



ALBERTA NON-GRID RISK SHARING POOL

MARCH 2017 OPERATIONAL REPORT

ACTUARIAL HIGHLIGHTS

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ACTUARIAL HIGHLIGHTS
RSP ALBERTA NON-GRID
OPERATIONAL REPORT
MARCH 2017

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1 Summary

1.1 Valuation Schedule (Fiscal Year 2017)

The March 2017 Operational Report incorporates the results of an updated valuation (as at December 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 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		May 2017	update valuation (roll forward):
Jun. 30, 2017		Aug. 2017	update valuation:
Sep. 30, 2017		Oct. 2017	update valuation (roll forward):

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 December 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 December 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	(442)	365	(77)	(2,467)	-	(2,544)
CAY	1,218	159	1,377	(306)	-	1,071
Prem Def	2,412	158	2,570	(588)	-	1,982
TOTAL	3,188	682	3,870	(3,361)	-	509

As indicated in the table above, the incorporation of the new valuation had an estimated **\$0.5 million unfavourable impact** on the month's net result from operations, adding an estimated 2.1 points (see table immediately below) to the **year-to-date Combined Operating Ratio** to end at **128.4%**.

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

AB Non-Grid	ytd EP 24,016 (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	(1.8%)	1.5%	(0.3%)	(10.3%)	-	(10.6%)
CAY	5.1%	0.7%	5.7%	(1.3%)	-	4.5%
Prem Def	10.0%	0.7%	10.7%	(2.4%)	-	8.3%
TOTAL	13.3%	2.8%	16.1%	(14.0%)	-	2.1%

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 \$3.2 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 \$0.4 million favourable variance, which is attributed to recorded activity process variance. This favourable change is 0.3% of the prior accident years' nominal unpaid balance of \$155.1 million determined at the end of last month (February 2017). 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 **2017** (up 5.0 points from 98.3% to **103.3%**) and **2018** (up 6.4 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 99.3% to **105.7%**).

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 an unfavourable change of \$0.7 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 December 2016. Column [4] accounts for the change in the **discount rate** selected (increased 53 basis points to **1.08%**), indicating a favourable impact of \$3.4 million. The impact *related only to claims liabilities* (i.e. PAYs plus CAY) was \$2.8 million at March 2017 (projected \$3.1 million impact at December 31, 2017) – this compares to the \$2.9 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

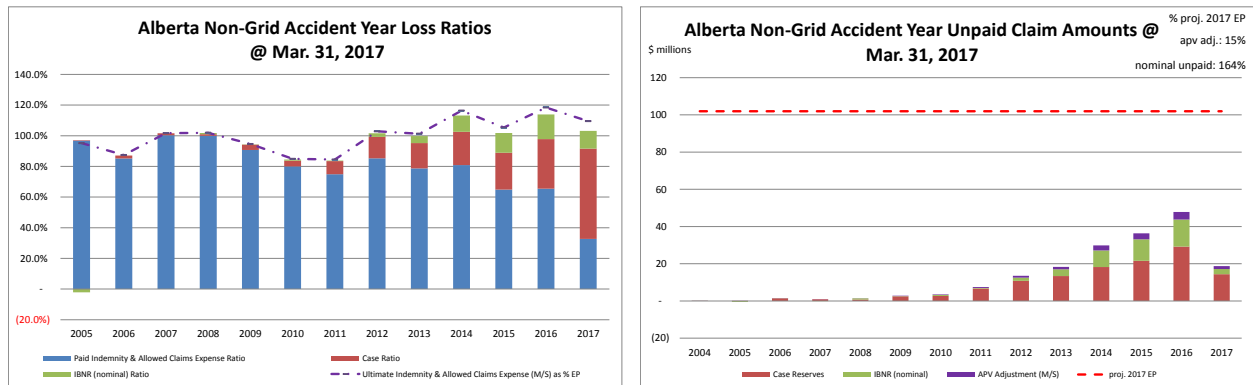
Consideration and assessment of potential impacts of legal decisions and changes in legislation / regulation constitutes a regular part of the valuation process. Descriptions of some of the more recent changes are provided below (there have been no changes in these descriptions since last month’s Highlights, other than updating that the most recent valuation is December 31, 2016).

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 most recent valuation (December 31, 2016) 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 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.

The current actuarial present value adjustments balance (\$15.1 million – see table immediately below) represents 15% of the earned premium projected for the full year 2017 (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 periods.

claim liabilities (\$000s)	amt	%
case	122,704	67.4%
ibnr	44,341	24.3%
M/S apv adjust.	15,128	8.3%
M/S total	182,173	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 39% of the IBNR balance relates to accident years 2016 and 2017 (see Exhibit B). Approximately 83% 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 at the top of the next page summarize the premium liabilities and the total policy

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.

liabilities.

premium liabilities (\$000s)			policy liabilities (\$000s)		
	amt	%		amt	%
unearned prem	47,436	89.9%	claim	167,045	71.1%
prem def/(dpac)	1,857	3.5%	premium	49,293	21.0%
M/S apv adjust.	3,484	6.6%	M/S apv adjust.	18,612	7.9%
M/S total	52,777	100.0%	M/S total	234,950	100.0%

2 Activity During the Month of March 2017

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	(0)	(0)	2,005	473	(2,542)	(1,273)	(537)	(800)
2015	(1)	(1)	413	(755)	236	1,284	649	529
2016	(81)	(81)	2,325	518	(2,313)	(778)	12	(260)
2017	8,400	45	4,631	974	4,910	1,041	9,541	2,015
TOTAL	8,318	(37)	9,374	1,209	290	274	9,664	1,483

(Recorded transaction amounts exclude IBNR & other actuarial provisions)

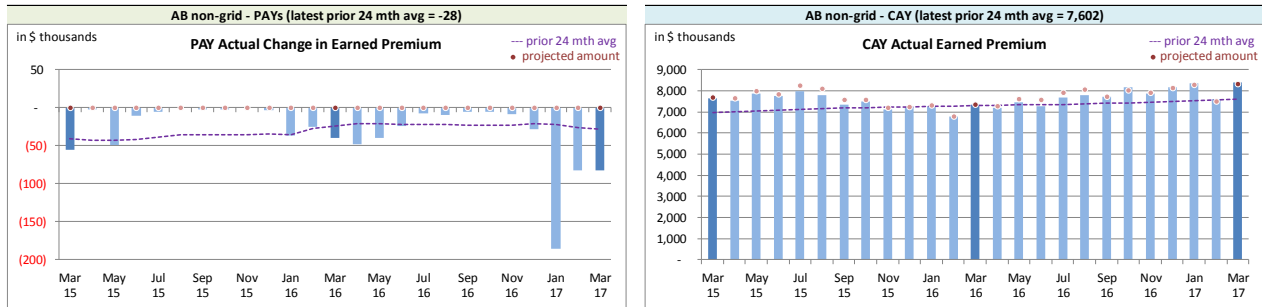
Claims transaction activity is generally volatile and changes from one month to the next are anticipated due to this natural “process variance”. Each month, the projection variances are reviewed for signs of projection bias and to identify potential ways to reduce the level of the variance. Commentary 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.

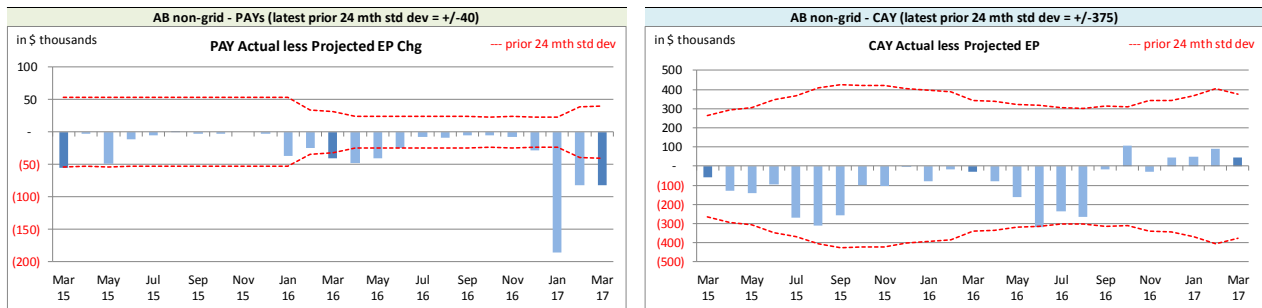
⁴There may be rounding differences in values in this document compared with the associated Bulletin and/or Operational Report.

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)	(28)	7,602	
std dev	40	375	
A-P <> std dev	8	1	
% <> std dev	32.0%	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' bias⁶, with actuals generally lower than projected. However, the magnitude is not high relative to monthly

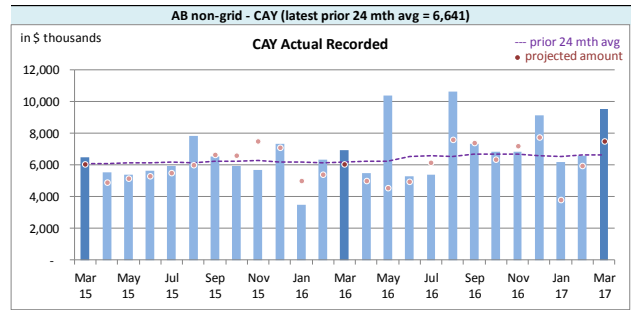
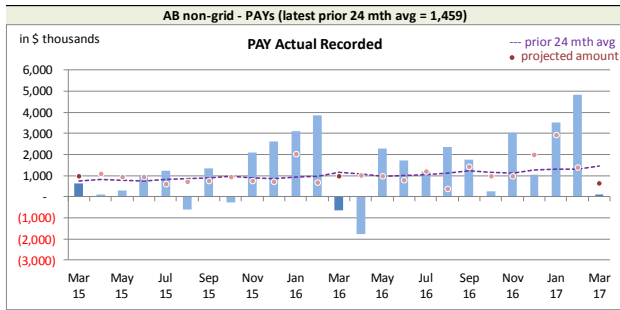
premium. In addition to the prior accident years' bias, the CAY has also shown bias, with actuals being generally lower than projected. Starting with the August 2016 projections, we have modified our projections processes in an attempt to account for CAY bias. Over time, we may consider other projection approaches to narrow monthly variance levels further, but it is not currently deemed a priority.

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.

2.1.b AvsP: Recorded Indemnity & Allowed Claims Expense

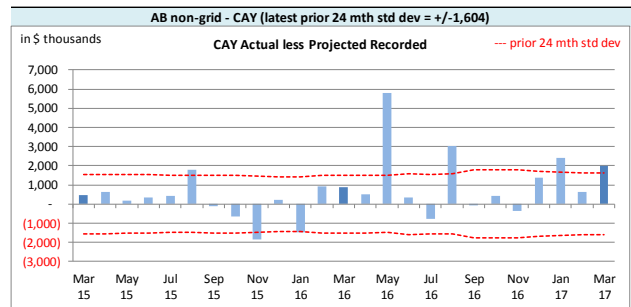
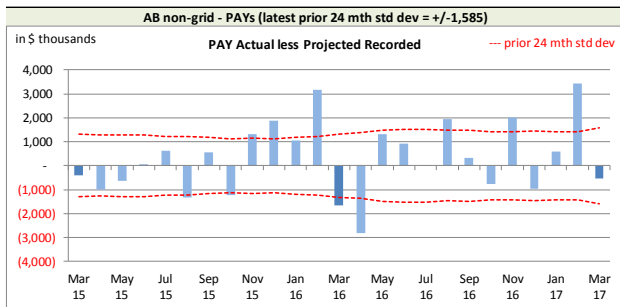
Actual **recorded** activity (**paid** and case reserve changes) over the last 25-month period is shown in the charts immediately below, including the “prior 24-month average” level.

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	
Mthly Avg Recorded (prior 24 mths)	1,459	6,641
std dev	1,585	1,604
A-P <> std dev	10	7
% <> std dev	40.0%	28.0%
norm <> std dev	31.7%	31.7%

With respect to **recorded** indemnity & allowed claims expense activity, 40% 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. We are

looking at options in an attempt to address this.

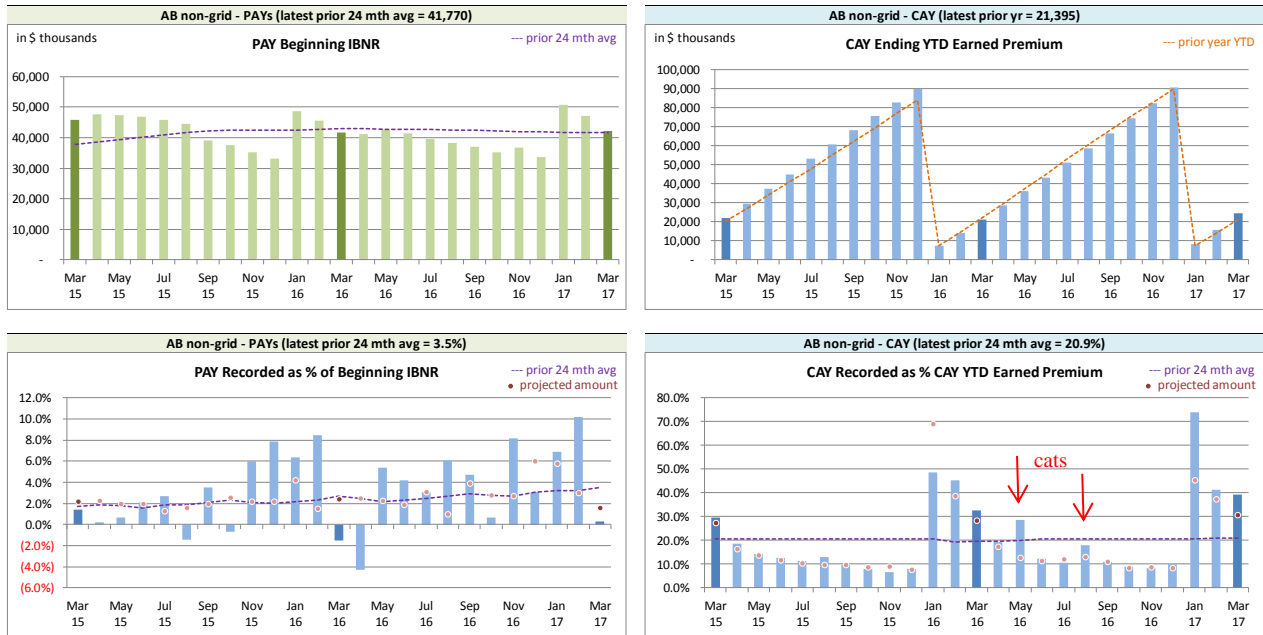
The current accident year (CAY) **recorded** variances (right chart above) have been greater than one standard deviation 28% of the time, suggesting that the projection process is little better than simply projecting the most recent prior 24-month average.

The CAYs **recorded** variance for the current month was outside the one standard deviation band. The activity was reviewed and confirmed, with the variance attributed to process variance.

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

We have included, for reference, additional charts immediately below related to levels influencing **recorded** activity. The lower right chart (CAY month recorded activity to year-to-date earned premium ratio) shows the influence of catastrophic events during 2016 (Fort McMurray in May and hail storms in August).

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:

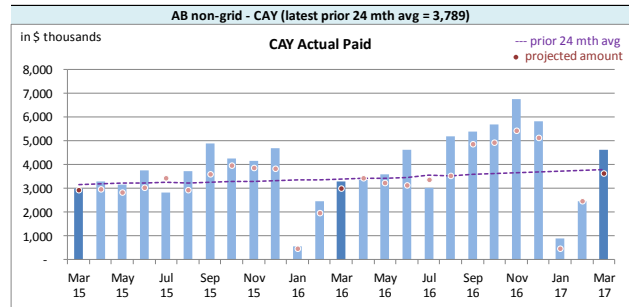
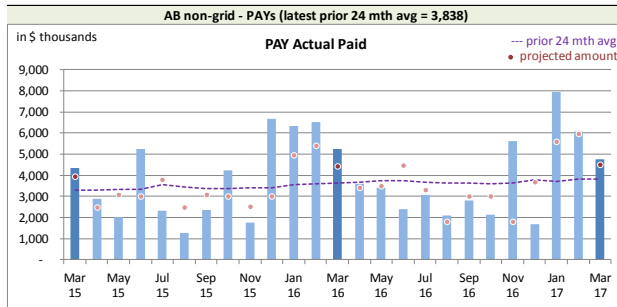
- to offset actual **recorded** activity (through loss ratio matching);
- the annual switchover as a current accident year becomes a prior accident year (occurs in January); and
- when a new valuation is implemented, where the valuation resulted in changes to the selection of prior accident years’ ultimate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

2.1.c AvsP: Paid Indemnity & Allowed Claims Expense

The charts at the top of the next page 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.

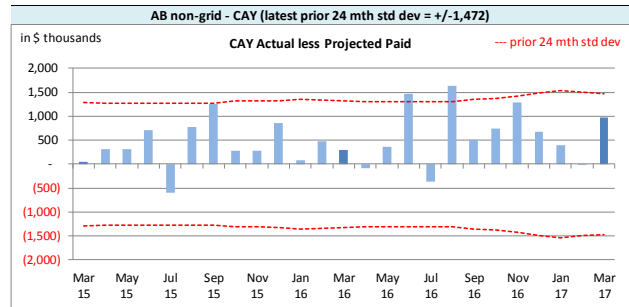
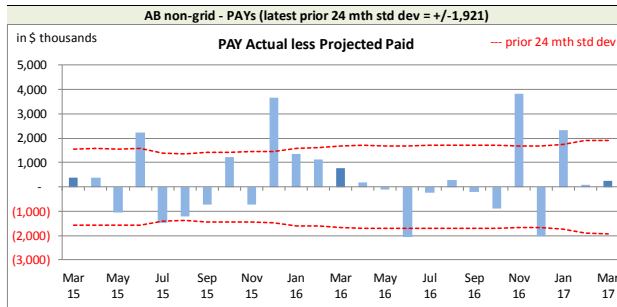
⁷Our recorded activity projections for the prior accident years are based on selected ratios of recorded activity to beginning unpaid balances, whereas the current accident year projections are based on selected ratios of year-to-date IBNR to year-to-date selected ultimate (i.e. selected LR x earned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

*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)		3,838	3,789
std dev		1,921	1,472
A-P <> std dev		7	2
% <> std dev		28.0%	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 28% 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 little 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 at the top of the next page 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 projections and actuals were based on the applicable valuation. The table at the top of the next page summarizes variances in provisions included in the March 2017 Operational Report and the associated one-month projections from last month’s Report.

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”.

Alberta Non-Grid RSP Actual vs Projected Summary: IBNR and APV Amounts (\$ thousands)

Table 02		actuarial present value adjustments						
Accident Year	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	15,441	(821)	(1,955)	(905)	8,279	(374)	21,765	(2,100)
2015	11,554	(349)	(1,027)	(512)	4,213	28	14,740	(833)
2016	14,513	1,164	(1,487)	(707)	5,588	345	18,614	802
2017	2,833	(753)	(550)	(280)	2,067	36	4,350	(997)
TOTAL	44,341	(759)	(5,019)	(2,404)	20,147	35	59,469	(3,128)

The IBNR provision is \$0.8 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 below summarizes the variances in the provisions for premium deficiency liability / (deferred policy acquisition cost asset) included in the March 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. Variances are mainly driven by 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:	1,857	2,404	3,484	(363)	5,341	2,041
balance as % unearned premium:	3.9%	5.1%	7.3%	(0.9%)	11.3%	4.2%
actual unearned premium:	47,436					
less projected:	824					

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 below 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 104.8% rather than 103.3% (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.)

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	(836)	(3.5%)	(3,947)	(16.4%)	(4,783)	(19.9%)	(3,139)	(9.4%)
CAY	25,168	104.8%	1,517	6.3%	26,685	111.1%	9,708	3.0%
TOTAL	24,332	101.3%	(2,430)	(10.1%)	21,902	91.2%	6,569	(6.5%)

(“% 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 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 (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

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.

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 Feb. 2017	Actual Mar. 2017	Projected Apr. 2017	Projected May. 2017	Projected Dec. 2017
	2004	42	42	42	42	42
	2005	(536)	(480)	(470)	(461)	(400)
	2006	162	145	143	141	124
	2007	82	70	69	67	59
	2008	487	735	721	707	612
	2009	433	322	316	310	269
	2010	912	841	829	812	694
	2011	638	788	775	759	653
discount rate	2012	3,839	2,724	2,697	2,638	2,260
1.08%	2013	6,155	4,980	4,955	4,855	4,152
	2014	12,071	11,598	11,500	11,225	9,453
interest rate margin	2015	15,826	14,740	14,618	14,211	11,286
25 basis pts	2016	18,270	18,614	18,459	18,089	13,366
	2017	4,183	4,350	6,629	7,597	27,939
	TOTAL	62,564	59,469	61,283	60,992	70,509
	Change		(3,095)	1,814	(291)	

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 Feb. 2017	Actual Mar. 2017	Projected Apr. 2017	Projected May. 2017	Projected Dec. 2017
	349.1%	2004	36	36	36	36	36
	95.0%	2005	(586)	(530)	(519)	(509)	(442)
	87.2%	2006	24	21	21	21	21
	101.6%	2007	(3)	(5)	(5)	(5)	(5)
	101.8%	2008	357	623	611	599	519
	94.3%	2009	186	111	109	107	93
	84.5%	2010	602	582	576	564	480
	83.8%	2011	15	256	253	248	210
	101.6%	2012	2,609	1,753	1,744	1,709	1,453
	99.7%	2013	4,473	3,698	3,698	3,624	3,083
	113.2%	2014	8,812	8,896	8,852	8,631	7,190
	101.8%	2015	12,023	11,554	11,496	11,151	8,685
	113.9%	2016	13,621	14,513	14,440	14,151	10,135
	103.3%	2017	2,898	2,833	4,741	5,279	22,717
		TOTAL	45,067	44,341	46,053	45,606	54,175
		Change		(726)	1,712	(447)	

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

EXHIBIT C

Premium Liabilities

TABLE EXHIBIT C

	Amounts in \$000s				
	Actual Feb. 2017	Actual Mar. 2017	Projected Apr. 2017	Projected May. 2017	Projected Dec. 2017
Premium Liabilities					
(1) unearned premium (UP)	46,937	47,436	49,244	50,440	51,389
FOR MEMBER SHARING					
(2) expected future costs ratio {% of (1)}	107.0%	111.3%	111.4%	111.6%	113.7%
(3) expected future costs {(1) x (2)}	50,244	52,777	54,856	56,272	58,415
(4) premium deficiency / (deferred policy acquisition cost)	3,307	5,341	5,612	5,832	7,026
Excluding Actuarial Present Value Adjustments					
(5) expected future costs ratio {% of (1)}	98.8%	103.9%	104.0%	104.2%	106.2%
(6) expected future costs {(1) x (5)}	46,370	49,293	51,234	52,557	54,556
(7) premium deficiency / (deferred policy acquisition cost)	(567)	1,857	1,990	2,117	3,167

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 ending 2017	Projected Balances as at Dec. 31, 2017 (\$000s)							
	nominal values			actuarial present value adjustments (apvs)				
Acc Yr	Case	IBNR	Total Unpaid	discount	investment PfAD	development PfAD	Total apvs	TOTAL
2004	26	36	62	-	-	6	6	68
2005	69	(442)	(373)	7	(1)	36	42	(331)
2006	1,192	21	1,213	(21)	5	119	103	1,316
2007	751	(5)	746	(13)	3	74	64	810
2008	633	519	1,152	(25)	6	112	93	1,245
2009	2,085	93	2,178	(48)	11	213	176	2,354
2010	2,264	480	2,744	(69)	16	267	214	2,958
2011	5,601	210	5,811	(157)	35	565	443	6,254
2012	8,965	1,453	10,418	(271)	63	1,015	807	11,225
2013	11,139	3,083	14,222	(398)	85	1,382	1,069	15,291
2014	15,559	7,190	22,749	(637)	136	2,764	2,263	25,012
2015	18,368	8,685	27,053	(839)	189	3,251	2,601	29,654
2016	24,318	10,135	34,453	(1,171)	241	4,161	3,231	37,684
PAYs (sub-total):	90,970	31,458	122,428	(3,642)	789	13,965	11,112	133,540
CAY (2017)	36,453	22,717	59,170	(1,893)	414	6,701	5,222	64,392
claims liabilities:	127,423	54,175	181,598	(5,535)	1,203	20,666	16,334	197,932
	Unearned Premium	Premium Deficiency / (DPAC)	Total Provision	discount	investment PfAD	development PfAD	Total apvs	TOTAL*
premium liabilities:	51,389	3,167	54,556	(1,195)	272	4,782	3,859	58,415
*Total may not be sum of parts, as apvs apply to future costs within UPR								
policy liabilities:			236,154	(6,730)	1,475	25,448	20,193	256,347

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 (Dec. 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%	10.0%	10.0%
2009	10.0%	10.0%	10.0%	10.0%
2010	10.0%	10.0%	9.0%	10.0%
2011	10.0%	10.0%	9.9%	10.0%
2012	10.0%	10.0%	9.0%	10.0%
2013	10.0%	10.0%	10.0%	10.0%
2014	12.5%	10.0%	12.5%	12.5%
2015	12.5%	10.0%	11.6%	12.4%
2016	12.5%	10.0%	12.5%	12.5%
2017	12.1%	10.0%	8.2%	11.7%
prem liab	11.8%	10.0%	5.1%	9.0%

discount rate:	1.08%
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 both the current valuation selection (1.08%), the prior valuation assumption (0.55%) 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	0.58%	1.08%	1.58%	2.08%	2.58%	3.08%	0.55%	0.55%
2004	-	-	-	-	-	-	-	-
2005	481	477	473	469	466	462	481	481
2006	882	874	867	860	854	847	882	882
2007	555	551	546	542	538	533	556	556
2008	1,144	1,132	1,120	1,109	1,098	1,087	1,144	1,144
2009	2,191	2,169	2,147	2,125	2,104	2,084	2,192	2,192
2010	2,428	2,400	2,372	2,346	2,320	2,295	2,429	2,429
2011	5,226	5,160	5,096	5,034	4,974	4,914	5,230	5,230
2012	9,856	9,735	9,617	9,503	9,392	9,283	9,862	9,862
2013	14,863	14,670	14,483	14,303	14,126	13,954	14,874	14,874
2014	24,689	24,364	24,052	23,746	23,452	23,161	24,708	24,708
2016	40,567	39,919	39,292	38,683	38,094	37,518	40,605	40,605
2017	61,809	60,880	59,975	59,112	58,265	57,452	61,863	61,863
Total	196,626	193,804	191,064	188,424	185,852	183,350	196,788	196,788
	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	0.58%	1.08%	1.58%	2.08%	2.58%	3.08%	0.55%	0.55%
Total	2,822	-	(2,740)	(5,380)	(7,952)	(10,454)	2,984	2,984
	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	0.58%	1.08%	1.58%	2.08%	2.58%	3.08%	0.55%	0.55%
2004	-	-	-	-	-	-	-	-
2005	0.8%	-	(0.8%)	(1.7%)	(2.3%)	(3.1%)	0.8%	0.8%
2006	0.9%	-	(0.8%)	(1.6%)	(2.3%)	(3.1%)	0.9%	0.9%
2007	0.7%	-	(0.9%)	(1.6%)	(2.4%)	(3.3%)	0.9%	0.9%
2008	1.1%	-	(1.1%)	(2.0%)	(3.0%)	(4.0%)	1.1%	1.1%
2009	1.0%	-	(1.0%)	(2.0%)	(3.0%)	(3.9%)	1.1%	1.1%
2010	1.2%	-	(1.2%)	(2.3%)	(3.3%)	(4.4%)	1.2%	1.2%
2011	1.3%	-	(1.2%)	(2.4%)	(3.6%)	(4.8%)	1.4%	1.4%
2012	1.2%	-	(1.2%)	(2.4%)	(3.5%)	(4.6%)	1.3%	1.3%
2013	1.3%	-	(1.3%)	(2.5%)	(3.7%)	(4.9%)	1.4%	1.4%
2014	1.3%	-	(1.3%)	(2.5%)	(3.7%)	(4.9%)	1.4%	1.4%
2016	1.6%	-	(1.6%)	(3.1%)	(4.6%)	(6.0%)	1.7%	1.7%
2017	1.5%	-	(1.5%)	(2.9%)	(4.3%)	(5.6%)	1.6%	1.6%
Total	1.5%	-	(1.4%)	(2.8%)	(4.1%)	(5.4%)	1.5%	1.5%
	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 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
	Sum of Prior Month Actual Amount							
2004	42		-	-	-	-	-	42
2005	(536)		11	(5)	50	56	(10.4%)	(480)
2006	162		(3)	(1)	(13)	(17)	(10.5%)	145
2007	82		(2)	(1)	(9)	(12)	(14.6%)	70
2008	487		(10)	276	(18)	248	50.9%	735
2009	433		(10)	6	(107)	(111)	(25.6%)	322
2010	912		(18)	69	(122)	(71)	(7.8%)	841
2011	638		(13)	(244)	407	150	23.5%	788
2012	3,839		(77)	56	(1,094)	(1,115)	(29.0%)	2,724
2013	6,155		(145)	207	(1,237)	(1,175)	(19.1%)	4,980
2014	12,071		(153)	385	(705)	(473)	(3.9%)	11,598
2015	15,826		(253)	(442)	(391)	(1,086)	(6.9%)	14,740
2016	18,270		(458)	107	695	344	1.9%	18,614
2017	4,183		1,164	(2,068)	1,071	167	4.0%	4,350
Grand Total	62,564		33	(1,655)	(1,473)	(3,095)	(4.9%)	59,469

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	(586)	12	(6)	50	56	(9.6%)	(530)
2006	24	-	(3)	-	(3)	(12.5%)	21
2007	(3)	-	(2)	-	(2)	66.7%	(5)
2008	357	(7)	273	-	266	74.5%	623
2009	186	(4)	1	(72)	(75)	(40.3%)	111
2010	602	(12)	64	(72)	(20)	(3.3%)	582
2011	15	-	(231)	472	241	1,606.7%	256
2012	2,609	(52)	47	(851)	(856)	(32.8%)	1,753
2013	4,473	(112)	229	(892)	(775)	(17.3%)	3,698
2014	8,812	(88)	424	(252)	84	1.0%	8,896
2015	12,023	(120)	(529)	180	(469)	(3.9%)	11,554
2016	13,621	(272)	169	995	892	6.5%	14,513
2017	2,898	688	(1,971)	1,218	(65)	(2.2%)	2,833
Grand Total	45,067	33	(1,535)	776	(726)	(1.6%)	44,341