ALBERTA GRID RISK SHARING POOL

APRIL 2021 OPERATIONAL REPORT

ACTUARIAL HIGHLIGHTS

Related Bulletin: F2021-035_AB_RSP_April_2021_Operational_Report

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FACILITY ASSOCIATION

ACTUARIAL HIGHLIGHTS
RSP ALBERTA GRID
OPERATIONAL REPORT
APRIL 2021

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1 Summary

Note to members: we are currently reviewing our member reporting requirements and intend to provide the **Actuarial Highlights quarterly instead of the current monthly reporting**, starting with the May 2021 operational reporting and aligned with the valuation schedule; please contact us with any questions or concerns in regards to this matter.

1.1 Valuation Schedule (Fiscal Year 2021)

The April 2021 Operational Report leverages actuarial assumptions consistent with last month (that is, it does not reflect the results of an updated valuation). 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	% mfad -- bp	May 2021	update valuation (roll-forward):
Jun. 30, 2021	% mfad -- bp	Aug. 2021	update valuation:
Sep. 30, 2021	% mfad -- bp	Oct. 2021	update valuation (roll-forward):

Under the proposed schedule for fiscal year 2021, the off-half valuation quarters ending 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 Appointed Actuary and Hybrid Actuarial Services Model

The Annual General Meeting of the members of Facility Association ("FA") appointed Mr. Cosimo

[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%.

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.

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

There have been no changes in these descriptions since last month's Highlights.

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 **May 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). With the **most recent** valuation (December 31, 2020), consideration of changes in the definition of minor injuries under the MIR, were included with the updated industry trend analysis (completed using industry data as at June 30, 2020).

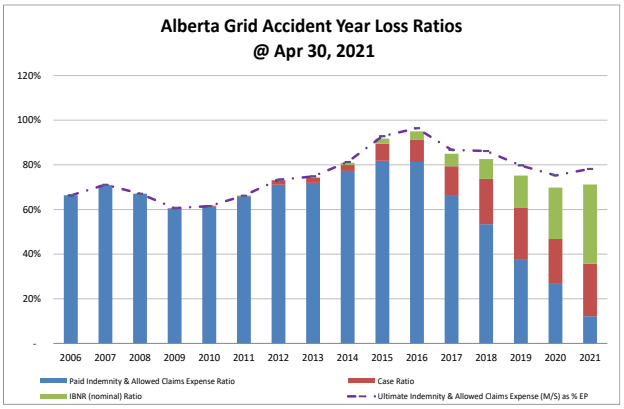
Amendments to the **Alberta Automobile Accident Insurance Benefits Regulation, Diagnostic and Treatment Protocols Regulation, and Minor Injury Regulation** came into force effective November 1, 2020, amending definitions and various benefit maximums defined in these regulations. **Alberta Bill 41** (Insurance (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. With the **most recent** valuation (December 31, 2020), consideration of changes were included with the updated industry trend analysis (completed using industry data as at June 30, 2020). 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.

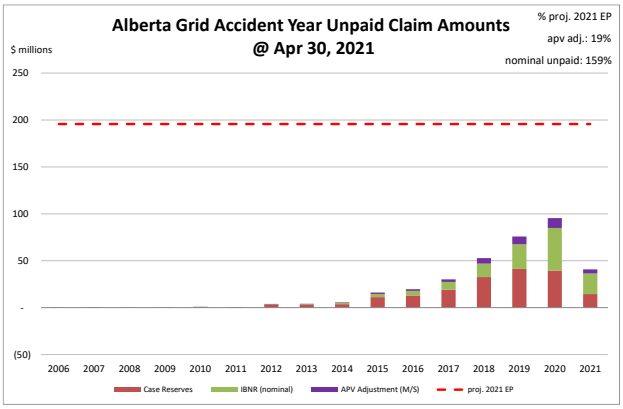
1.4 Current Provision Summary

The following charts show the current levels of claim liabilities[2] 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

[2]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.

amounts for the components of the claim liabilities and the current projected amount of 2021full year earned premium (the red hash-mark line) to provide some perspective.





"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 ($36.6 million – see the following table) represents 19% 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.

claim liabilities ($000s)

	amt	%
case	185,317	53.3%
ibnr	125,681	36.2%
M/S apv adjust.	36,564	10.5%
M/S total	347,562	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 54% of the IBNR balance relates to accident years 2020 and 2021 (see Exhibit B). Approximately 85% 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).

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

premium liabilities ($000s)

	amt	%
unearned prem	95,616	126.1%
prem def/(dpac)	(26,612)	(35.1%)
M/S apv adjust.	6,828	9.0%
M/S total	75,832	100.0%

policy liabilities ($000s)

	amt	%
claim	310,998	73.5%
premium	69,004	16.3%
M/S apv adjust.	43,392	10.2%
M/S total	423,394	100.0%

2 Activity During the Month of April 2021

2.1 Recorded Premium and Claims Activity

The following table summarizes the extent to which premiums and claims amounts recorded during

the month differ from projections reflected in the prior month's Operational Report[3].

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

Table 01	Earned Premium		Paid Indemnity & Allowed Claims Expense		Case increase / (decrease)		Recorded increase / (decrease)	
Accident Year	Actual	Actual less Projected	Actual	Actual less Projected	Actual	Actual less Projected	Actual	Actual less Projected
Prior	(4)	(4)	3,671	501	(3,290)	(1,496)	381	(995)
2019	(35)	(35)	1,182	(54)	(356)	(64)	826	(118)
2020	(76)	(76)	943	(1,807)	(676)	1,435	266	(373)
2021	15,616	(2,757)	2,440	(1,885)	2,811	(418)	5,251	(2,303)
TOTAL	15,500	(2,872)	8,236	(3,245)	(1,511)	(544)	6,724	(3,789)

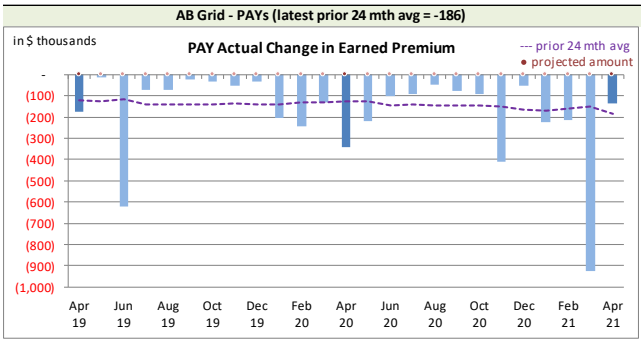
(Recorded transaction amounts exclude IBNR & other actuarial provisions)

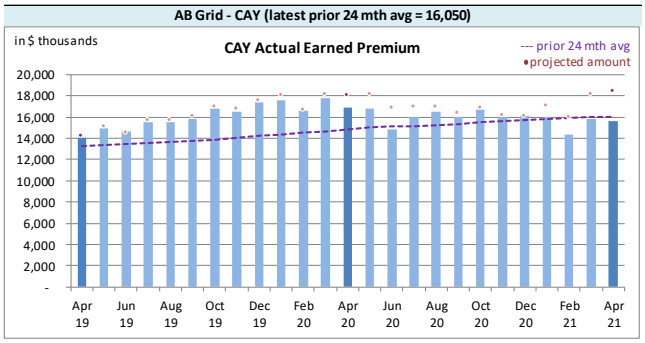
Claims transaction activity is generally volatile; changes from one month to the next are anticipated due to this natural "process variance" (i.e. random variation). Each month, the projection variances are reviewed for signs of projection bias and to identify potential ways to reduce the level of the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

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.

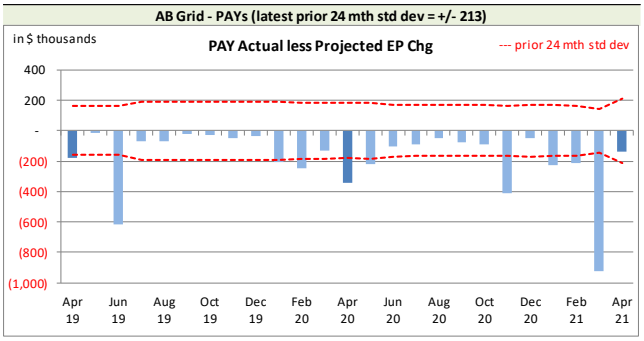
The associated variances between the actual changes and the projections from the previous month are shown in the following charts. **Earned premium** change projections are all attributed to the current accident year, as the projection upload does not accept earned premium changes for other accident 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

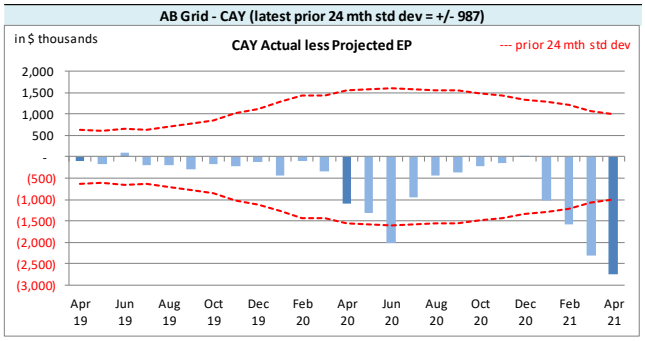
[3]There may be rounding differences in values in this document compared with the associated Bulletin and/or Operational Report.

[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.

prior accident years.

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





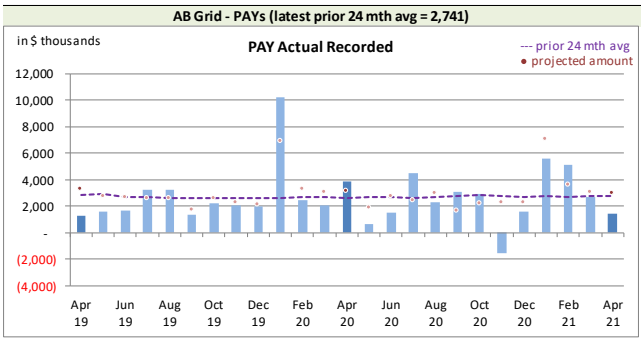
On Latest	$ thousands	
Earned Premium	PAYs	CAY
Mthly Avg EP Chg (prior 24 mths)	(186)	16,050
std dev	213	987
A-P <> std dev	10	4
% <> std dev	40.0%	16.0%
norm <> std dev	31.7%	31.7%
performance vs 24-mth avg:	worse	better

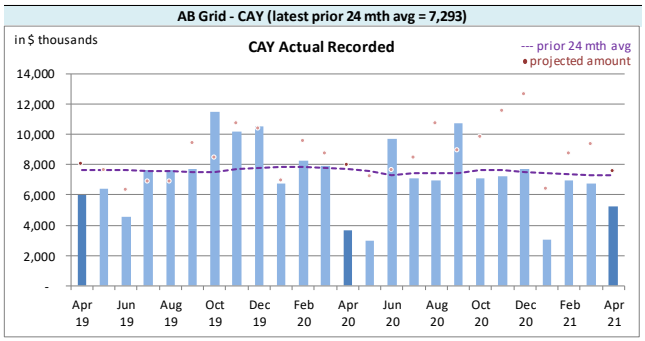
We project **earned premium** changes from known unearned premium balances and projected written premium levels, but upload the total projections as current accident year (CAY). This process has generated prior accident years' (PAYs) bias[5], with actuals generally lower than projected, although the 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.

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



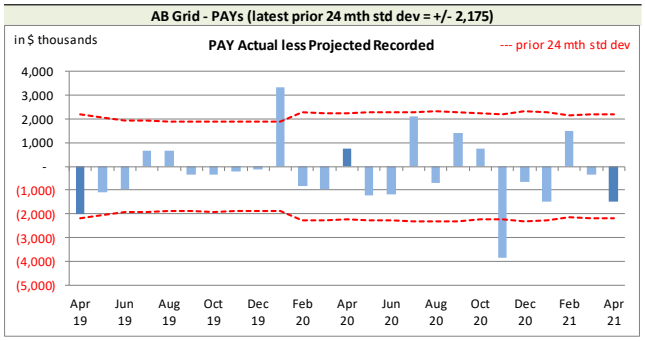


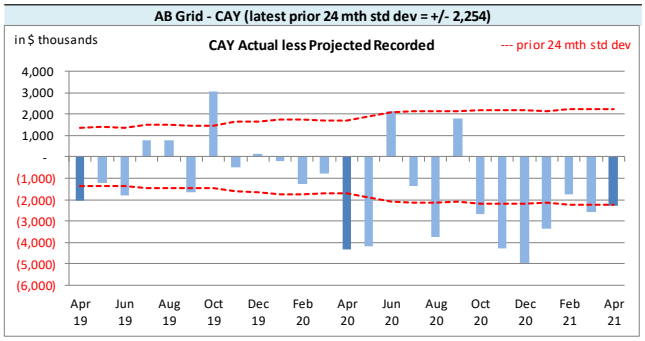
[5]The PAYs' variances will show bias as the projection upload forces all earned premium projections to be attributed to the CAY.

[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 April 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.

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)	2,741	7,293
std dev	2,175	2,254
A-P <> std dev	2	14
% <> std dev	8.0%	56.0%
norm <> std dev	31.7%	31.7%
performance vs 24-mth avg:	better	worse

With respect to **recorded** indemnity & allowed claims expense activity, 8% 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 not been indicated at a 95% confidence level on a rolling 25-month basis (8 of 25 variances were positive).

The current accident year (CAY) **recorded** variances fell outside of one standard deviation 56% of the time over the last 25 calendar months (see preceding table on the left), suggesting that the projection process has performed worse than simply projecting the prior 24-month average amount. Bias has been indicated at a 95% confidence level on a lagging 24-month basis (6 of 25 variances were positive).

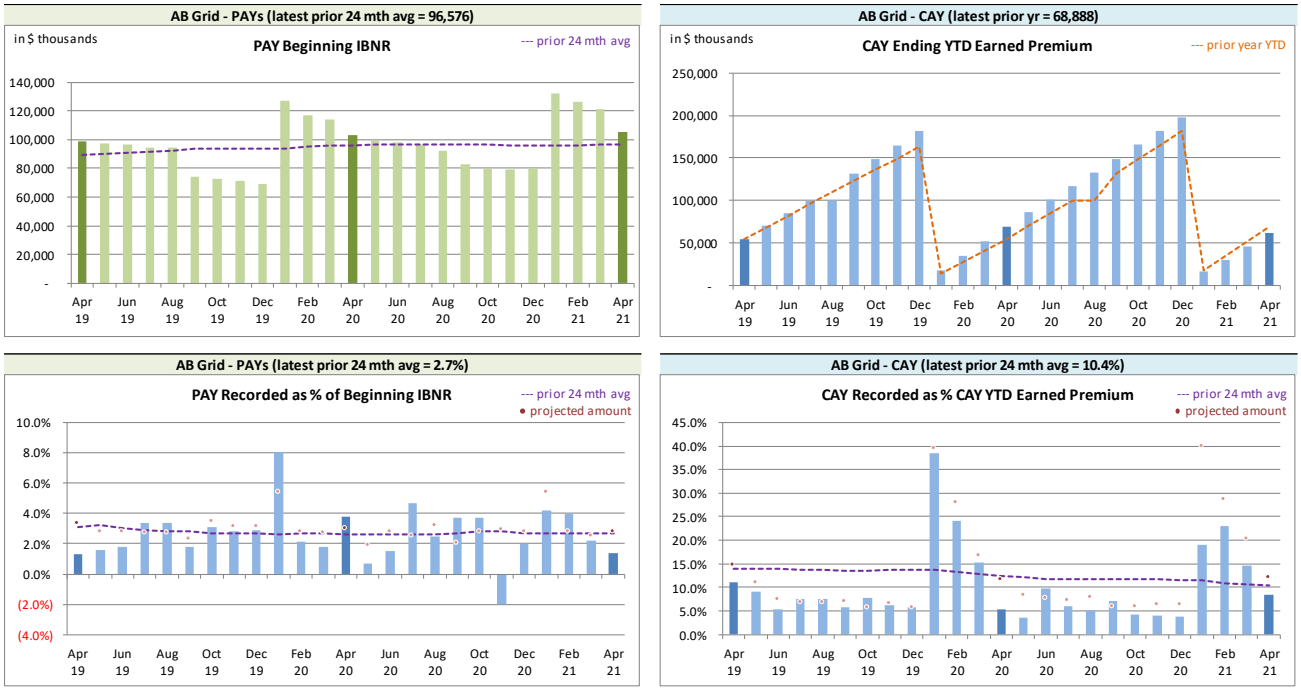
The CAY **recorded** variance was just outside of the one standard deviation band this month (see preceding chart on the right). The lower than projected recorded activity was reviewed, and attributed to process variance.

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

[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.

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:

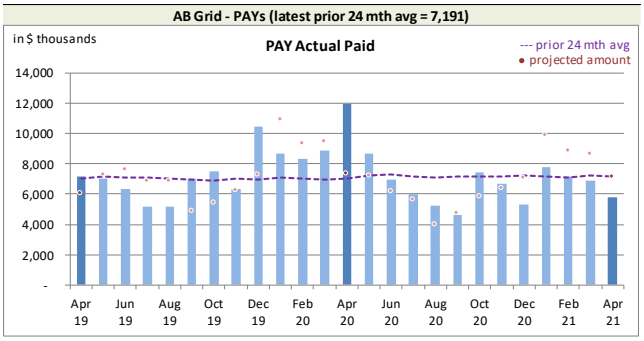
- to offset actual **recorded** activity (through loss ratio matching);
- the annual switchover as a CAY becomes a PAY (occurs in January); and
- when a new valuation is implemented, where the valuation resulted in changes to the selection of PAYs' ultimates (will show up as a beginning IBNR change one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

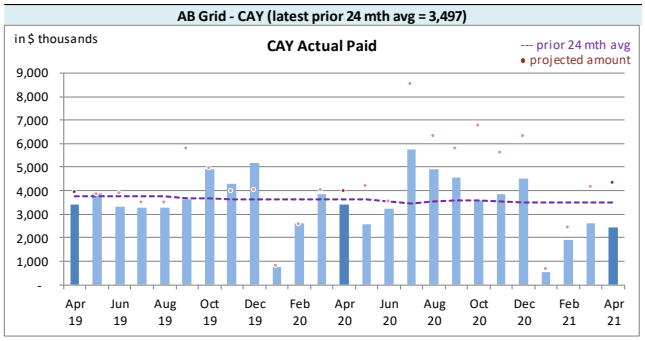
2.1.c AvsP: Paid Indemnity & Allowed Claims Expense

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.

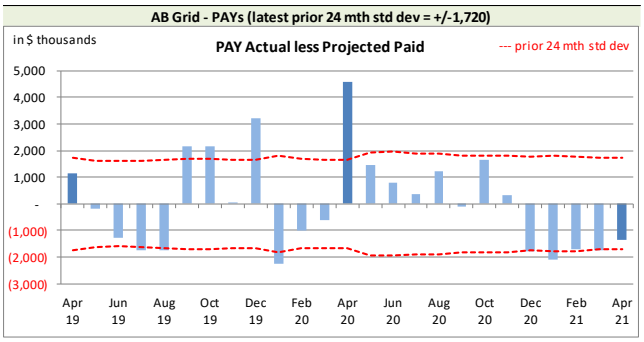
*Alberta Grid RSP Actual **Paid** activity by Calendar Month*

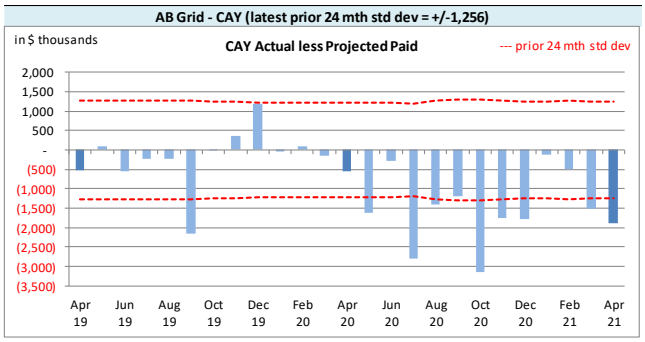




Paid activity variances from the previous month's projections shown in the following charts, including the prior 24-month standard deviation levels to show how the variances from projection compare with historical standard deviations.

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





On Latest $ thousands		
Paid	PAYs	CAY
Mthly Avg Paid (prior 24 mths)	7,191	3,497
std dev	1,720	1,256
A-P <> std dev	10	9
% <> std dev	40.0%	36.0%
norm <> std dev	31.7%	31.7%
performance vs 24-mth avg:	worse	no better

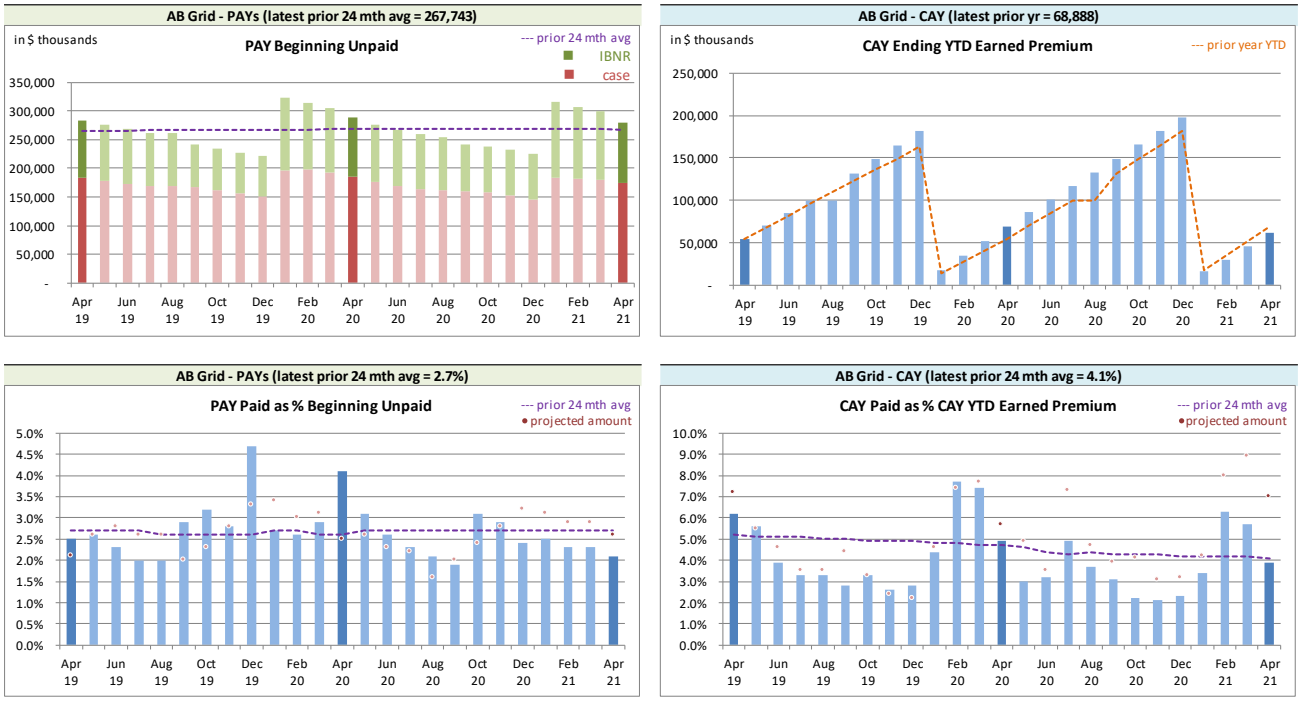
With respect to **paid** indemnity & allowed claims expense, 40% of the prior accident years' (PAYs) variances over the last 25 calendar months have fallen outside of one standard deviation of the actual **paid** amounts (see table on left), suggesting the projection process has performed worse than 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 (12 of 25 variances are positive).

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 (4 of 25 variances are positive).

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

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

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

[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".

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.

The following table summarizes variances in provisions included in this month's Operational Report and the associated one-month projections from last month's Report.

Alberta Grid RSP Actual vs Projected Summary: IBNR and APV Amounts ($ thousands)

Table 02

			actuarial present value adjustments					
	IBNR		Discount Amount		Provisions for Adverse Deviations		IBNR + actuarial present value adjustments	
Accident Year	Actual	Actual less Projected	Actual	Actual less Projected	Actual	Actual less Projected	Actual	Actual less Projected
Prior	32,264	975	(668)	4	13,997	(50)	45,593	929
2019	26,126	92	(405)	-	8,785	4	34,506	96
2020	45,345	319	(595)	(13)	11,140	231	55,890	537
2021	21,946	341	(255)	1	4,565	(10)	26,256	332
TOTAL	125,681	1,727	(1,923)	(8)	38,487	175	162,245	1,894

The IBNR provision is $1.7 million higher than projected from last month, counterbalancing the recorded claims activity and adjusting for the earned premium variance impacts indicated in section 2.1, .

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)

The variances associated with (ii) above are discussed in sections 2.1.a and 2.1.b.

The following table summarizes the variances in the provisions for premium deficiency liability / (deferred policy acquisition cost asset) included in this month's Operational Report and the one-month projections from last month's Report. This RSP is in a deferred policy acquisition cost asset position (shown as a negative amount) prior to and after actuarial present value adjustments. Actuarial present value adjustments decrease the asset value as the adjustments increase the expected future policy obligations (costs) associated with the unearned premium. The variances noted are mainly driven by the unearned premium variance.

Alberta Grid RSP Actual vs Projected Summary: Premium Deficiency / (DPAC) Amounts ($ thousands)

Table 03

	Premium Deficiency / (Deferred Policy Acquisition Costs)		actuarial present value adjustments		Premium Deficiency / (DPAC) including actuarial present value adjustments	
	Actual	Actual less Projected	Actual	Actual less Projected	Actual	Actual less Projected
balance:	(26,612)	(1,017)	6,828	260	(19,784)	(757)
balance as % unearned premium:	(27.8%)	-	7.1%	-	(20.7%)	-
actual unearned premium:	95,616					
less projected:	3,637					

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 73.0% rather than 71.2% (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.)

[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.

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	(13,542)	(22.5%)	(4,309)	(7.1%)	(17,851)	(29.6%)	(756)	8.5%
CAY	44,007	73.0%	4,310	7.1%	48,317	80.1%	12,144	(0.6%)
TOTAL	30,465	50.5%	1	-	30,466	50.5%	11,388	7.9%

("% 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 premium.

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.

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 0.24%

interest rate margin 25 basis pts

Accident Year	Actual Mar. 2021	Actual Apr. 2021	Projected May. 2021	Projected Jun. 2021	Projected Jul. 2021	Projected Aug. 2021	Projected Sep. 2021	Projected Dec. 2021
2005	13	13	12	12	11	12	12	10
2006	(120)	(120)	(117)	(112)	(109)	(105)	(100)	(93)
2007	193	193	188	180	175	170	163	150
2008	5	5	4	5	4	4	4	3
2009	46	46	45	43	41	40	38	35
2010	(271)	(280)	(275)	(261)	(255)	(247)	(236)	(219)
2011	(265)	(53)	(53)	(50)	(50)	(48)	(45)	(43)
2012	480	459	445	425	411	403	389	350
2013	875	720	701	669	649	634	610	555
2014	2,058	1,955	1,908	1,817	1,771	1,723	1,653	1,519
2015	4,698	4,797	4,679	4,458	4,342	4,227	4,057	3,722
2016	6,845	6,718	6,557	6,246	6,086	5,920	5,680	5,218
2017	10,839	11,028	10,603	10,132	9,699	9,173	8,864	8,089
2018	21,049	20,182	19,439	18,889	18,511	17,802	17,467	15,949
2019	35,509	34,506	33,677	33,053	31,841	30,806	29,831	28,093
2020	56,334	55,890	55,173	53,610	52,300	51,454	50,631	46,594
2021	19,363	26,256	33,102	37,642	42,540	46,944	50,763	60,541
TOTAL	157,581	162,245	166,020	166,693	167,904	168,851	169,723	170,419
Change		4,664	3,775	673	1,211	947	872	

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 Mar. 2021	Actual Apr. 2021	Projected May. 2021	Projected Jun. 2021	Projected Jul. 2021	Projected Aug. 2021	Projected Sep. 2021	Projected Dec. 2021
60.5%	2005	(26)	(26)	(25)	(24)	(23)	(22)	(21)	(19)
66.3%	2006	(129)	(129)	(126)	(120)	(117)	(113)	(108)	(100)
71.1%	2007	135	135	132	126	123	119	114	106
67.1%	2008	(14)	(14)	(14)	(13)	(13)	(13)	(12)	(12)
60.6%	2009	26	26	25	24	23	22	21	19
61.5%	2010	(323)	(331)	(324)	(308)	(301)	(292)	(279)	(258)
66.2%	2011	(320)	(108)	(106)	(101)	(99)	(96)	(92)	(85)
73.1%	2012	111	91	89	85	83	81	77	71
74.5%	2013	477	347	340	323	316	307	293	272
80.9%	2014	1,527	1,435	1,406	1,337	1,308	1,269	1,213	1,126
91.8%	2015	3,183	3,340	3,273	3,113	3,045	2,954	2,824	2,620
95.0%	2016	4,973	4,935	4,836	4,599	4,498	4,363	4,171	3,869
84.9%	2017	7,982	8,297	7,949	7,528	7,152	6,680	6,426	5,954
82.6%	2018	15,141	14,344	13,770	13,329	13,062	12,461	12,212	11,143
75.1%	2019	26,978	26,126	25,473	24,989	23,889	22,957	22,131	20,935
69.9%	2020	45,665	45,345	44,892	43,545	42,456	41,777	41,109	37,595
71.2%	2021	16,079	21,946	27,661	31,338	35,205	38,597	41,462	48,431
	TOTAL	121,387	125,681	129,175	129,698	130,537	130,983	131,476	131,607
	Change		4,294	3,494	523	839	446	493	

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 Mar. 2021	Actual Apr. 2021	Projected May. 2021	Projected Jun. 2021	Projected Jul. 2021	Projected Aug. 2021	Projected Sep. 2021	Projected Dec. 2021
(1) unearned premium (UP)	93,648	95,616	96,454	100,523	104,310	108,382	113,270	117,950
FOR MEMBER SHARING								
(2) expected future costs ratio {% of (1)}	79.0%	79.3%	79.8%	80.4%	81.0%	81.7%	82.4%	84.8%
(3) expected future costs {(1) x (2)}	73,948	75,832	76,991	80,828	84,518	88,552	93,333	99,979
(4) premium deficiency / (deferred policy acquisition cost)	(19,700)	(19,784)	(19,463)	(19,695)	(19,792)	(19,830)	(19,937)	(17,971)
Excluding Actuarial Present Value Adjustments								
(5) expected future costs ratio {% of (1)}	71.9%	72.2%	72.6%	73.2%	73.7%	74.3%	75.0%	77.1%
(6) expected future costs {(1) x (5)}	67,290	69,004	70,059	73,550	76,908	80,578	84,928	90,974
(7) premium deficiency / (deferred policy acquisition cost)	(26,358)	(26,612)	(26,395)	(26,973)	(27,402)	(27,804)	(28,342)	(26,976)

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	312	(19)	293	-	-	29	-	29	29	322
2006	168	(100)	68	-	-	7	-	7	7	75
2007	335	106	441	-	-	44	-	44	44	485
2008	158	(12)	146	-	-	15	-	15	15	161
2009	136	19	155	(1)	1	16	-	16	16	171
2010	645	(258)	387	(2)	2	39	-	39	39	426
2011	504	(85)	419	(2)	2	42	-	42	42	461
2012	2,725	71	2,796	(11)	11	280	(1)	279	279	3,075
2013	2,567	272	2,839	(11)	11	284	(1)	283	283	3,122
2014	2,824	1,126	3,950	(16)	16	395	(2)	393	393	4,343
2015	8,459	2,620	11,079	(55)	55	1,108	(6)	1,102	1,102	12,181
2016	9,690	3,869	13,559	(68)	68	1,356	(7)	1,349	1,349	14,908
2017	15,522	5,954	21,476	(129)	129	2,148	(13)	2,135	2,135	23,611
2018	27,534	11,143	38,677	(232)	232	4,835	(29)	4,806	4,806	43,483
2019	36,676	20,935	57,611	(346)	346	7,201	(43)	7,158	7,158	64,769
2020	34,899	37,595	72,494	(507)	507	9,062	(63)	8,999	8,999	81,493
PAYs (sub-total):	143,154	83,176	226,330	(1,380)	1,380	26,867	(165)	26,702	26,702	253,032
CAY (2021)	54,047	48,431	102,478	(717)	717	12,195	(85)	12,110	12,110	114,588
claims liabilities:	197,201	131,607	328,808	(2,097)	2,097	39,062	(250)	38,812	38,812	367,620
	Unearned Premium	Premium Deficiency / (DPAC)	Total Provision	discount	investment PfAD	nominal development PfAD	development PfAD discount	development PfAD	Total apvs	TOTAL*
premium liabilities:	117,950	(26,976)	90,974	(544)	544	9,059	(54)	9,005	9,005	99,979
										*Total may not be sum of parts, as apvs apply to future costs within UPR
policy liabilities:			**419,782**	**(2,641)**	**2,641**	**48,121**	**(304)**	**47,817**	**47,817**	**467,599**

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.

Selected Claims Development MfADs (Dec. 31, 2020)

Accident Year	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%	9.9%	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	12.5%	10.0%	12.5%	12.5%
2019	12.5%	10.0%	12.5%	12.5%
2020	12.5%	10.0%	12.5%	12.5%
2021	12.2%	10.0%	8.1%	11.9%
prem liab	12.0%	10.0%	5.1%	10.0%

discount rate:	0.24%
margin (basis points):	25

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 (0.24%), the prior valuation assumption (0.20%) 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.

$ Format: $000s

	Actuarial Present Value of Provisions at Various Discount Rates - Dec. 31, 2021 projected Unpaid							
AY	0.00%	0.00%	0.24%	0.74%	1.24%	1.74%	0.20%	0.20%
2004	-	-	-	-	-	-	-	-
2005	-	-	-	-	-	-	-	-
2006	85	85	85	85	85	85	85	85
2007	356	356	356	355	354	353	356	356
2008	92	92	92	92	91	91	92	92
2009	98	98	98	97	96	96	98	98
2010	1,045	1,045	1,045	1,037	1,029	1,021	1,045	1,045
2011	1,219	1,219	1,218	1,208	1,198	1,189	1,218	1,218
2012	2,360	2,360	2,359	2,339	2,318	2,298	2,359	2,359
2013	2,760	2,760	2,759	2,735	2,710	2,687	2,759	2,759
2014	4,165	4,165	4,163	4,128	4,092	4,058	4,163	4,163
2015	13,492	13,492	13,486	13,352	13,218	13,090	13,487	13,487
2016	14,686	14,686	14,679	14,520	14,360	14,206	14,681	14,681
2017	22,727	22,727	22,714	22,455	22,193	21,945	22,716	22,716
2018	41,924	41,924	41,896	41,405	40,917	40,446	41,901	41,901
2019	61,570	61,570	61,529	60,720	59,925	59,151	61,536	61,536
2020	80,972	80,972	80,909	79,760	78,612	77,506	80,918	80,918
Total	247,551	247,551	247,388	244,288	241,198	238,222	247,414	247,414
	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%	0.00%	0.24%	0.74%	1.24%	1.74%	0.20%	0.20%
Total	163	163	-	(3,100)	(6,190)	(9,166)	26	26
	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%	0.00%	0.24%	0.74%	1.24%	1.74%	0.20%	0.20%
2004	-	-	-	-	-	-	-	-
2005	-	-	-	-	-	-	-	-
2006	-	-	-	-	-	-	-	-
2007	-	-	-	(0.3%)	(0.6%)	(0.8%)	-	-
2008	-	-	-	-	(1.1%)	(1.1%)	-	-
2009	-	-	-	(1.0%)	(2.0%)	(2.0%)	-	-
2010	-	-	-	(0.8%)	(1.5%)	(2.3%)	-	-
2011	0.1%	0.1%	-	(0.8%)	(1.6%)	(2.4%)	-	-
2012	0.0%	0.0%	-	(0.8%)	(1.7%)	(2.6%)	-	-
2013	0.0%	0.0%	-	(0.9%)	(1.8%)	(2.6%)	-	-
2014	0.0%	0.0%	-	(0.8%)	(1.7%)	(2.5%)	-	-
2015	0.0%	0.0%	-	(1.0%)	(2.0%)	(2.9%)	0.0%	0.0%
2016	0.0%	0.0%	-	(1.1%)	(2.2%)	(3.2%)	0.0%	0.0%
2017	0.1%	0.1%	-	(1.1%)	(2.3%)	(3.4%)	0.0%	0.0%
2018	0.1%	0.1%	-	(1.2%)	(2.3%)	(3.5%)	0.0%	0.0%
2019	0.1%	0.1%	-	(1.3%)	(2.6%)	(3.9%)	0.0%	0.0%
2020	0.1%	0.1%	-	(1.4%)	(2.8%)	(4.2%)	0.0%	0.0%
Total	0.1%	0.1%	-	(1.3%)	(2.5%)	(3.7%)	0.0%	0.0%
	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 During Month

RSP	**Alberta Grid**
AccountCode Desc	**IBNR - Discounted**

M/S IBNR - in $000s

AccYear	Values 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
2005	13	-	-	-	-	-	13
2006	(120)	4	(4)	-	-	-	(120)
2007	193	(7)	7	-	-	-	193
2008	5	-	-	-	-	-	5
2009	46	(1)	1	-	-	-	46
2010	(271)	9	(18)	-	(9)	3.3%	(280)
2011	(265)	9	203	-	212	(80.0%)	(53)
2012	480	(15)	(6)	-	(21)	(4.4%)	459
2013	875	(28)	(127)	-	(155)	(17.7%)	720
2014	2,058	(69)	(34)	-	(103)	(5.0%)	1,955
2015	4,698	(155)	254	-	99	2.1%	4,797
2016	6,845	(229)	102	-	(127)	(1.9%)	6,718
2017	10,839	(478)	667	-	189	1.7%	11,028
2018	21,049	(754)	(113)	-	(867)	(4.1%)	20,182
2019	35,509	(1,099)	96	-	(1,003)	(2.8%)	34,506
2020	56,334	(981)	537	-	(444)	(0.8%)	55,890
2021	19,363	6,561	332	-	6,893	35.6%	26,256
Grand Total	**157,581**	**2,770**	**1,894**	**-**	**4,664**	**3.0%**	**162,245**

EXHIBIT G

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

RSP	**Alberta Grid**
AccountCode Desc	**IBNR - Undiscounted**

M/S IBNR - in $000s

AccYear	Values 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
2005	(26)	1	(1)	-	-	-	(26)
2006	(129)	4	(4)	-	-	-	(129)
2007	135	(5)	5	-	-	-	135
2008	(14)	-	-	-	-	-	(14)
2009	26	(1)	1	-	-	-	26
2010	(323)	11	(19)	-	(8)	2.5%	(331)
2011	(320)	11	201	-	212	(66.3%)	(108)
2012	111	(4)	(16)	-	(20)	(18.0%)	91
2013	477	(16)	(114)	-	(130)	(27.3%)	347
2014	1,527	(52)	(40)	-	(92)	(6.0%)	1,435
2015	3,183	(108)	265	-	157	4.9%	3,340
2016	4,973	(169)	131	-	(38)	(0.8%)	4,935
2017	7,982	(415)	730	-	315	3.9%	8,297
2018	15,141	(636)	(161)	-	(797)	(5.3%)	14,344
2019	26,978	(944)	92	-	(852)	(3.2%)	26,126
2020	45,665	(639)	319	-	(320)	(0.7%)	45,345
2021	16,079	5,526	341	-	5,867	36.5%	21,946
Grand Total	**121,387**	**2,567**	**1,727**	**-**	**4,294**	**3.5%**	**125,681**