ALBERTA NON-GRID RISK SHARING POOL

JUNE 2020 OPERATIONAL REPORT

ACTUARIAL HIGHLIGHTS

Related Bulletin: F2020-053 Alberta RSPs June 2020 Operational Reports

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ACTUARIAL HIGHLIGHTS

RSP ALBERTA NON-GRID

OPERATIONAL REPORT

JUNE 2020

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1   Summary

Key Points

    (a) The loss ratios currently being used include an initial assessment of the incurred impacts associated with the COVID-19 pandemic; and

    (b) The month's Current Accident Year recorded activity was higher than projected; the activity was reviewed, and attributed to the high level of Comprehensive recorded claims activity reported in the month in relation to the June 13, 2020 hailstorm in and around the Calgary area. In response to this, the Current Accident Year payment projections for July 2020 (next month) have been adjusted to reflect the high level of reported Comprehensive case reserves in the month.

1.1   Valuation Schedule (Fiscal Year 2020)

The June 2020 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 2020.

ALBERTA NON-GRID RISK SHARING POOL FISCAL YEAR 2020 – SCHEDULE OF VALUATIONS			
Valuation Date	**Discount Rate (per annum)**	**Operational Report**	**Description of Changes**
Sep 30, 2019 (completed)	1.46% mfad 25 bp	Oct. 2019	updated valuation (roll forward) : accident year 2019 loss ratio decreased 2.6 points to 102.2%; discount rate increased 3 basis points; no change to selected margins for adverse deviations
Dec. 31, 2019 (completed)	1.64% mfad 25 bp	Mar. 2020	update valuation: 2019 loss ratio decreased 1.3 points to 100.9%; accident year 2020 loss ratio decreased 7.0 points to 99.7%; discount rate increased 18 basis points; no change to selected margins for adverse deviations
Mar. 31, 2020 (completed)	0.63% mfad 25 bp	May. 2020	update valuation (partial roll-forward): accident year 2020 loss ratio decreased 3.6 points to 96.1%; discount rate decreased 101 basis points; no change to selected margins for adverse deviations
Jun. 30, 2020	% mfad -- bp	Aug. 2020	update valuation
Sep 30, 2020	% mfad -- bp	Oct. 2020	update valuation (roll-forward)

Under the proposed schedule for fiscal year 2020, the off-half valuation quarters ending March 31, 2020 and September 30, 2020 would not reflect a full valuation update of assumptions, but would rather roll-forward key assumptions from the previous valuation. However, with disruption in

the insurance environment from the COVID-19 pandemic, the valuation quarter ending March 31, 2020 includes a partial update of key assumptions to reflect this impact. Other assumptions are rolled-forward from the previous valuation.

1.2   Appointed Actuary and Hybrid Actuarial Services Model

Mr. Cosimo Pantaleo of Ernst & Young LLP (EY) was appointed as Actuary by the FA Board at its February 18, 2020 meeting.

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[1]

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 March 31, 2020), reform adjustments related to 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, 2019), impacting the selection of ultimates.

1.4   Current Provision Summary

The following charts show the current levels of claim liabilities[2] booked by accident year[3]. 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 2020 full year earned premium (the red hash-mark line) to provide some perspective.

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[1]This url to a pdf is to a helpful guide on how bills become laws: https://www.ola.org/sites/default/files/common/how-bills-become-law-en.pdf.

[2]Claim liabilities refer to provision for unpaid indemnity and allowed claims expenses. 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 discussion.

[3]Accident year 2004 was an incomplete year and therefore has been excluded from the loss ratio chart.
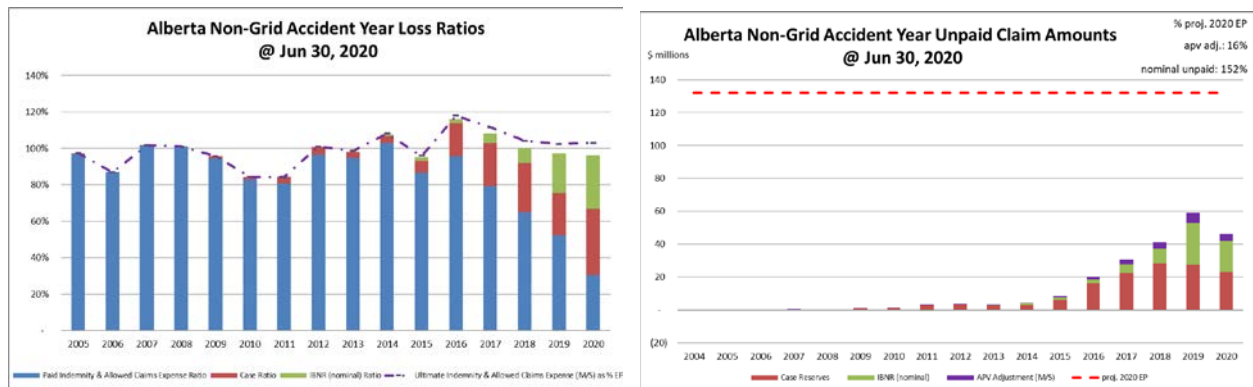
"M/S" refers to "Member Statement" values – that is, actuarial present value adjustments at the selected discount rate.

The current actuarial present value adjustments balance ($21.3 million – see the following table) represents 16% of the earned premium projected for the full year 2020 (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	138,322	62.3%
ibnr	62,468	28.1%
M/S apv adjust.	21,282	9.6%
M/S total	222,072	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 71% of the IBNR balance relates to accident years 2019 and 2020 (see Exhibit B). Approximately 89% of the M/S total claim liabilities are related to accident years 2016-2020 inclusive (i.e. the most recent 5 accident years), and approximately 1% is related to accident years 2010 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	66,622	94.6%
prem def/(dpac)	(1,620)	(2.3%)
M/S apv adjust.	5,420	7.7%
M/S total	70,422	100.0%

policy liabilities ($000s)

	amt	%
claim	200,790	68.6%
premium	65,002	22.2%
M/S apv adjust.	26,702	9.1%
M/S total	292,494	100.0%

2 Activity During the Month of June 2020

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].

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

Alberta Non-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	(8)	(8)	1,580	(113)	(156)	808	1,424	695
2018	(49)	(49)	509	(131)	643	1,185	1,152	1,054
2019	(176)	(176)	876	(314)	(496)	432	380	118
2020	9,928	(1,089)	4,041	(13)	10,438	7,436	14,479	7,423
TOTAL	9,695	(1,323)	7,006	(571)	10,428	9,861	17,435	9,290

(Recorded transaction amounts exclude IBNR & other actuarial provisions)

Claims transaction activity is generally volatile and 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.

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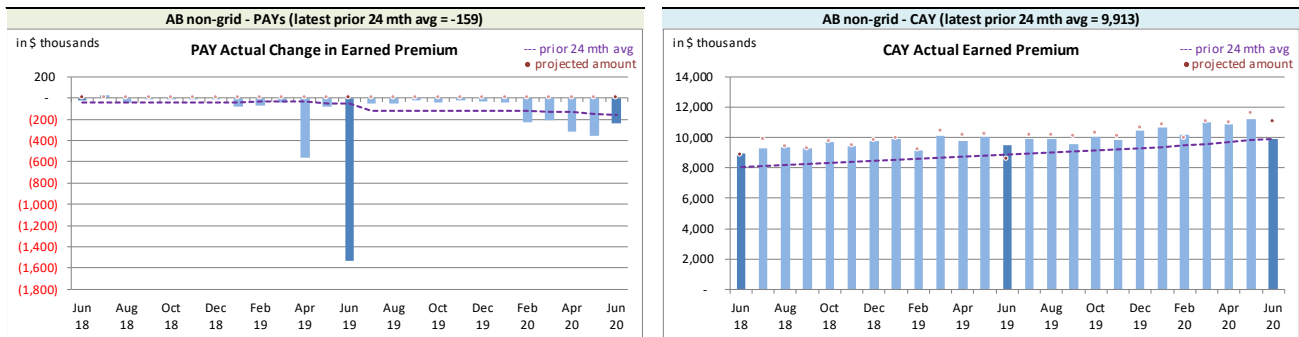
Earned premium changes during a given calendar month in relation to prior accident years tend to be at modest levels, although relatively high levels generally occur at the beginning of each year.

On Latest $ thousands		
Earned Premium	PAYs	CAY
Mthly Avg EP Chg (prior 24 mths)	(159)	9,913
std dev	324	594
A-P <> std dev	6	3
% <> std dev	24.0%	12.0%
norm <> std dev	31.7%	31.7%
performance vs 24-mth avg:	better	better

The associated variance 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

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[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.

accident years.

Alberta non-Grid RSP Actual vs. Projected Summary: **Earned Premium** *Variances by Calendar Month*
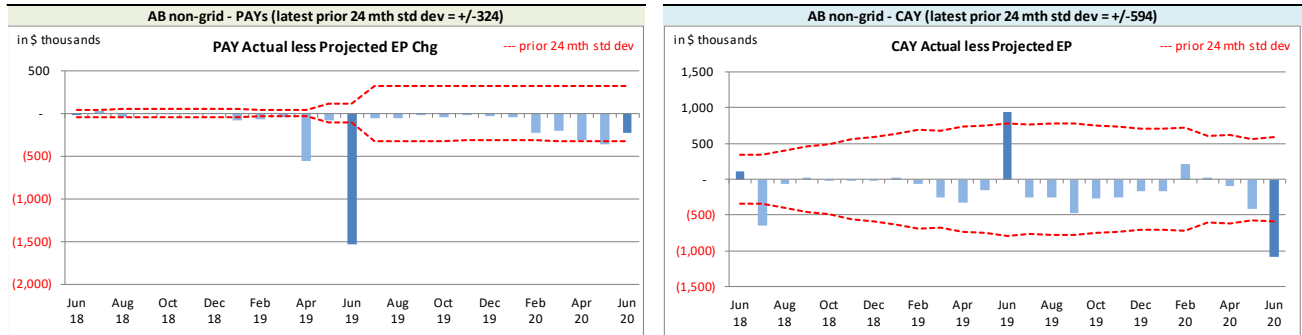
We project **earned premium** changes from known unearned premium and projected written premium levels, but upload the total projections as current accident year (CAY). This process has generated prior accident years' (PAYs) bias[6], with actuals generally lower than projected, although the magnitude 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. Over time, we may consider other projection approaches to address the bias issue, but it is not currently deemed as priority.

The CAY **earned premium** variance was outside of the one standard deviation band this month (see preceding chart on the right). The significant lower than projected recorded activity was reviewed, and it was largely driven by one company group removing vehicles from the Alberta non-Grid risk sharing pool.

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 non-Grid RSP Actual **Recorded** *by Calendar Month*

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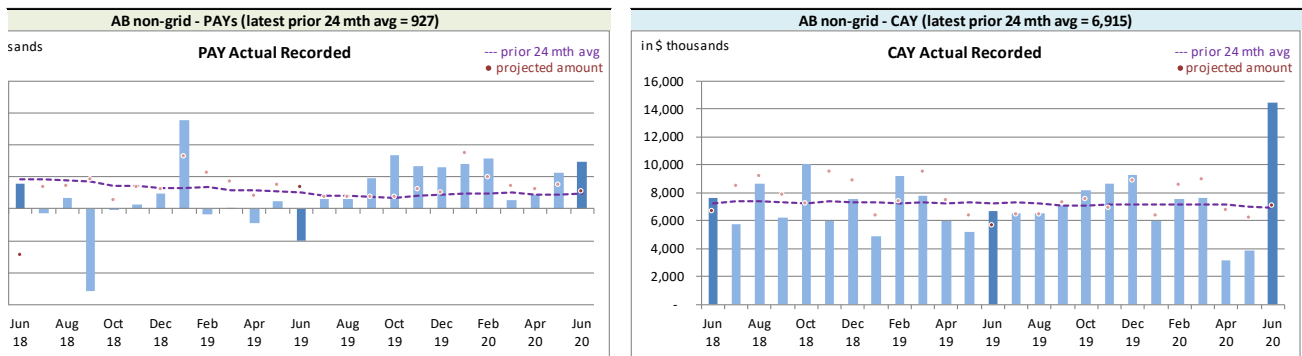
[6]The PAYs' variances will show bias as the projection upload forces all earned premium projections to be attributed to the CAY.

[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 June 2020 had only 6 months where the actuals was 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 are 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 non-Grid RSP Actual vs Projected Summary: **Recorded** Variances by Calendar Month*
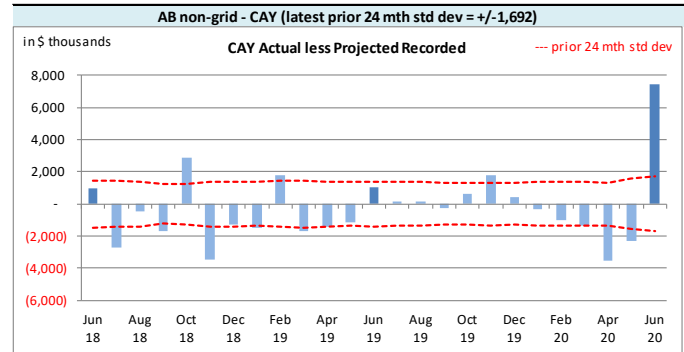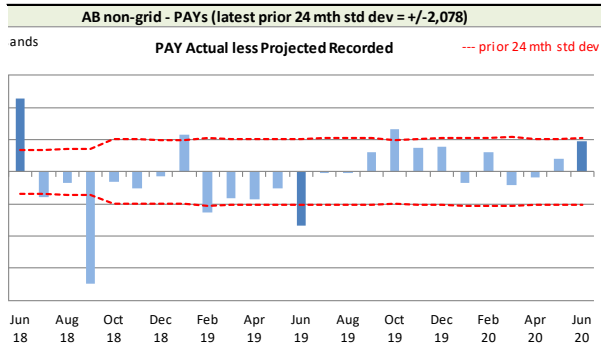
On Latest $ thousands		
Recorded	PAYs	CAY
Mthly Avg Recorded (prior 24 mths)	927	6,915
std dev	2,078	1,692
A-P <> std dev	7	13
% <> std dev	28.0%	52.0%
norm <> std dev	31.7%	31.7%
performance vs 24-mth avg:	no better	worse

With respect to **recorded** indemnity & allowed claims expense activity, 28% 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 no better than simply projecting the prior 24-month average amount (assuming it follows a normal distribution). Bias has not been indicated at a 95% confidence level on a rolling 25-month basis (9 of 25 variances are positive).

The current accident year (CAY) **recorded** variances fell outside of one standard deviation 52% of the time over the last 25 calendar months (see the preceding table on the left), suggesting that the projection process has performed worse than simply projecting the prior 24-month average amount. Bias has not been indicated at a 95% confidence level on a rolling 25-month basis (10 of 25 variances are positive).

The CAY **recorded** variance was outside of the one standard deviation band this month (see preceding chart on the right). The significantly higher than projected recorded activity was reviewed, and attributed to the high level of Comprehensive recorded claims activity reported in the month in relation to the June 13, 2020 hailstorm in and around the Calgary area. In response to this, the Current Accident Year payment projections for July 2020 (next month) have been adjusted to reflect the high level of reported Comprehensive case reserves in the month.

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, the following charts related to levels influencing **recorded** activity.

*Alberta non-Grid RSP Levels that influence[8] **Recorded** activity by Calendar Month*
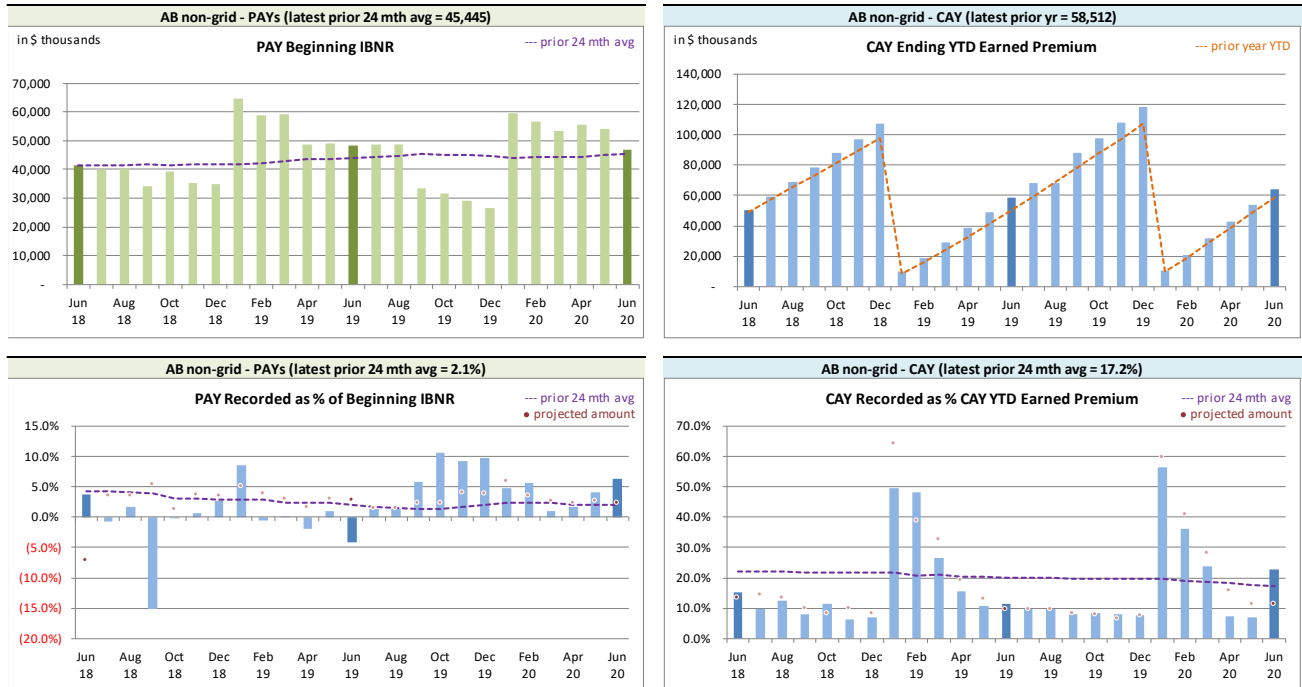
We track PAY beginning IBNR as **recorded** activity comes out of IBNR. Changes in the PAY beginning IBNR (see upper left of the preceding group of charts) occur for several possible reasons:

- 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.

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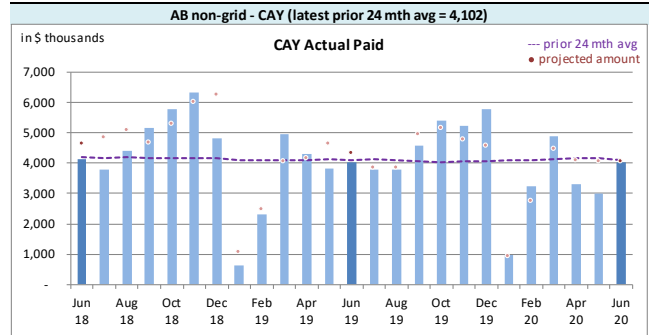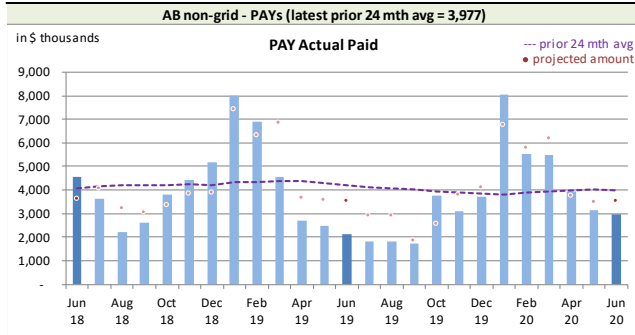
Paid activity variances from the previous month's projections are shown in the following charts, including the "prior 24-month standard deviation" levels to show how the variances from projection compare with historical standard deviations.

*Alberta non-Grid RSP Actual vs Projected Summary: **Paid** Variances by Calendar Month*
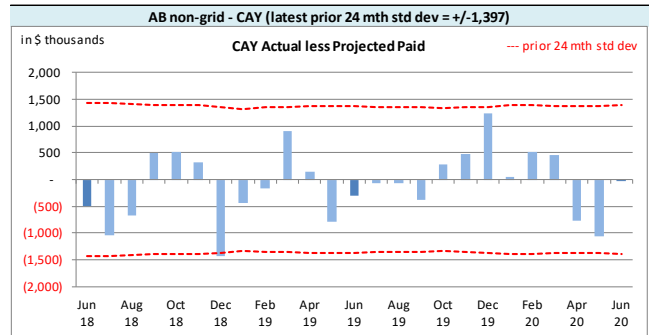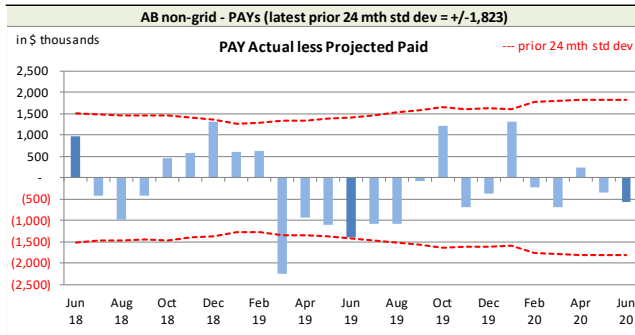
On Latest $ thousands		
Paid	PAYs	CAY
Mthly Avg Paid (prior 24 mths)	3,977	4,102
std dev	1,823	1,397
A-P <> std dev	1	1
% <> std dev	4.0%	4.0%
norm <> std dev	31.7%	31.7%
performance vs 24-mth avg:	better	better

With respect to **paid** indemnity & allowed claims expense, 4% 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 better than simply projecting the prior 24-month average amount (assuming it follows a normal distribution). Bias has not been indicated at a 95% confidence level on a lagging 24-month basis (9 of 25 variances are positive).

The current accident year (CAY) **paid** variances fell outside of one standard deviation 4% of the time over the last 25 calendar months (see the preceding table), suggesting 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 rolling 25-month basis (11 of 25 variances are positive).

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

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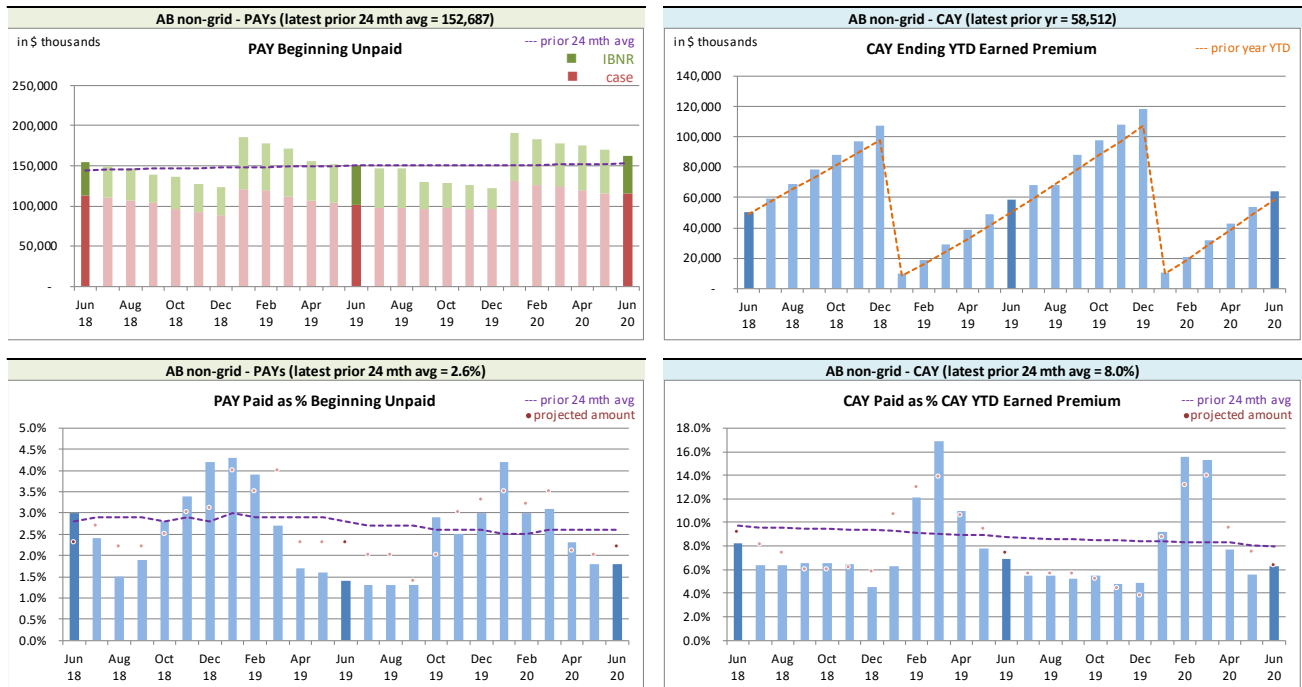
We track the PAY beginning unpaid balance (case and IBNR) as **paid** activity comes out of the unpaid balance. Changes in the PAY beginning unpaid balance (see upper left of the preceding group of charts) occur for several possible reasons:

- 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 were based on the applicable valuation.

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

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[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".

and the associated one-month projections from last month's Report.

Alberta Non-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	9,484	(705)	(1,127)	(2)	7,881	12	16,238	(695)
2018	8,645	(1,102)	(593)	(1)	4,785	11	12,837	(1,092)
2019	25,598	(290)	(902)	(3)	6,837	19	31,533	(274)
2020	18,741	(8,470)	(712)	18	5,113	(127)	23,142	(8,579)
TOTAL	62,468	(10,567)	(3,334)	12	24,616	(85)	83,750	(10,640)

The IBNR provision is $10.6 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.

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

(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 premium deficiency position (shown as a positive amount) prior to and after actuarial present value adjustments. Actuarial present value adjustments increase the liability 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 Non-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:	(1,620)	52	5,420	(131)	3,800	(79)
balance as % unearned premium:	(2.4%)	-	8.1%	-	5.7%	-
actual unearned premium:	66,622					
less projected:	(1,631)					

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 98.2% rather than 96.1% (the valuation ultimate ratio for accident year 2020), 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 Non-Grid RSP Summary of Operations due to rounding.)

Alberta Non-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	(3,261)	(5.2%)	1,574	2.5%	(1,687)	(2.7%)	(563)	(0.6%)
CAY	61,364	98.2%	4,401	7.0%	65,765	105.3%	10,119	(0.1%)
TOTAL	58,103	93.0%	5,975	9.6%	64,078	102.6%	9,556	(0.7%)

("% EP" based on 2020 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 are 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.

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[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.

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 is shown in the Operational Report as "Undiscounted IBNR".

The ultimate loss ratios detailed in section 6, Exhibit B, refer to the estimates derived on the basis of various actuarial methodologies applied to the experience of the Alberta Non-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	Accident Year	Actual May. 2020	Actual Jun. 2020	Projected Jul. 2020	Projected Aug. 2020	Projected Dec. 2020
	2004	42	42	41	41	35
	2005	13	13	13	13	12
	2006	1	1	1	1	1
	2007	17	17	16	16	13
	2008	67	67	66	65	57
	2009	50	50	48	46	41
	2010	72	72	70	68	59
	2011	(326)	(328)	(324)	(324)	(286)
	2012	426	201	195	189	163
	2013	701	449	438	429	375
	2014	1,221	1,213	1,186	1,169	1,024
discount rate	2015	2,202	2,378	2,324	2,292	2,009
0.63%	2016	4,158	3,720	3,523	3,370	2,860
	2017	9,180	8,343	7,911	7,679	6,639
interest rate margin	2018	14,100	12,837	12,546	12,069	10,694
25 basis pts	2019	32,203	31,533	31,170	30,811	28,579
	2020	27,502	23,142	26,364	27,716	43,801
	TOTAL	91,629	83,750	85,588	85,650	96,076
	Change		(7,879)	1,838	62	

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 May. 2020	Actual Jun. 2020	Projected Jul. 2020	Projected Aug. 2020	Projected Dec. 2020
	349.1%	2004	36	36	35	35	30
	97.4%	2005	5	5	5	5	5
	86.9%	2006	1	1	1	1	1
	101.8%	2007	(11)	(11)	(11)	(11)	(10)
	101.1%	2008	64	64	63	62	55
	95.6%	2009	(28)	(28)	(27)	(27)	(23)
	84.3%	2010	(27)	(27)	(26)	(26)	(22)
	83.9%	2011	(550)	(550)	(539)	(534)	(469)
	100.7%	2012	131	(93)	(91)	(90)	(80)
	98.3%	2013	439	187	183	181	159
	107.8%	2014	850	862	845	837	734
	95.2%	2015	1,535	1,724	1,690	1,673	1,469
	116.1%	2016	2,475	2,103	1,945	1,817	1,469
	108.3%	2017	5,998	5,211	4,877	4,677	3,902
	100.1%	2018	9,845	8,645	8,455	8,032	7,008
	97.4%	2019	26,150	25,598	25,342	25,063	23,186
	96.1%	2020	23,679	18,741	22,025	22,797	35,865
		TOTAL	70,592	62,468	64,772	64,492	73,279
		Change		(8,124)	2,304	(280)	

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 May. 2020	Actual Jun. 2020	Projected Jul. 2020	Projected Aug. 2020	Projected Dec. 2020
(1) unearned premium (UP)	69,306	66,622	65,201	66,724	79,842
FOR MEMBER SHARING					
(2) expected future costs ratio {% of (1)}	105.4%	105.7%	106.1%	106.5%	108.9%
(3) expected future costs {(1) x (2)}	73,038	70,422	69,154	71,082	86,914
(4) premium deficiency / (deferred policy acquisition cost)	3,732	3,800	3,953	4,358	7,072
Excluding Actuarial Present Value Adjustments					
(5) expected future costs ratio {% of (1)}	97.3%	97.6%	97.9%	98.3%	100.5%
(6) expected future costs {(1) x (5)}	67,416	65,002	63,832	65,611	80,225
(7) premium deficiency / (deferred policy acquisition cost)	(1,890)	(1,620)	(1,369)	(1,113)	383

EXHIBIT D

Projected Year-end Policy Liabilities

The table below presents the projected policy liabilities as at December 31, 2020, broken down by component.

Alberta non-Grid	Projected Balances as at Dec. 31, 2020 ($000s)									
ending 2020	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
2004	22	30	52	-	-	5	-	5	5	57
2005	61	5	66	-	-	7	-	7	7	73
2006	1	1	2	-	-	-	-	-	-	2
2007	251	(10)	241	(2)	1	24	-	24	23	264
2008	(32)	55	23	-	-	2	-	2	2	25
2009	726	(23)	703	(8)	3	70	(1)	69	64	767
2010	917	(22)	895	(11)	4	89	(1)	88	81	976
2011	2,488	(469)	2,019	(28)	12	202	(3)	199	183	2,202
2012	2,766	(80)	2,686	(38)	16	269	(4)	265	243	2,929
2013	2,234	159	2,393	(34)	14	239	(3)	236	216	2,609
2014	2,597	734	3,331	(60)	23	333	(6)	327	290	3,621
2015	4,882	1,469	6,351	(127)	51	629	(13)	616	540	6,891
2016	14,293	1,469	15,762	(268)	110	1,576	(27)	1,549	1,391	17,153
2017	20,325	3,902	24,227	(388)	145	3,028	(48)	2,980	2,737	26,964
2018	25,612	7,008	32,620	(522)	196	4,077	(65)	4,012	3,686	36,306
2019	25,016	23,186	48,202	(819)	337	5,977	(102)	5,875	5,393	53,595
PAYs (sub-total):	102,159	37,414	139,573	(2,305)	912	16,527	(273)	16,254	14,861	154,434
CAY (2020)	39,707	35,865	75,572	(1,285)	529	8,842	(150)	8,692	7,936	83,508
claims liabilities:	141,866	73,279	215,145	(3,590)	1,441	25,369	(423)	24,946	22,797	237,942

	Unearned Premium	Premium Deficiency / (DPAC)	Total Provision	discount	investment PfAD	nominal development PfAD	development PfAD discount	development PfAD	Total apvs	TOTAL*
premium liabilities:	79,842	383	80,225	(1,038)	399	7,425	(97)	7,328	6,689	86,914

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

policy liabilities:			295,370	(4,628)	1,840	32,794	(520)	32,274	29,486	324,856

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, 2020 from the valuation), followed by the selected discount rate and the associated margin for investment income.

| Accident Year | Selected Claims Development MfADs (Mar. 31, 2020) | | | |
| | 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	9.9%	10.0%	10.0%	9.9%
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%	9.3%	10.0%
2013	10.0%	10.0%	10.0%	10.0%
2014	10.0%	10.0%	9.2%	10.0%
2015	10.0%	10.0%	10.0%	9.9%
2016	10.0%	10.0%	10.0%	10.0%
2017	12.5%	10.0%	12.5%	12.5%
2018	12.5%	10.0%	11.5%	12.5%
2019	12.4%	10.0%	7.7%	12.4%
2020	12.2%	10.0%	12.5%	11.7%
2021	11.9%	10.0%	5.2%	9.3%
prem liab	11.9%	10.0%	5.2%	9.3%

discount rate:	0.63%
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, 2020 from the latest valuation date (projections in exhibits A to D are to Dec. 31, 2020, and are based on more up-to-date information). We have included the most recent valuation selection (0.63%), the prior valuation assumption (1.64%) and the prior fiscal year end valuation assumption (1.46%) 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, 2020 projected Unpaid								
AY	0.00%	0.13%	0.63%	1.13%	1.63%	2.13%	1.64%	1.46%
2004	-	-	-	-	-	-	-	-
2005	-	-	-	-	-	-	-	-
2006	1	1	1	1	1	1	1	1
2007	247	247	246	244	243	241	243	243
2008	-	-	-	-	-	-	-	-
2009	694	694	689	683	677	671	677	679
2010	915	915	908	900	892	884	892	894
2011	2,019	2,018	2,001	1,979	1,958	1,937	1,957	1,965
2012	2,726	2,725	2,701	2,672	2,643	2,615	2,643	2,653
2013	2,763	2,762	2,738	2,708	2,679	2,651	2,679	2,689
2014	4,502	4,500	4,451	4,389	4,329	4,270	4,327	4,349
2015	6,202	6,200	6,121	6,023	5,927	5,834	5,924	5,959
2016	15,301	15,297	15,134	14,933	14,737	14,547	14,733	14,803
2017	23,692	23,684	23,443	23,148	22,860	22,579	22,852	22,957
2018	34,773	34,761	34,409	33,977	33,555	33,143	33,542	33,696
2019	52,418	52,395	51,837	51,148	50,474	49,822	50,460	50,704
2020	85,401	85,366	84,460	83,339	82,245	81,187	82,222	82,618
Total	231,654	231,565	229,139	226,144	223,220	220,382	223,152	224,210
	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%	0.13%	0.63%	1.13%	1.63%	2.13%	1.64%	1.46%
Total	2,515	2,426	-	(2,995)	(5,919)	(8,757)	(5,987)	(4,929)
	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%	0.13%	0.63%	1.13%	1.63%	2.13%	1.64%	1.46%
2004	-	-	-	-	-	-	-	-
2005	-	-	-	-	-	-	-	-
2006	-	-	-	-	-	-	-	-
2007	0.4%	0.4%	-	(0.8%)	(1.2%)	(2.0%)	(1.2%)	(1.2%)
2008	-	-	-	-	-	-	-	-
2009	0.7%	0.7%	-	(0.9%)	(1.7%)	(2.6%)	(1.7%)	(1.5%)
2010	0.8%	0.8%	-	(0.9%)	(1.8%)	(2.6%)	(1.8%)	(1.5%)
2011	0.9%	0.8%	-	(1.1%)	(2.1%)	(3.2%)	(2.2%)	(1.8%)
2012	0.9%	0.9%	-	(1.1%)	(2.1%)	(3.2%)	(2.1%)	(1.8%)
2013	0.9%	0.9%	-	(1.1%)	(2.2%)	(3.2%)	(2.2%)	(1.8%)
2014	1.1%	1.1%	-	(1.4%)	(2.7%)	(4.1%)	(2.8%)	(2.3%)
2015	1.3%	1.3%	-	(1.6%)	(3.2%)	(4.7%)	(3.2%)	(2.6%)
2016	1.1%	1.1%	-	(1.3%)	(2.6%)	(3.9%)	(2.6%)	(2.2%)
2017	1.1%	1.0%	-	(1.3%)	(2.5%)	(3.7%)	(2.5%)	(2.1%)
2018	1.1%	1.0%	-	(1.3%)	(2.5%)	(3.7%)	(2.5%)	(2.1%)
2019	1.1%	1.1%	-	(1.3%)	(2.6%)	(3.9%)	(2.7%)	(2.2%)
2020	1.1%	1.1%	-	(1.3%)	(2.6%)	(3.9%)	(2.6%)	(2.2%)
Total	1.1%	1.1%	-	(1.3%)	(2.6%)	(3.8%)	(2.6%)	(2.2%)
	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 Non-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
2004	42	(1)	1	-	-	-	42
2005	13	-	-	-	-	-	13
2006	1	-	-	-	-	-	1
2007	17	(1)	1	-	-	-	17
2008	67	(3)	3	-	-	-	67
2009	50	(2)	2	-	-	-	50
2010	72	(2)	2	-	-	-	72
2011	(326)	16	(18)	-	(2)	0.6%	(328)
2012	426	(14)	(211)	-	(225)	(52.8%)	201
2013	701	(25)	(227)	-	(252)	(35.9%)	449
2014	1,221	(47)	39	-	(8)	(0.7%)	1,213
2015	2,202	(84)	260	-	176	8.0%	2,378
2016	4,158	(133)	(305)	-	(438)	(10.5%)	3,720
2017	9,180	(595)	(242)	-	(837)	(9.1%)	8,343
2018	14,100	(171)	(1,092)	-	(1,263)	(9.0%)	12,837
2019	32,203	(396)	(274)	-	(670)	(2.1%)	31,533
2020	27,502	4,219	(8,579)	-	(4,360)	(15.9%)	23,142
Grand Total	**91,629**	**2,761**	**(10,640)**	**-**	**(7,879)**	**(8.6%)**	**83,750**

EXHIBIT G

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

RSP   Alberta Non-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
	Values						
2004	36	(1)	1	-	-	-	36
2005	5	-	-	-	-	-	5
2006	1	-	-	-	-	-	1
2007	(11)	-	-	-	-	-	(11)
2008	64	(3)	3	-	-	-	64
2009	(28)	1	(1)	-	-	-	(28)
2010	(27)	1	(1)	-	-	-	(27)
2011	(550)	23	(23)	-	-	-	(550)
2012	131	(5)	(219)	-	(224)	(171.0%)	(93)
2013	439	(18)	(234)	-	(252)	(57.4%)	187
2014	850	(35)	47	-	12	1.4%	862
2015	1,535	(63)	252	-	189	12.3%	1,724
2016	2,475	(101)	(271)	-	(372)	(15.0%)	2,103
2017	5,998	(528)	(259)	-	(787)	(13.1%)	5,211
2018	9,845	(98)	(1,102)	-	(1,200)	(12.2%)	8,645
2019	26,150	(262)	(290)	-	(552)	(2.1%)	25,598
2020	23,679	3,532	(8,470)	-	(4,938)	(20.9%)	18,741
Grand Total	**70,592**	**2,443**	**(10,567)**	**-**	**(8,124)**	**(11.5%)**	**62,468**