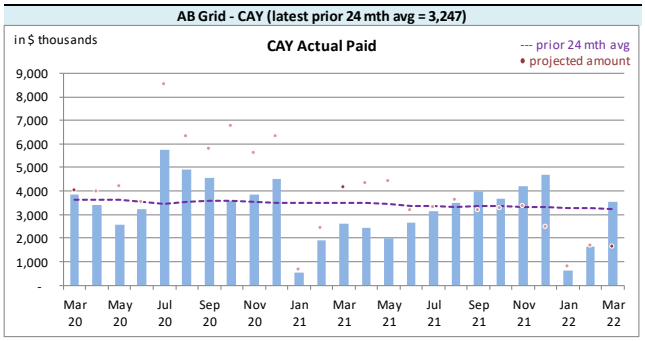
The following charts show actual **paid** activity in each of the most recent 25 calendar months, along with a "prior 24-month average" to show how each month's actual compares with the average

[8]Our recorded activity projections for the prior accident years are based on selected ratios of recorded activity to beginning unpaid balances, whereas the current accident year projections are based on selected ratios of year-to-date IBNR to year-to-date selected ultimate (i.e. selected LR x earned premium), deriving year-to-date recorded as selected ultimate less IBNR. In both cases, the ratio selection is based on our review of the more recent recorded activity and recent AvsP analyses.

amount of the preceding 24 calendar months.

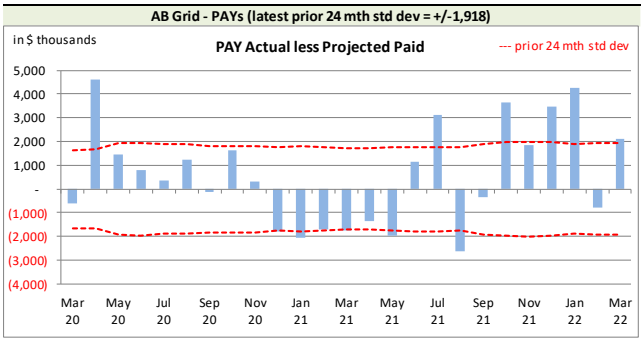
*Alberta Grid RSP Actual **Paid** activity by Calendar Month*

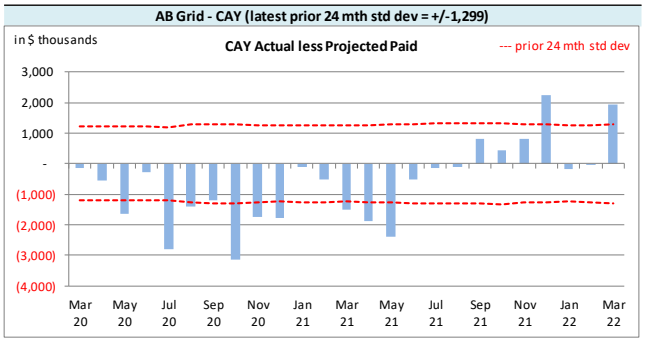




Paid activity variances from the previous month's projections shown in the following charts, including the prior 24-month standard deviation levels to show how the variances from projection compare with historical standard deviations.

*Alberta Grid RSP Actual vs Projected Summary: **Paid** Variances by Calendar Month*





On Latest $ thousands		
Paid	PAYs	CAY
Mthly Avg Paid (prior 24 mths)	6,970	3,247
std dev	1,918	1,299
A-P <> std dev	11	11
% <> std dev	44.0%	44.0%
norm <> std dev	31.7%	31.7%
performance vs 24-mth avg:	worse	worse

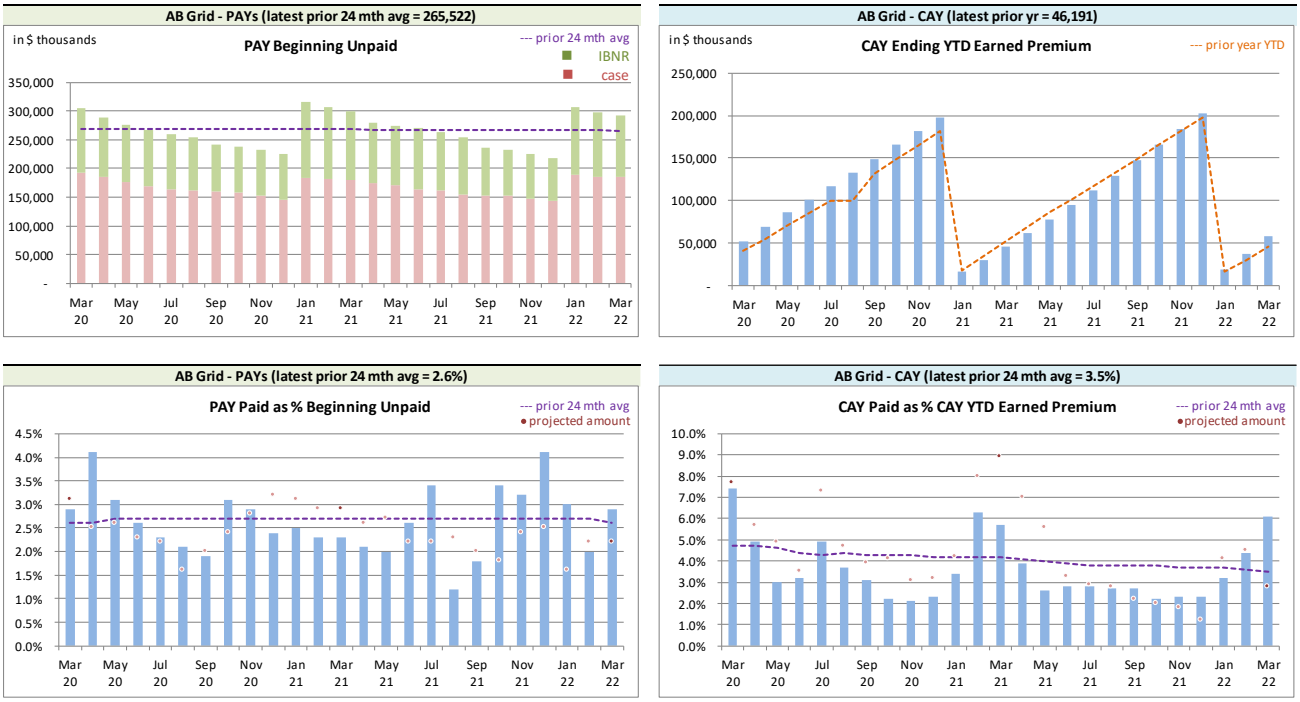
With respect to **paid** indemnity & allowed claims expense, 44% of the prior accident years' (PAYs) variances over the last 25 calendar months have fallen outside of one standard deviation of the actual **paid** amounts (see table on left), suggesting the projection process has performed worse than simply projecting the prior 24-month average amount (assuming it follows a normal distribution), and we are actively looking into the projection process for means of improving this result. Bias has not been indicated at a 95% confidence level on a rolling 25-month basis (13 of 25 variances are positive).

The PAY **paid** variance was just outside of the one standard deviation band this month (see preceding chart on the right). The lower than projected recorded activity was reviewed, and attributed to process variance.

The current accident year (CAY) **paid** variances fell outside one standard deviation 36% of the time over the last 25 calendar months (see preceding table on the left), suggesting the projection process has performed no better than simply projecting the prior 24-month average amount. Bias has been indicated at a 95% confidence level on a rolling 25-month basis (5 of 25 variances are positive).

We have included, for reference, the following charts related to levels influencing **paid** activity.

*Alberta Grid RSP Levels that influence[9] **Paid** activity by Calendar Month*



We track the PAY beginning unpaid balance (case and IBNR) as **paid** activity comes out of the unpaid balance. Changes in the PAY beginning unpaid balance (see upper left of the preceding group of charts) occur for several possible reasons:

- to offset actual **paid** activity (may reduce case or IBNR or both);
- the annual switchover as a CAY becomes a PAY (occurs in January); and
- when a new valuation is implemented, where the valuation resulted in changes to the selection of PAYs' ultimates (will show up as a beginning unpaid balance change one month after the valuation is implemented, i.e. the change will generally show in April, June, September, and November).

2.2 Actuarial Provisions

An ultimate loss ratio matching method (described in section 3) is used to determine the month's IBNR[10], and factors are applied to the nominal unpaid claims liability (case plus IBNR) to determine the discount amount (shown as a negative value to indicate its impact of reducing the liability) and the Provisions for Adverse Deviations. The loss ratios and the factors used to determine the

[9]Our paid projections for the prior accident years are based on selected ratios of paid to beginning unpaid balances, whereas the current accident year projections are based on selected ratios of year-to-date paid to year-to-date selected ultimate indemnity (i.e. selected LR x earned premium). In both cases, the ratio selection is based on our review of the more recent recorded activity and recent AvsP analyses.

[10]For ease of discussion, "IBNR" is used in place of "provisions for incurred but not recorded (IBNR) and development".

projections and actuals based on the applicable valuation.

Exhibit G shows the accident years IBNR amount change from last month to this month are broken down:

(i) the change projected last month;

(ii) the additional change due to variances in earned premium (because we apply a loss ratio to earned premium in determining ultimate level) and/or recorded claims (as IBNR is calculated as ultimate less recorded) differences; and

(iii) the additional change due to valuation implementation impacts (as applicable)

3 Ultimate Loss Ratio Matching Method

An "ultimate loss ratio matching method" continues to be applied to the current month and two projected months shown in the Operational Reports, with IBNR determined by accident year as follows:

(a) Earned premium to-date
(b) Ultimate loss[11] ratio per latest valuation
(c) Estimated ultimate incurred = (a) x (b)
(d) Recorded indemnity & allowed claims expense to-date
(e) IBNR = (c) – (d)

4 Calendar Year-to-Date Results

The following table summarizes the calendar year-to-date results for indemnity & allowed claims expenses[12], including IBNR.

In calculating the amounts as percentages of earned premium, the calendar year-to-date earned premium has been used, which includes earned premium associated with the current accident year but also earned premium adjustments related to prior accident years. Specifically, the current accident year (CAY) ratio in the table is 83.1% rather than 65.5% (the valuation ultimate ratio for accident year 2022), as the calendar year-to-date earned premium includes prior accident year earned premium adjustments. (Note that the ratios in this table may differ slightly from those shown in the Alberta Grid RSP Summary of Operations due to rounding.)

Alberta Grid RSP Calendar Year-to-Date Indemnity & Allowed Claims Expense Summary ($ thousands)

Table 04	YTD Nominal Values		YTD actuarial present value adjustment		YTD Total		Change from Prior Month YTD	
	Amount	% EP	Amount	% EP	Amount	% EP	Amount	LR pts
PAYs	(7,929)	(13.7%)	(4,097)	(7.1%)	(12,026)	(20.8%)	(10,204)	(15.9%)
CAY	48,091	83.1%	3,937	6.8%	52,028	90.0%	19,728	2.6%
TOTAL	40,162	69.4%	(160)	(0.3%)	40,002	69.2%	9,523	(13.2%)

("% EP" based on 2021 calendar year-to-date earned premium; ratios may not total due to rounding)

[11]"Loss" here refers to indemnity and allowed claims expenses, but does not include the claims expense allowance included in member company overall expense allowances ("Expense Allowance" in the Operational Report).

[12]Allowed claims expenses are first party legal and other expenses as listed in the RSP Claims Guide. Claims expenses paid through the member company expense allowance are NOT included in this analysis.

In general, prior accident years (PAYs) changes from last month are due to the release of the actuarial present value adjustments with claims payments, except when valuations implemented. The loss ratio change year-to-date in Table 04 reflects not only changes in the prior accident year levels, but also the increase in the calendar year-to-date earned premium with an additional month's earned premium, and due to the impact of valuation implementation.

For the current accident year (CAY), changes in the year-to-date total reflects the additional month's exposure and regular changes to actuarial present value adjustments as the year ages, and due to the impact of valuation implementation.

5 Current Operational Report – Additional Exhibits

Section 6 provides exhibits pertaining to the actuarial provisions reflected in the current month's Operational Report.

IBNR (including actuarial present value adjustments) presented in section 6, Exhibit A, were derived on a discounted basis, and therefore reflect the time value of money and include an explicit provision for adverse deviations in accordance with accepted actuarial practice in Canada.

IBNR presented in section 6, Exhibit B, does NOT include any actuarial present value adjustments. The "Total IBNR" from this exhibit shown in the Operational Report as "Undiscounted IBNR".

The ultimate loss ratios presented in section 6, Exhibit B, refer to the estimates derived based on various actuarial methodologies applied to the experience of the Alberta Grid Risk Sharing Pool for the purposes of the most recent quarterly valuation. As discussed in section 3, IBNR reflected in the current month's Operational Report was derived as the difference between the estimated ultimate for the claims amount (i.e. earned premium x ultimate loss ratio) and the associated current recorded amounts (life-to-date payments plus current case reserves).

6 EXHIBITS

The exhibits listed below are provided on the pages that follow:

EXHIBIT A	IBNR for Member Sharing – includes Actuarial Present Value Adjustments
EXHIBIT B	IBNR
EXHIBIT C	Premium Liabilities
EXHIBIT D	Projected Year-end Policy Liabilities
EXHIBIT E	Discount Rate & Margins for Adverse Deviations
EXHIBIT F	Interest Rate Sensitivity
EXHIBIT G	Components of IBNR Change During Month

EXHIBIT A

IBNR for Member Sharing – includes Actuarial Present Value Adjustments

TABLE EXHIBIT A

Amounts in $000s

IBNR + M/S actuarial present value adjustments

discount rate 1.04%

interest rate margin 25 basis pts

Accident Year	Actual Feb. 2022	Actual Mar. 2022	Projected Apr. 2022	Projected May. 2022	Projected Jun. 2022	Projected Jul. 2022	Projected Aug. 2022	Projected Dec. 2022
2006	(77)	(77)	(74)	(73)	(72)	(68)	(66)	(55)
2007	(131)	(131)	(127)	(124)	(124)	(117)	(112)	(95)
2008	(5)	(4)	(3)	(3)	(4)	(5)	(4)	(5)
2009	2	1	1	1	-	1	1	1
2010	74	71	68	66	64	62	60	50
2011	54	47	45	45	44	42	42	35
2012	(56)	50	48	49	42	43	46	41
2013	531	649	626	616	603	574	557	468
2014	884	548	530	521	507	485	472	397
2015	3,145	2,989	2,889	2,842	2,781	2,644	2,564	2,157
2016	3,974	3,494	3,378	3,320	3,250	3,089	2,998	2,522
2017	6,872	5,109	4,939	4,855	4,748	4,517	4,386	3,691
2018	13,386	10,237	9,744	9,447	9,292	9,066	8,461	6,842
2019	21,148	20,131	19,314	18,720	18,128	17,631	16,911	14,518
2020	41,229	32,902	31,779	31,010	30,378	29,247	28,171	24,980
2021	43,709	44,161	42,467	40,884	39,692	38,692	38,066	34,450
2022	22,254	32,947	47,530	59,755	71,369	83,309	95,251	140,094
TOTAL	156,783	152,914	162,951	171,732	180,501	189,026	197,623	229,940
Change		(3,869)	10,037	8,781	8,769	8,525	8,597	

Please see Exhibit G, page 1 for Components of Change during Current Month

EXHIBIT B

IBNR

TABLE EXHIBIT B — Amounts in $000s

IBNR

Ultimate Loss Ratio	Accident Year	Actual Feb. 2022	Actual Mar. 2022	Projected Apr. 2022	Projected May. 2022	Projected Jun. 2022	Projected Jul. 2022	Projected Aug. 2022	Projected Dec. 2022
66.4%	2006	(80)	(80)	(77)	(76)	(75)	(71)	(69)	(57)
71.0%	2007	(159)	(159)	(154)	(151)	(149)	(141)	(136)	(115)
67.1%	2008	(22)	(21)	(20)	(20)	(20)	(19)	(18)	(16)
60.6%	2009	(16)	(16)	(15)	(15)	(15)	(14)	(14)	(12)
61.7%	2010	45	45	43	42	41	39	38	32
66.2%	2011	8	8	8	8	8	8	8	7
73.3%	2012	(367)	(212)	(205)	(201)	(198)	(188)	(182)	(152)
74.3%	2013	370	515	497	488	481	456	441	370
80.2%	2014	594	304	294	288	284	269	260	218
90.8%	2015	2,275	2,355	2,275	2,232	2,199	2,082	2,013	1,690
93.8%	2016	3,061	2,708	2,616	2,566	2,528	2,394	2,315	1,943
83.9%	2017	5,316	3,821	3,691	3,621	3,567	3,378	3,267	2,743
81.3%	2018	10,369	7,626	7,191	6,968	6,863	6,691	6,136	4,862
73.2%	2019	15,784	15,132	14,421	13,974	13,471	13,067	12,440	10,490
64.2%	2020	33,739	26,436	25,431	24,795	24,274	23,230	22,231	19,574
66.7%	2021	34,944	35,432	34,015	32,654	31,642	30,819	30,326	27,261
82.3%	2022	19,543	29,010	42,008	52,662	62,721	72,999	83,222	120,936
	TOTAL	125,175	122,675	131,798	139,618	147,408	154,796	162,081	189,609
	Change		(2,500)	9,123	7,820	7,790	7,388	7,285	

Please see Exhibit G, page 2 for Components of Change during Current Month

EXHIBIT C

Premium Liabilities

TABLE EXHIBIT C	Amounts in $000s							
Premium Liabilities	Actual Feb. 2022	Actual Mar. 2022	Projected Apr. 2022	Projected May. 2022	Projected Jun. 2022	Projected Jul. 2022	Projected Aug. 2022	Projected Dec. 2022
(1) unearned premium (UP)	125,649	132,440	143,495	154,300	166,825	177,850	189,334	210,227
FOR MEMBER SHARING								
(2) expected future costs ratio {% of (1)}	86.6%	89.8%	90.1%	90.5%	90.9%	91.3%	91.7%	93.8%
(3) expected future costs {(1) x (2)}	108,786	118,948	129,312	139,590	151,612	162,371	173,709	197,270
(4) premium deficiency / (deferred policy acquisition cost)	(16,863)	(13,492)	(14,183)	(14,710)	(15,213)	(15,479)	(15,625)	(12,957)
Excluding Actuarial Present Value Adjustments								
(5) expected future costs ratio {% of (1)}	79.5%	82.9%	83.2%	83.5%	83.9%	84.3%	84.7%	86.6%
(6) expected future costs {(1) x (5)}	99,847	109,800	119,370	128,858	139,953	149,885	160,350	182,099
(7) premium deficiency / (deferred policy acquisition cost)	(25,802)	(22,640)	(24,125)	(25,442)	(26,872)	(27,965)	(28,984)	(28,128)

EXHIBIT D

Projected Year-end Policy Liabilities

The table below presents the projected policy liabilities as at December 31, 2022, broken down by component.

Alberta Grid	Projected Balances as at Dec. 31, 2022 ($000s)									
ending 2022	nominal values			actuarial present value adjustments (apvs)						
Acc Yr	Case	IBNR	Total Unpaid	discount	investment PfAD	nominal development PfAD	development PfAD discount	development PfAD	Total apvs	TOTAL
2006	80	(57)	23	-	-	2	-	2	2	25
2007	325	(115)	210	(1)	-	21	-	21	20	230
2008	150	(16)	134	(2)	-	13	-	13	11	145
2009	149	(12)	137	(2)	1	14	-	14	13	150
2010	201	32	233	(5)	1	23	(1)	22	18	251
2011	367	7	374	(10)	2	37	(1)	36	28	402
2012	2,841	(152)	2,689	(88)	21	269	(9)	260	193	2,882
2013	1,064	370	1,434	(52)	12	143	(5)	138	98	1,532
2014	1,975	218	2,193	(46)	11	219	(5)	214	179	2,372
2015	4,085	1,690	5,775	(126)	30	576	(13)	563	467	6,242
2016	5,268	1,943	7,211	(164)	39	720	(16)	704	579	7,790
2017	9,199	2,743	11,942	(284)	67	1,193	(28)	1,165	948	12,890
2018	19,706	4,862	24,568	(550)	129	2,456	(55)	2,401	1,980	26,548
2019	28,309	10,490	38,799	(914)	215	4,841	(114)	4,727	4,028	42,827
2020	33,433	19,574	53,007	(1,316)	309	6,576	(163)	6,413	5,406	58,413
2021	44,843	27,261	72,104	(1,961)	461	8,932	(243)	8,689	7,189	79,293
PAYs (sub-total):	152,181	68,673	220,854	(5,521)	1,298	26,049	(653)	25,396	21,173	242,027
CAY (2022)	84,654	120,936	205,590	(5,972)	1,402	24,438	(710)	23,728	19,158	224,748
claims liabilities:	236,835	189,609	426,444	(11,493)	2,700	50,487	(1,363)	49,124	40,331	466,775
	Unearned Premium	Premium Deficiency / (DPAC)	Total Provision	discount	investment PfAD	nominal development PfAD	development PfAD discount	development PfAD	Total apvs	TOTAL*
premium liabilities:	210,227	(28,128)	182,099	(4,987)	1,170	19,525	(537)	18,988	15,171	197,270
										*Total may not be sum of parts, as apvs apply to future costs within UPR
policy liabilities:			**608,543**	**(16,480)**	**3,870**	**70,012**	**(1,900)**	**68,112**	**55,502**	**664,045**

EXHIBIT E

Discount Rate & Margins for Adverse Deviations

The tables below present selected margins for adverse development by coverage (the total is a weighted average, based on the unpaid claims projection for December 31, 2022 from the valuation), followed by the selected discount rate and the associated margin for investment income.

Accident Year	Selected Claims Development MfADs			
	Third Party Liability	Accident Benefits	Other Coverages	Total
	Margins	Margins	Margins	Margins
2004	10.0%	10.0%	10.0%	10.0%
2005	10.0%	10.0%	10.0%	10.0%
2006	10.0%	10.0%	10.0%	10.0%
2007	10.0%	10.0%	10.0%	10.0%
2008	10.0%	10.0%	10.0%	10.0%
2009	10.0%	10.0%	10.0%	10.0%
2010	10.0%	10.0%	10.0%	10.0%
2011	10.0%	10.0%	10.0%	10.0%
2012	10.0%	10.0%	10.0%	10.0%
2013	10.0%	10.0%	10.0%	10.0%
2014	10.0%	10.0%	8.4%	10.0%
2015	10.0%	10.0%	6.2%	10.0%
2016	10.0%	10.0%	9.9%	10.0%
2017	10.0%	10.0%	9.0%	10.0%
2018	10.0%	10.0%	9.2%	10.0%
2019	12.5%	10.0%	12.5%	12.5%
2020	12.5%	10.0%	8.1%	12.4%
2021	12.4%	10.0%	12.5%	12.4%
2022	12.2%	10.0%	7.1%	11.9%
prem liab	11.9%	10.0%	5.1%	10.8%

discount rate:	1.04%
margin (basis points):	25

*prem liabilities as at 2021m12

EXHIBIT F

Interest Rate Sensitivity

The tables below present sensitivity to the member statement claims liability as projected to Dec. 31, 2022 from the latest valuation date (projections in exhibits A to D are to Dec. 31, 2022, and are based on more up-to-date information). We have included the most recent valuation selection (1.04%), the prior valuation assumption (0.81%) and the prior fiscal year end valuation assumption (0.20%) for comparative purposes. A 25 basis point margin for investment return adverse deviation is used in all scenarios presented.

	Actuarial Present Value of Provisions at Various Discount Rates - Dec. 31, 2022 projected Unpaid							
AY	0.04%	0.54%	1.04%	1.54%	2.04%	2.54%	0.81%	0.20%
2004 & prior	-	-	-	-	-	-	-	-
2004	-	-	-	-	-	-	-	-
2005	-	-	-	-	-	-	-	-
2006	39	39	38	38	38	38	39	39
2007	246	246	245	245	244	243	246	246
2008	118	118	117	116	115	115	117	118
2009	170	169	168	166	165	164	168	170
2010	246	244	242	239	236	234	243	246
2011	467	463	457	451	445	439	460	467
2012	3,497	3,462	3,407	3,354	3,301	3,250	3,433	3,496
2013	861	851	836	822	807	794	843	860
2014	1,925	1,913	1,894	1,875	1,857	1,839	1,903	1,925
2015	6,802	6,757	6,685	6,616	6,548	6,483	6,718	6,800
2016	7,799	7,746	7,661	7,578	7,498	7,419	7,700	7,797
2017	11,454	11,372	11,241	11,114	10,990	10,870	11,301	11,450
2018	25,913	25,737	25,459	25,188	24,924	24,667	25,586	25,905
2019	40,227	39,936	39,481	39,039	38,608	38,189	39,689	40,210
2020	52,731	52,329	51,701	51,091	50,496	49,917	51,988	52,708
2021	80,475	79,802	78,752	77,732	76,740	75,775	79,232	80,437
2022	179,823	178,210	175,695	173,254	170,883	168,580	176,843	179,732
Total	412,794	409,394	404,081	398,917	393,897	389,015	406,506	412,605
	curr - 100 bp	curr - 50 bp	curr val assumption	curr + 50bp	curr + 100bp	curr + 150bp	prior val assumption	prior fyr end assumption

	Dollar Impact Relative to Valuation Assumption							
AY	0.04%	0.54%	1.04%	1.54%	2.04%	2.54%	0.81%	0.20%
Total	8,713	5,313	-	(5,163)	(10,183)	(15,065)	2,425	8,524
	curr - 100 bp	curr - 50 bp	curr val assumption	curr + 50bp	curr + 100bp	curr + 150bp	prior val assumption	prior fyr end assumption

	Percentage Impact Relative to Valuation Assumption							
AY	0.04%	0.54%	1.04%	1.54%	2.04%	2.54%	0.81%	0.20%
2004 & prior	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2004	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2005	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2006	0.2%	0.1%	0.0%	-0.1%	-0.2%	-0.4%	0.1%	0.2%
2007	0.4%	0.2%	0.0%	-0.2%	-0.5%	-0.7%	0.1%	0.4%
2008	1.0%	0.6%	0.0%	-0.6%	-1.2%	-1.8%	0.3%	1.0%
2009	1.2%	0.7%	0.0%	-0.7%	-1.5%	-2.2%	0.3%	1.2%
2010	1.8%	1.1%	0.0%	-1.1%	-2.2%	-3.2%	0.5%	1.8%
2011	2.2%	1.4%	0.0%	-1.3%	-2.6%	-3.9%	0.6%	2.2%
2012	2.6%	1.6%	0.0%	-1.6%	-3.1%	-4.6%	0.7%	2.6%
2013	2.9%	1.8%	0.0%	-1.8%	-3.5%	-5.1%	0.8%	2.9%
2014	1.7%	1.0%	0.0%	-1.0%	-2.0%	-2.9%	0.5%	1.6%
2015	1.7%	1.1%	0.0%	-1.0%	-2.0%	-3.0%	0.5%	1.7%
2016	1.8%	1.1%	0.0%	-1.1%	-2.1%	-3.2%	0.5%	1.8%
2017	1.9%	1.2%	0.0%	-1.1%	-2.2%	-3.3%	0.5%	1.9%
2018	1.8%	1.1%	0.0%	-1.1%	-2.1%	-3.1%	0.5%	1.8%
2019	1.9%	1.2%	0.0%	-1.1%	-2.2%	-3.3%	0.5%	1.8%
2020	2.0%	1.2%	0.0%	-1.2%	-2.3%	-3.5%	0.6%	1.9%
2021	2.2%	1.3%	0.0%	-1.3%	-2.6%	-3.8%	0.6%	2.1%
2022	2.3%	1.4%	0.0%	-1.4%	-2.7%	-4.0%	0.7%	2.3%
Total	2.2%	1.3%	0.0%	-1.3%	-2.5%	-3.7%	0.6%	2.1%
	curr - 100 bp	curr - 50 bp	curr val assumption	curr + 50bp	curr + 100bp	curr + 150bp	prior val assumption	prior fyr end assumption

EXHIBIT G

Components of Member Statement IBNR (i.e. "Discounted") Change

(November 2021 to March 2022)

RSP **Alberta Grid**
AccountCode Desc **IBNR - Discounted** **M/S IBNR - in $000s**

AccYear	Sum of Prior Month Actual Amount	Sum of Projected Change	Sum of Change Due to AvsP Variances	Sum of Change Due to Valuation Implementation	Sum of Total Change	Sum of % Total Change	Sum of Current Month Final Amount
prior	-	-	-	-	-	-	-
2001	-	-	-	-	-	-	-
2002	-	-	-	-	-	-	-
2003	-	-	-	-	-	-	-
2004	(70)	12	(12)	-	-	-	(70)
2005	(56)	15	(99)	-	(84)	150.0%	(140)
2006	(68)	12	(21)	-	(9)	13.2%	(77)
2007	(131)	20	(20)	-	-	-	(131)
2008	(1)	(1)	(2)	-	(3)	300.0%	(4)
2009	-	(1)	3	(1)	1	-	1
2010	161	(12)	(75)	(3)	(90)	(55.9%)	71
2011	72	(7)	(11)	(7)	(25)	(34.7%)	47
2012	119	3	(208)	135	(70)	(58.8%)	50
2013	386	(45)	189	119	263	68.1%	649
2014	1,120	(140)	(96)	(336)	(572)	(51.1%)	548
2015	2,839	(411)	1,562	(1,022)	129	4.5%	2,989
2016	3,735	(547)	784	(489)	(252)	(6.7%)	3,494
2017	7,575	(1,150)	390	(1,719)	(2,479)	(32.7%)	5,109
2018	14,382	(2,686)	939	(2,408)	(4,155)	(28.9%)	10,237
2019	25,850	(2,865)	(3,286)	351	(5,800)	(22.4%)	20,131
2020	43,696	(7,661)	3,358	(6,606)	(10,909)	(25.0%)	32,902
2021	51,060	1,842	(11,448)	2,686	(6,920)	(13.6%)	43,888
2022	-	37,706	(6,620)	1,861	32,947	-	32,947
Grand Total	**150,669**	**24,084**	**(14,673)**	**(7,439)**	**1,972**	**1.3%**	**152,641**

EXHIBIT G

Components of IBNR (i.e. "Undiscounted") Change

(November 2021 to March 2022)

RSP **Alberta Grid**
AccountCode Desc **IBNR - Undiscounted** **IBNR - in $000s**

AccYear	Sum of Prior Month Actual Amount	Sum of Projected Change	Sum of Change Due to AvsP Variances	Sum of Change Due to Valuation Implementation	Sum of Total Change	Sum of % Total Change	Sum of Current Month Final Amount
prior	-	-	-	-	-	-	-
2001	-	-	-	-	-	-	-
2002	-	-	-	-	-	-	-
2003	-	-	-	-	-	-	-
2004	(78)	12	(12)	-	-	-	(78)
2005	(94)	17	(74)	-	(57)	60.6%	(151)
2006	(72)	12	(20)	-	(8)	11.1%	(80)
2007	(159)	24	(24)	-	-	-	(159)
2008	(19)	3	(5)	-	(2)	10.5%	(21)
2009	(18)	3	(1)	-	2	(11.1%)	(16)
2010	78	(6)	(27)	-	(33)	(42.3%)	45
2011	25	(2)	(15)	-	(17)	(68.0%)	8
2012	(195)	37	(237)	183	(17)	8.7%	(212)
2013	142	(26)	253	146	373	262.7%	515
2014	811	(111)	(107)	(289)	(507)	(62.5%)	304
2015	1,870	(308)	1,673	(880)	485	25.9%	2,355
2016	2,738	(439)	801	(392)	(30)	(1.1%)	2,708
2017	5,827	(848)	332	(1,490)	(2,006)	(34.4%)	3,821
2018	10,889	(2,289)	1,118	(2,092)	(3,263)	(30.0%)	7,626
2019	19,984	(2,336)	(3,058)	542	(4,852)	(24.3%)	15,132
2020	35,887	(7,029)	3,271	(5,693)	(9,451)	(26.3%)	26,436
2021	42,918	537	(10,450)	2,427	(7,486)	(17.4%)	35,432
2022	-	33,231	(6,149)	1,928	29,010	-	29,010
Grand Total	**120,534**	**20,482**	**(12,731)**	**(5,610)**	**2,141**	**1.8%**	**122,675**