



ALBERTA NON-GRID RISK SHARING POOL

NOVEMBER 2020 OPERATIONAL REPORT

ACTUARIAL HIGHLIGHTS

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ACTUARIAL HIGHLIGHTS**RSP ALBERTA NON-GRID****OPERATIONAL REPORT****NOVEMBER 2020**

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1 Summary

Key Points

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

1.1 Valuation Schedule (Fiscal Year 2021)

The November 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 2021.

ALBERTA NON-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)	0.22% mfad 25 bp	Oct. 2020	update valuation (roll-forward): accident year 2020 loss ratio <u>decreased</u> 1.7 points to 98.1%; discount rate <u>decreased</u> 4 basis points; no change to selected margins for adverse deviations
Dec. 31, 2020	% mfad -- bp	Mar. 2021	update valuation:
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

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 / Regulation¹

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 (September 30, 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 December 31, 2019).

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 from 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. The impact will be assessed with the next valuation (as at December 31, 2020) and as part of the next Industry valuation and trend analysis (as at June 30, 2020).

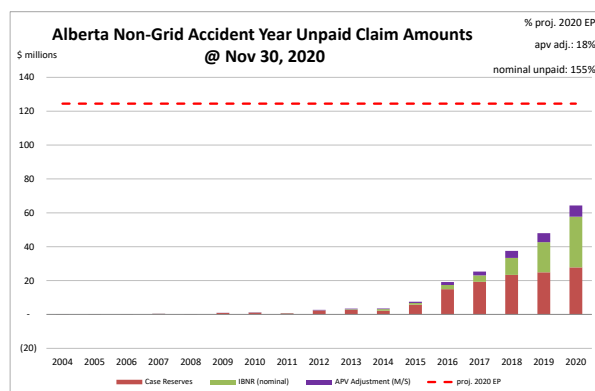
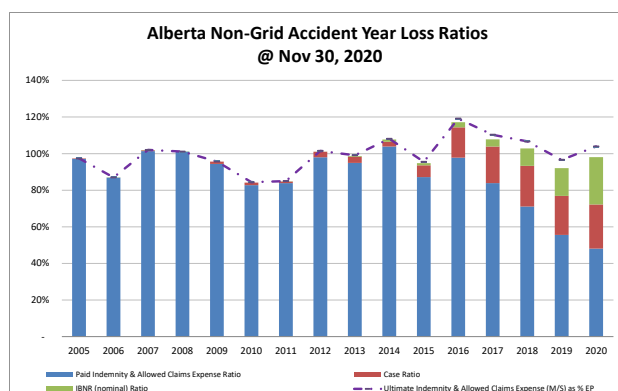
1.4 Current Provision Summary

The following charts show the current levels of claim liabilities² booked by accident year³. 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.

¹This 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>.

²Claim 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.

³Accident 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 (\$22.0 million – see the following table) represents 18% 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	126,246	58.7%
ibnr	66,807	31.1%
M/S apv adjust.	21,991	10.2%
M/S total	215,044	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 90% 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	63,641	94.4%
prem def/(dpac)	(1,262)	(1.9%)
M/S apv adjust.	5,007	7.4%
M/S total	67,386	100.0%

policy liabilities (\$000s)

	amt	%
claim	193,053	68.4%
premium	62,379	22.1%
M/S apv adjust.	26,998	9.6%
M/S total	282,430	100.0%

2 Activity During the Month of November 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 Report⁴.

⁴There 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 Accident Year	Earned Premium		Paid Indemnity & Allowed Claims Expense		Case increase / (decrease)		Recorded increase / (decrease)	
	Actual	Actual less Projected	Actual	Actual less Projected	Actual	Actual less Projected	Actual	Actual less Projected
Prior	(5)	(5)	1,926	515	(1,930)	(974)	(4)	(459)
2018	(20)	(20)	1,526	688	(1,549)	(911)	(22)	(222)
2019	(23)	(23)	640	(10)	(239)	138	401	128
2020	10,274	(330)	4,172	(1,676)	2,415	(939)	6,586	(2,615)
TOTAL	10,226	(378)	8,264	(482)	(1,303)	(2,686)	6,961	(3,168)

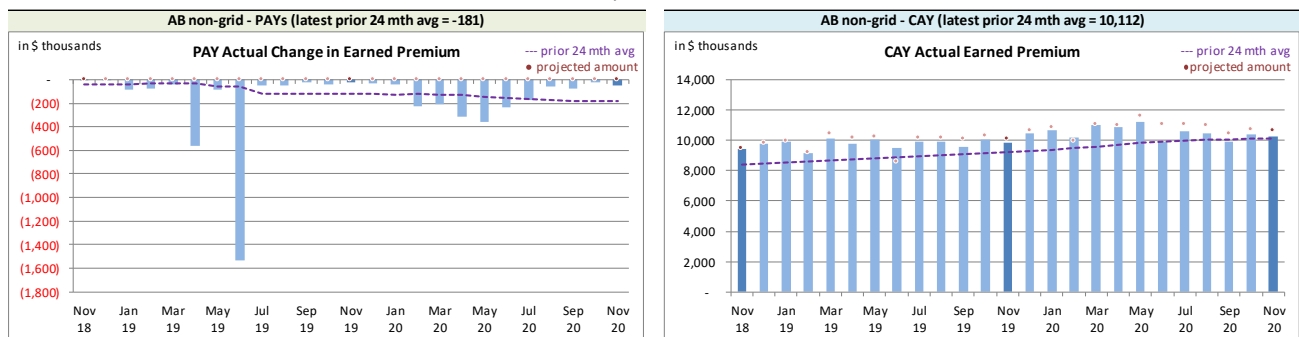
(Recorded transaction amounts exclude IBNR & other actuarial provisions)

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.

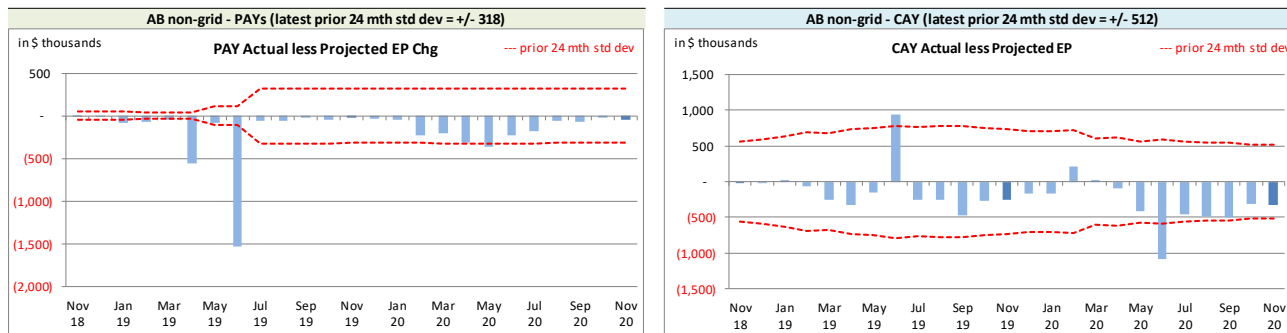
On Latest \$ thousands		
	Earned Premium	PAYS CAY
Mthly Avg EP Chg (prior 24 mths)	(181)	10,112
std dev	318	512
A-P <> std dev	6	2
% <> std dev	24.0%	8.0%
norm <> std dev	31.7%	31.7%
performance vs 24-mth avg:	better	better

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

⁵Premium 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.

the actual less projection variance will equal the actual **earned premium** change in relation to prior accident years.

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

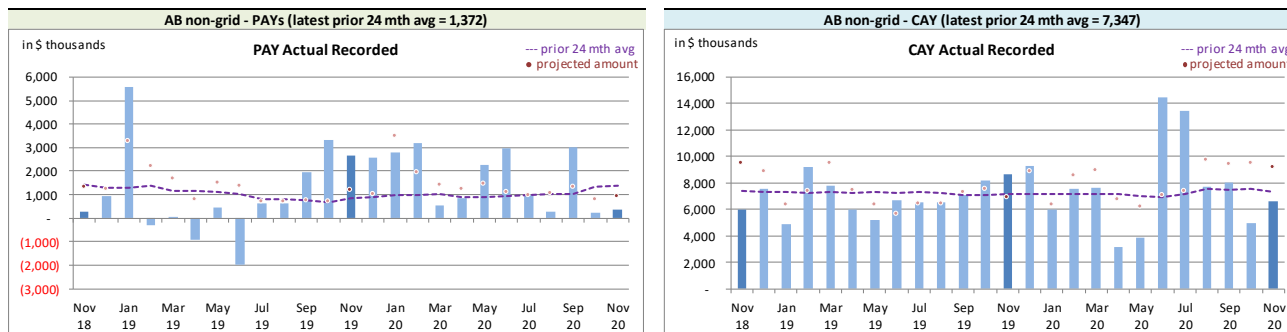


We project **earned premium** changes from known unearned premium and projected written premium levels, but upload the total projections as current accident year (CAY). This process has generated prior accident years' (PAYs) bias⁶, with actuals generally lower than projected, although the magnitude is not high relative to monthly premium. In addition to the PAYs' bias, the CAY has also shown bias⁷, 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.

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.

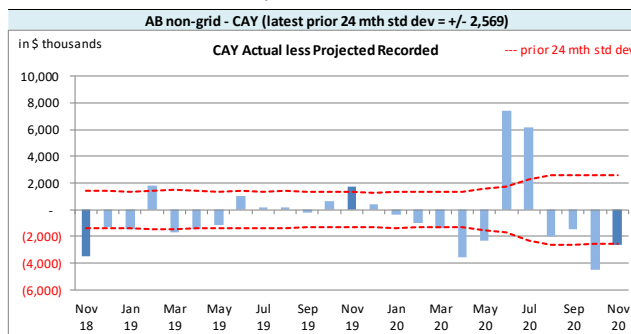
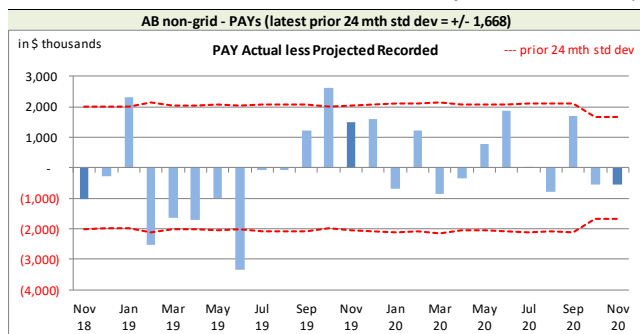
Alberta non-Grid RSP Actual **Recorded** by Calendar Month



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.

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

⁷We 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 November 2020 had only 4 months where the actuals was higher than projected, and as the 95% confidence range is 8 to 17, bias continues to be indicated.

*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)		1,372	7,347
std dev		1,668	2,569
A-P <> std dev		4	13
% <> std dev		16.0%	52.0%
norm <> std dev		31.7%	31.7%
performance vs 24-mth avg:		better	worse

With respect to **recorded** indemnity & allowed claims expense activity, 16% 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 has not been indicated at a 95% confidence level on a rolling 25-month basis (10 of 25 variances are positive).

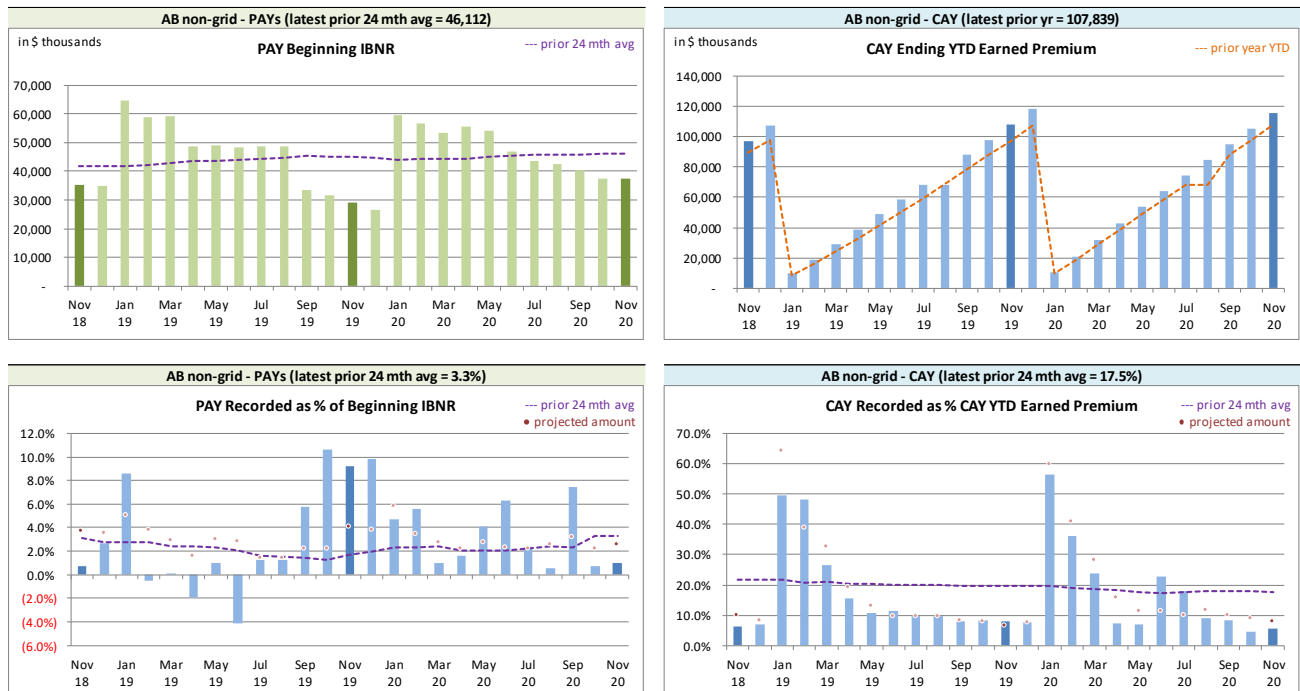
The current accident year (CAY) **recorded** variances fell outside of one standard deviation 52% of the time over the last 25 calendar months (see the preceding table on the left), suggesting that the projection process has performed worse than simply projecting the prior 24-month average amount. Bias has not been indicated at a 95% confidence level on a rolling 25-month basis (9 of 25 variances are positive). Through 2020, our CAY recorded projections have been generally higher than actual activity (notwithstanding the hail impact in June/July 2020); 2020 has been a challenging year to project loss estimates, particularly with changes in RSP volumes and portfolio mix driven by Member transfer activity. We are working with our Appointed Actuary to adjust and refine our 2020 and 2021 accident year estimates to reflect the impact of COVID-19 and Member transfer activity.

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 low levels of reported physical damage claim activities 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 influence⁸ 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:

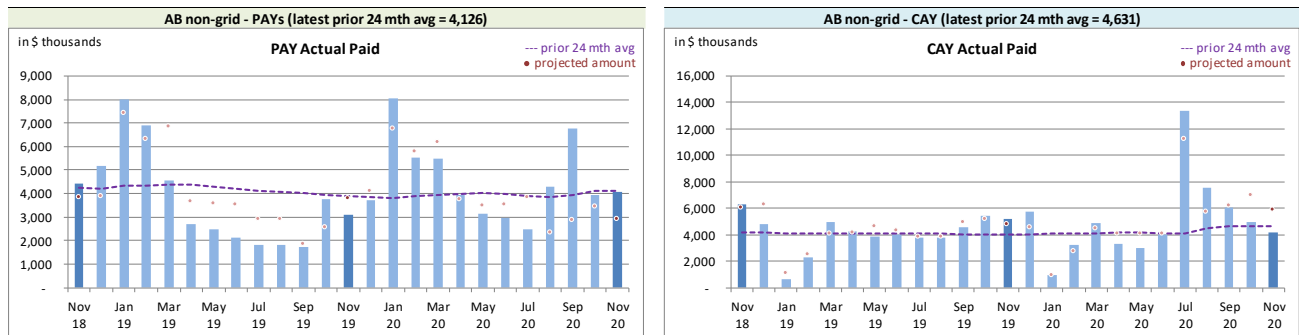
- to offset actual **recorded** activity (through loss ratio matching);
- the annual switchover as a CAY becomes a PAY (occurs in January); and
- when a new valuation is implemented, where the valuation resulted in changes to the selection of PAYs' ultimates (will show up as a beginning IBNR change one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

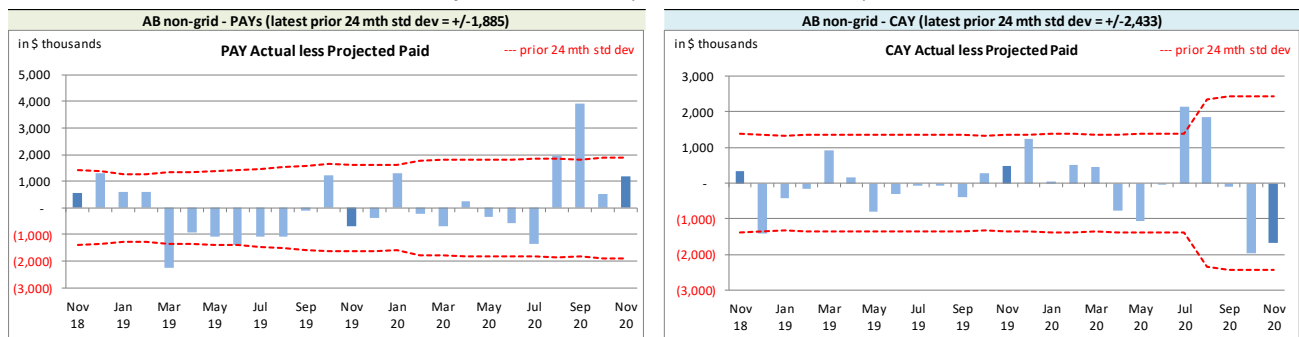
⁸Our recorded activity projections for the prior accident years are based on selected ratios of recorded activity to beginning unpaid balances, whereas the current accident year projections are based on selected ratios of year-to-date IBNR to year-to-date selected ultimate (i.e. selected LR x earned 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	
Mthly Avg Paid (prior 24 mths)	4,126	4,631
std dev	1,885	2,433
A-P <> std dev	3	2
% <> std dev	12.0%	8.0%
norm <> std dev	31.7%	31.7%
performance vs 24-mth avg:	better	better

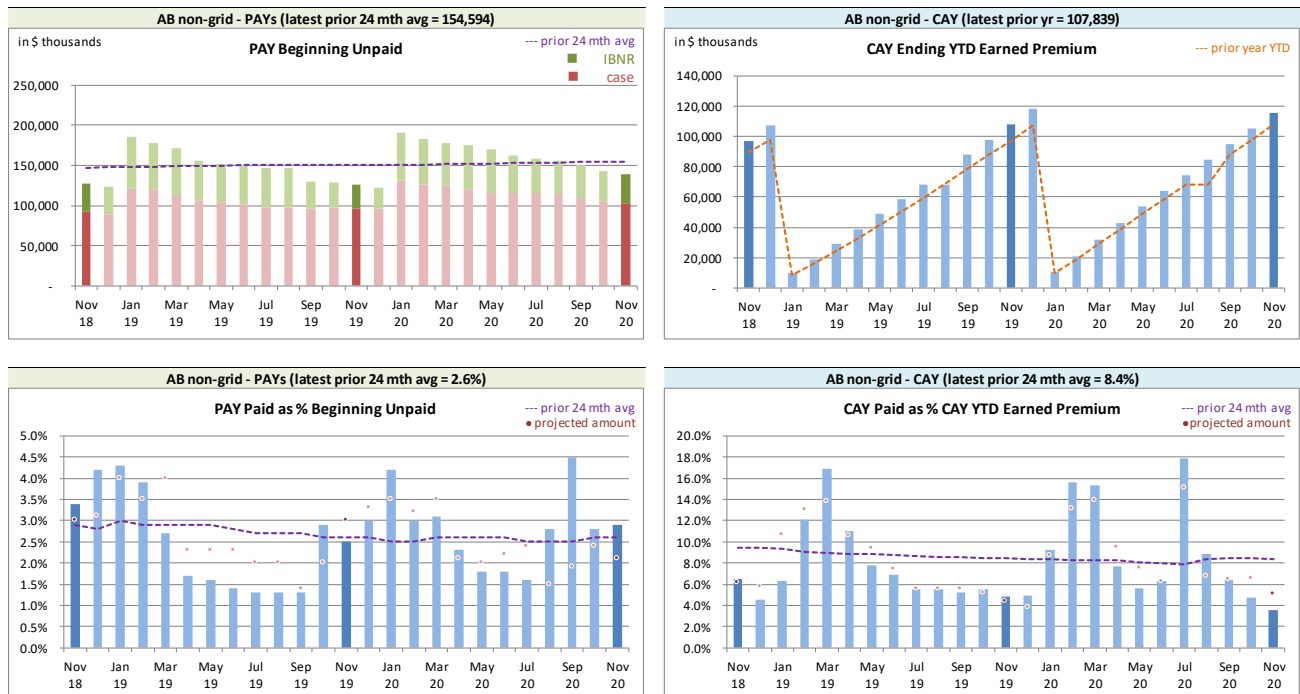
With respect to **paid** indemnity & allowed claims expense, 12% of the prior accident years' (PAYs) variances over the last 25 calendar months have fallen outside of one standard deviation of the actual **paid** amounts (see table on left), suggesting the projection process has performed better than 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 (11 of 25 variances are positive).

The current accident year (CAY) **paid** variances fell outside of one standard deviation 8% 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 influence⁹ 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 IBNR¹⁰, 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

⁹Our 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.

¹⁰For 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

Accident Year	actuarial present value adjustments							
	IBNR		Discount Amount		Provisions for Adverse Deviations		IBNR + actuarial present value adjustments	
	Actual	Actual less Projected	Actual	Actual less Projected	Actual	Actual less Projected	Actual	Actual less Projected
Prior	9,108	456	(349)	4	6,236	(55)	14,995	405
2018	10,008	201	(200)	5	4,348	(93)	14,156	113
2019	17,789	(150)	(256)	-	5,558	(2)	23,091	(152)
2020	29,902	2,291	(346)	(8)	7,000	163	36,556	2,446
TOTAL	66,807	2,798	(1,151)	1	23,142	13	88,798	2,812

The IBNR provision is \$2.8 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 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 deferred policy acquisition cost asset position (shown as a negative amount) prior to actuarial present value adjustments while in a premium deficiency position (shown as a positive amount) after the 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:	(1,262)	223	5,007	(788)	3,745	(565)
balance as % unearned premium:	(2.0%)	-	7.9%	-	5.9%	-
actual unearned premium:	63,641					
less projected:	(10,032)					

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 loss¹¹ 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 expenses¹², 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 99.6% rather than 98.1% (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.)

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).

¹²Allowed 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 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	(5,198)	(4.6%)	30	-	(5,168)	(4.5%)	(512)	-
CAY	113,302	99.6%	6,654	5.9%	119,956	105.5%	10,759	-
TOTAL	108,104	95.1%	6,684	5.9%	114,788	100.9%	10,247	(0.1%)

("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.

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

 IBNR + M/S actuarial present
 value adjustments

 discount rate
 0.22%

 interest rate margin
 25 basis pts

Amounts in \$000s					
Accident Year	Actual Oct. 2020	Actual Nov. 2020	Projected Dec. 2020	Projected Jan. 2021	Projected Dec. 2021
2004	42	42	41	40	31
2005	13	13	13	13	10
2006	83	83	80	78	59
2007	96	97	94	91	68
2008	69	69	67	65	49
2009	64	64	61	61	41
2010	125	124	119	118	85
2011	171	202	195	191	143
2012	352	337	324	318	230
2013	798	666	643	629	468
2014	1,297	1,296	1,254	1,223	931
2015	1,907	1,738	1,679	1,642	1,230
2016	4,113	4,201	4,025	3,933	2,940
2017	6,056	6,063	5,881	5,737	3,511
2018	14,347	14,156	13,767	13,339	8,219
2019	23,596	23,091	22,486	21,382	15,335
2020	32,383	36,556	37,460	35,284	29,027
2021	-	-	-	6,133	50,040
TOTAL	85,512	88,798	88,189	90,277	112,417
Change		3,286	(609)	2,088	

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

EXHIBIT B
IBNR
TABLE EXHIBIT B

Amounts in \$000s						
Ultimate Loss Ratio	Accident Year	Actual Oct. 2020	Actual Nov. 2020	Projected Dec. 2020	Projected Jan. 2021	Projected Dec. 2021
349.1%	2004	36	36	35	34	27
97.4%	2005	5	5	5	5	5
87.0%	2006	75	75	73	71	54
101.9%	2007	60	61	59	57	44
101.1%	2008	66	66	64	62	47
95.6%	2009	(22)	(22)	(21)	(20)	(16)
84.3%	2010	17	17	16	16	14
84.9%	2011	96	127	123	120	93
101.2%	2012	96	94	91	88	68
98.7%	2013	489	357	346	336	262
107.7%	2014	979	979	950	923	719
94.8%	2015	1,227	1,068	1,036	1,007	783
117.2%	2016	2,367	2,472	2,363	2,297	1,789
107.9%	2017	3,616	3,773	3,637	3,528	1,807
102.8%	2018	10,007	10,008	9,718	9,339	4,968
92.1%	2019	18,212	17,789	17,273	16,237	11,182
98.1%	2020	26,410	29,902	30,336	28,516	23,845
97.4%	2021	-	-	-	4,940	40,259
	TOTAL	63,736	66,807	66,104	67,556	85,950
	Change		3,071	(703)	1,452	

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 Oct. 2020	Actual Nov. 2020	Projected Dec. 2020	Projected Jan. 2021	Projected Dec. 2021
(1) unearned premium (UP)	63,363	63,641	67,254	67,718	81,056
FOR MEMBER SHARING					
(2) expected future costs ratio {% of (1)}	106.0%	105.9%	105.7%	105.8%	108.5%
(3) expected future costs {(1) x (2)}	67,159	67,386	71,113	71,637	87,921
(4) premium deficiency / (deferred policy acquisition cost)	3,796	3,745	3,859	3,919	6,865
Excluding Actuarial Present Value Adjustments					
(5) expected future costs ratio {% of (1)}	98.1%	98.0%	97.9%	97.9%	100.4%
(6) expected future costs {(1) x (5)}	62,169	62,379	65,828	66,314	81,388
(7) premium deficiency / (deferred policy acquisition cost)	(1,194)	(1,262)	(1,426)	(1,404)	332

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 ending 2020		Projected Balances as at Dec. 31, 2020 (\$000s)								
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	25	35	60	-	-	6	-	6	6	66
2005	72	5	77	-	-	8	-	8	8	85
2006	-	73	73	-	-	7	-	7	7	80
2007	290	59	349	(1)	1	35	-	35	35	384
2008	(34)	64	30	-	-	3	-	3	3	33
2009	843	(21)	822	(3)	3	82	-	82	82	904
2010	1,015	16	1,031	(4)	4	103	-	103	103	1,134
2011	594	123	717	(4)	4	72	-	72	72	789
2012	2,253	91	2,344	(12)	12	234	(1)	233	233	2,577
2013	2,636	346	2,982	(15)	15	298	(1)	297	297	3,279
2014	2,113	950	3,063	(18)	18	306	(2)	304	304	3,367
2015	5,510	1,036	6,546	(46)	46	648	(5)	643	643	7,189
2016	14,353	2,363	16,716	(100)	100	1,672	(10)	1,662	1,662	18,378
2017	18,943	3,637	22,580	(135)	135	2,258	(14)	2,244	2,244	24,824
2018	22,865	9,718	32,583	(195)	195	4,073	(24)	4,049	4,049	36,632
2019	24,678	17,273	41,951	(252)	252	5,244	(31)	5,213	5,213	47,164
PAYs (sub-total):	96,156	35,768	131,924	(785)	785	15,049	(88)	14,961	14,961	146,885
CAY (2020)	31,450	30,336	61,786	(371)	371	7,167	(43)	7,124	7,124	68,910
claims liabilities:	127,606	66,104	193,710	(1,156)	1,156	22,216	(131)	22,085	22,085	215,795
	Unearned Premium	Premium Deficiency / (DPAC)	Total Provision	discount	investment PfAD	nominal development PfAD	development PfAD discount	development PfAD	Total apvs	TOTAL*
premium liabilities:	67,254	(1,426)	65,828	(262)	262	5,306	(21)	5,285	5,285	71,113
*Total may not be sum of parts, as apvs apply to future costs within UPR										
policy liabilities:			259,538	(1,418)	1,418	27,522	(152)	27,370	27,370	286,908

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.

**Selected Claims Development MfADs (Sep. 30,
 2020)**

Accident Year	Third Party Liability Margins	Accident Benefits Margins	Other Coverages Margins	Total 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%	5.0%	10.0%
2014	10.0%	10.0%	9.3%	10.0%
2015	10.0%	10.0%	10.0%	9.9%
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%	7.5%	12.5%
2020	12.2%	10.0%	12.5%	11.6%
2021	11.9%	10.0%	5.1%	8.1%
prem liab	11.9%	10.0%	5.1%	8.1%

discount rate: 0.22%
 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 (0.22%), the prior valuation assumption (0.26%) 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

AY	Actuarial Present Value of Provisions at Various Discount Rates - Dec. 31, 2020 projected Unpaid							
	0.00%	0.00%	0.22%	0.72%	1.22%	1.72%	0.26%	1.46%
2004	-	-	-	-	-	-	-	-
2005	-	-	-	-	-	-	-	-
2006	1	1	1	1	1	1	1	1
2007	301	301	301	299	298	296	301	297
2008	-	-	-	-	-	-	-	-
2009	802	802	801	794	787	780	801	784
2010	1,083	1,083	1,083	1,073	1,063	1,054	1,082	1,059
2011	738	738	738	729	720	711	738	715
2012	2,567	2,567	2,566	2,541	2,514	2,489	2,566	2,502
2013	3,191	3,191	3,189	3,156	3,121	3,087	3,188	3,105
2014	4,054	4,054	4,052	3,998	3,941	3,886	4,051	3,914
2015	6,867	6,867	6,862	6,758	6,651	6,547	6,860	6,600
2016	16,713	16,713	16,704	16,485	16,259	16,042	16,699	16,155
2017	23,606	23,606	23,593	23,305	23,008	22,723	23,586	22,870
2018	36,747	36,747	36,722	36,281	35,821	35,385	36,711	35,612
2019	48,433	48,433	48,401	47,758	47,092	46,456	48,385	46,787
2020	69,268	69,268	69,224	68,330	67,411	66,534	69,204	66,986
Total	214,371	214,371	214,237	211,508	208,687	205,991	214,173	207,387
	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%	0.22%	0.72%	1.22%	1.72%	0.26%	1.46%
Total	134	134	-	(2,729)	(5,550)	(8,246)	(64)	(6,850)
	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%	0.22%	0.72%	1.22%	1.72%	0.26%	1.46%
2004	-	-	-	-	-	-	-	-
2005	-	-	-	-	-	-	-	-
2006	-	-	-	-	-	-	-	-
2007	-	-	-	(0.7%)	(1.0%)	(1.7%)	-	(1.3%)
2008	-	-	-	-	-	-	-	-
2009	0.1%	0.1%	-	(0.9%)	(1.7%)	(2.6%)	-	(2.1%)
2010	-	-	-	(0.9%)	(1.8%)	(2.7%)	(0.1%)	(2.2%)
2011	-	-	-	(1.2%)	(2.4%)	(3.7%)	-	(3.1%)
2012	0.0%	0.0%	-	(1.0%)	(2.0%)	(3.0%)	-	(2.5%)
2013	0.1%	0.1%	-	(1.0%)	(2.1%)	(3.2%)	(0.0%)	(2.6%)
2014	0.0%	0.0%	-	(1.3%)	(2.7%)	(4.1%)	(0.0%)	(3.4%)
2015	0.1%	0.1%	-	(1.5%)	(3.1%)	(4.6%)	(0.0%)	(3.8%)
2016	0.1%	0.1%	-	(1.3%)	(2.7%)	(4.0%)	(0.0%)	(3.3%)
2017	0.1%	0.1%	-	(1.2%)	(2.5%)	(3.7%)	(0.0%)	(3.1%)
2018	0.1%	0.1%	-	(1.2%)	(2.5%)	(3.6%)	(0.0%)	(3.0%)
2019	0.1%	0.1%	-	(1.3%)	(2.7%)	(4.0%)	(0.0%)	(3.3%)
2020	0.1%	0.1%	-	(1.3%)	(2.6%)	(3.9%)	(0.0%)	(3.2%)
Total	0.1%	0.1%	-	(1.3%)	(2.6%)	(3.8%)	(0.0%)	(3.2%)
	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
AccountCode Desc

Alberta Non-Grid
IBNR - Discounted

M/S IBNR - in \$000s

AccYear	Values				Sum of Total Change	Sum of % Total Change	Sum of Current Month Final Amount
	Sum of Prior Month Actual Amount	Sum of Projected Change	Sum of Change Due to AvsP Variances	Sum of Change Due to Valuation Implementation			
2004	42	(2)	2	-	-	-	42
2005	13	-	-	-	-	-	13
2006	83	(5)	5	-	-	-	83
2007	96	(4)	5	-	1	1.0%	97
2008	69	(3)	3	-	-	-	69
2009	64	(2)	2	-	-	-	64
2010	125	(5)	4	-	(1)	(0.8%)	124
2011	171	(8)	39	-	31	18.1%	202
2012	352	(14)	(1)	-	(15)	(4.3%)	337
2013	798	(34)	(98)	-	(132)	(16.5%)	666
2014	1,297	(60)	59	-	(1)	(0.1%)	1,296
2015	1,907	(83)	(86)	-	(169)	(8.9%)	1,738
2016	4,113	(150)	238	-	88	2.1%	4,201
2017	6,056	(226)	233	-	7	0.1%	6,063
2018	14,347	(304)	113	-	(191)	(1.3%)	14,156
2019	23,596	(353)	(152)	-	(505)	(2.1%)	23,091
2020	32,383	1,727	2,446	-	4,173	12.9%	36,556
Grand Total	85,512	474	2,812	-	3,286	3.8%	88,798

EXHIBIT G

Page 2 of 2

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

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

IBNR - in \$000s

AccYear	Values				Sum of Total Change	Sum of % Total Change	Sum of Current Month Final Amount
	Sum of Prior Month Actual Amount	Sum of Projected Change	Sum of Change Due to AvsP Variances	Sum of Change Due to Valuation Implementation			
2004	36	(2)	2	-	-	-	36
2005	5	-	-	-	-	-	5
2006	75	(4)	4	-	-	-	75
2007	60	(3)	4	-	1	1.7%	61
2008	66	(3)	3	-	-	-	66
2009	(22)	1	(1)	-	-	-	(22)
2010	17	(1)	1	-	-	-	17
2011	96	(5)	36	-	31	32.3%	127
2012	96	(5)	3	-	(2)	(2.1%)	94
2013	489	(24)	(108)	-	(132)	(27.0%)	357
2014	979	(49)	49	-	-	-	979
2015	1,227	(61)	(98)	-	(159)	(13.0%)	1,068
2016	2,367	(118)	223	-	105	4.4%	2,472
2017	3,616	(181)	338	-	157	4.3%	3,773
2018	10,007	(200)	201	-	1	-	10,008
2019	18,212	(273)	(150)	-	(423)	(2.3%)	17,789
2020	26,410	1,201	2,291	-	3,492	13.2%	29,902
Grand Total	63,736	273	2,798	-	3,071	4.8%	66,807