ALBERTA NON-GRID RISK SHARING POOL

OCTOBER 2017 OPERATIONAL REPORT

ACTUARIAL HIGHLIGHTS

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FACILITY Association

ACTUARIAL HIGHLIGHTS

RSP ALBERTA NON-GRID

OPERATIONAL REPORT

OCTOBER 2017

TABLE OF CONTENTS

1 Summary

1.1 Valuation Schedule (Fiscal Year 2017)

The October 2017 Operational Report incorporates the results of an updated valuation (as at September 30, 2017) – the impact of the implementation of the valuation is discussed in section 1.2. The table immediately below summarizes the implemented valuations and future scheduled valuations for fiscal year 2017.

ALBERTA NON-GRID RISK SHARING POOL
FISCAL YEAR 2017 – SCHEDULE OF VALUATIONS

Valuation Date	Discount Rate (per annum)	Operational Report	Description of Changes
Sep. 30, 2016 (completed)	0.55% mfad: 25 bp	Oct. 2016	updated valuation (roll forward): accident year 2016 loss ratio increased 7.2 points to 112.8%; discount rate decreased by 6 basis points; no change to selected margins for adverse deviations
Dec. 31, 2016 (completed)	1.08% mfad: 25 bp	Mar. 2017	updated valuation: accident year 2016 loss ratio increased 1.1 points to 113.9%; accident year 2017 loss ratio increased 5.0 points to 103.3%; discount rate increased by 53 basis points; no change to selected margins for adverse deviations
Mar. 31, 2017 (completed)	0.99% mfad: 25 bp	May 2017	updated valuation (roll forward): accident year 2017 loss ratio increased 3.1 points to 106.4%; discount rate decreased by 9 basis points; no change to selected margins for adverse deviations
Jun. 30, 2017 (completed)	1.20% mfad: 25 bp	Aug. 2017	updated valuation: accident year 2017 loss ratio increased 3.5 points to 109.9%; discount rate increased by 21 basis points; selected margins for adverse deviations were updated
Sep. 30, 2017 (completed)	1.76% mfad: 25 bp	Oct. 2017	updated valuation (roll forward): accident year 2017 loss ratio increased 2.9 points to 112.8%; discount rate increased by 56 basis points; no change to selected margins for adverse deviations

Under the proposed schedule for fiscal year 2017, the "off-half" valuation quarters ending March 31, 2017 and September 30, 2017 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 Non-Grid Risk Sharing Pool ("RSP") as at September 30, 2017 has been completed since last month's Operational Report and the results of that valuation have been incorporated into this month's Report. The valuation was completed by the Facility Association's internal actuarial group in conjunction with, and approved by, the Appointed Actuary, under the

hybrid model for actuarial services. Additional detail will be provided in an "Actuarial Highlights – Quarterly Valuation" report which we anticipate will be posted to the FA website in early December.

The valuation implementation impact is summarized in the tables below.

Summary of Impact ($000s) of Implementing Result of Valuation as at September 30, 2017[1]

AB Non-Grid	unfav / (fav) for the month and ytd					
	IMPACT in $000s from changes in:					
	ults & payout patterns			dsct rate	margins	
	Nominal [1]	apv adj. [2]	sub-tot [3]	apv adj. [4]	apv adj. [5]	TOTAL [6]
PAYs	2,182	135	2,317	(2,080)	-	237
CAY	2,356	298	2,654	(946)	-	1,708
Prem Def	(1,180)	64	(1,116)	(711)	-	(1,827)
TOTAL	3,358	497	3,855	(3,737)	-	118

As indicated in the table above, the incorporation of the new valuation had an estimated ***$0.1 million unfavourable impact*** on the month's net result from operations, adding an estimated 0.1 point (see table immediately below) from the **year-to-date Combined Operating Ratio** to end at **151.1%.**

Summary of Impact (% YTD EP) of Implementing Result of Valuation as at September 30, 2017

AB Non-Grid	ytd EP 80,725 (actual)					
	IMPACT unfav / (fav) as % ytd EP from changes in:					
	ults & payout patterns			dsct rate	margins	
	Nominal [1]	apv adj. [2]	sub-tot [3]	apv adj. [4]	apv adj. [5]	TOTAL [6]
PAYs	2.7%	0.2%	2.9%	(2.6%)	-	0.3%
CAY	2.9%	0.4%	3.3%	(1.2%)	-	2.1%
Prem Def	(1.5%)	0.1%	(1.4%)	(0.9%)	-	(2.3%)
TOTAL	4.2%	0.6%	4.8%	(4.6%)	-	0.1%

The impact of the nominal changes is shown in column [1] of the two preceding summary tables. The change in the selected nominal ultimates was unfavourable by $3.4 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 ultimate loss ratio).

The prior accident years overall showed a $2.2 million unfavourable variance due to recorded claims activity related to a member's corrections of historical claims transactions. This unfavourable

[1]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.

impact is 1.6% of the prior accident years' nominal unpaid balance of $132.4 million determined at the end of last month (September 2017).

The current accident year and premium deficiency impacts are a result of the change in the selected loss ratio for accident year **2017** (up 2.9 points from 109.9% to **112.8%**) and **2018** (down 4.6 points from 110.4% to **105.8%**).

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 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 an unfavourable change of $0.5 million in the actuarial present value adjustments, prior to any changes in the selected discount rate and/or MfADs.

Claims payment emergence patterns were updated and cash flows were reviewed against the selected risk-free yield curve, derived from Government of Canada benchmark bond yields monthly series using values for September 2017. Column [4] accounts for the change in the **discount rate** selected (increased 56 basis points to **1.76%**), indicating a favourable impact of $3.7 million. The impact *related only to claims liabilities* (i.e. PAYs plus CAY) was $3.0 million at October 2017 (projected $3.0 million impact at December 31, 2017) – this compares to the $3.1 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 **left unchanged** as well.

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

Liam McFarlane of Ernst & Young LLP is Facility Association's Appointed Actuary (effective as of June 1, 2013).

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

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 changes are provided below (there have been no changes in these descriptions since last month's Highlights).

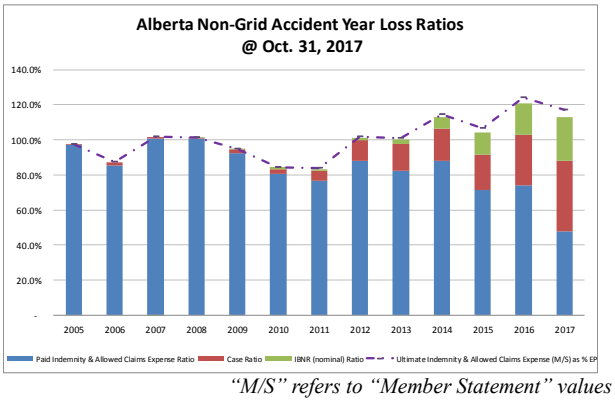
The **Supreme Court of Canada** rendered its judgment on **Saadati v Moorhead** (**2017** SCC 28, **rendered on Jun 2, 2017**). Saadati was involved in a collision in July of 2005 in British Columbia and sued the at-fault driver for damages. According to the Supreme Court decision, "*The trial judge found that the ... accident caused S[aadati] psychological injuries, including personality change and cognitive difficulties. ...and awarded S[aadati] $100,000 for non-pecuniary damages*." The trial decision was appealed to the BC Court of Appeal where the trial's $100,000 non-pecuniary award was dismissed. The Supreme Court upheld the $100,000 non-pecuniary award, determining:

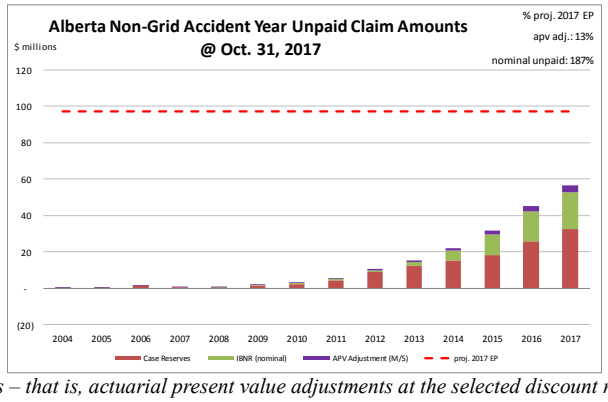
- "*A finding of legally compensable mental injury need not rest, in whole or in part, on the claimant proving a recognized psychiatric injury.*"
- "*...a trier of fact adjudicating a claim of mental injury is not concerned with diagnosis, but with symptoms and their effects.*"
- "*Expert evidence can assist in determining whether or not a mental injury has been shown, but where psychiatric diagnosis is unavailable, it remains open to a trier of fact to find on other evidence adduced by the claimant that he or she has proven on a balance of probabilities the occurrence of mental injury*."

At the current time, no adjustments have been made to our valuation estimates or views based on the judgment as rendered, but we continue to review and consider the implications of the judgment.

1.5 Current Provision Summary

The charts at the top of the next page 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 2017 full 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.

[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.

The current actuarial present value adjustments balance ($12.2 million – see table immediately below) represents 13% of the earned premium projected for the full year 2017 (the upper right corner of the right chart above). 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	124,193	63.9%
ibnr	57,940	29.8%
M/S apv adjust.	12,245	6.3%
M/S total	194,378	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 is in case reserves for this pool. Approximately 63% of the IBNR balance relates to accident years 2016 and 2017 (see Exhibit B). Approximately 88% of the M/S total claim liabilities are related to accident years 2013-2017 inclusive (i.e. the most recent 5 accident years).

The tables immediately below summarize the premium liabilities and the total policy liabilities.

premium liabilities ($000s)

	amt	%
unearned prem	50,272	87.3%
prem def/(dpac)	4,213	7.3%
M/S apv adjust.	3,115	5.4%
M/S total	57,600	100.0%

policy liabilities ($000s)

	amt	%
claim	182,133	72.3%
premium	54,485	21.6%
M/S apv adjust.	15,360	6.1%
M/S total	251,978	100.0%

2 Activity During the Month of October 2017

2.1 Recorded Premium and Claims Activity

The table at the top of the next page 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 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	(0)	(0)	3,260	1,825	(3,029)	(1,732)	232	94
2015	4	4	1,050	150	(1,498)	(801)	(448)	(651)
2016	0	0	1,065	(599)	(1,146)	372	(81)	(227)
2017	8,137	(101)	4,615	(635)	2,661	540	7,275	(95)
TOTAL	8,141	(97)	9,991	742	(3,012)	(1,621)	6,978	(879)

(Recorded transaction amounts exclude IBNR & other actuarial provisions)

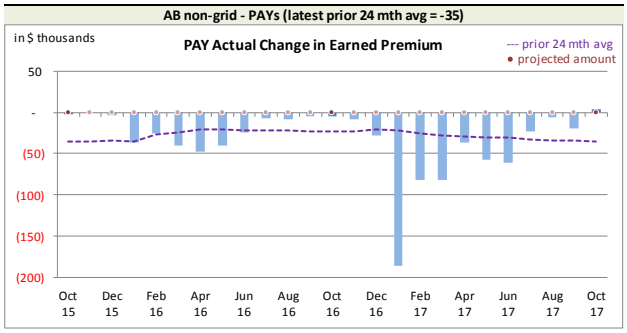
Claims transaction activity is generally volatile and changes from one month to the next are anticipated due to this natural "process variance" (i.e. random variation). Each month, the projection variances are reviewed for signs of projection bias and to identify potential ways to reduce the level of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

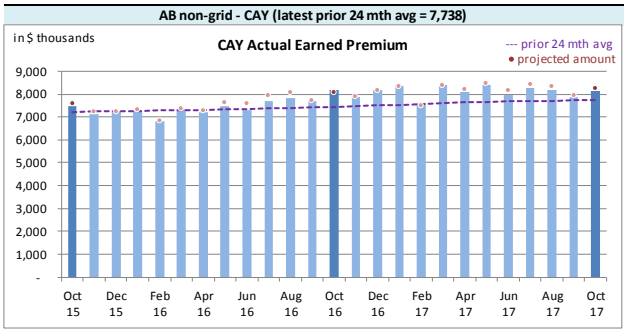
[4]There may be rounding differences in values in this document compared with the associated Bulletin and/or Operational Report.

2.1.a Actual vs. Projected (AvsP): Earned Premium

The charts immediately below 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*



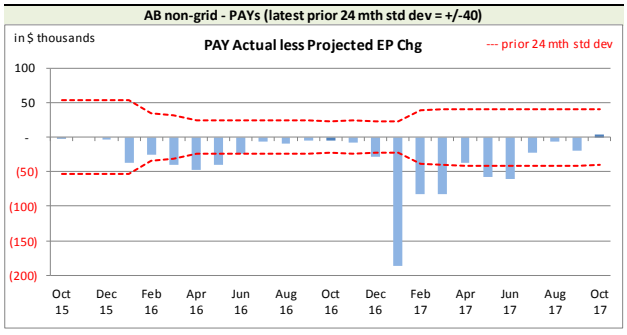


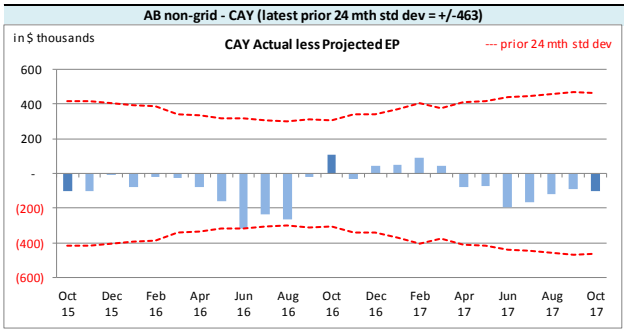
Earned premium changes during a given calendar month in relation to prior accident years tend to be at modest levels, although relatively high levels seem to occur at the beginning of each year.

We have noted and have been investigating the unusually high level of PAYs earned premium activity earlier in 2017, particularly with respect to one member and we are in discussions with that member to better understand the causes of the changes.

The associated variance between the actual changes and the projections from the previous month are shown in the charts at the top of the next page. **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 non-Grid RSP Actual vs. Projected Summary: **Earned Premium** Variances by Calendar Month*





[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.

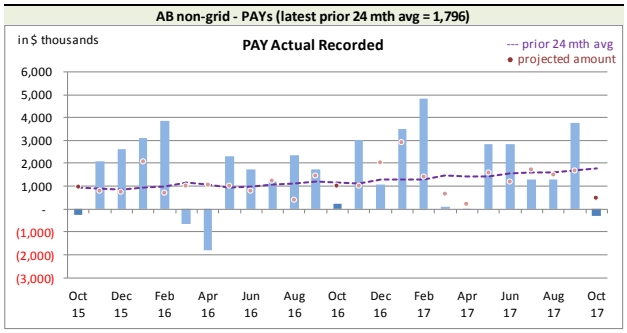
On Latest $ thousands		
Earned Premium	PAYs	CAY
Mthly Avg EP Chg (prior 24 mths)	(35)	7,738
std dev	40	463
A-P <> std dev	9	1
% <> std dev	36.0%	4.0%
norm <> std dev	31.7%	31.7%

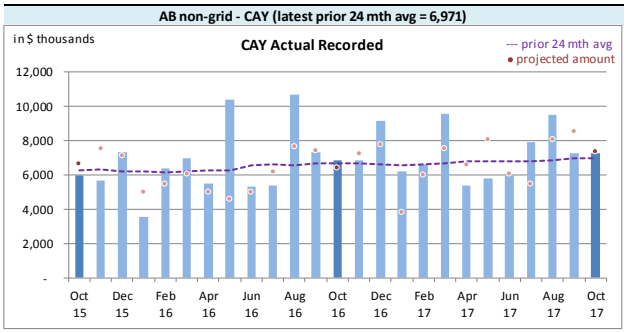
We project **earned premium** changes from known unearned premium and projected written premium levels, but upload the total projections as current accident year (CAY). This process has generated prior accident years' (PAYs) bias[6], with actuals generally lower than projected. However, the magnitude is not high relative to monthly premium. In addition to the PAYs' bias, the CAY has also shown bias, with actuals being generally lower than projected. Starting with the August 2016 projections, we have modified our projections processes in an attempt to account for CAY bias (we note bias again post April 2017, which we are reviewing). Over time, we may consider other projection approaches to narrow monthly variance levels further, but it is not currently deemed a priority.

2.1.b AvsP: Recorded Indemnity & Allowed Claims Expense

The charts immediately below 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.

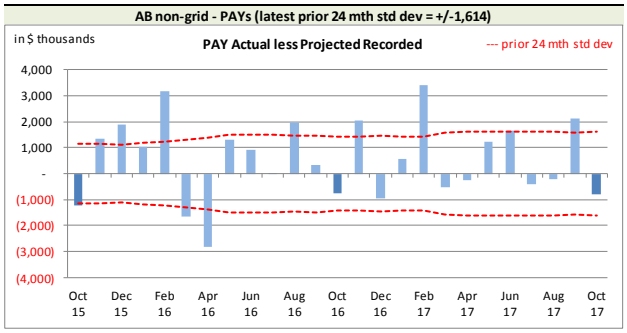
*Alberta non-Grid RSP Actual **Recorded** by Calendar Month*

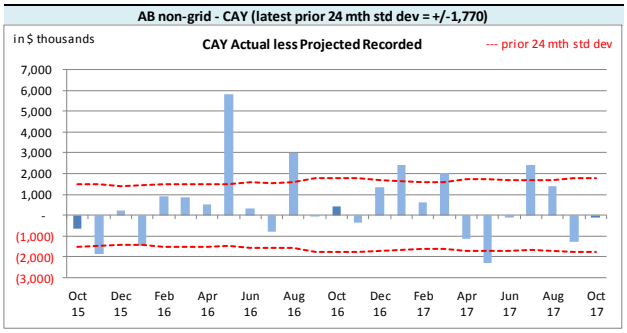




Recorded activity variances from the previous month's projections are shown in the charts immediately below, including the "prior 24-month standard deviation" levels to show how the variances from projection compare with historical standard deviations.

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





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

On Latest $ thousands		
Recorded	PAYs	CAY
Mthly Avg Recorded (prior 24 mths)	1,796	6,971
std dev	1,614	1,770
A-P <> std dev	11	8
% <> std dev	44.0%	32.0%
norm <> std dev	31.7%	31.7%

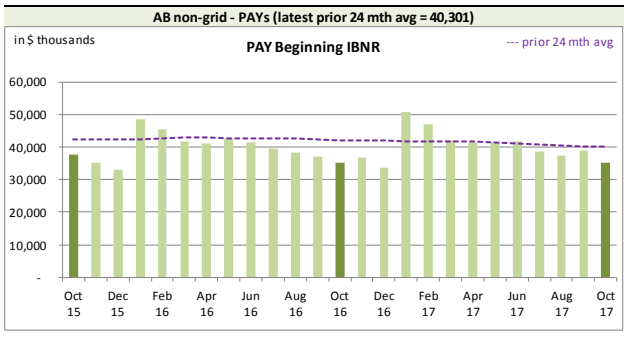
With respect to **recorded** indemnity & allowed claims expense activity, 44% of the prior accident years' (PAYs) variances (left chart at the bottom of the previous page) fell outside of the experience period's standard deviation, suggesting the projection process performs worse than a projection based simply on the 24-month average. We have implemented changes in an attempt to address this.

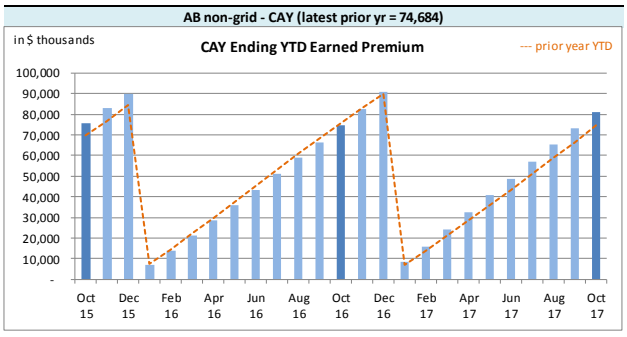
The current accident year (CAY) **recorded** variances (right chart at the bottom of the previous page) have been greater than one standard deviation 32% of the time, suggesting that the projection process is no better than simply projecting the most recent prior 24-month average.

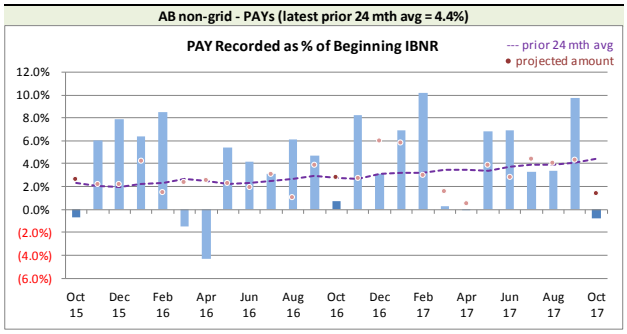
The method for establishing IBNR adjusts automatically for changes in **earned premium** and **recorded** claims activity level (see sections 2.2 and 3).

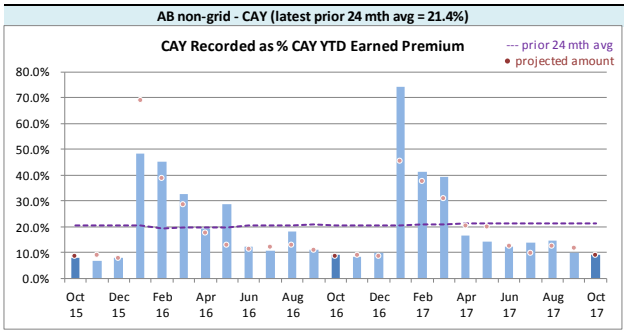
We have included, for reference, additional charts immediately below related to levels influencing **recorded** activity.

Alberta non-Grid RSP Levels that influence[7] ***Recorded*** *activity by Calendar Month*









We track beginning prior accident years' IBNR as **recorded** activity "comes out of" IBNR. Changes in the prior accident years' beginning IBNR (see upper left chart above) occur for several possible reasons:

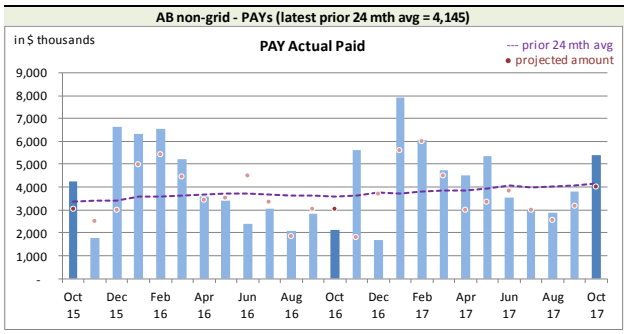
[7]Our recorded activity projections for the prior accident years are based on selected ratios of recorded activity to beginning unpaid balances, whereas the current accident year projections are based on selected ratios of year-to-date IBNR to year-to-date selected ultimate (i.e. selected LR x earned 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.

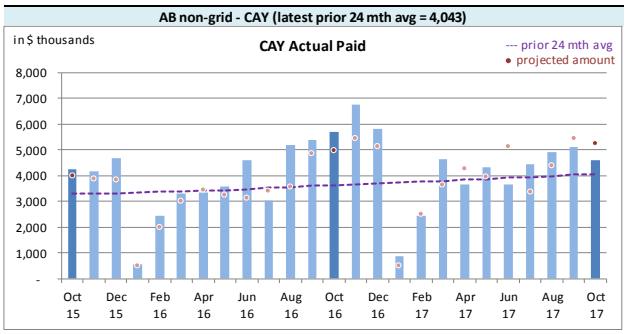
- to offset actual **recorded** activity (through loss ratio matching);
- the annual switchover as a current accident year becomes a prior accident year (occurs in January); and
- when a new valuation is implemented, where the valuation resulted in changes to the selection of prior accident years' ultimate (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 charts immediately below 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.

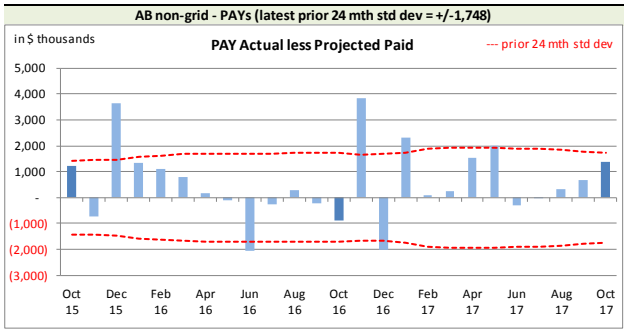
*Alberta non-Grid RSP Actual **Paid** activity by Calendar Month*

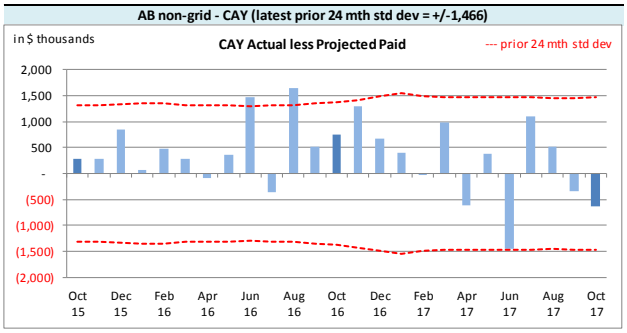




Paid activity variances from the previous month's projections are shown in the charts below, including the "prior 24-month standard deviation" levels to show how the variances from projection compare with historical standard deviations.

*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)	4,145	4,043
std dev	1,748	1,466
A-P <> std dev	6	2
% <> std dev	24.0%	8.0%
norm <> std dev	31.7%	31.7%

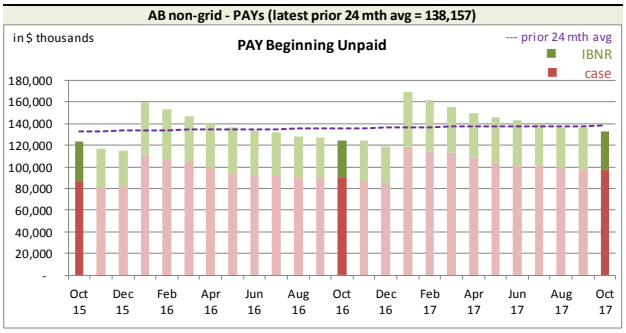
With respect to **paid** indemnity & allowed claims expense, the prior accident years' variances (left chart above) do not appear to have bias and the magnitude of the variances do not appear to be an issue. With 24% of prior accident years (PAYs) **paid** variances over the last 25 calendar months falling outside of one standard deviation,

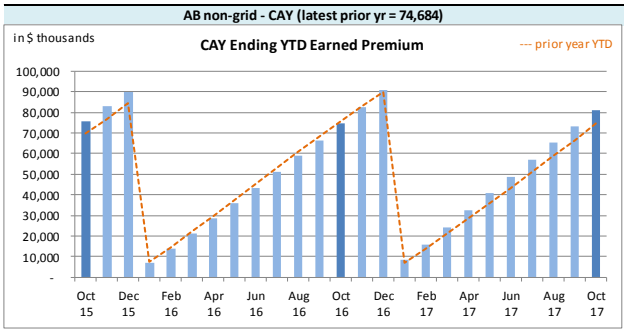
the projection process appears to have performed better than simply projecting based on a 24-month average.

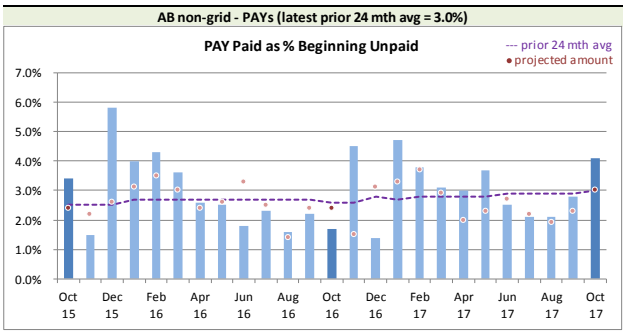
With only 8% of the current accident year (CAY) **paid** variances falling outside of one standard deviation of the experience period activity, the projection process appears to perform better than simply projecting based on a 24-month average. However, there does appear to be evidence of bias (actuals tend to be higher than our projections) and we are considering options on how to address this.

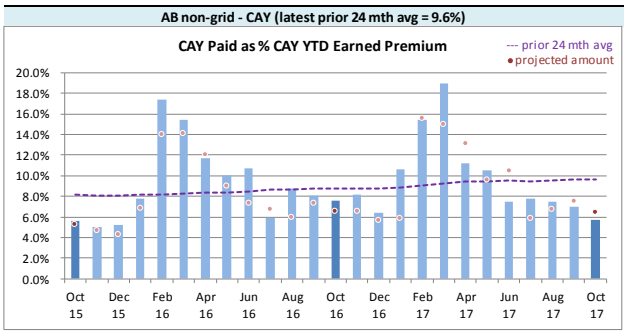
We have included, for reference, additional charts immediately below related to levels influencing **paid** activity.

Alberta non-Grid RSP Levels that influence[8] ***Paid*** *activity by Calendar Month*









We track beginning prior accident years' unpaid balance (case and IBNR) as **paid** activity "comes out of" the unpaid balance. Changes in the prior accident years' beginning unpaid balance (see upper left chart above) occur for several possible reasons:

- to offset actual **paid** activity (may reduce case or IBNR or both);
- the annual switchover as a current accident year becomes a prior accident year (occurs in January); and
- when a new valuation is implemented, where the valuation resulted in changes to the selection of prior accident years' ultimate (will show up as a beginning unpaid balance

[8]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.

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[9], 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 table immediately below summarizes variances in provisions included in the October 2017 Operational Report 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	10,166	(77)	(2,449)	(699)	5,840	(265)	13,557	(1,041)
2015	11,235	1,283	(1,421)	(431)	3,672	(47)	13,486	805
2016	16,223	1,761	(2,188)	(710)	5,241	113	19,276	1,164
2017	20,316	2,341	(2,701)	(948)	6,251	343	23,866	1,736
TOTAL	57,940	5,308	(8,759)	(2,788)	21,004	144	70,185	2,664

The IBNR provision is $5.3 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 , and due to the valuation implementation.

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 table at the top of the next page summarizes the variances in the provisions for premium deficiency liability / (deferred policy acquisition cost asset) included in the October 2017 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

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

variances noted are mainly driven by the unearned premium variance and due to valuation implementation.

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:	4,213	(1,142)	3,115	(624)	7,328	(1,766)
balance as % unearned premium:	8.4%	(2.3%)	6.2%	(1.3%)	14.6%	(3.6%)
actual unearned premium:	50,272					
less projected:	314					

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[10] 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 table at the top of the next page summarizes the calendar year-to-date results for indemnity & allowed claims expenses[11], 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 113.6% rather than 112.8% (the valuation ultimate ratio for accident year 2017), 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.)

[10] "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).

[11] 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 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	6,954	8.6%	(8,863)	(11.0%)	(1,909)	(2.4%)	(198)	-
CAY	91,673	113.6%	3,550	4.4%	95,223	118.0%	11,009	2.0%
TOTAL	98,627	122.2%	(5,313)	(6.6%)	93,314	115.6%	10,811	1.9%

("% EP" based on 2017 calendar year-to-date earned premium; ratios may not total due to rounding)

The prior accident years (PAYs) changes from last month are due to the release of the actuarial present value adjustments with claims payments and due to valuation implementation. The loss ratio change year-to-date 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 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 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 1.76%

interest rate margin 25 basis pts

	Amounts in $000s				
Accident Year	Actual Sep. 2017	Actual Oct. 2017	Projected Nov. 2017	Projected Dec. 2017	Projected Dec. 2018
2004	42	42	41	40	29
2005	(42)	13	13	12	10
2006	137	122	117	112	103
2007	305	(19)	(19)	(18)	(13)
2008	126	122	117	110	78
2009	593	406	392	375	270
2010	682	827	797	764	546
2011	940	968	933	896	638
2012	2,450	1,647	1,587	1,524	1,063
2013	2,866	2,776	2,555	2,357	1,676
2014	6,742	6,653	6,333	6,079	2,827
2015	12,968	13,486	13,262	12,953	7,555
2016	18,411	19,276	19,023	18,451	13,944
2017	20,132	23,866	25,028	26,038	18,251
2018	-	-	-	-	18,985
TOTAL	66,352	70,185	70,179	69,693	65,962
Change		3,833	(6)	(486)	

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 Sep. 2017	Actual Oct. 2017	Projected Nov. 2017	Projected Dec. 2017	Projected Dec. 2018
349.1%	2004	36	36	35	34	25
97.4%	2005	(45)	5	5	5	5
87.2%	2006	17	16	15	14	12
101.5%	2007	225	(65)	(62)	(60)	(43)
101.2%	2008	93	93	89	85	60
94.9%	2009	426	301	289	277	197
84.3%	2010	471	657	631	606	431
83.4%	2011	552	670	643	617	441
101.1%	2012	1,631	1,062	1,020	979	700
100.1%	2013	1,852	1,960	1,764	1,605	1,146
112.9%	2014	5,123	5,431	5,159	4,953	1,994
104.3%	2015	10,155	11,235	11,123	10,901	5,754
120.6%	2016	14,608	16,223	16,061	15,579	11,485
112.8%	2017	16,292	20,316	21,254	22,047	15,568
105.8%	2018	-	-	-	-	15,229
	TOTAL	51,436	57,940	58,026	57,642	53,004
	Change		6,504	86	(384)	

Please see Exhibit G, page 2 for Components of Change during Current Month

EXHIBIT C

Premium Liabilities

TABLE EXHIBIT C

Premium Liabilities	Actual Sep. 2017	Actual Oct. 2017	Projected Nov. 2017	Projected Dec. 2017	Projected Dec. 2018
	Amounts in $000s				
(1) unearned premium (UP)	48,623	50,272	50,916	50,512	49,630
FOR MEMBER SHARING					
(2) expected future costs ratio {% of (1)}	118.1%	114.6%	113.5%	112.4%	115.1%
(3) expected future costs {(1) x (2)}	57,440	57,600	57,804	56,759	57,132
(4) premium deficiency / (deferred policy acquisition cost)	8,817	7,328	6,888	6,247	7,502
Excluding Actuarial Present Value Adjustments					
(5) expected future costs ratio {% of (1)}	110.7%	108.4%	107.4%	106.3%	108.9%
(6) expected future costs {(1) x (5)}	53,806	54,485	54,679	53,691	54,043
(7) premium deficiency / (deferred policy acquisition cost)	5,183	4,213	3,763	3,179	4,413

EXHIBIT D

Projected Year-end Policy Liabilities

The table below presents the projected policy liabilities as at December 31, 2017, broken down by component.

Alberta non-Grid	Projected Balances as at Dec. 31, 2017 ($000s)								
ending 2017	nominal values			actuarial present value adjustments (apvs)					
Acc Yr	Case	IBNR	Total Unpaid	discount	investment PfAD	nominal development PfAD	development PfAD discount	Total apvs	TOTAL
2004	24	34	58	-	-	6	-	6	64
2005	70	5	75	-	-	7	-	7	82
2006	1,324	14	1,338	(37)	5	134	(4)	98	1,436
2007	646	(60)	586	(17)	2	59	(2)	42	628
2008	287	85	372	(12)	1	37	(1)	25	397
2009	1,255	277	1,532	(57)	8	153	(6)	98	1,630
2010	2,047	606	2,653	(109)	13	265	(11)	158	2,811
2011	4,210	617	4,827	(212)	29	483	(21)	279	5,106
2012	8,304	979	9,283	(399)	56	928	(40)	545	9,828
2013	11,691	1,605	13,296	(598)	80	1,330	(60)	752	14,048
2014	14,233	4,953	19,186	(825)	115	1,919	(83)	1,126	20,312
2015	16,091	10,901	26,992	(1,296)	162	3,347	(161)	2,052	29,044
2016	24,010	15,579	39,589	(2,059)	277	4,909	(255)	2,872	42,461
PAYs (sub-total):	84,192	35,595	119,787	(5,621)	748	13,577	(644)	8,060	127,847
CAY (2017)	37,479	22,047	59,526	(3,036)	417	6,965	(355)	3,991	63,517
claims liabilities:	121,671	57,642	179,313	(8,657)	1,165	20,542	(999)	12,051	191,364
	Unearned Premium	Premium Defiency / (DPAC)	Total Provision	discount	investment PfAD	nominal development PfAD	development PfAD discount	Total apvs	TOTAL*
premium liabilities:	50,512	3,179	53,691	(2,032)	267	5,024	(191)	3,068	56,759
									*Total may not be sum of parts, as apvs apply to future costs within UPR
policy liabilities:			**233,004**	**(10,689)**	**1,432**	**25,566**	**(1,190)**	**15,119**	**248,123**

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, 2017 from the valuation), followed by the selected discount rate and the associated margin for investment income.

Selected Claims Development MfADs (Sep. 30, 2017)

Accident Year	Third Party Liability	Accident Benefits	Other Coverages	Total
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%	6.0%	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%	9.8%	10.0%
2014	10.0%	10.0%	9.3%	10.0%
2015	12.5%	10.0%	11.1%	12.4%
2016	12.5%	10.0%	12.5%	12.4%
2017	12.1%	10.0%	8.2%	11.7%
2018	11.8%	10.0%	5.2%	9.4%
prem liab	11.8%	10.0%	5.2%	9.4%

discount rate:	1.76%
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, 2017 from the latest valuation date (projections in exhibits A to D are also to Dec. 31, 2017, but are based on more up-to-date information). We have included the most recent valuation selection (1.76%), the prior valuation assumption (1.20%) and the prior fiscal year end valuation assumption (0.55%) 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, 2017 projected Unpaid							
AY	0.76%	1.26%	1.76%	2.26%	2.76%	3.26%	1.20%	0.55%
2004	-	-	-	-	-	-	-	-
2005	-	-	-	-	-	-	-	-
2006	1,330	1,319	1,309	1,298	1,288	1,278	1,320	1,334
2007	692	687	681	676	670	665	687	695
2008	370	367	364	360	357	354	367	372
2009	2,162	2,139	2,117	2,095	2,073	2,052	2,142	2,172
2010	2,754	2,721	2,689	2,657	2,627	2,597	2,725	2,768
2011	5,094	5,029	4,966	4,905	4,845	4,788	5,037	5,121
2012	10,645	10,513	10,385	10,260	10,139	10,022	10,528	10,701
2013	13,576	13,397	13,226	13,058	12,894	12,737	13,419	13,651
2014	22,289	22,009	21,739	21,473	21,217	20,968	22,042	22,408
2016	45,362	44,669	44,007	43,356	42,725	42,118	44,752	45,654
2017	66,776	65,786	64,842	63,923	63,032	62,176	65,905	67,193
Total	202,862	199,998	197,258	194,571	191,966	189,459	200,337	204,068
	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	0.76%	1.26%	1.76%	2.26%	2.76%	3.26%	1.20%	0.55%
Total	5,604	2,740	-	(2,687)	(5,292)	(7,799)	3,079	6,810
	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	0.76%	1.26%	1.76%	2.26%	2.76%	3.26%	1.20%	0.55%
2004	-	-	-	-	-	-	-	-
2005	-	-	-	-	-	-	-	-
2006	1.6%	0.8%	-	(0.8%)	(1.6%)	(2.4%)	0.8%	1.9%
2007	1.6%	0.9%	-	(0.7%)	(1.6%)	(2.3%)	0.9%	2.1%
2008	1.6%	0.8%	-	(1.1%)	(1.9%)	(2.7%)	0.8%	2.2%
2009	2.1%	1.0%	-	(1.0%)	(2.1%)	(3.1%)	1.2%	2.6%
2010	2.4%	1.2%	-	(1.2%)	(2.3%)	(3.4%)	1.3%	2.9%
2011	2.6%	1.3%	-	(1.2%)	(2.4%)	(3.6%)	1.4%	3.1%
2012	2.5%	1.2%	-	(1.2%)	(2.4%)	(3.5%)	1.4%	3.0%
2013	2.6%	1.3%	-	(1.3%)	(2.5%)	(3.7%)	1.5%	3.2%
2014	2.5%	1.2%	-	(1.2%)	(2.4%)	(3.5%)	1.4%	3.1%
2016	3.1%	1.5%	-	(1.5%)	(2.9%)	(4.3%)	1.7%	3.7%
2017	3.0%	1.5%	-	(1.4%)	(2.8%)	(4.1%)	1.6%	3.6%
Total	2.8%	1.4%	-	(1.4%)	(2.7%)	(4.0%)	1.6%	3.5%
	curr - 100 bp	curr - 50 bp	curr val assumption	curr + 50bp	curr + 100bp	curr + 150bp	prior val assumption	prior fyr end assumption

EXHIBIT G

Components of Member Statement IBNR (i.e. "Discounted") Change During Month

RSP	**Alberta 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	-	-	-	-	-	42
2005	(42)	1	(1)	55	55	(131.0%)	13
2006	137	(3)	2	(14)	(15)	(10.9%)	122
2007	305	(7)	(160)	(157)	(324)	(106.2%)	(19)
2008	126	(3)	3	(4)	(4)	(3.2%)	122
2009	593	(12)	(76)	(99)	(187)	(31.5%)	406
2010	682	(12)	198	(41)	145	21.3%	827
2011	940	(20)	213	(165)	28	3.0%	968
2012	2,450	(48)	(280)	(475)	(803)	(32.8%)	1,647
2013	2,866	(39)	(439)	388	(90)	(3.1%)	2,776
2014	6,742	(100)	309	(298)	(89)	(1.3%)	6,653
2015	12,968	(287)	641	164	518	4.0%	13,486
2016	18,411	(299)	281	883	865	4.7%	19,276
2017	20,132	1,998	28	1,708	3,734	18.5%	23,866
Grand Total	**66,352**	**1,169**	**719**	**1,945**	**3,833**	**5.8%**	**70,185**

EXHIBIT G

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

RSP	Alberta Non-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
2004	36	-	-	-	-	-	36
2005	(45)	1	(1)	50	50	(111.1%)	5
2006	17	-	(1)	-	(1)	(5.9%)	16
2007	225	(5)	(145)	(140)	(290)	(128.9%)	(65)
2008	93	(2)	2	-	-	-	93
2009	426	(9)	(45)	(71)	(125)	(29.3%)	301
2010	471	(9)	195	-	186	39.5%	657
2011	552	(11)	208	(79)	118	21.4%	670
2012	1,631	(33)	(227)	(309)	(569)	(34.9%)	1,062
2013	1,852	(19)	(441)	568	108	5.8%	1,960
2014	5,123	(51)	359	-	308	6.0%	5,431
2015	10,155	(203)	654	629	1,080	10.6%	11,235
2016	14,608	(146)	227	1,534	1,615	11.1%	16,223
2017	16,292	1,683	(15)	2,356	4,024	24.7%	20,316
Grand Total	**51,436**	**1,196**	**770**	**4,538**	**6,504**	**12.6%**	**57,940**