



ALBERTA NON-GRID RISK SHARING POOL

APRIL 2016 OPERATIONAL REPORT

ACTUARIAL HIGHLIGHTS

Related Bulletin: [F16-033 Alberta RSPs April 2016 Operational Reports](#)

For your convenience, bookmarks have been added to this document. To view them, please click on the BOOKMARK tab at the left.

Should you require any further information, please call Norm Seeney, Vice President, Finance & Member Services at (416) 644-4914.

ACTUARIAL HIGHLIGHTS**RSP ALBERTA NON-GRID****OPERATIONAL REPORT****APRIL 2016**

TABLE OF CONTENTS

1	Summary.....	3
1.1	Valuation Schedule (Fiscal Year 2016).....	3
1.2	Appointed Actuary and Hybrid Actuarial Services Model.....	3
1.3	Consideration of Recent Legal Decisions and Changes in Legislation / Regulation	3
1.4	Current Provision Summary	4
2	Activity During the Month of April 2016	5
2.1	Recorded Premium and Claims Activity	5
2.1.a	Actual vs. Projected (AvsP): Earned Premium.....	5
2.1.b	AvsP: Recorded Indemnity & Allowed Claims Expense	6
2.1.c	AvsP: Paid Indemnity & Allowed Claims Expense	8
2.2	Actuarial Provisions.....	10
3	Ultimate Loss Ratio Matching Method.....	12
4	Calendar Year-to-Date Results.....	12
5	Current Operational Report – Additional Exhibits	12
6	EXHIBITS	13

1 Summary

1.1 Valuation Schedule (Fiscal Year 2016)

The April 2016 Operational Report leverages actuarial assumptions consistent with last month (that is, it does not reflect the results of an updated valuation). 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		May 2016	update valuation (roll forward):
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 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.

1.3 Consideration of Recent Legal Decisions and Changes in Legislation / Regulation

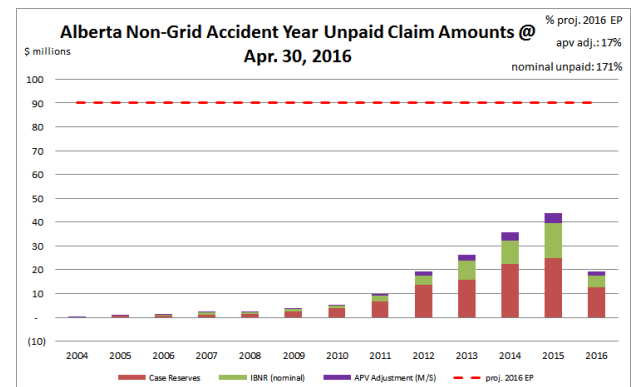
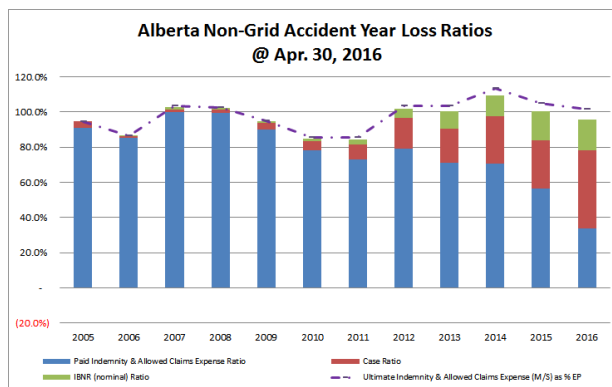
Consideration and assessment of potential impacts of legal decisions and changes in legislation /

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.

1.4 Current Provision Summary

The charts immediately below show the current levels of claim liabilities¹ booked by accident year². 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 (\$15.5 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	106,444	62.7%
ibnr	47,811	28.2%
M/S apv adjust.	15,450	9.1%
M/S total	169,705	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 41% of the IBNR balance relates to accident years 2015 and 2016 (see

¹Claim 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.

²Accident year 2004 was an incomplete year and therefore has been excluded from the loss ratio chart.

Exhibit B). Approximately 85% of the M/S total claim liabilities are related to accident years 2012-2016 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 liabilities.

premium liabilities (\$000s)			policy liabilities (\$000s)		
	amt	%		amt	%
unearned prem	43,999	96.1%	claim	154,255	71.6%
prem def/(dpac)	(1,666)	(3.6%)	premium	42,333	19.6%
M/S apv adjust.	3,467	7.6%	M/S apv adjust.	18,917	8.8%
M/S total	45,800	100.0%	M/S total	215,505	100.0%

2 Activity During the Month of April 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 Report³.

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

Table 01 Accident Year	Earned Premium		Paid Indemnity & Allowed Claims Expense		Case increase / (decrease)		Recorded increase / (decrease)	
	Actual	Actual less Projected	Actual	Actual less Projected	Actual	Actual less Projected	Actual	Actual less Projected
Prior	(5)	(5)	2,025	691	(3,509)	(2,505)	(1,483)	(1,813)
2014	(6)	(6)	482	(175)	(539)	(79)	(58)	(255)
2015	(38)	(38)	1,090	(332)	(1,321)	(406)	(232)	(739)
2016	7,194	(80)	3,360	(81)	2,157	599	5,517	519
TOTAL	7,146	(129)	6,956	103	(3,212)	(2,391)	3,744	(2,288)

(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.

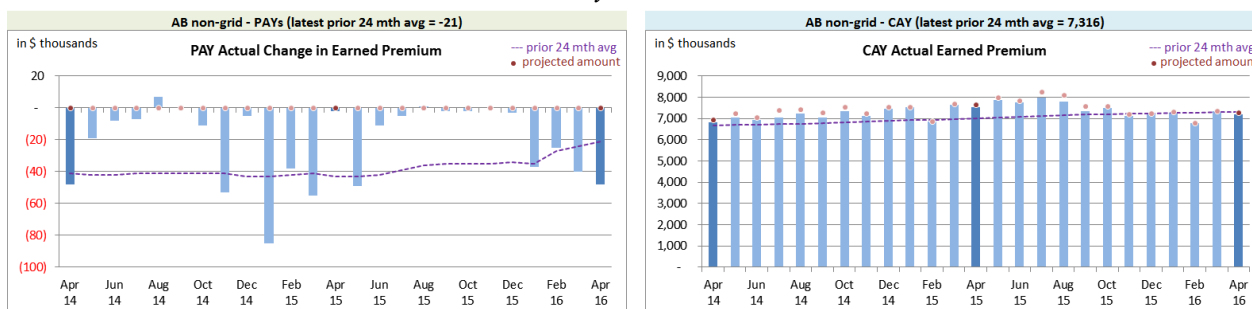
2.1.a Actual vs. Projected (AvsP): Earned Premium

The charts at the top of the next page show actual **earned premium**⁴ 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.

³There may be rounding differences in values in this document compared with the associated Bulletin and/or Operational Report.

⁴Premium 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.

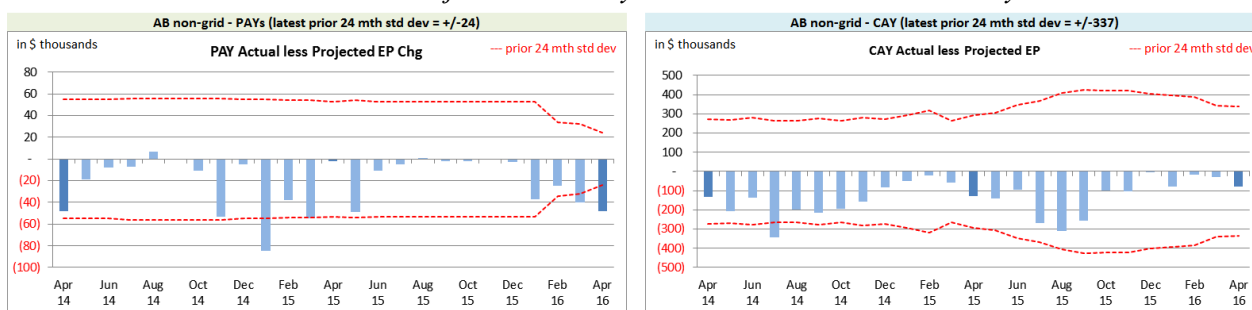
Alberta non-Grid RSP Actual **Earned Premium** by Calendar Month



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	
Mthly Avg EP Chg (prior 24 mths)	(21)	7,316
std dev	24	337
A-P <> std dev	4	1
% <> std dev	16.0%	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 bias⁵, 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.

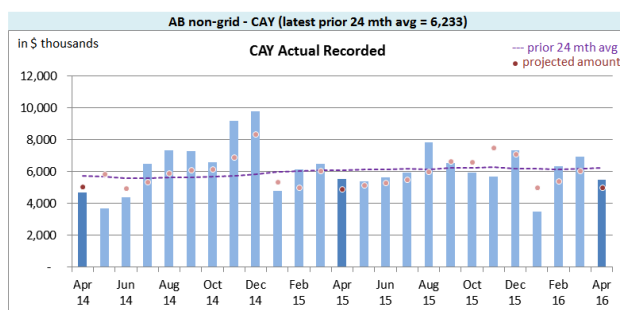
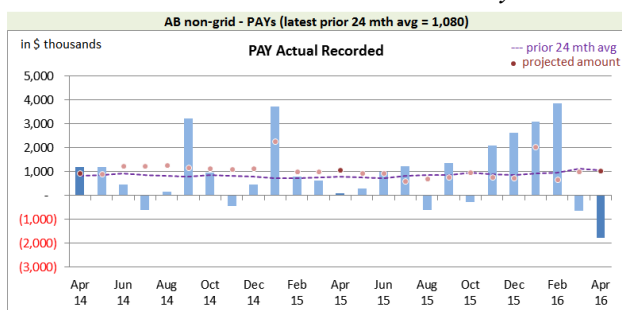
2.1.b AvsP: Recorded Indemnity & Allowed Claims Expense

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

⁵The 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.

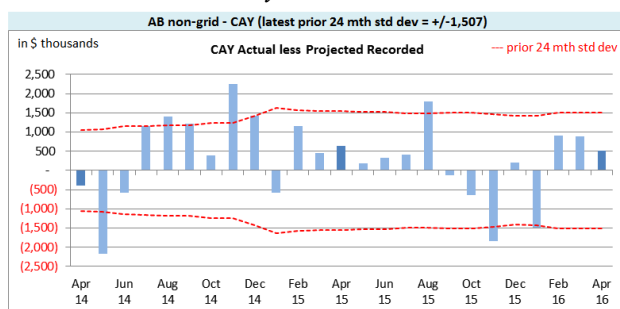
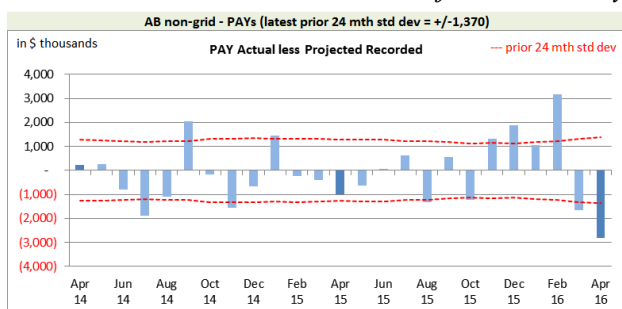
the charts immediately below, including the “prior 24-month average” level.

*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	
Mthly Avg Recorded (prior 24 mths)	1,080	6,233
std dev	1,370	1,507
A-P <> std dev	11	7
% <> std dev	44.0%	28.0%
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 PAY **recorded** variance for the current month was outside the one standard deviation band. After four months with recorded amounts above \$2.0 million, this now marks the second consecutive month with more than \$0.5 million of negative recorded activity. The projections for five of the past six months have been outside the one standard deviation band. The activity for this month was reviewed and confirmed, but we continue to investigate the recent trends with reference to our projection process.

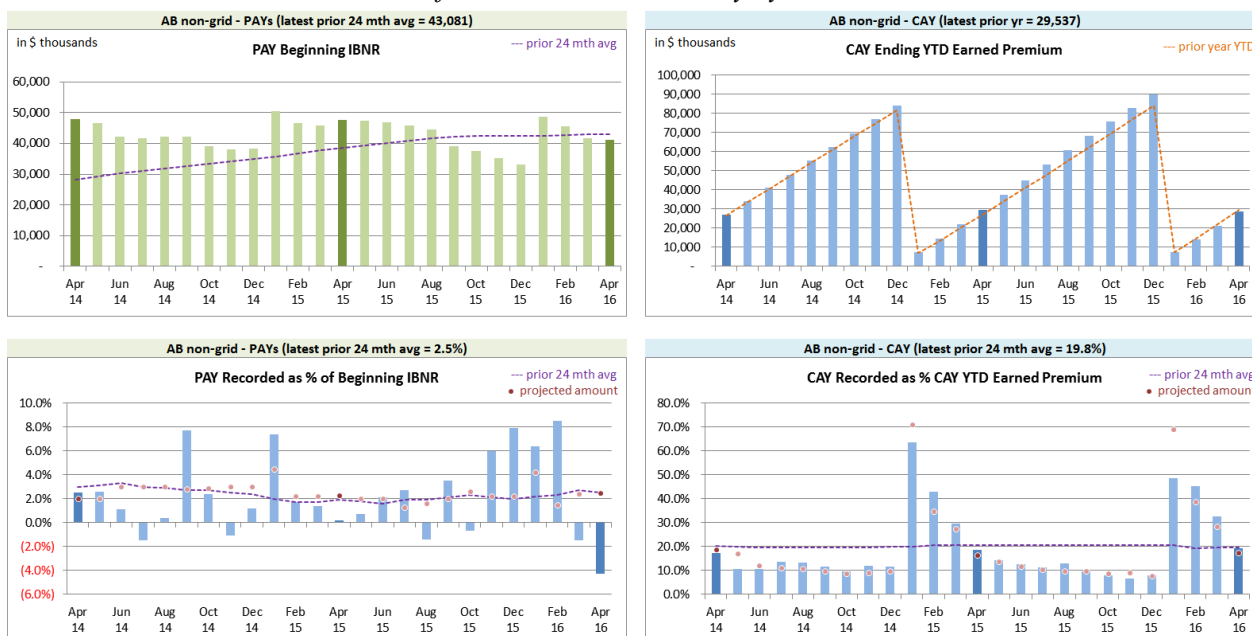
The current accident year (CAY) **recorded** variances (right chart above) have been greater than one standard deviation 28% of the time, suggesting that the projection process is not much better than simply projecting the most recent prior 24-month average. There was evidence of bias in the

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 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 influence⁶ 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).

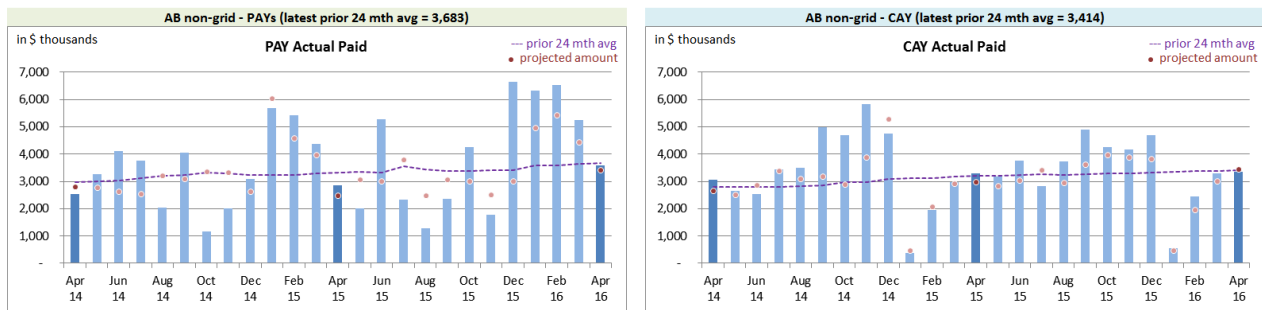
2.1.c AvsP: Paid Indemnity & Allowed Claims Expense

The charts at the top of the next page show actual **paid** activity in each of the most recent

⁶Our 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.

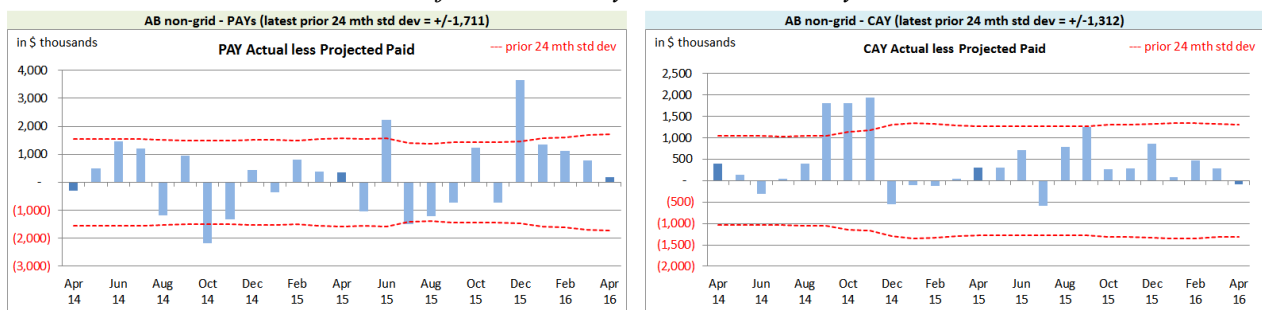
25 calendar months, along with a “prior 24-month average” to show how each month’s actual compares with the average amount of the preceding 24 calendar months. The prior 24-month average payment for both the prior accident years and current accident year appear to be increasing but as this point, we have not investigated to confirm or identify any particular cause, although a review of the ratios used for the projections are 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	
Mthly Avg Paid (prior 24 mths)	PAYs 3,683	CAY 3,414
std dev	1,711	1,312
A-P <> std dev	4	3
% <> std dev	16.0%	12.0%
norm <> std dev	31.7%	31.7%

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).

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

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

Alberta non-Grid RSP Levels that influence⁷ 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 IBNR⁸, 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

⁷Our 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.

⁸For 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 April 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		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	18,238	1,806	(1,224)	13	7,321	(66)	24,335	1,753
2014	9,911	249	(744)	(4)	4,177	23	13,344	268
2015	14,666	700	(988)	(8)	5,172	40	18,850	732
2016	4,996	(595)	(406)	-	2,142	1	6,732	(594)
TOTAL	47,811	2,160	(3,362)	1	18,812	(2)	63,261	2,159

The IBNR provision is \$2.2 million higher than projected from last month, counterbalancing the recorded claims activity and adjusting for the earned premium variance impacts indicated in section 2.1.

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

- (i) the change projected last month;
- (ii) the additional change due to variances in earned premium (because we apply a loss ratio to earned premium in determining ultimate level) and/or recorded claims (as IBNR is calculated as ultimate less recorded) differences; and
- (iii) the additional change due to valuation implementation impacts (as applicable)

The variances associated with (ii) above are discussed in sections 2.1.a and 2.1.b.

The table immediately below summarizes the variances in the provisions for deferred policy acquisition cost asset included in the April 2016 Operational Report and the one-month projections from last month's Report. Note, that this RSP is in a deferred policy acquisition cost asset position before actuarial present value adjustments, and in a premium deficiency position after actuarial present value adjustments. The variances indicated are due to the unearned premium variance.

Alberta Non-Grid RSP Actual vs Projected Summary: Premium Deficiency / (DPAC) Amounts (\$ thousands)

Table 03		Premium Deficiency / (Deferred Policy Acquisition Costs)		actuarial present value adjustments		Premium Deficiency / (DPAC) including actuarial present value adjustments	
		Actual	Actual less Projected	Actual	Actual less Projected	Actual	Actual less Projected
	balance:	(1,666)	(43)	3,467	92	1,801	49
	balance as % unearned premium:	(3.8%)	-	7.9%	-	4.1%	-
	actual unearned premium:	43,999					
	less projected:	1,191					

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 loss⁹ 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 expenses¹⁰, 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 96.1% rather than 95.6% (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.)

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	(1,236)	(4.3%)	(1,531)	(5.4%)	(2,767)	(9.7%)	(400)	1.4%
CAY	27,331	96.1%	1,736	6.1%	29,067	102.2%	7,224	(0.4%)
TOTAL	26,095	91.8%	205	0.7%	26,300	92.5%	6,824	1.0%

(“% 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. 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.

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.

5 Current Operational Report – Additional Exhibits

Section 6 provides exhibits pertaining to the actuarial provisions reflected in the current month’s

⁹“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).

¹⁰Allowed 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

 IBNR + M/S actuarial present
 value adjustments

 discount rate
 0.73%

 interest rate margin
 25 basis pts

Amounts in \$000s					
Accident Year	Actual Mar. 2016	Actual Apr. 2016	Projected May. 2016	Projected Jun. 2016	Projected Dec. 2016
2004	42	42	42	42	42
2005	13	10	9	8	-
2006	338	337	335	333	323
2007	898	1,268	1,242	1,218	1,099
2008	762	789	774	758	683
2009	1,112	1,093	1,071	1,049	943
2010	1,234	1,514	1,485	1,455	1,309
2011	3,179	3,214	3,149	3,085	2,776
2012	4,709	5,494	5,383	5,276	4,744
2013	10,750	10,574	10,363	10,197	9,172
2014	13,343	13,344	13,078	12,863	11,568
2015	18,776	18,850	18,241	17,665	15,901
2016	5,025	6,732	9,860	12,468	20,847
TOTAL	60,181	63,261	65,032	66,417	69,407
Change		3,080	1,771	1,385	

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 Mar. 2016	Actual Apr. 2016	Projected May. 2016	Projected Jun. 2016	Projected Dec. 2016
349.1%	2004	36	36	36	36	36
94.3%	2005	(59)	(62)	(62)	(62)	(62)
86.6%	2006	238	237	237	237	237
103.0%	2007	717	1,087	1,065	1,044	945
102.2%	2008	551	607	595	583	527
94.8%	2009	813	795	779	763	689
85.0%	2010	807	1,089	1,067	1,046	946
84.5%	2011	2,358	2,429	2,380	2,332	2,108
101.8%	2012	3,118	3,997	3,917	3,839	3,471
100.3%	2013	8,183	8,023	7,863	7,745	7,001
109.2%	2014	9,859	9,911	9,713	9,567	8,648
100.2%	2015	14,473	14,666	14,226	13,870	12,539
95.6%	2016	3,635	4,996	7,724	9,937	16,000
	TOTAL	44,729	47,811	49,540	50,937	53,085
	Change		3,082	1,729	1,397	

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

EXHIBIT C
Premium Liabilities
TABLE EXHIBIT C

	Amounts in \$000s				
Premium Liabilities	Actual Mar. 2016	Actual Apr. 2016	Projected May. 2016	Projected Jun. 2016	Projected Dec. 2016
(1) unearned premium (UP)	41,122	43,999	45,247	46,272	45,767
FOR MEMBER SHARING					
(2) expected future costs ratio {% of (1)}	104.0%	104.1%	104.2%	104.2%	104.9%
(3) expected future costs {(1) x (2)}	42,784	45,800	47,128	48,229	48,032
(4) premium deficiency / (deferred policy acquisition cost)	1,662	1,801	1,881	1,957	2,265
Excluding Actuarial Present Value Adjustments					
(5) expected future costs ratio {% of (1)}	96.2%	96.2%	96.3%	96.3%	97.0%
(6) expected future costs {(1) x (5)}	39,544	42,333	43,559	44,575	44,394
(7) premium deficiency / (deferred policy acquisition cost)	(1,578)	(1,666)	(1,688)	(1,697)	(1,373)

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	Projected Balances as at Dec. 31, 2016 (\$000s)							
ending 2016	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	743	(62)	681	(8)	3	67	62	743
2006	699	237	936	(11)	4	93	86	1,022
2007	769	945	1,714	(22)	7	169	154	1,868
2008	1,230	527	1,757	(26)	9	173	156	1,913
2009	2,177	689	2,866	(43)	14	283	254	3,120
2010	3,199	946	4,145	(66)	21	408	363	4,508
2011	5,637	2,108	7,745	(139)	46	761	668	8,413
2012	11,509	3,471	14,980	(300)	105	1,468	1,273	16,253
2013	13,213	7,001	20,214	(424)	141	2,454	2,171	22,385
2014	18,863	8,648	27,511	(633)	220	3,333	2,920	30,431
2015	19,212	12,539	31,751	(794)	286	3,870	3,362	35,113
PAYs (sub-total):	77,277	37,085	114,362	(2,466)	856	13,085	11,475	125,837
CAY (2016)	33,299	16,000	49,299	(1,134)	394	5,587	4,847	54,146
claims liabilities:	110,576	53,085	163,661	(3,600)	1,250	18,672	16,322	179,983
	Unearned Premium	Premium Deficiency / (DPAC)	Total Provision	discount	investment PfAD	development PfAD	Total apvs	TOTAL*
premium liabilities:	45,767	(1,373)	44,394	(751)	221	4,168	3,638	48,032
*Total may not be sum of parts, as apvs apply to future costs within UPR								
policy liabilities:			208,055	(4,351)	1,471	22,840	19,960	228,015

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 (Dec. 31, 2015)				
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%	5.0%	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%	7.7%	11.6%
<u>prem liab</u>	<u>11.7%</u>	<u>10.0%</u>	<u>5.2%</u>	<u>9.6%</u>
discount rate:				0.73%
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 (0.73%), the prior valuation assumption (0.78%) 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

AY	Actuarial Present Value of Provisions at Various Discount Rates - Dec. 31, 2016 projected Unpaid							
	0.23%	0.73%	1.23%	1.73%	2.23%	2.73%	0.78%	0.78%
2004	-	-	-	-	-	-	-	-
2005	454	450	446	443	439	436	450	450
2006	873	866	858	851	845	838	865	865
2007	2,227	2,208	2,188	2,169	2,150	2,132	2,206	2,206
2008	2,067	2,046	2,024	2,003	1,983	1,963	2,044	2,044
2009	2,535	2,510	2,485	2,460	2,435	2,411	2,508	2,508
2010	4,683	4,633	4,582	4,533	4,485	4,439	4,628	4,628
2011	8,854	8,750	8,646	8,543	8,444	8,347	8,740	8,740
2012	16,462	16,247	16,031	15,821	15,617	15,418	16,226	16,226
2013	21,951	21,644	21,335	21,033	20,742	20,459	21,615	21,615
2014	31,429	30,952	30,477	30,015	29,568	29,131	30,907	30,907
2015	40,060	39,400	38,742	38,100	37,483	36,881	39,338	39,338
2016	52,617	51,818	51,023	50,254	49,511	48,792	51,743	51,743
Total	184,212	181,524	178,837	176,225	173,702	171,247	181,270	181,270
	curr - 50 bp	curr val assumption	curr + 50bp	curr + 100bp	curr + 150bp	curr + 200bp	prior val assumption	prior fyr end assumption

AY	Dollar Impact Relative to Valuation Assumption							
	0.23%	0.73%	1.23%	1.73%	2.23%	2.73%	0.78%	0.78%
Total	2,688	-	(2,687)	(5,299)	(7,822)	(10,277)	(254)	(254)
	curr - 50 bp	curr val assumption	curr + 50bp	curr + 100bp	curr + 150bp	curr + 200bp	prior val assumption	prior fyr end assumption

AY	Percentage Impact Relative to Valuation Assumption							
	0.23%	0.73%	1.23%	1.73%	2.23%	2.73%	0.78%	0.78%
2004	-	-	-	-	-	-	-	-
2005	0.9%	-	(0.9%)	(1.6%)	(2.4%)	(3.1%)	-	-
2006	0.8%	-	(0.9%)	(1.7%)	(2.4%)	(3.2%)	(0.1%)	(0.1%)
2007	0.9%	-	(0.9%)	(1.8%)	(2.6%)	(3.4%)	(0.1%)	(0.1%)
2008	1.0%	-	(1.1%)	(2.1%)	(3.1%)	(4.1%)	(0.1%)	(0.1%)
2009	1.0%	-	(1.0%)	(2.0%)	(3.0%)	(3.9%)	(0.1%)	(0.1%)
2010	1.1%	-	(1.1%)	(2.2%)	(3.2%)	(4.2%)	(0.1%)	(0.1%)
2011	1.2%	-	(1.2%)	(2.4%)	(3.5%)	(4.6%)	(0.1%)	(0.1%)
2012	1.3%	-	(1.3%)	(2.6%)	(3.9%)	(5.1%)	(0.1%)	(0.1%)
2013	1.4%	-	(1.4%)	(2.8%)	(4.2%)	(5.5%)	(0.1%)	(0.1%)
2014	1.5%	-	(1.5%)	(3.0%)	(4.5%)	(5.9%)	(0.1%)	(0.1%)
2015	1.7%	-	(1.7%)	(3.3%)	(4.9%)	(6.4%)	(0.2%)	(0.2%)
2016	1.5%	-	(1.5%)	(3.0%)	(4.5%)	(5.8%)	(0.1%)	(0.1%)
Total	1.5%	-	(1.5%)	(2.9%)	(4.3%)	(5.7%)	(0.1%)	(0.1%)
	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	13	-	(3)	-	(3)	(23.1%)		10
2006	338	(2)	1	-	(1)	(0.3%)		337
2007	898	(18)	388	-	370	41.2%		1,268
2008	762	(15)	42	-	27	3.5%		789
2009	1,112	(21)	2	-	(19)	(1.7%)		1,093
2010	1,234	(24)	304	-	280	22.7%		1,514
2011	3,179	(64)	99	-	35	1.1%		3,214
2012	4,709	(96)	881	-	785	16.7%		5,494
2013	10,750	(215)	39	-	(176)	(1.6%)		10,574
2014	13,343	(267)	268	-	1	-		13,344
2015	18,776	(658)	732	-	74	0.4%		18,850
2016	5,025	2,301	(594)	-	1,707	34.0%		6,732
Grand Total	60,181	921	2,159	-	3,080	5.1%		63,261

EXHIBIT G

Page 2 of 2

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	(59)	-	(3)	-	(3)	5.1%	(62)
2006	238	-	(1)	-	(1)	(0.4%)	237
2007	717	(14)	384	-	370	51.6%	1,087
2008	551	(11)	67	-	56	10.2%	607
2009	813	(16)	(2)	-	(18)	(2.2%)	795
2010	807	(16)	298	-	282	34.9%	1,089
2011	2,358	(47)	118	-	71	3.0%	2,429
2012	3,118	(62)	941	-	879	28.2%	3,997
2013	8,183	(164)	4	-	(160)	(2.0%)	8,023
2014	9,859	(197)	249	-	52	0.5%	9,911
2015	14,473	(507)	700	-	193	1.3%	14,666
2016	3,635	1,956	(595)	-	1,361	37.4%	4,996
Grand Total	44,729	922	2,160	-	3,082	6.9%	47,811