ALBERTA GRID RISK SHARING POOL

OCTOBER 2021 OPERATIONAL REPORT

ACTUARIAL HIGHLIGHTS

Related Bulletin: F2021-090_AB_RSP_October_2021_Operational_Report

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FACILITY ASSOCIATION

ACTUARIAL HIGHLIGHTS
RSP ALBERTA GRID
OPERATIONAL REPORT
OCTOBER 2021

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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 October 2021 in November 2021, 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 2021)

The October 2021 Operational Report incorporates the results of an updated valuation (as at September 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 2021.

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

Valuation Date	Discount Rate (per annum)	Operational Report	Description of Changes
Sep. 30, 2020 (completed)	0.20% mfad[1] 25 bp	Oct. 2020	update valuation (roll-forward): accident year 2020 loss ratio decreased 6.3 points to 70.6%; discount rate decreased 4 basis points; no change to selected margins for adverse deviations
Dec. 31, 2020 (completed)	0.24% mfad 25 bp	Mar. 2021	update valuation: accident year 2020 loss ratio decreased 0.7 points to 69.9% and accident year 2021 loss ratio decreased 7.0 points to 71.2%; discount rate increased 4 basis points; no change to selected margins for adverse deviations
Mar. 31, 2021 (completed)	0.71% mfad 25 bp	May. 2021	update valuation (roll-forward): accident year 2021 loss ratio decreased 0.4 points to 70.8%; discount rate increased 47 basis points; no change to selected margins for adverse deviations
Jun. 30, 2021	0.72% mfad 25 bp	Aug. 2021	update valuation: accident year 2021 loss ratio decreased 4.5 points to 66.3%; discount rate increased 1 basis point; selected margins for adverse deviation were updated
Sep. 30, 2021	0.81% mfad 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

Under the proposed schedule for fiscal year 2021, the off-half valuation quarters ending

[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%.

March 31, 2021 and September 30, 2021 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 September 30, 2021 has been completed since last month's Operational Report and the results of that valuation have been incorporated into 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 (2021), and "Prem Def" refers to premium deficiency / deferred acquisition costs impacts.

Summary of Impact ($000s) of Implementing Result of Valuation as at September. 30, 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	950	23	973	(567)	-	406
CAY	(1,326)	(183)	(1,509)	(237)	-	(1,746)
Prem Def	(278)	81	(197)	(256)	-	(453)
TOTAL	(654)	(79)	(733)	(1,060)	-	(1,793)

As indicated in the preceding table, the incorporation of the new valuation had an estimated ***$1.8 million favourable impact*** on the month's net result from operations, subtracting an estimated 1.1 points (see following table) from the **year-to-date Combined Operating Ratio** to end at 77.0**%**.

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

AB Grid ytd EP 163,909 (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	0.6%	-	0.6%	(0.3%)	-	0.2%
CAY	(0.8%)	(0.1%)	(0.9%)	(0.1%)	-	(1.1%)
Prem Def	(0.2%)	-	(0.1%)	(0.2%)	-	(0.3%)
TOTAL	(0.4%)	-	(0.4%)	(0.6%)	-	(1.1%)

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 $0.7 million** overall. This reflects

[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.

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 ultimate loss ratio).

The **PAYs** overall showed a **$1.0 million unfavourable** nominal variance or 0.6% of the PAYs nominal unpaid balance of $232.6 million determined at the end of last month (September 2021), relatively unchanged since the prior valuation.

The CAY and premium deficiency impacts are a result of the change in the selected loss for accident year **2021** (decreased 0.8 points to 65.5%). This change is due to lower than expected claims costs on physical damage coverages year to date, particularly for the most recent quarter.

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 a favourable change of $0.1 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 March 2021. Column [4] accounts for the change in the **discount rate** selected (increased 9 basis point to **0.81%**), indicating a favourable impact of $1.1 million. The impact *related only to claims liabilities* (i.e. PAYs plus CAY) was $0.8 million at October 2021 – this compares to the $0.8 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.

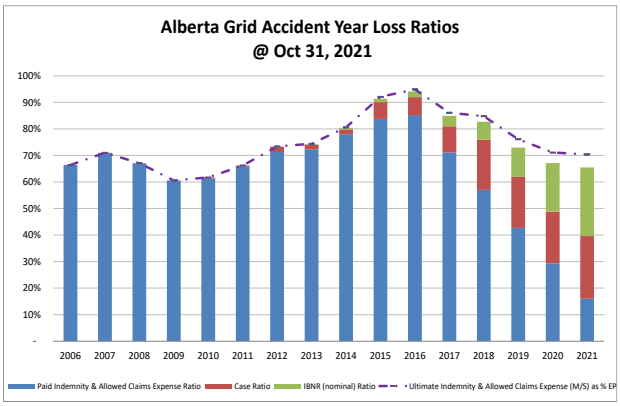
In the **Alberta Treasury Board and Finance Notice 04-2018** (Clarification of Minor Injury Regulation), dated **October 17, 2018**, the Alberta Superintendent of Insurance advised that clarifying amendments have been made to the definition of minor injuries under the Minor Injury Regulation (MIR). Consideration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

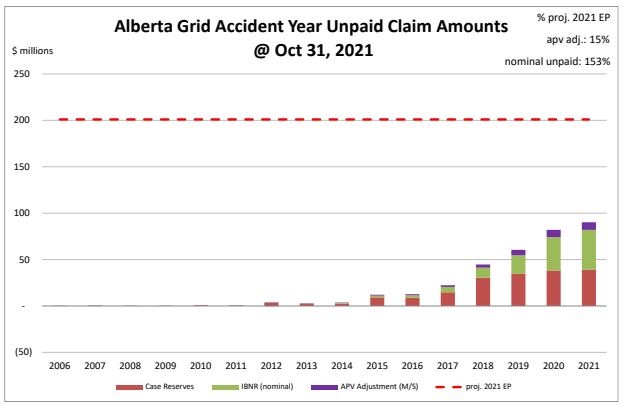
Amendments to the **Alberta Automobile Accident Insurance Benefits Regulation, Diagnostic and Treatment Protocols Regulation, and Minor Injury Regulation** came into force effective November 1, 2020, amending definitions and various benefit maximums defined in these regulations. **Alberta Bill 41** (Insurance (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 ($30.1 million – see the following table) represents 15% of the earned premium projected for the full year 2021 (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.

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 65% of the IBNR balance relates to accident years 2020 and 2021 (see Exhibit B). Approximately 89% of the M/S total claim liabilities are related to accident years 2017-2021 inclusive (i.e. the most recent 5 accident years), and approximately 1% is related to accident years 2011 and prior (i.e. prior to the most recent 10 accident years).

claim liabilities ($000s)

	amt	%
case	187,128	55.4%
ibnr	120,534	35.7%
M/S apv adjust.	30,135	8.9%
M/S total	337,797	100.0%

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

premium liabilities ($000s)

	amt	%
unearned prem	126,244	121.4%
prem def/(dpac)	(30,796)	(29.6%)
M/S apv adjust.	8,543	8.2%
M/S total	103,991	100.0%

policy liabilities ($000s)

	amt	%
claim	307,662	69.6%
premium	95,448	21.6%
M/S apv adjust.	38,678	8.8%
M/S total	441,788	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	September	(73)	(73)	4,385	(329)	4,683	2,512
		October	(40)	(40)	7,896	3,635	2,535	(124)
PAY Total			**(113)**	**(113)**	**12,281**	**3,306**	**7,218**	**2,388**
CAY	2021	September	17,683	(2,642)	3,992	815	8,299	1,227
		October	18,540	(1,947)	3,689	432	6,302	(950)
CAY Total			**36,223**	**(4,589)**	**7,681**	**1,247**	**14,601**	**277**
Grand Total			**36,110**	**(4,702)**	**19,962**	**4,553**	**21,819**	**2,665**

(Recorded transaction amounts exclude IBNR & other actuarial provisions)

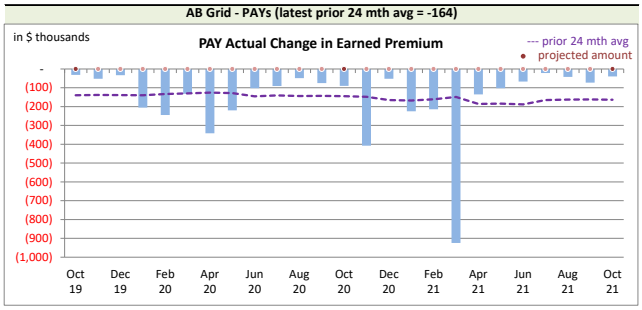
Claims transaction activity is generally volatile; changes from one month to the next are anticipated due to this natural "process variance" (i.e. random variation). Each month, the projection variances are reviewed for signs of projection bias and to identify potential ways to reduce the level of the 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.

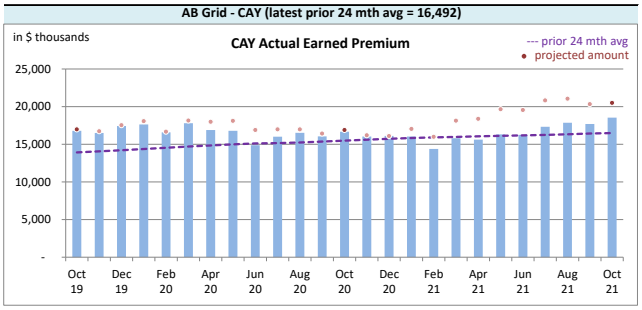
More detailed analysis and commentary on actual vs. projected for the most recent reporting months is provided below.

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*





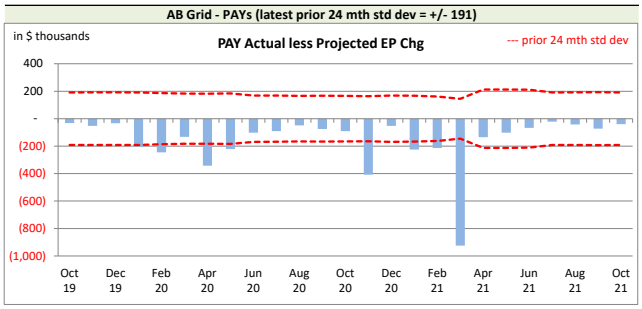
Earned premium changes during a given calendar month in relation to prior accident years tend to be at modest levels, although relatively high levels generally occur at the beginning of each year.

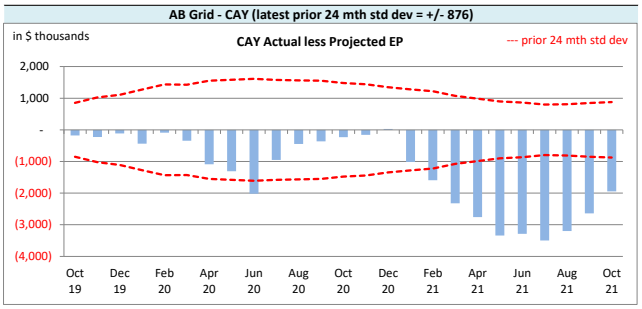
[4]Premium is earned on a daily basis based on the transaction term measured in days. As a result, months with 31 days earned relatively more than those with 30 days, and February earns the least.

On Latest	$ thousands	
Earned Premium	PAYs	CAY
Mthly Avg EP Chg (prior 24 mths)	(164)	16,492
std dev	191	876
A-P <> std dev	8	10
% <> std dev	32.0%	40.0%
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.

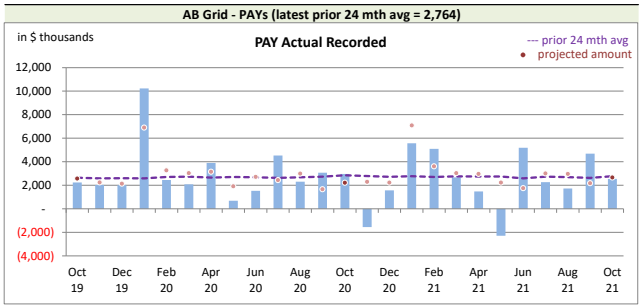
2.1.b AvsP: Recorded Indemnity & Allowed Claims Expense

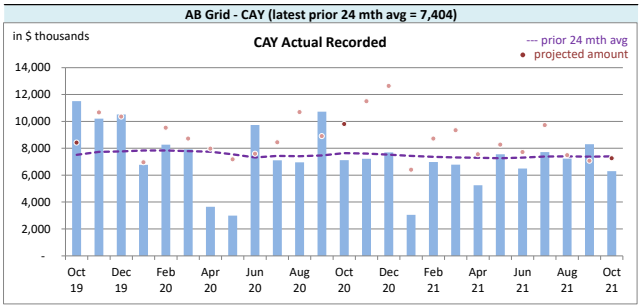
The following charts show actual **recorded** activity (**paid** and case reserve changes), in each of the most recent 25 calendar months, along with a "prior 24-month average" to show how each month's actual compares with the average amount of the preceding 24 calendar months.

[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 October 2021 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.

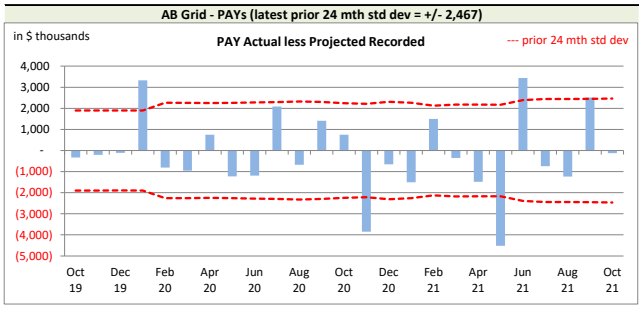
Alberta Grid RSP Actual **Recorded** *by Calendar Month*

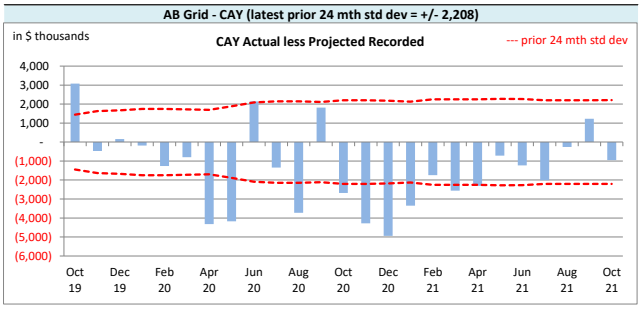




Recorded activity variances from the previous month's projections shown in the following charts, including the "prior 24-month standard deviation" levels to show how the variances from projection compare with historical standard deviations.

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





On Latest $ thousands		
Recorded	PAYs	CAY
Mthly Avg Recorded (prior 24 mths)	2,764	7,404
std dev	2,467	2,208
A-P <> std dev	5	11
% <> std dev	20.0%	44.0%
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).

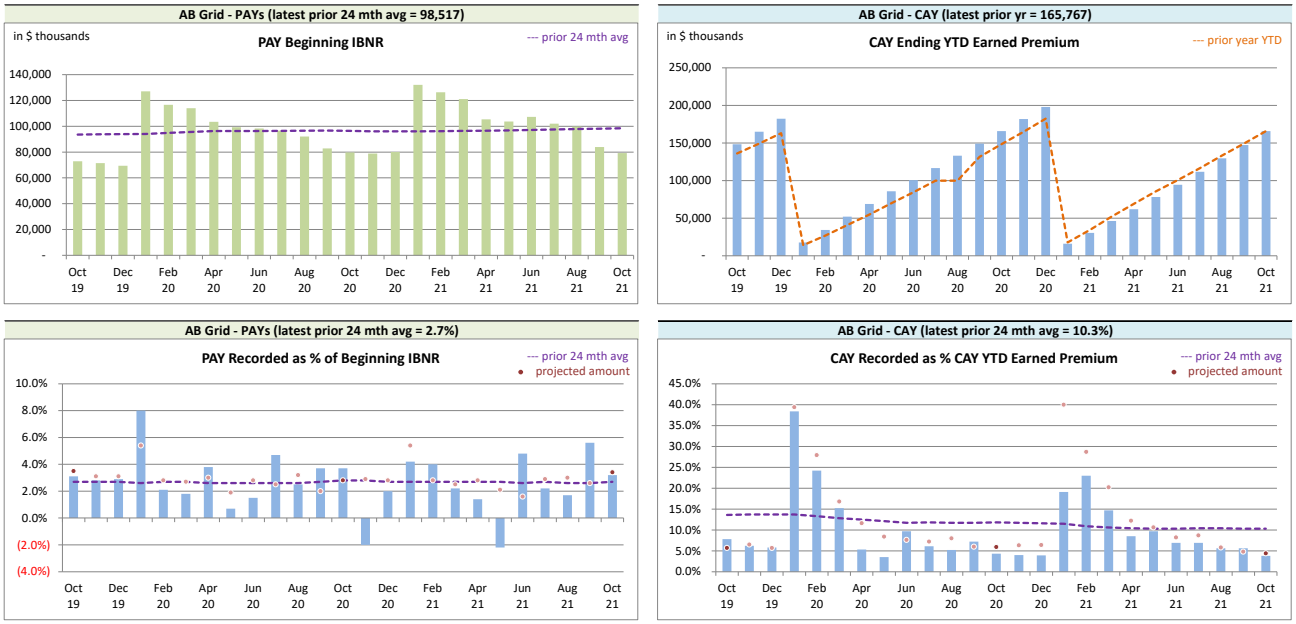
The current accident year (CAY) **recorded** variances fell outside of one standard deviation 44% of the time over the last 25 calendar months (see preceding table on the left), suggesting that the projection process has performed better than simply projecting the prior 24-month average amount. Bias 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** claims activity level (see sections 2.2 and 3).

[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.

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:

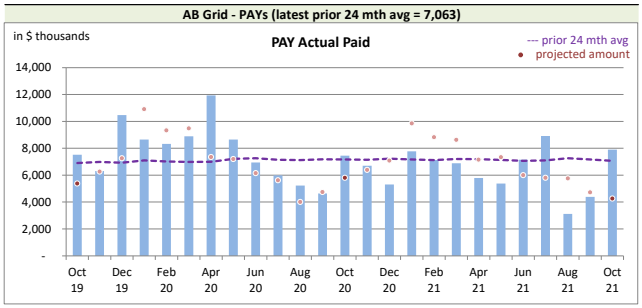
- to offset actual **recorded** activity (through loss ratio matching);
- the annual switchover as a CAY becomes a PAY (occurs in January); and
- when a new valuation is implemented, where the valuation resulted in changes to the selection of PAYs' ultimates (will show up as a beginning IBNR change one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

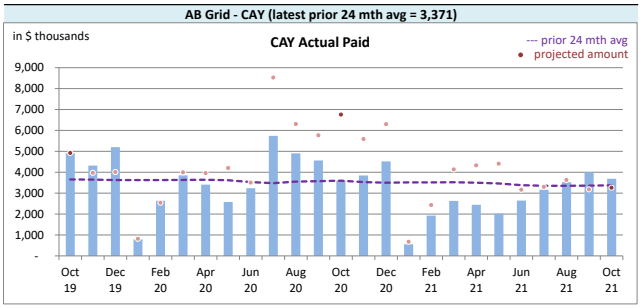
2.1.c AvsP: Paid Indemnity & Allowed Claims Expense

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 amount of the preceding 24 calendar months.

[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.

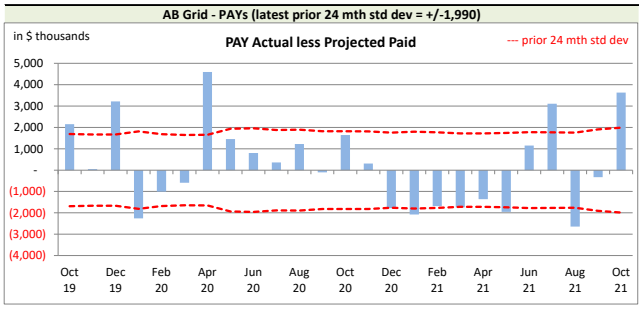
*Alberta Grid RSP Actual **Paid** activity by Calendar Month*

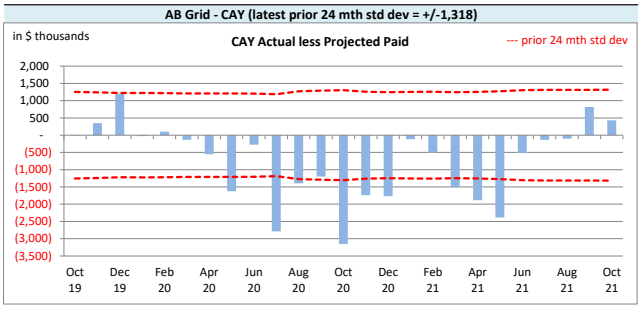




Paid activity variances from the previous month's projections shown in the following charts, including the prior 24-month standard deviation levels to show how the variances from projection compare with historical standard deviations.

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





On Latest $ thousands		
Paid	PAYs	CAY
Mthly Avg Paid (prior 24 mths)	7,063	3,371
std dev	1,990	1,318
A-P <> std dev	11	9
% <> std dev	44.0%	36.0%
norm <> std dev	31.7%	31.7%
performance vs 24-mth avg:	worse	no better

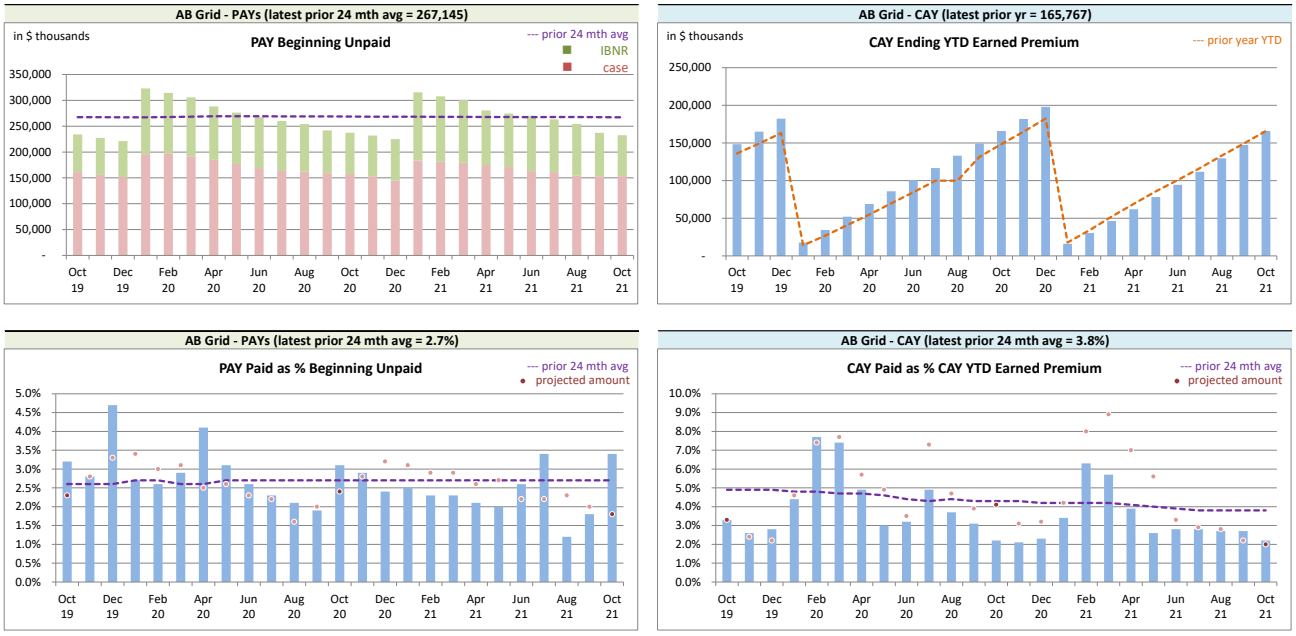
With respect to **paid** indemnity & allowed claims expense, 44% of the prior accident years' (PAYs) variances over the last 25 calendar months have fallen outside of one standard deviation of the actual **paid** amounts (see table on left), suggesting the projection process has performed worse than 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 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:

[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".

(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 66.2% rather than 65.5% (the valuation ultimate ratio for accident year 2021), 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	(25,578)	(15.6%)	(14,570)	(8.9%)	(40,148)	(24.5%)	(354)	2.9%
CAY	108,567	66.2%	8,142	5.0%	116,709	71.2%	11,429	(1.2%)
TOTAL	82,989	50.6%	(6,428)	(3.9%)	76,561	46.7%	11,076	1.7%

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

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

[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.

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

IBNR + M/S actuarial present value adjustments

discount rate 0.81%

interest rate margin 25 basis pts

Amounts in $000s

Accident Year	Actual Sep. 2021	Actual Oct. 2021	Projected Nov. 2021	Projected Dec. 2021	Projected Jan. 2022	Projected Feb. 2022	Projected Mar. 2022	Projected Dec. 2022
2005	(56)	(56)	(52)	(52)	(49)	(48)	(48)	(35)
2006	(300)	(68)	(65)	(64)	(62)	(61)	(60)	(45)
2007	(131)	(131)	(125)	(124)	(118)	(116)	(115)	(85)
2008	(1)	(1)	(1)	(1)	-	(1)	(1)	1
2009	(2)	-	1	-	1	-	-	1
2010	164	161	157	154	149	146	142	112
2011	73	72	70	69	68	67	65	51
2012	299	119	122	117	120	116	109	94
2013	1,124	386	379	372	361	352	343	271
2014	1,411	1,120	1,086	1,071	1,030	1,009	991	765
2015	2,674	2,839	2,757	2,720	2,643	2,583	2,536	1,966
2016	4,088	3,735	3,620	3,575	3,448	3,371	3,317	2,562
2017	7,586	7,575	7,423	7,117	6,848	6,697	6,597	5,079
2018	14,225	14,382	13,743	13,428	12,878	12,626	12,270	9,233
2019	26,884	25,850	25,363	24,971	24,387	23,336	22,888	17,180
2020	44,530	43,696	42,585	41,191	39,853	39,118	38,074	29,294
2021	45,932	51,060	53,762	55,732	51,431	49,768	48,194	39,884
TOTAL	148,430	150,669	150,758	150,210	153,200	157,312	161,711	168,302
Change		2,239	89	(548)	2,990	4,112	4,399	

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

EXHIBIT B

IBNR

TABLE EXHIBIT B

IBNR

Amounts in $000s

Ultimate Loss Ratio	Accident Year	Actual Sep. 2021	Actual Oct. 2021	Projected Nov. 2021	Projected Dec. 2021	Projected Jan. 2022	Projected Feb. 2022	Projected Mar. 2022	Projected Dec. 2022
60.5%	2005	(94)	(94)	(90)	(89)	(85)	(83)	(82)	(62)
66.4%	2006	(315)	(72)	(69)	(68)	(65)	(64)	(63)	(48)
71.0%	2007	(159)	(159)	(153)	(151)	(144)	(141)	(140)	(106)
67.1%	2008	(19)	(19)	(18)	(18)	(17)	(17)	(17)	(12)
60.6%	2009	(20)	(18)	(17)	(17)	(16)	(16)	(16)	(12)
61.7%	2010	79	78	75	74	71	70	69	53
66.2%	2011	25	25	24	24	23	23	23	17
73.2%	2012	(47)	(195)	(188)	(186)	(178)	(174)	(172)	(132)
74.2%	2013	821	142	137	136	130	127	126	96
80.4%	2014	1,069	811	780	772	738	723	716	543
91.4%	2015	1,639	1,870	1,799	1,781	1,703	1,669	1,652	1,254
94.1%	2016	2,990	2,738	2,634	2,608	2,493	2,443	2,419	1,838
84.9%	2017	5,712	5,827	5,769	5,538	5,294	5,188	5,136	3,902
82.6%	2018	10,536	10,889	10,355	10,158	9,650	9,457	9,173	6,882
72.9%	2019	20,673	19,984	19,644	19,389	18,788	17,811	17,473	12,817
67.1%	2020	36,415	35,887	34,918	33,661	32,315	31,701	30,782	23,270
65.5%	2021	38,253	42,918	44,705	45,838	42,171	40,990	39,801	32,938
	TOTAL	117,480	120,534	120,230	119,376	121,523	125,070	128,705	127,735
	Change		3,054	(304)	(854)	2,147	3,547	3,635	

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 Sep. 2021	Actual Oct. 2021	Projected Nov. 2021	Projected Dec. 2021	Projected Jan. 2022	Projected Feb. 2022	Projected Mar. 2022	Projected Dec. 2022
(1) unearned premium (UP)	122,403	126,244	128,979	130,915	130,315	131,658	131,919	185,785
FOR MEMBER SHARING								
(2) expected future costs ratio {% of (1)}	81.0%	82.4%	84.4%	86.4%	86.5%	86.6%	86.8%	91.9%
(3) expected future costs {(1) x (2)}	99,155	103,991	108,908	113,152	112,674	113,984	114,481	170,683
(4) premium deficiency / (deferred policy acquisition cost)	(23,248)	(22,253)	(20,071)	(17,763)	(17,641)	(17,674)	(17,438)	(15,102)
Excluding Actuarial Present Value Adjustments								
(5) expected future costs ratio {% of (1)}	74.2%	75.6%	77.5%	79.3%	79.4%	79.5%	79.7%	84.3%
(6) expected future costs {(1) x (5)}	90,879	95,448	99,959	103,855	103,415	104,617	105,075	156,654
(7) premium deficiency / (deferred policy acquisition cost)	(31,524)	(30,796)	(29,020)	(27,060)	(26,900)	(27,041)	(26,844)	(29,131)

EXHIBIT D

Projected Year-end Policy Liabilities

The table below presents the projected policy liabilities as at December 31, 2021, broken down by component.

Alberta Grid	Projected Balances as at Dec. 31, 2021 ($000s)									
ending 2021	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
2005	457	(89)	368	-	-	37	-	37	37	405
2006	103	(68)	35	-	-	4	-	4	4	39
2007	430	(151)	279	(1)	-	28	-	28	27	306
2008	198	(18)	180	(2)	1	18	-	18	17	197
2009	198	(17)	181	(2)	1	18	-	18	17	198
2010	814	74	888	(11)	3	89	(1)	88	80	968
2011	489	24	513	(7)	2	51	(1)	50	45	558
2012	3,600	(186)	3,414	(47)	14	341	(5)	336	303	3,717
2013	2,526	136	2,662	(37)	11	266	(4)	262	236	2,898
2014	2,600	772	3,372	(47)	14	337	(5)	332	299	3,671
2015	9,062	1,781	10,843	(182)	55	1,084	(18)	1,066	939	11,782
2016	8,685	2,608	11,293	(204)	62	1,129	(20)	1,109	967	12,260
2017	13,056	5,538	18,594	(352)	107	1,859	(35)	1,824	1,579	20,173
2018	28,456	10,158	38,614	(743)	226	3,861	(74)	3,787	3,270	41,884
2019	32,579	19,389	51,968	(1,102)	335	6,487	(138)	6,349	5,582	57,550
2020	37,907	33,661	71,568	(1,657)	503	8,890	(206)	8,684	7,530	79,098
PAYs (sub-total):	141,159	73,538	214,697	(4,394)	1,334	24,507	(507)	24,000	20,940	235,637
CAY (2021)	53,809	45,838	99,647	(2,333)	708	11,795	(276)	11,519	9,894	109,541
claims liabilities:	194,968	119,376	314,344	(6,727)	2,042	36,302	(783)	35,519	30,834	345,178
	Unearned Premium	Premium Deficiency / (DPAC)	Total Provision	discount	investment PfAD	nominal development PfAD	development PfAD discount	development PfAD	Total apvs	TOTAL*
premium liabilities:	130,915	(27,060)	103,855	(2,279)	691	11,130	(245)	10,885	9,297	113,152
										*Total may not be sum of parts, as apvs apply to future costs within UPR
policy liabilities:			**418,199**	**(9,006)**	**2,733**	**47,432**	**(1,028)**	**46,404**	**40,131**	**458,330**

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, 2021 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%	10.0%	10.0%
2015	10.0%	10.0%	10.0%	10.0%
2016	10.0%	10.0%	10.0%	10.0%
2017	10.0%	10.0%	10.0%	10.0%
2018	10.0%	10.0%	10.0%	10.0%
2019	12.5%	10.0%	12.5%	12.5%
2020	12.5%	10.0%	12.5%	12.4%
2021	12.2%	10.0%	8.7%	11.9%
2022	12.0%	10.0%	5.1%	10.7%
prem liab	12.0%	10.0%	5.1%	10.7%

discount rate:	0.72%
margin (basis points):	25

*prem liabilities as at 2021m06

EXHIBIT F

Interest Rate Sensitivity

The tables below present sensitivity to the member statement claims liability as projected to Dec. 31, 2021 from the latest valuation date (projections in exhibits A to D are to Dec. 31, 2021, and are based on more up-to-date information). We have included the most recent valuation selection (0.81%), the prior valuation assumption (0.72%) 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, 2021 projected Unpaid							
AY	0.00%	0.22%	0.72%	1.22%	1.72%	2.22%	0.71%	0.20%
2004 & prior	-	-	-	-	-	-	-	-
2004	-	-	-	-	-	-	-	-
2005	-	-	-	-	-	-	-	-
2006	119	119	119	119	119	119	119	119
2007	341	340	340	339	338	337	340	340
2008	139	139	138	137	136	135	138	139
2009	129	129	128	127	126	125	128	129
2010	749	748	743	737	732	726	743	748
2011	419	418	415	412	409	405	415	418
2012	3,409	3,408	3,380	3,352	3,324	3,296	3,381	3,408
2013	2,871	2,870	2,846	2,822	2,798	2,775	2,847	2,870
2014	3,608	3,607	3,577	3,546	3,516	3,486	3,578	3,607
2015	11,145	11,141	11,031	10,917	10,806	10,698	11,033	11,141
2016	14,845	14,838	14,681	14,518	14,359	14,204	14,684	14,839
2017	22,028	22,017	21,773	21,521	21,275	21,035	21,778	22,018
2018	42,325	42,305	41,826	41,332	40,850	40,381	41,836	42,307
2019	58,514	58,476	57,745	56,993	56,261	55,549	57,760	58,479
2020	77,770	77,715	76,653	75,562	74,503	73,473	76,675	77,720
2021	102,436	102,362	100,934	99,470	98,050	96,672	100,964	102,369
2022	-	-	-	-	-	-	-	-
Total	340,846	340,632	336,328	331,903	327,600	323,416	336,417	340,652
	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	0.00%	0.22%	0.72%	1.22%	1.72%	2.22%	0.71%	0.20%
Total	4,518	4,305	-	(4,425)	(8,727)	(12,911)	90	4,324
	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	0.00%	0.22%	0.72%	1.22%	1.72%	2.22%	0.71%	0.20%
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	0.1%	0.1%	0.0%	-0.1%	-0.3%	-0.4%	0.0%	0.1%
2007	0.3%	0.2%	0.0%	-0.3%	-0.5%	-0.8%	0.0%	0.2%
2008	0.6%	0.6%	0.0%	-0.6%	-1.3%	-1.9%	0.0%	0.6%
2009	0.8%	0.7%	0.0%	-0.8%	-1.5%	-2.2%	0.0%	0.7%
2010	0.8%	0.7%	0.0%	-0.8%	-1.5%	-2.3%	0.0%	0.7%
2011	0.8%	0.8%	0.0%	-0.8%	-1.6%	-2.4%	0.0%	0.8%
2012	0.8%	0.8%	0.0%	-0.8%	-1.7%	-2.5%	0.0%	0.8%
2013	0.9%	0.8%	0.0%	-0.9%	-1.7%	-2.5%	0.0%	0.8%
2014	0.9%	0.8%	0.0%	-0.9%	-1.7%	-2.5%	0.0%	0.8%
2015	1.0%	1.0%	0.0%	-1.0%	-2.0%	-3.0%	0.0%	1.0%
2016	1.1%	1.1%	0.0%	-1.1%	-2.2%	-3.2%	0.0%	1.1%
2017	1.2%	1.1%	0.0%	-1.2%	-2.3%	-3.4%	0.0%	1.1%
2018	1.2%	1.1%	0.0%	-1.2%	-2.3%	-3.5%	0.0%	1.2%
2019	1.3%	1.3%	0.0%	-1.3%	-2.6%	-3.8%	0.0%	1.3%
2020	1.5%	1.4%	0.0%	-1.4%	-2.8%	-4.1%	0.0%	1.4%
2021	1.5%	1.4%	0.0%	-1.5%	-2.9%	-4.2%	0.0%	1.4%
2022	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	1.3%	1.3%	0.0%	-1.3%	-2.6%	-3.8%	0.0%	1.3%
	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

(September 2021 to October 2021)

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	-	-	-	-	-	-	-
2002	-	-	-	-	-	-	-
2003	-	-	-	-	-	-	-
2004	(70)	6	(6)	-	-	-	(70)
2005	(39)	6	(23)	-	(17)	43.6%	(56)
2006	(200)	22	(166)	276	132	(66.0%)	(68)
2007	(131)	12	(12)	-	-	-	(131)
2008	(2)	-	1	-	1	(50.0%)	(1)
2009	9	-	(9)	-	(9)	(100.0%)	-
2010	185	(13)	(10)	(1)	(24)	(13.0%)	161
2011	74	(4)	3	(1)	(2)	(2.7%)	72
2012	422	(13)	(284)	(6)	(303)	(71.8%)	119
2013	1,185	(82)	(71)	(646)	(799)	(67.4%)	386
2014	1,409	(102)	133	(320)	(289)	(20.5%)	1,120
2015	3,242	(205)	(496)	298	(403)	(12.4%)	2,839
2016	4,113	(297)	(482)	401	(378)	(9.2%)	3,735
2017	7,953	(566)	74	114	(378)	(4.8%)	7,575
2018	15,560	(798)	(807)	427	(1,178)	(7.6%)	14,382
2019	28,208	(1,913)	(104)	(341)	(2,358)	(8.4%)	25,850
2020	45,723	(1,767)	(465)	205	(2,027)	(4.4%)	43,696
2021	41,712	14,852	(3,758)	(1,746)	9,348	22.4%	51,060
Grand Total	**149,353**	**9,138**	**(6,482)**	**(1,340)**	**1,316**	**0.9%**	**150,669**

EXHIBIT G

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

(September 2021 to October 2021)

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	-	-	-	-	-	-	-
2002	-	-	-	-	-	-	-
2003	-	-	-	-	-	-	-
2004	(78)	6	(6)	-	-	-	(78)
2005	(77)	7	(24)	-	(17)	22.1%	(94)
2006	(204)	22	(188)	298	132	(64.7%)	(72)
2007	(159)	13	(13)	-	-	-	(159)
2008	(20)	2	(1)	-	1	(5.0%)	(19)
2009	(10)	1	(9)	-	(8)	80.0%	(18)
2010	98	(7)	(13)	-	(20)	(20.4%)	78
2011	25	(2)	2	-	-	-	25
2012	76	(1)	(270)	-	(271)	(356.6%)	(195)
2013	881	(72)	(79)	(588)	(739)	(83.9%)	142
2014	1,066	(90)	124	(289)	(255)	(23.9%)	811
2015	2,194	(163)	(455)	294	(324)	(14.8%)	1,870
2016	2,931	(249)	(336)	392	(193)	(6.6%)	2,738
2017	6,013	(456)	121	149	(186)	(3.1%)	5,827
2018	11,837	(658)	(772)	482	(948)	(8.0%)	10,889
2019	21,866	(1,636)	(65)	(181)	(1,882)	(8.6%)	19,984
2020	37,520	(1,547)	(479)	393	(1,633)	(4.4%)	35,887
2021	34,828	12,734	(3,318)	(1,326)	8,090	23.2%	42,918
Grand Total	**118,787**	**7,904**	**(5,781)**	**(376)**	**1,747**	**1.5%**	**120,534**