



ALBERTA NON-GRID RISK SHARING POOL

MAY 2016 OPERATIONAL REPORT

ACTUARIAL HIGHLIGHTS

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[Actuarial Quarterly Valuation Highlights Risk Sharing Pools as at March 31, 2016](#)

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ACTUARIAL HIGHLIGHTS
RSP ALBERTA NON-GRID
OPERATIONAL REPORT
MAY 2016

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1 Summary

1.1 Valuation Schedule (Fiscal Year 2016)

The May 2016 Operational Report incorporates the results of an updated valuation (as at March 31, 2016) – 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 2016.

ALBERTA NON-GRID RISK SHARING POOL FISCAL YEAR 2016 – SCHEDULE OF VALUATIONS			
Valuation Date	Discount Rate (per annum)	Operational Report	Description of Changes
Sep. 30, 2015 (completed)	0.78% mfad: 25 bp	Oct. 2015	updated valuation (roll forward): accident year 2015 loss ratio increased 1.5 points to 101.4%; discount rate decreased by 19 basis points; no change to selected margins for adverse deviations
Dec. 31, 2015 (completed)	0.73% mfad: 25 bp	Mar. 2016	updated valuation: accident year 2015 loss ratio decreased 1.2 points to 100.2%; accident year 2016 loss ratio increased 0.2 points to 95.6%; discount rate decreased by 5 basis points; no change to selected margins for adverse deviations
Mar. 31, 2016 (completed)	0.68% mfad: 25 bp	May 2016	updated valuation (roll forward): accident year 2016 loss ratio increased 0.1 points to 95.7%; discount rate decreased by 5 basis points; no change to selected margins for adverse deviations
Jun. 30, 2016		Aug. 2016	update valuation:
Sep. 30, 2016		Oct. 2016	update valuation (roll forward):

Under the proposed schedule for fiscal year 2016, the “off-half” valuation quarters ending March 31, 2016 and September 30, 2016 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 March 31, 2016 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 to be posted to the FA website at the same time as this report.

The valuation implementation impact is summarized in the tables at the top of the next page.

Summary of Impact (\$000s) of Implementing Result of Valuation as at March 31, 2016¹

AB Non-Grid	unfav / (fav) for the month and ytd					
	IMPACT in \$000s from changes in:					
	ults & payout patterns			dsct rate	margins	
	Nominal	apv adj.	sub-tot	apv adj.	apv adj.	TOTAL
[1]	[2]	[3]	[4]	[5]	[6]	
PAYs	814	131	945	211	-	1,156
CAY	36	(15)	21	45	-	66
Prem Def	(50)	(165)	(215)	48	-	(167)
TOTAL	800	(49)	751	304	-	1,055

As indicated in the table above, the incorporation of the new valuation had an estimated **\$1.1 million unfavourable impact** on the month’s net result from operations, adding an estimated 2.9 points (see table immediately below) to the **year-to-date Combined Operating Ratio** to end at **134.3%**.

Summary of Impact (% YTD EP) of Implementing Result of Valuation as at March 31, 2016

AB Non-Grid	ytd EP 35,876 (actual)					
	IMPACT unfav / (fav) as % ytd EP from changes in:					
	ults & payout patterns			dsct rate	margins	
	Nominal	apv adj.	sub-tot	apv adj.	apv adj.	TOTAL
[1]	[2]	[3]	[4]	[5]	[6]	
PAYs	2.3%	0.4%	2.6%	0.6%	-	3.2%
CAY	0.1%	-	0.1%	0.1%	-	0.2%
Prem Def	(0.1%)	(0.5%)	(0.6%)	0.1%	-	(0.5%)
TOTAL	2.2%	(0.1%)	2.1%	0.8%	-	2.9%

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 \$0.8 million overall. This reflects the impact attributable to the change in the selected ultimate loss ratio (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 \$0.8 million unfavourable variance, which is attributed to recorded activity process variance. This unfavourable change is 0.6% of the prior accident years’ nominal unpaid balance of \$136.6 million determined at the end of last month (April 2016). It is interesting to note that we are not seeing the prior accident year deterioration “phenomena” in this RSP that we are seeing occur in the Alberta Grid RSP.

The current accident year and premium deficiency impacts are a result of the changes in the selected loss ratios for accident years **2016** (up 0.1 points from 95.6% to **95.7%**) and **2017** (down 0.7 points

¹In 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.

from 96.5% to **95.8%**).

The impacts related to actuarial present value adjustments are split into the impact prior to any change in the selected discount rate and margin changes (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 margins (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 margins for adverse deviations or “MfADs”). It also reflects the fact that we updated the projected emergence of claims payments, resulting in a change in the projected cash flows. These changes generated a slight favourable change 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 March 2016. Column [4] accounts for the change in the **discount rate** selected (decreased 5 basis points to **0.68%**), indicating an unfavourable impact of \$0.3 million. The impact *related only to claims liabilities* (i.e. PAYs plus CAY) was \$0.3 million at May 2016 (projected \$0.3 million impact at December 31, 2016) – this compares to the \$0.3 million change one would estimate as the impact by interpolation using the interest rate sensitivity table provided in last month’s Actuarial Highlights.

Column [5] accounts for any changes to selected MfADs. The selected **investment rate MfAD** was **left unchanged at 25 basis points** and the selected **claims development MfADs** at the coverage and accident year level were **left unchanged** as well.

Consideration was given to recent legal decisions and changes in legislation / regulation as outlined in section 1.4. For this valuation, no specific adjustments have been made.

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

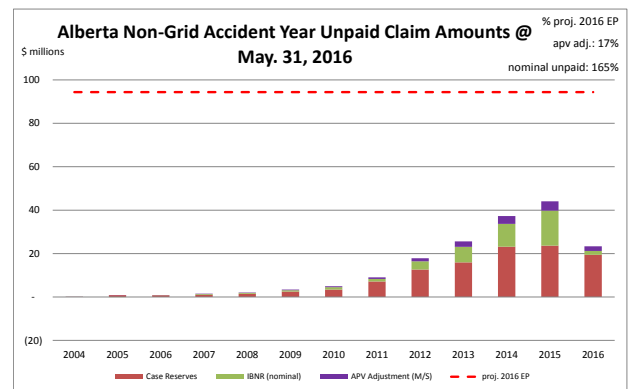
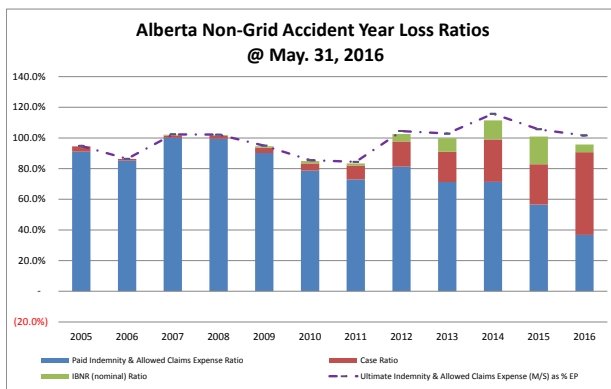
Consideration and assessment of potential impacts of legal decisions and changes in legislation / regulation constitutes a regular part of the valuation process. Descriptions of some of the more recent changes are provided below.

Alberta Bill 39 (Enhancing Consumer Protection in Auto Insurance Act) was introduced into the Legislature by the Minister of Finance on November 6, 2013, and received Royal Assent on December 11, 2013. Bill 39 includes various amendments and provisions such as, allowing for both

mandatory and optional auto insurance premiums to be regulated by the independent Automobile Insurance Rate Board (AIRB), the introduction of an Insurer file and approve system for premium adjustments instead of an annual industry-wide rate adjustment, improved access to health care after a collision and strengthened Insurance Company solvency requirements. No specific adjustments have been made to the current valuation assumptions based on Bill 39.

1.5 Current Provision Summary

The charts immediately below 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 2016 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.

The current actuarial present value adjustments balance (\$15.9 million – see table immediately below) represents 17% of the earned premium projected for the full year 2016 (see 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 period.

claim liabilities (\$'000s)	amt	%
case	112,111	65.5%
ibnr	43,097	25.2%
M/S apv adjust.	15,852	9.3%
M/S total	171,060	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 42% of the IBNR balance relates to accident years 2015 and 2016 (see Exhibit B). Approximately 87% of the M/S total

claim liabilities are related to accident years 2012-2016 inclusive (i.e. the most recent 5 accident years).

The IBNR level for accident year 2016 in the charts above reflect the unusually high level of recorded activity during the month of May, 2016 (the loss ratio matching approach taken to book

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.

results adjusts IBNR automatically for recorded activity differences with expected results).

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

premium liabilities (\$000s)			policy liabilities (\$000s)		
	amt	%		amt	%
unearned prem	45,633	96.3%	claim	155,208	71.1%
prem def/(dpac)	(1,752)	(3.7%)	premium	43,881	20.1%
M/S apv adjust.	3,482	7.4%	M/S apv adjust.	19,334	8.9%
M/S total	47,363	100.0%	M/S total	218,423	100.0%

2 Activity During the Month of May 2016

2.1 Recorded Premium and Claims Activity

The table immediately below summarizes the extent to which premiums and claims amounts recorded during the month differ from projections reflected in the prior month’s Operational Report⁴.

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

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	1	1	2,511	1,219	(664)	267	1,847	1,486
2014	(0)	(0)	607	(40)	760	1,209	1,368	1,170
2015	(41)	(41)	289	(1,291)	(1,201)	(61)	(912)	(1,352)
2016	7,478	(163)	3,600	357	6,771	5,438	10,371	5,795
TOTAL	7,438	(203)	7,008	246	5,667	6,853	12,674	7,099

(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”. 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.

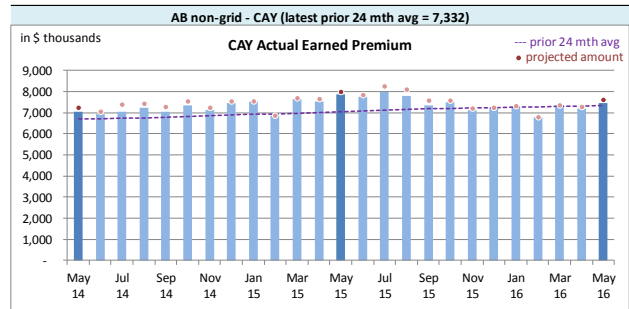
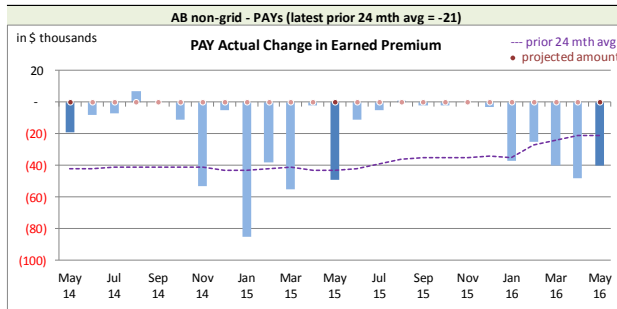
2.1.a Actual vs. Projected (AvsP): Earned Premium

The charts at the top of the next page 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.

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

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.

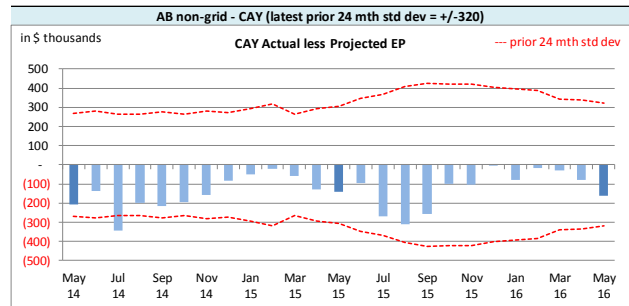
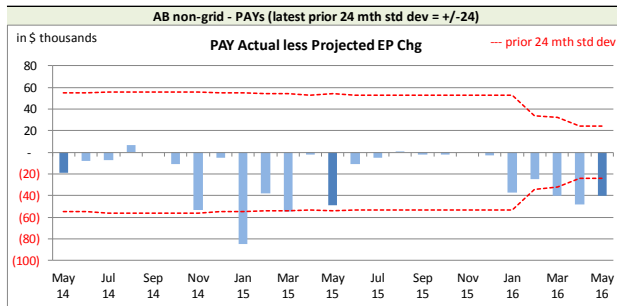
*Alberta non-Grid RSP Actual **Earned Premium** by Calendar Month*



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.

The associated variance between the actual changes and the projections from the previous month are shown in the charts immediately below. **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*



On Latest \$ thousands			
Earned Premium	PAYs	CAY	
Mthly Avg EP Chg (prior 24 mths)	(21)	7,332	
std dev	24	320	
A-P <> std dev	5	1	
% <> std dev	20.0%	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 bias⁶, with actuals generally lower than projected. However, the magnitude is not high relative to monthly premium, and the

variances are within the prior 24-month standard deviation more often than indicated by a normal distribution (see table above). Over time, we may consider other projection approaches to narrow monthly variance levels further, but it is not currently deemed a priority.

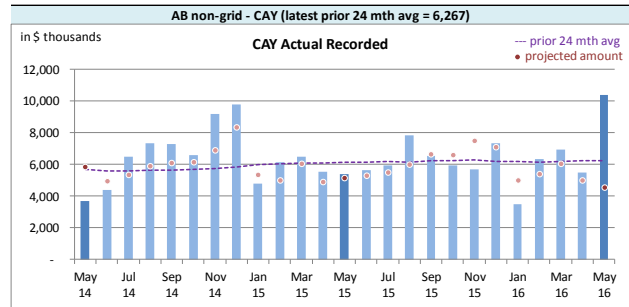
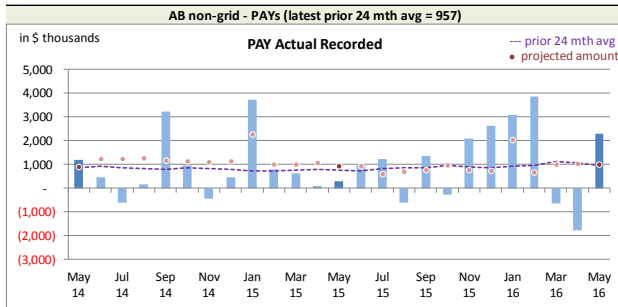
2.1.b AvsP: Recorded Indemnity & Allowed Claims Expense

Actual **recorded** activity (**paid** and case reserve changes) over the last 25-month period is shown in

⁶The prior accident years (PAYs) variances will show bias as the projection upload forces all earned premium projections to be attributed to the current accident year.

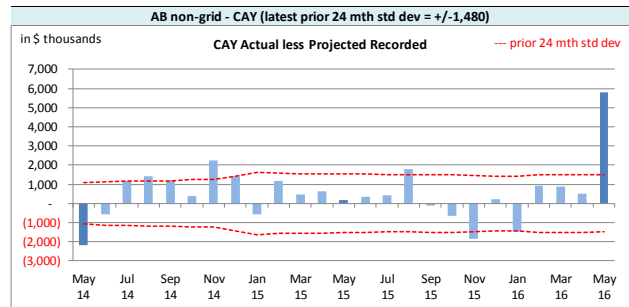
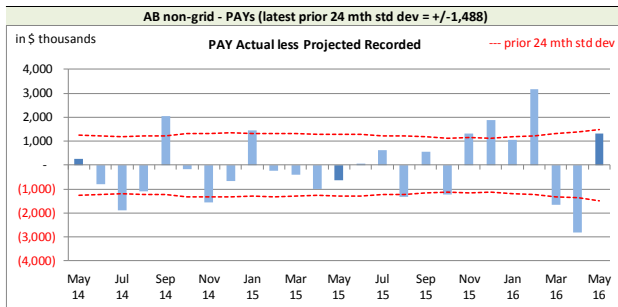
the charts immediately below, including the “prior 24-month average” level.

*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.

*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)	957	6,267
std dev	1,488	1,480
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 above) 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. There may

also be evidence of bias in the projections (actuals tend to be lower than our projections), although adjustments made to our projections seem to have been successful in reducing the bias. As discussed at the end of this section, there has been a general rise in IBNR level, contributing to the difficulty in projecting for this RSP.

The current accident year (CAY) **recorded** variances (right chart above) have been greater than one standard deviation 32% of the time, suggesting that the projection process is not much better than simply projecting the most recent prior 24-month average. There was evidence of bias in the projection process from the middle of 2014 to the middle of 2015 (actuals tended to be higher than our projections). Measures taken in an effort to address this bias seem to have been successful.

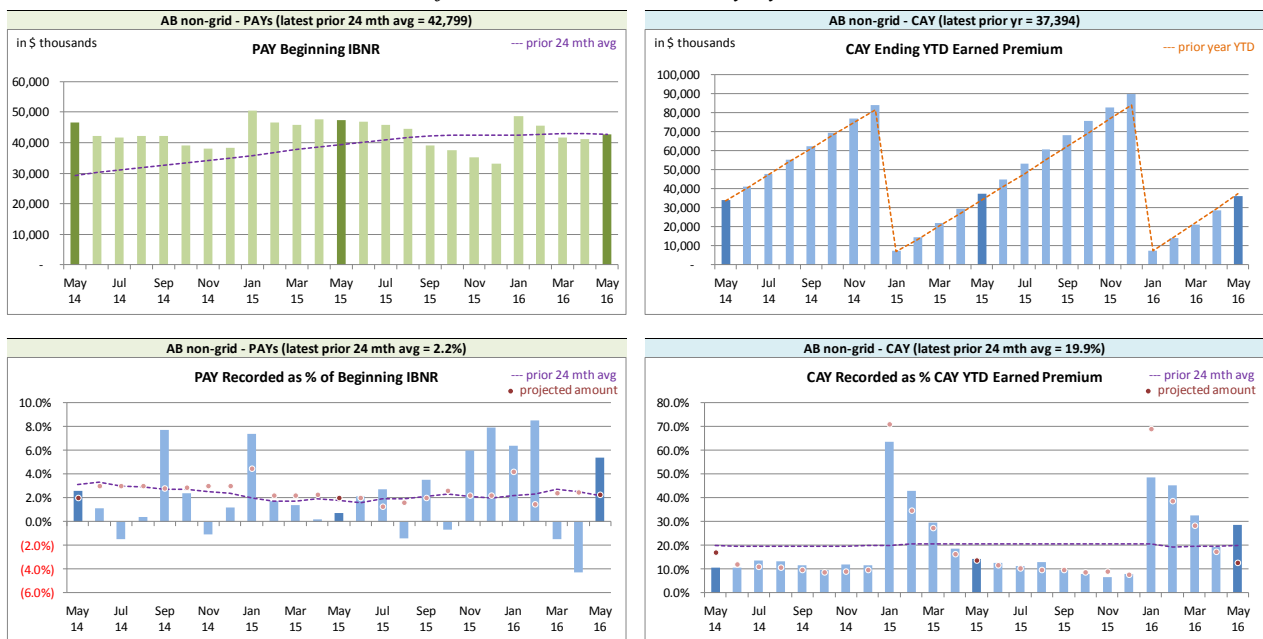
The CAY **recorded** variance for the current month was outside the one standard deviation band, and was an unusually high level – at \$10.4 million, it is the highest single month recorded activity level for a current accident year for 2009 and onward (and likely the highest level ever for this RSP for a current accident year). In addition, “high” recorded levels for the current accident year typically

occur later in the year (November / December), rather than May. The activity for this month was reviewed and the investigation revealed that \$2.7 million of the \$10.4 million in recorded activity related to comprehensive / specified perils claims occurring during the week May 1 to 7, which may suggest that some of the claims relate to the Fort McMurray fires. This amount accounts for a little less than half of the \$5.8 million variance from our projection. We continue to investigate.

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 influence⁷ 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:

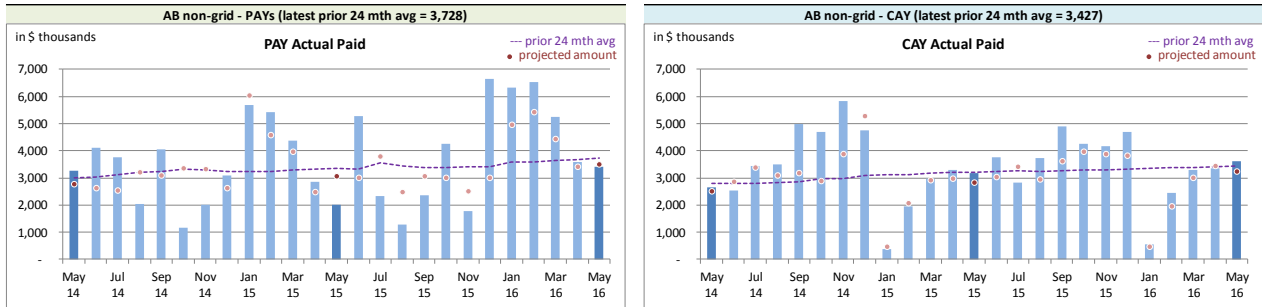
- to offset actual **recorded** activity (through loss ratio matching);
- the annual switchover as a current accident year becomes a prior accident year (occurs in January); and
- when a new valuation is implemented, where the valuation resulted in changes to the selection of prior accident years’ ultimate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

⁷Our 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.

2.1.c AvsP: Paid Indemnity & Allowed Claims Expense

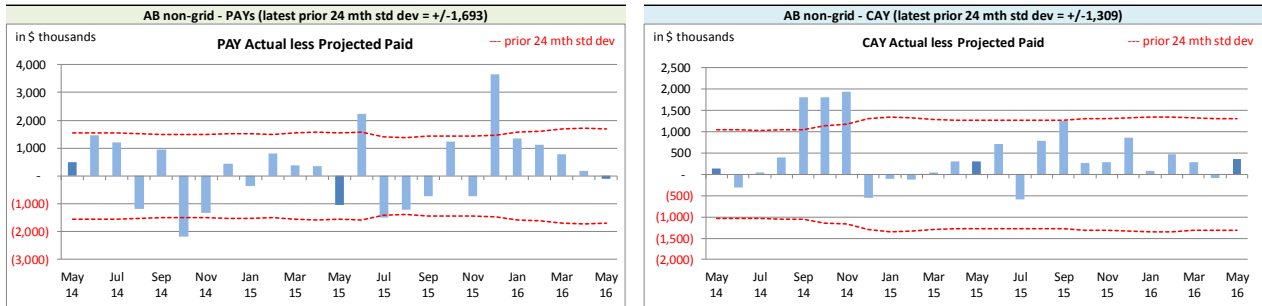
The charts immediately below show actual **paid** activity in each of the most recent 25 calendar months, along with a “prior 24-month average” to show how each month’s actual compares with the average amount of the preceding 24 calendar months. The prior 24-month average payment for both the prior accident years and current accident year appear to be increasing but as of this point, we have not investigated to confirm or identify any particular cause, although a review of the ratios used for the projections is not showing a similar trend, suggesting that the increases are volume related.

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



The charts immediately below show the actual less projected **paid** variances for the last 25 calendar months, along with bands for the “prior 24-month standard deviations” 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)	3,728	3,427	
std dev	1,693	1,309	
A-P <> std dev	4	3	
% <> std dev	16.0%	12.0%	
norm <> std dev	31.7%	31.7%	

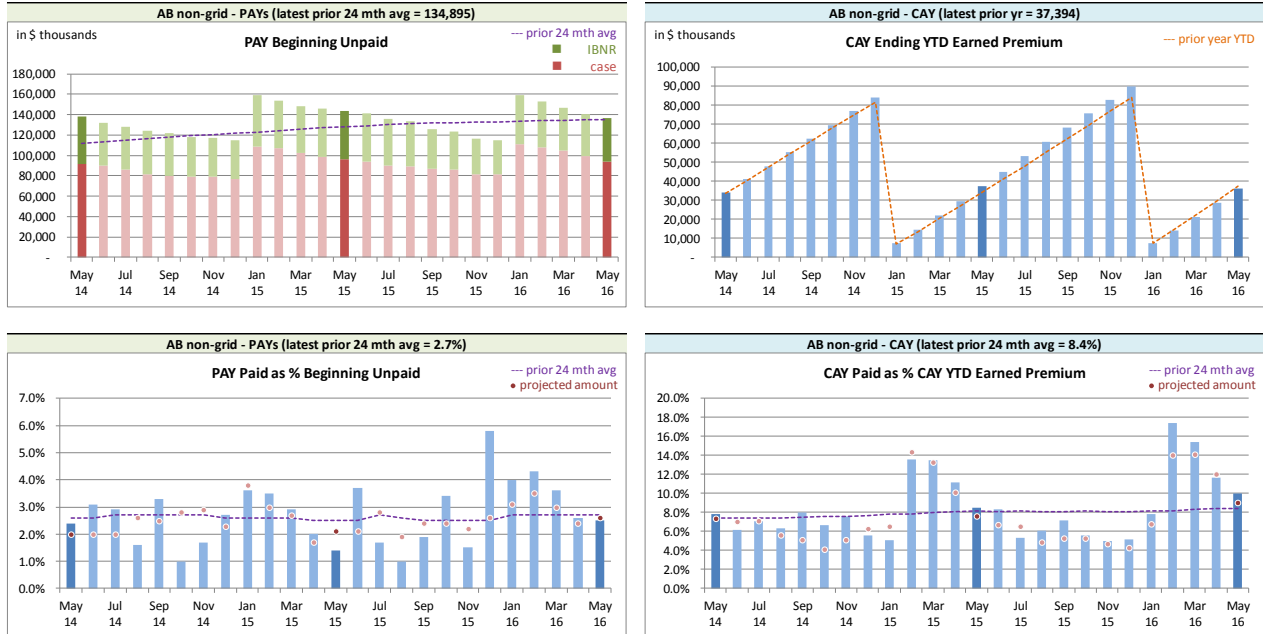
With respect to **paid** indemnity & allowed claims expense, the prior accident years’ variances (left chart above) do not appear to have bias and the magnitude of the variances do not appear to be an issue. With 16% of prior accident years (PAYs) **paid** variances over the last 25 calendar months falling outside of one

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

With only 12% 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).

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

Alberta non-Grid RSP Levels that influence⁸ 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 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 IBNR⁹, 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

⁸Our 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.

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

projections and actuals were based on the applicable valuation. The table immediately below summarizes variances in provisions included in the May 2016 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

Accident Year	IBNR		actuarial present value adjustments				IBNR + actuarial present value adjustments	
	Actual	Actual less Projected	Discount Amount		Provisions for Adverse Deviations		Actual	Actual less Projected
			Actual	Actual less Projected	Actual	Actual less Projected		
Prior	14,645	(3,232)	(1,058)	141	6,883	(292)	20,470	(3,383)
2014	10,476	763	(707)	22	4,355	261	14,124	1,046
2015	16,167	1,941	(916)	32	5,180	217	20,431	2,190
2016	1,809	(5,915)	(446)	53	2,561	(74)	3,924	(5,936)
TOTAL	43,097	(6,443)	(3,127)	248	18,979	112	58,949	(6,083)

The IBNR provision is \$6.4 million lower than projected from last month, counterbalancing the recorded claims activity and adjusting for the earned premium variance impacts indicated in section 2.1, and due to the valuation implementation.

Exhibit G shows the accident 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 May 2016 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 value) before actuarial present value adjustments, and in a premium deficiency position (shown as a positive value) after actuarial present value adjustments. Actuarial present value adjustments increase the expected future policy obligations (costs) associated with the unearned premium and cause the write down of the asset value and the creation of the liability. The variances indicated are due to the unearned premium variance and due to the 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:	(1,752)	(64)	3,482	(87)	1,730	(151)
balance as % unearned premium:	(3.8%)	(0.1%)	7.6%	(0.3%)	3.8%	(0.4%)
actual unearned premium:	45,633					
less projected:	386					

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 loss¹⁰ 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 expenses¹¹, 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 96.2% rather than 95.7% (the valuation ultimate ratio for accident year 2016), 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).

¹¹Allowed 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	(460)	(1.3%)	(1,508)	(4.2%)	(1,968)	(5.5%)	799	4.2%
CAY	34,515	96.2%	2,115	5.9%	36,630	102.1%	7,563	(0.1%)
TOTAL	34,055	94.9%	607	1.7%	34,662	96.6%	8,362	4.1%

("% EP" based on 2016 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 the 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 due to the valuation implementation.

For the current accident year, 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

		Amounts in \$000s				
IBNR + M/S actuarial present value adjustments	Accident Year	Actual Apr. 2016	Actual May. 2016	Projected Jun. 2016	Projected Jul. 2016	Projected Dec. 2016
	2004	42	42	41	40	35
	2005	10	62	61	59	52
	2006	337	77	75	73	67
	2007	1,268	521	510	499	454
	2008	789	624	612	599	548
	2009	1,093	911	892	875	796
	2010	1,514	1,484	1,452	1,425	1,298
discount rate	2011	3,214	1,854	1,812	1,777	1,616
0.68%	2012	5,494	5,222	5,136	5,033	4,549
	2013	10,574	9,673	9,515	9,360	8,355
interest rate margin	2014	13,344	14,124	13,878	13,633	12,166
25 basis pts	2015	18,850	20,431	19,771	19,217	15,782
	2016	6,732	3,924	6,621	8,909	22,197
	TOTAL	63,261	58,949	60,376	61,499	67,915
	Change		(4,312)	1,427	1,123	

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 Apr. 2016	Actual May. 2016	Projected Jun. 2016	Projected Jul. 2016	Projected Dec. 2016
	349.1%	2004	36	36	35	34	29
	94.5%	2005	(62)	(15)	(15)	(15)	(15)
	86.3%	2006	237	3	3	3	3
	102.1%	2007	1,087	396	388	380	344
	102.0%	2008	607	454	445	436	399
	94.6%	2009	795	631	618	606	553
	84.9%	2010	1,089	1,082	1,060	1,039	949
	83.5%	2011	2,429	1,129	1,106	1,084	990
	102.6%	2012	3,997	3,787	3,730	3,655	3,303
	99.8%	2013	8,023	7,142	7,035	6,929	6,135
	111.5%	2014	9,911	10,476	10,319	10,164	8,999
	100.9%	2015	14,666	16,167	15,763	15,369	12,375
	95.7%	2016	4,996	1,809	4,095	5,901	17,195
		TOTAL	47,811	43,097	44,582	45,585	51,259
		Change		(4,714)	1,485	1,003	

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

EXHIBIT C

Premium Liabilities

TABLE EXHIBIT C

	Amounts in \$000s				
	Actual Apr. 2016	Actual May. 2016	Projected Jun. 2016	Projected Jul. 2016	Projected Dec. 2016
Premium Liabilities					
(1) unearned premium (UP)	43,999	45,633	48,192	49,994	54,330
FOR MEMBER SHARING					
(2) expected future costs ratio {% of (1)}	104.1%	103.8%	103.8%	103.8%	103.6%
(3) expected future costs {(1) x (2)}	45,800	47,363	50,012	51,871	56,295
(4) premium deficiency / (deferred policy acquisition cost)	1,801	1,730	1,820	1,877	1,965
Excluding Actuarial Present Value Adjustments					
(5) expected future costs ratio {% of (1)}	96.2%	96.2%	96.1%	96.1%	96.0%
(6) expected future costs {(1) x (5)}	42,333	43,881	46,335	48,058	52,157
(7) premium deficiency / (deferred policy acquisition cost)	(1,666)	(1,752)	(1,857)	(1,936)	(2,173)

EXHIBIT D

Projected Year-end Policy Liabilities

The table below presents the projected policy liabilities as at December 31, 2016, broken down by component.

Alberta non-Grid ending 2016	Projected Balances as at Dec. 31, 2016 (\$000s)							
	nominal values			actuarial present value adjustments (apvs)				TOTAL
	Acc Yr	Case	IBNR	Total Unpaid	discount	investment PfAD	development PfAD	
2004	29	29	58	-	-	6	6	64
2005	747	(15)	732	(8)	3	72	67	799
2006	697	3	700	(8)	3	69	64	764
2007	853	344	1,197	(14)	5	119	110	1,307
2008	1,258	399	1,657	(25)	10	164	149	1,806
2009	2,159	553	2,712	(38)	14	267	243	2,955
2010	2,989	949	3,938	(59)	20	388	349	4,287
2011	6,180	990	7,170	(122)	43	705	626	7,796
2012	10,964	3,303	14,267	(243)	86	1,403	1,246	15,513
2013	14,128	6,135	20,263	(405)	162	2,463	2,220	22,483
2014	20,222	8,999	29,221	(614)	234	3,547	3,167	32,388
2015	19,435	12,375	31,810	(732)	254	3,885	3,407	35,217
PAYs (sub-total):	79,661	34,064	113,725	(2,268)	834	13,088	11,654	125,379
CAY (2016)	33,034	17,195	50,229	(1,055)	402	5,655	5,002	55,231
claims liabilities:	112,695	51,259	163,954	(3,323)	1,236	18,743	16,656	180,610
	Unearned Premium	Premium Deficiency / (DPAC)	Total Provision	discount	investment PfAD	development PfAD	Total apvs	TOTAL*
premium liabilities:	54,330	(2,173)	52,157	(726)	259	4,605	4,138	56,295
*Total may not be sum of parts, as apvs apply to future costs within UPR								
policy liabilities:			216,111	(4,049)	1,495	23,348	20,794	236,905

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, 2016 from the valuation), followed by the selected discount rate and the associated margin for investment income.

Selected Claims Development MfADs (Mar. 31, 2016)				
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%	5.0%	10.0%
2009	10.0%	10.0%	5.1%	10.0%
2010	10.0%	10.0%	9.7%	10.0%
2011	10.0%	10.0%	9.9%	10.0%
2012	10.0%	10.0%	10.0%	10.0%
2013	12.5%	10.0%	12.5%	12.4%
2014	12.5%	10.0%	12.3%	12.4%
2015	12.4%	10.0%	12.5%	12.5%
2016	12.1%	10.0%	7.3%	11.5%
2017	12.5%	10.0%	12.5%	12.5%
prem liab	11.7%	10.0%	5.2%	9.0%

discount rate: 0.68%
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, 2016 from the latest valuation date (projections in exhibits A to D are to Dec. 31, 2016 and based on more up-to-date information). We have included both the current valuation selection (0.68%), the prior valuation assumption (0.73%) and the prior fiscal year end valuation assumption (0.78%) 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, 2016 projected Unpaid								
AY	0.18%	0.68%	1.18%	1.68%	2.18%	2.68%	0.73%	0.78%
2004	-	-	-	-	-	-	-	-
2005	555	551	547	542	538	534	551	550
2006	660	655	649	644	639	634	654	654
2007	1,037	1,029	1,020	1,011	1,002	993	1,028	1,027
2008	1,805	1,788	1,769	1,750	1,732	1,714	1,786	1,784
2009	2,599	2,575	2,549	2,523	2,497	2,472	2,573	2,570
2010	4,057	4,017	3,973	3,930	3,889	3,848	4,013	4,009
2011	7,434	7,354	7,264	7,177	7,093	7,010	7,345	7,336
2012	17,524	17,330	17,108	16,895	16,690	16,487	17,305	17,284
2013	21,822	21,544	21,234	20,936	20,646	20,362	21,512	21,483
2014	32,997	32,549	32,047	31,564	31,091	30,637	32,495	32,448
2015	39,325	38,743	38,095	37,468	36,865	36,277	38,677	38,613
2016	53,515	52,800	52,005	51,236	50,494	49,775	52,719	52,638
Total	183,330	180,935	178,260	175,676	173,176	170,743	180,658	180,396
	curr - 50 bp	curr val assumption	curr + 50bp	curr + 100bp	curr + 150bp	curr + 200bp	prior val assumption	prior fyr end assumption

Dollar Impact Relative to Valuation Assumption								
AY	0.18%	0.68%	1.18%	1.68%	2.18%	2.68%	0.73%	0.78%
Total	2,395	-	(2,675)	(5,259)	(7,759)	(10,192)	(277)	(539)
	curr - 50 bp	curr val assumption	curr + 50bp	curr + 100bp	curr + 150bp	curr + 200bp	prior val assumption	prior fyr end assumption

Percentage Impact Relative to Valuation Assumption								
AY	0.18%	0.68%	1.18%	1.68%	2.18%	2.68%	0.73%	0.78%
2004	-	-	-	-	-	-	-	-
2005	0.7%	-	(0.7%)	(1.6%)	(2.4%)	(3.1%)	-	(0.2%)
2006	0.8%	-	(0.9%)	(1.7%)	(2.4%)	(3.2%)	(0.2%)	(0.2%)
2007	0.8%	-	(0.9%)	(1.7%)	(2.6%)	(3.5%)	(0.1%)	(0.2%)
2008	1.0%	-	(1.1%)	(2.1%)	(3.1%)	(4.1%)	(0.1%)	(0.2%)
2009	0.9%	-	(1.0%)	(2.0%)	(3.0%)	(4.0%)	(0.1%)	(0.2%)
2010	1.0%	-	(1.1%)	(2.2%)	(3.2%)	(4.2%)	(0.1%)	(0.2%)
2011	1.1%	-	(1.2%)	(2.4%)	(3.5%)	(4.7%)	(0.1%)	(0.2%)
2012	1.1%	-	(1.3%)	(2.5%)	(3.7%)	(4.9%)	(0.1%)	(0.3%)
2013	1.3%	-	(1.4%)	(2.8%)	(4.2%)	(5.5%)	(0.1%)	(0.3%)
2014	1.4%	-	(1.5%)	(3.0%)	(4.5%)	(5.9%)	(0.2%)	(0.3%)
2015	1.5%	-	(1.7%)	(3.3%)	(4.8%)	(6.4%)	(0.2%)	(0.3%)
2016	1.4%	-	(1.5%)	(3.0%)	(4.4%)	(5.7%)	(0.2%)	(0.3%)
Total	1.3%	-	(1.5%)	(2.9%)	(4.3%)	(5.6%)	(0.2%)	(0.3%)
	curr - 50 bp	curr val assumption	curr + 50bp	curr + 100bp	curr + 150bp	curr + 200bp	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 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	-	-	-	-	-	42
2005	10	(1)	(3)	56	52	520.0%	62
2006	337	(2)	(16)	(242)	(260)	(77.2%)	77
2007	1,268	(26)	(32)	(689)	(747)	(58.9%)	521
2008	789	(15)	15	(165)	(165)	(20.9%)	624
2009	1,093	(22)	(7)	(153)	(182)	(16.7%)	911
2010	1,514	(29)	73	(74)	(30)	(2.0%)	1,484
2011	3,214	(65)	(452)	(843)	(1,360)	(42.3%)	1,854
2012	5,494	(111)	(869)	708	(272)	(5.0%)	5,222
2013	10,574	(211)	(290)	(400)	(901)	(8.5%)	9,673
2014	13,344	(266)	(1,167)	2,213	780	5.8%	14,124
2015	18,850	(609)	1,445	745	1,581	8.4%	20,431
2016	6,732	3,128	(6,002)	66	(2,808)	(41.7%)	3,924
Grand Total	63,261	1,771	(7,305)	1,222	(4,312)	(6.8%)	58,949

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 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	-	-	-	-	-	36
2005	(62)	-	(3)	50	47	(75.8%)	(15)
2006	237	-	(12)	(222)	(234)	(98.7%)	3
2007	1,087	(22)	(35)	(634)	(691)	(63.6%)	396
2008	607	(12)	12	(153)	(153)	(25.2%)	454
2009	795	(16)	(4)	(144)	(164)	(20.6%)	631
2010	1,089	(22)	88	(73)	(7)	(0.6%)	1,082
2011	2,429	(49)	(466)	(785)	(1,300)	(53.5%)	1,129
2012	3,997	(80)	(748)	618	(210)	(5.3%)	3,787
2013	8,023	(160)	(315)	(406)	(881)	(11.0%)	7,142
2014	9,911	(198)	(1,170)	1,933	565	5.7%	10,476
2015	14,666	(440)	1,311	630	1,501	10.2%	16,167
2016	4,996	2,728	(5,951)	36	(3,187)	(63.8%)	1,809
Grand Total	47,811	1,729	(7,293)	850	(4,714)	(9.9%)	43,097