ALBERTA GRID RISK SHARING POOL

MARCH 2021 OPERATIONAL REPORT

ACTUARIAL HIGHLIGHTS

Related Bulletin: F2021-027_AB_RSP_March_2021_Operational_Reports

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FACILITY ASSOCIATION

ACTUARIAL HIGHLIGHTS

RSP ALBERTA GRID

OPERATIONAL REPORT

MARCH 2021

TABLE OF CONTENTS

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 participation 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 March 2021 Operational Report incorporates the results of an updated valuation (as at December 31, 2020) – 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	% 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   New Valuation

A valuation of the Alberta Grid Risk Sharing Pool ("RSP") as at December 31, 2020 has been completed since last month's Operational Report and the results of that valuation have been

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[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%.

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 Dec. 31, 2020[2]

AB Grid	unfav / (fav) for the month and ytd					
	IMPACT in $000s from changes in:					
	ults & payout patterns			dsct rate	margins	
	Nominal	apv adj.	sub-tot	apv adj.	apv adj.	TOTAL
	[1]	[2]	[3]	[4]	[5]	[6]
PAYs	(12,449)	(1,060)	(13,509)	(31)	-	(13,540)
CAY	(3,279)	(419)	(3,698)	(3)	-	(3,701)
Prem Def	(6,454)	(642)	(7,096)	(7)	-	(7,103)
TOTAL	(22,182)	(2,121)	(24,303)	(41)	-	(24,344)

As indicated in the preceding table, the incorporation of the new valuation had an estimated ***$24.3 million favourable impact*** on the month's net result from operations, subtracting an estimated 54.3 points (see following table) from the **year-to-date Combined Operating Ratio** to end at **54.8%**.

Summary of Impact (% YTD EP) of Implementing Result of Valuation as at Dec. 31, 2020

AB Grid	ytd EP	44,827	(actual)			
	IMPACT unfav / (fav) as % ytd EP from changes in:					
	ults & payout patterns			dsct rate	margins	
	Nominal	apv adj.	sub-tot	apv adj.	apv adj.	TOTAL
	[1]	[2]	[3]	[4]	[5]	[6]
PAYs	(27.8%)	(2.4%)	(30.1%)	(0.1%)	-	(30.2%)
CAY	(7.3%)	(0.9%)	(8.2%)	-	-	(8.3%)
Prem Def	(14.4%)	(1.4%)	(15.8%)	-	-	(15.8%)
TOTAL	(49.5%)	(4.7%)	(54.2%)	(0.1%)	-	(54.3%)

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 $22.2 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

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[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 **$12.4 million favourable** nominal variance or 27.8% of the PAYs nominal unpaid balance of $300.4 million determined at the end of last month (February 2021), driven by favourable claims development and updates to a priori loss ratios to include more recent data and updated trends. While the valuation implementation impact does differ from the valuation changes themselves (as they apply to different periods), the main drivers of PAY change were:

1) Favourable development of Third Party Liability - Bodily Injury claims for accident year 2019 & prior. The table below summarizes the movements for 2019& prior by government line:

Alberta Grid RSP - valuation changes in selected ultimate
(favourable) / unfavourable **during Quarter**

Accident Year	Third Party Liability	Accident Benefits	Other Coverages	Total
2015 & Prior	(660)	(35)	(58)	(753)
2016	(487)	(90)	618	41
2017	(1,412)	(5)	(55)	(1,472)
2018	(603)	(34)	(182)	(819)
2019	(8,043)	(436)	75	(8,404)
TOTAL	**(11,205)**	**(600)**	**398**	**(11,407)**

2) Accident year 2020. Lower than expected claims frequency due to a reduction in driving as a result of the COVID-19 pandemic led to a reduction in ultimate claims across all coverages; this is reflected in the implementation through both actual data and through revised actuarial assumptions to estimate the ultimate expected loss ratio.

The CAY and premium deficiency impacts are a result of the change in the selected loss for accident year **2021** (decreased 7.0 points to 71.2%). This change is also driven by revised assumptions for the continuing impact of COVID-19 on claims costs in 2021.

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 government line, 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 $2.1 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 December 2020.

Column [4] accounts for the change in the **discount rate** selected (increased 4 basis point to **0.24%**), indicating a favourable impact of $41 thousand. The impact *related only to claims liabilities* (i.e. PAYs plus CAY) was $34 thousand at March 2021 – this compares to the $0.3 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 month's 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 **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. At the current time, no explicit adjustments have been made to our valuation estimates or views based on the amendments to the various Regulations and introduction of Bill 41. 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).

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 2021full year earned premium (the red hash-mark line) to provide some perspective.
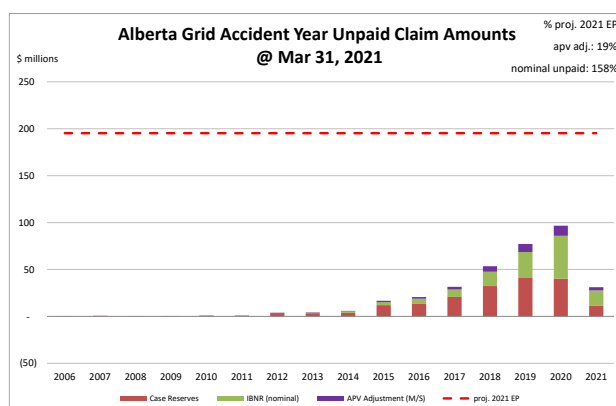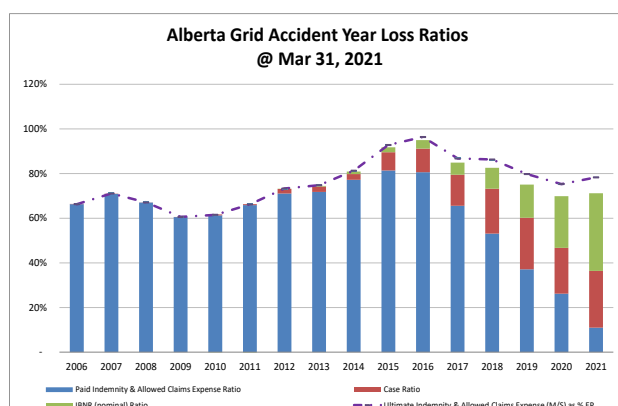
"M/S" refers to "Member Statement" values – that is, actuarial present value adjustments at the selected discount rate.

The current actuarial present value adjustments balance ($36.2 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	186,828	54.2%
ibnr	121,387	35.2%
M/S apv adjust.	36,194	10.5%
M/S total	344,409	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 51% of the IBNR balance relates to accident years 2020 and 2021 (see Exhibit B). Approximately 84% of the M/S total claim liabilities are related to accident years 2017-2021 inclusive

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[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.

(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	93,648	126.6%
prem def/(dpac)	(26,358)	(35.6%)
M/S apv adjust.	6,658	9.0%
M/S total	73,948	100.0%

policy liabilities ($000s)

	amt	%
claim	308,215	73.7%
premium	67,290	16.1%
M/S apv adjust.	42,852	10.2%
M/S total	418,357	100.0%

2   Activity During the Month of March 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[4].

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	(23)	(23)	3,890	542	(3,511)	(967)	379	(425)
2019	(122)	(122)	995	(332)	103	481	1,098	149
2020	(747)	(747)	1,998	(1,955)	(808)	1,877	1,190	(78)
2021	15,798	(2,322)	2,623	(1,510)	4,156	(1,053)	6,779	(2,563)
TOTAL	14,907	(3,213)	9,506	(3,255)	(61)	338	9,446	(2,917)

(Recorded transaction amounts exclude IBNR & other actuarial provisions)

It is unusual to see large actual earned premium transactions affecting prior accident years beyond the first prior accident year. We have identified that the prior accident years changes in the month reflects system sweep activity undertaken by two member groups in responding to audit findings.

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**[5] 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.

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

[5]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.

*Alberta Grid RSP Actual **Earned Premium** by Calendar Month*
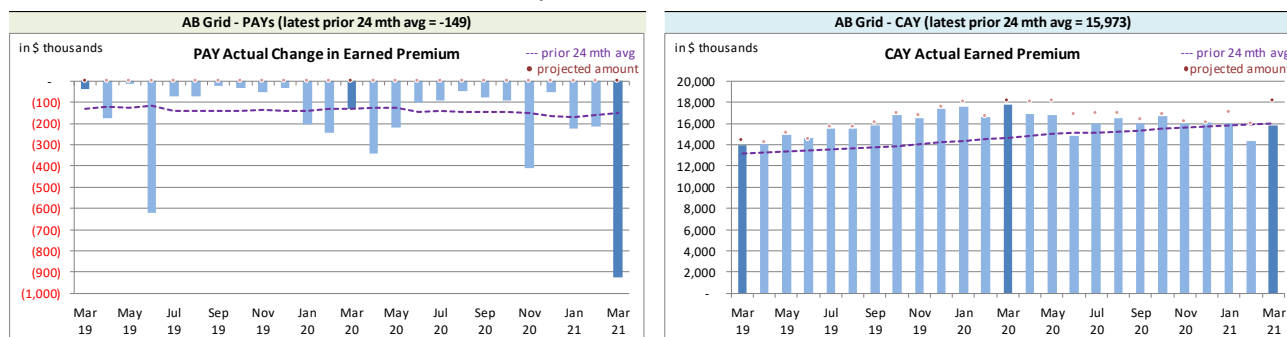
Earned premium changes during a given calendar month in relation to prior accident years tend to be at modest levels, although relatively high levels generally occur at the beginning of each year.

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 prior accident years.

*Alberta Grid RSP Actual vs. Projected Summary: **Earned Premium** Variances by Calendar Month*
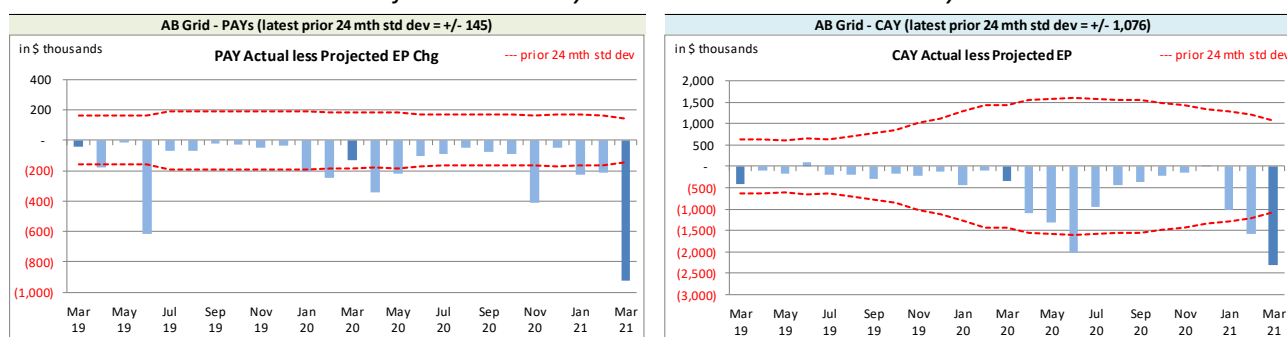
On Latest $ thousands		
Earned Premium	**PAYs**	**CAY**
Mthly Avg EP Chg (prior 24 mths)	(149)	15,973
std dev	145	1,076
A-P <> std dev	10	3
% <> std dev	40.0%	12.0%
norm <> std dev	31.7%	31.7%
performance vs 24-mth avg:	worse	better

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[6], 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[7], with actuals being generally lower than projected, and while we modified our projections processes in response, bias still exists.

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

[7]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 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.

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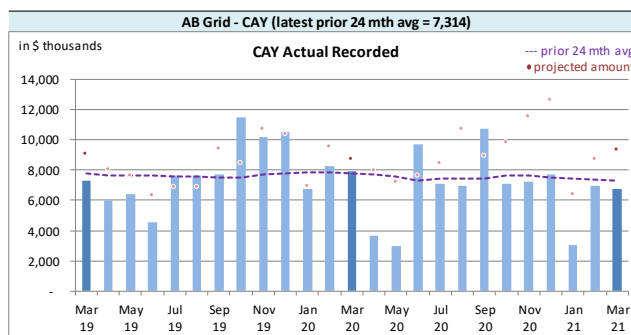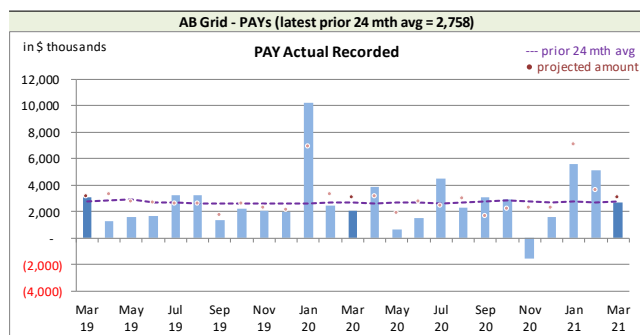
The following charts show actual **recorded** activity (**paid** and case reserve changes), in each of the most recent 25 calendar months, along with a "prior 24-month average" to show how each month's actual compares with the average amount of the preceding 24 calendar months.

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

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*
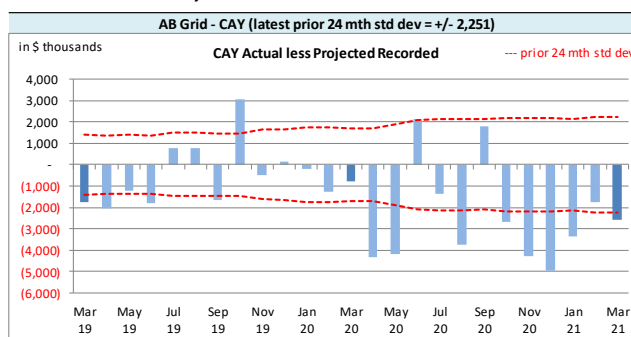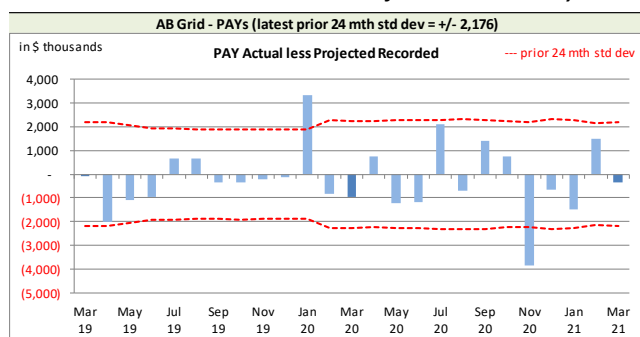
On Latest $ thousands		
Recorded	PAYs	CAY
Mthly Avg Recorded (prior 24 mths)	2,758	7,314
std dev	2,176	2,251
A-P <> std dev	2	14
% <> std dev	8.0%	56.0%
norm <> std dev	31.7%	31.7%
performance vs 24-mth avg:	better	worse

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[8] has not been

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[8] 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.

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 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).

*Alberta Grid RSP Levels that influence[9] **Recorded** activity by Calendar Month*
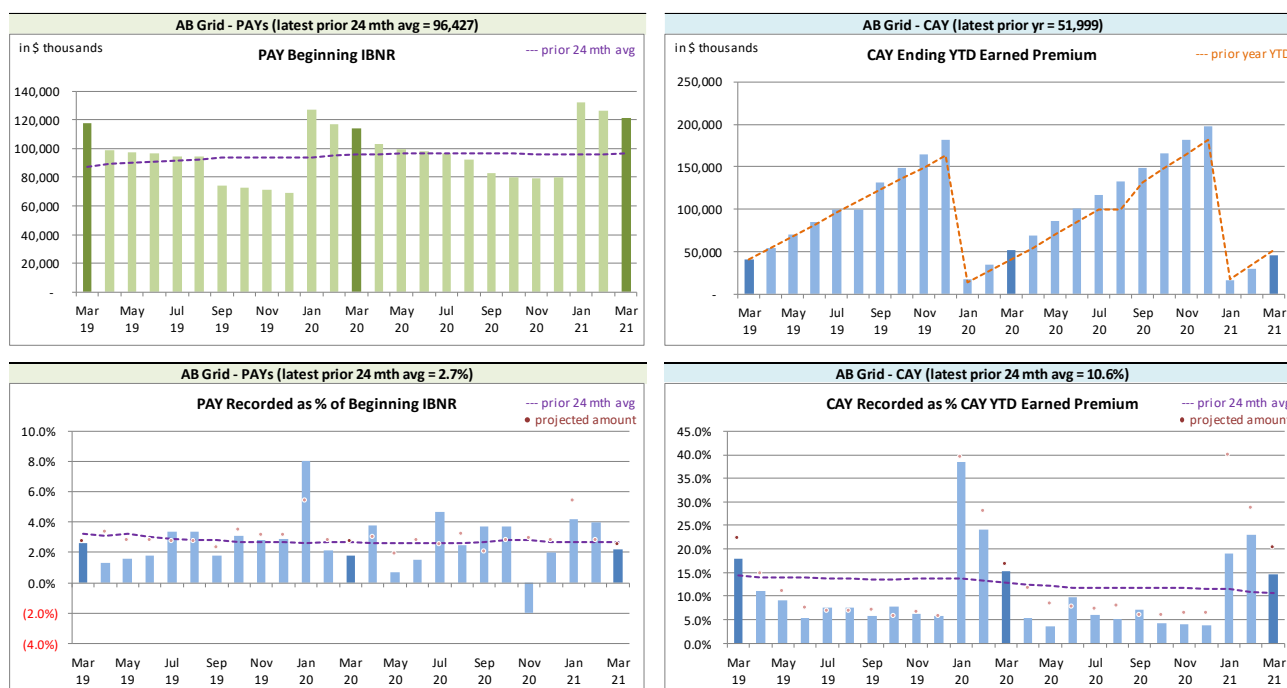
We track PAY beginning IBNR as **recorded** activity comes out of IBNR. Changes in the PAY beginning IBNR (see upper left of the preceding group of charts) occur for several possible reasons:

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[9]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.

- 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.

*Alberta Grid RSP Actual **Paid** activity by Calendar Month*
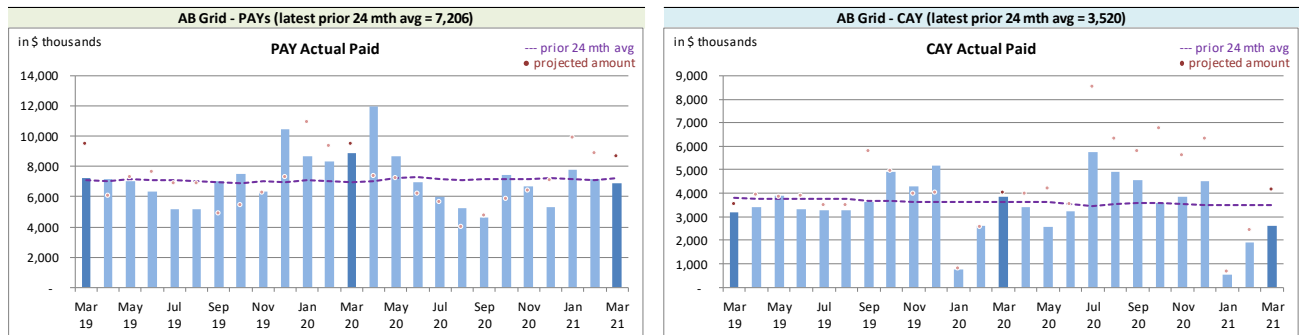
Paid activity variances from the previous month's projections shown in the following charts, including the prior 24-month standard deviation levels to show how the variances from projection compare with historical standard deviations.

*Alberta Grid RSP Actual vs Projected Summary: **Paid** Variances by Calendar Month*
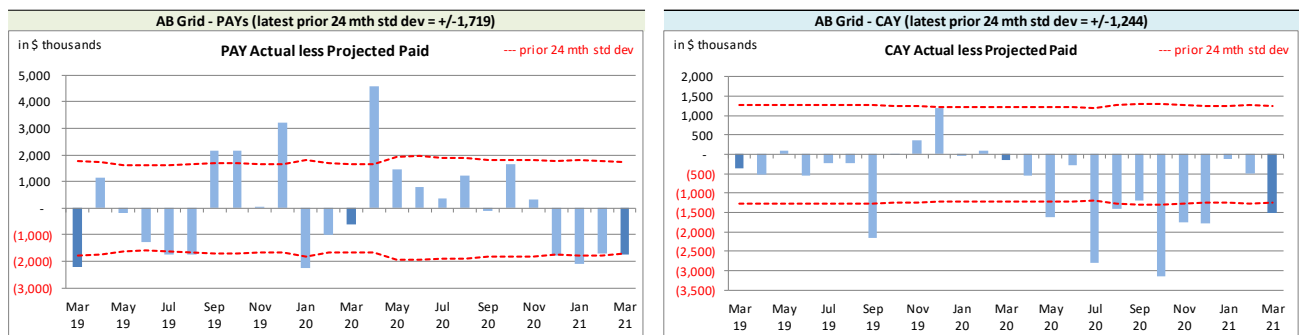
On Latest $ thousands		
Paid	PAYs	CAY
Mthly Avg Paid (prior 24 mths)	7,206	3,520
std dev	1,719	1,244
A-P <> std dev	11	8
% <> std dev	44.0%	32.0%
norm <> std dev	31.7%	31.7%
performance vs 24-mth avg:	worse	no better

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 (12 of 25 variances are positive).

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

The current accident year (CAY) **paid** variances fell outside one standard deviation 32% 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[10] **Paid** activity by Calendar Month*
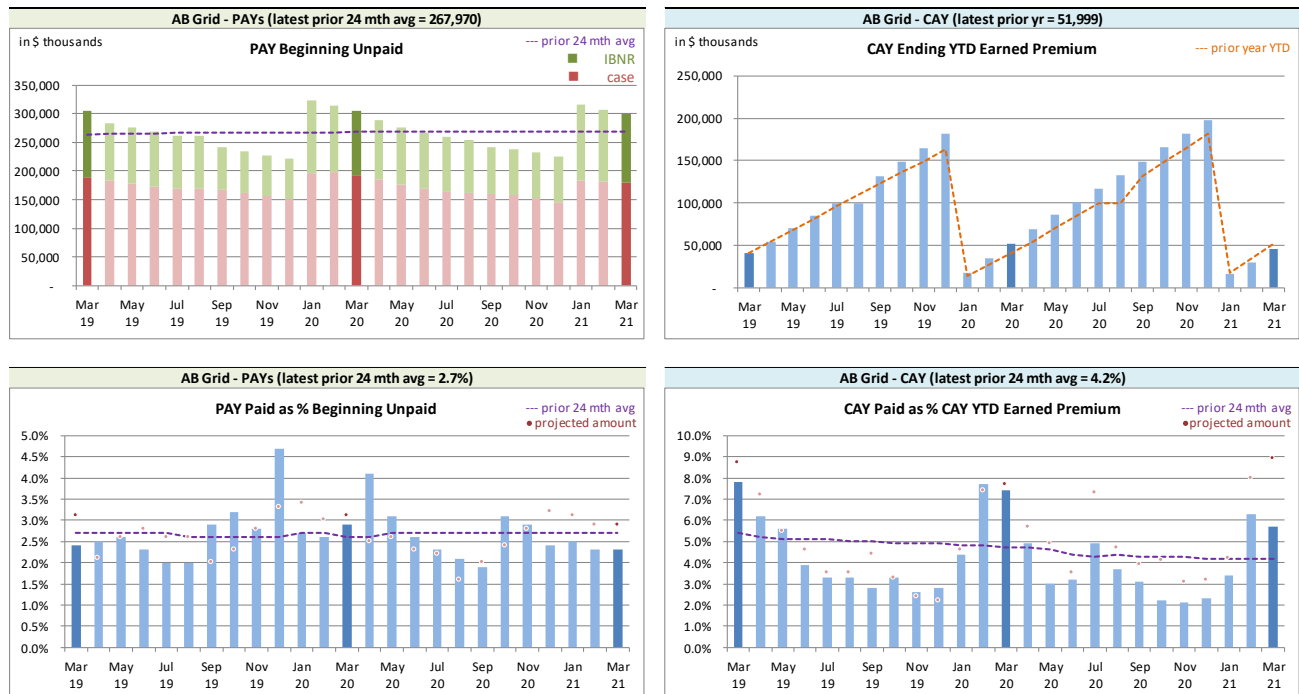
We track the PAY beginning unpaid balance (case and IBNR) as **paid** activity comes out of the unpaid balance. Changes in the PAY beginning unpaid balance (see upper left of the preceding group of charts) occur for several possible reasons:

- 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[11], 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.

The following table summarizes variances in provisions included in this month's Operational Report

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[10]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.

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

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	32,665	(2,379)	(686)	(86)	14,396	(274)	46,375	(2,739)
2019	26,978	(8,561)	(412)	(28)	8,943	(985)	35,509	(9,574)
2020	45,665	(1,827)	(602)	(87)	11,271	510	56,334	(1,404)
2021	16,079	(2,534)	(195)	(7)	3,479	(451)	19,363	(2,992)
TOTAL	121,387	(15,301)	(1,895)	(208)	38,089	(1,200)	157,581	(16,709)

The IBNR provision is $15.3 million lower than projected from last month, counterbalancing the recorded claims activity and adjusting for the earned premium variance impacts indicated in section 2.1, and due to the valuation implementation.

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, and the valuation implementation.

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:	(26,358)	(6,904)	6,658	(484)	(19,700)	(7,388)
balance as % unearned premium:	(28.1%)	(6.8%)	7.1%	(0.7%)	(21.0%)	(7.5%)
actual unearned premium:	93,648					
less projected:	2,112					

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[12] 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[13], 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 73.4% 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.)

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[12]"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).

[13]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	(13,442)	(30.0%)	(3,653)	(8.1%)	(17,095)	(38.1%)	(15,063)	(31.3%)
CAY	32,888	73.4%	3,284	7.3%	36,172	80.7%	9,831	(7.2%)
TOTAL	19,446	43.4%	(369)	(0.8%)	19,077	42.6%	(5,232)	(38.6%)

("% 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, and due to the 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 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

TABLE EXHIBIT A	Amounts in $000s				
IBNR + M/S actuarial present value adjustments	Accident Year	Actual Feb. 2021	Actual Mar. 2021	Projected Apr. 2021	Projected May. 2021	Projected Dec. 2021
	2005	13	13	13	12	10
	2006	(119)	(120)	(116)	(113)	(90)
	2007	193	193	186	181	144
	2008	11	5	5	4	2
	2009	46	46	45	43	33
	2010	(342)	(271)	(262)	(257)	(207)
	2011	(217)	(265)	(256)	(251)	(203)
	2012	681	480	465	450	355
	2013	848	875	847	825	653
	2014	2,027	2,058	1,989	1,941	1,545
	2015	5,427	4,698	4,543	4,429	3,520
discount rate	2016	6,686	6,845	6,616	6,456	5,138
0.24%	2017	12,475	10,839	10,361	9,965	7,615
	2018	22,615	21,049	20,295	19,547	16,033
interest rate margin	2019	46,197	35,509	34,410	33,583	28,016
25 basis pts	2020	59,477	56,334	55,353	54,645	46,143
	2021	16,311	19,363	25,924	31,456	60,388
	TOTAL	172,259	157,581	160,351	162,850	169,044
	Change		(14,678)	2,770	2,499	

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

FACILITY ASSOCIATION

EXHIBIT B

IBNR

TABLE EXHIBIT B			Amounts in $000s				
IBNR	Ultimate Loss Ratio	Accident Year	Actual Feb. 2021	Actual Mar. 2021	Projected Apr. 2021	Projected May. 2021	Projected Dec. 2021
	60.5%	2005	(26)	(26)	(25)	(24)	(18)
	66.3%	2006	(129)	(129)	(125)	(122)	(97)
	71.1%	2007	135	135	130	127	101
	67.1%	2008	(9)	(14)	(14)	(14)	(12)
	60.6%	2009	26	26	25	24	18
	61.5%	2010	(469)	(323)	(312)	(306)	(245)
	66.2%	2011	(315)	(320)	(309)	(303)	(243)
	73.1%	2012	294	111	107	105	85
	74.5%	2013	451	477	461	452	361
	80.9%	2014	1,482	1,527	1,475	1,445	1,157
	91.8%	2015	3,777	3,183	3,075	3,013	2,410
	95.0%	2016	4,743	4,973	4,804	4,708	3,767
	84.9%	2017	9,454	7,982	7,567	7,249	5,431
	82.6%	2018	16,512	15,141	14,505	13,925	11,267
	75.1%	2019	36,488	26,978	26,034	25,383	20,861
	69.9%	2020	48,760	45,665	45,026	44,576	37,330
	71.2%	2021	13,767	16,079	21,605	26,196	48,309
		TOTAL	134,863	121,387	123,954	126,361	130,425
		Change		(13,476)	2,567	2,407	

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. 2021	Actual Mar. 2021	Projected Apr. 2021	Projected May. 2021	Projected Dec. 2021
(1) unearned premium (UP)	94,803	93,648	91,978	95,621	117,570
FOR MEMBER SHARING					
(2) expected future costs ratio {% of (1)}	86.5%	79.0%	79.3%	79.8%	84.8%
(3) expected future costs {(1) x (2)}	81,975	73,948	72,951	76,315	99,657
(4) premium deficiency / (deferred policy acquisition cost)	(12,828)	(19,700)	(19,027)	(19,306)	(17,913)
Excluding Actuarial Present Value Adjustments					
(5) expected future costs ratio {% of (1)}	78.7%	71.9%	72.2%	72.6%	77.1%
(6) expected future costs {(1) x (5)}	74,585	67,290	66,383	69,444	90,682
(7) premium deficiency / (deferred policy acquisition cost)	(20,218)	(26,358)	(25,595)	(26,177)	(26,888)

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	303	(18)	285	-	-	28	-	28	28	313
2006	164	(97)	67	-	-	7	-	7	7	74
2007	325	101	426	-	-	43	-	43	43	469
2008	153	(12)	141	-	-	14	-	14	14	155
2009	132	18	150	(1)	1	15	-	15	15	165
2010	625	(245)	380	(2)	2	38	-	38	38	418
2011	646	(243)	403	(2)	2	40	-	40	40	443
2012	2,628	85	2,713	(11)	11	271	(1)	270	270	2,983
2013	2,570	361	2,931	(12)	12	293	(1)	292	292	3,223
2014	2,745	1,157	3,902	(16)	16	390	(2)	388	388	4,290
2015	8,746	2,410	11,156	(56)	56	1,116	(6)	1,110	1,110	12,266
2016	10,010	3,767	13,777	(69)	69	1,378	(7)	1,371	1,371	15,148
2017	16,541	5,431	21,972	(132)	132	2,197	(13)	2,184	2,184	24,156
2018	27,094	11,267	38,361	(230)	230	4,795	(29)	4,766	4,766	43,127
2019	36,725	20,861	57,586	(346)	346	7,198	(43)	7,155	7,155	64,741
2020	33,667	37,330	70,997	(497)	497	8,875	(62)	8,813	8,813	79,810
PAYs (sub-total):	143,073	82,116	225,189	(1,374)	1,374	26,704	(164)	26,540	26,540	251,729
CAY (2021)	53,909	48,309	102,218	(716)	716	12,164	(85)	12,079	12,079	114,297
claims liabilities:	196,982	130,425	327,407	(2,090)	2,090	38,868	(249)	38,619	38,619	366,026

	Unearned Premium	Premium Deficiency / (DPAC)	Total Provision	discount	investment PfAD	nominal development PfAD	development PfAD discount	development PfAD	Total apvs	TOTAL*
premium liabilities:	117,570	(26,888)	90,682	(542)	542	9,029	(54)	8,975	8,975	99,657

*Total may not be sum of parts, as apvs apply to future costs within UPR

policy liabilities:			418,089	(2,632)	2,632	47,897	(303)	47,594	47,594	465,683

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	Third Party Liability	Accident Benefits	Other Coverages	Total
	Selected Claims Development MfADs (Dec. 31, 2020)			
	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

AY	Actuarial Present Value of Provisions at Various Discount Rates - Dec. 31, 2021 projected Unpaid							
	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

AY	Dollar Impact Relative to Valuation Assumption							
	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

AY	Percentage Impact Relative to Valuation Assumption							
	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

Page 1 of 2

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	(119)	3	(4)	-	(1)	0.8%	(120)
2007	193	(5)	5	-	-	-	193
2008	11	(1)	(5)	-	(6)	(54.5%)	5
2009	46	(1)	1	-	-	-	46
2010	(342)	6	65	-	71	(20.8%)	(271)
2011	(217)	3	(51)	-	(48)	22.1%	(265)
2012	681	(18)	18	(201)	(201)	(29.5%)	480
2013	848	(22)	50	(1)	27	3.2%	875
2014	2,027	(48)	79	-	31	1.5%	2,058
2015	5,427	(131)	50	(648)	(729)	(13.4%)	4,698
2016	6,686	(162)	321	-	159	2.4%	6,845
2017	12,475	(350)	192	(1,478)	(1,636)	(13.1%)	10,839
2018	22,615	(436)	(400)	(730)	(1,566)	(6.9%)	21,049
2019	46,197	(1,114)	(217)	(9,357)	(10,688)	(23.1%)	35,509
2020	59,477	(1,739)	(279)	(1,125)	(3,143)	(5.3%)	56,334
2021	16,311	6,044	709	(3,701)	3,052	18.7%	19,363
Grand Total	**172,259**	**2,031**	**532**	**(17,241)**	**(14,678)**	**(8.5%)**	**157,581**

EXHIBIT G

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

RSP **Alberta Grid**
AccountCode Desc **IBNR - Undiscounted** 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)	3	(3)	-	-	-	(129)
2007	135	(3)	3	-	-	-	135
2008	(9)	-	(5)	-	(5)	55.6%	(14)
2009	26	(1)	1	-	-	-	26
2010	(469)	10	136	-	146	(31.1%)	(323)
2011	(315)	7	(12)	-	(5)	1.6%	(320)
2012	294	(6)	6	(183)	(183)	(62.2%)	111
2013	451	(9)	35	-	26	5.8%	477
2014	1,482	(31)	76	-	45	3.0%	1,527
2015	3,777	(79)	72	(587)	(594)	(15.7%)	3,183
2016	4,743	(100)	330	-	230	4.8%	4,973
2017	9,454	(284)	154	(1,342)	(1,472)	(15.6%)	7,982
2018	16,512	(314)	(413)	(644)	(1,371)	(8.3%)	15,141
2019	36,488	(949)	(246)	(8,315)	(9,510)	(26.1%)	26,978
2020	48,760	(1,268)	(449)	(1,378)	(3,095)	(6.3%)	45,665
2021	13,767	4,846	745	(3,279)	2,312	16.8%	16,079
Grand Total	**134,863**	**1,825**	**427**	**(15,728)**	**(13,476)**	**(10.0%)**	**121,387**