



ALBERTA GRID RISK SHARING POOL

MARCH 2016 OPERATIONAL REPORT

ACTUARIAL HIGHLIGHTS

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ACTUARIAL HIGHLIGHTS**RSP ALBERTA GRID****OPERATIONAL REPORT****MARCH 2016**

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1 Summary

1.1 Valuation Schedule (Fiscal Year 2016)

The March 2016 Operational Report incorporates the results of an updated valuation (as at December 31, 2015) – 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 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)	0.75% mfad: 25 bp	Oct. 2015	updated valuation (roll forward): accident year 2015 loss ratio increased 2.1 points to 75.7%; discount rate decreased by 18 basis points; no change to selected margins for adverse deviations
Dec. 31, 2015 (completed)	0.70% mfad: 25 bp	Mar. 2016	updated valuation: accident year 2015 loss ratio increased 8.3 points to 84.0%; accident year 2016 loss ratio increased 2.5 points to 73.7%; 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 New Valuation

A valuation of the Alberta Grid Risk Sharing Pool (“RSP”) as at December 31, 2015 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, 2015¹

AB 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	17,973	2,286	20,259	399	-	20,658
CAY	799	81	880	39	-	919
Prem Def	1,364	116	1,480	83	-	1,563
TOTAL	20,136	2,483	22,619	521	-	23,140

As indicated in the table above, the incorporation of the new valuation had an estimated **\$23.1 million unfavourable impact** on the month's net result from operations, adding an estimated 73.2 points (see table immediately below) from the **year-to-date Combined Operating Ratio** to end at **172.1%**.

Summary of Impact (% YTD EP) of Implementing Result of Valuation as at December 31, 2015

AB Grid	ytd EP 31,631 (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	56.8%	7.2%	64.0%	1.3%	-	65.3%
CAY	2.5%	0.3%	2.8%	0.1%	-	2.9%
Prem Def	4.3%	0.4%	4.7%	0.3%	-	4.9%
TOTAL	63.7%	7.8%	71.5%	1.6%	-	73.2%

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 \$20.1 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 an \$18.0 million unfavourable variance, which is attributed to recorded activity process variance. The unfavourable impact is 7.9% of the prior accident years' nominal unpaid balance of \$228.9 million determined at the end of last month (February 2016).

The current accident year and premium deficiency impacts are a result of changes in the selected loss ratios for accident years **2016** (up 2.5 points from 71.2% to **73.7%**) and **2017** (up 2.3 points from 71.6% to **73.9%**).

¹ In these tables, "PAYs" refers to prior accident years, "CAY" refers to the current accident year, and "Prem Def" refers to the provision for premium deficiency or the deferred policy acquisition asset (as applicable). "Nominal" refers to changes excluding any actuarial present value adjustments, whereas "apv adj." refers to actuarial present value adjustments.

The columns under the heading "ults & payout patterns" reflect the impact of changes in the valuation selected ultimates and claims payment patterns (i.e. based on unchanged selection of discount rates and margins for adverse deviation). The column "dsct rate" reflects the impact of the change in the selected discount rate and the column "margins" reflects the impact of any changes in selected margins for adverse deviations.

The impacts related to actuarial present value adjustments (“APVs”) are split into the impact prior to any change in the selected discount rate and margin changes (at the level they were selected, which was at the coverage and accident half-year level), the impact of then updating the discount rate, and finally the impact of any changes to the margins (at the level they are 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 \$2.5 million in the actuarial present value adjustments, prior to any changes in the selected discount rate and/or MfADs.

Claims payment emergence patterns were updated and cash flows were reviewed against the selected risk-free yield curve, derived from Government of Canada benchmark bond yields monthly series using values for December 2015. Column [4] accounts for the change in the **discount rate** selected (decreased 5 basis points to **0.70%**), indicating an unfavourable impact of \$0.5 million. The impact *related only to claims liabilities* (i.e. PAYs plus CAY) was \$0.4 million at March 2016 (projected \$0.4 million impact at December 31, 2016) – this compares to the \$0.4 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

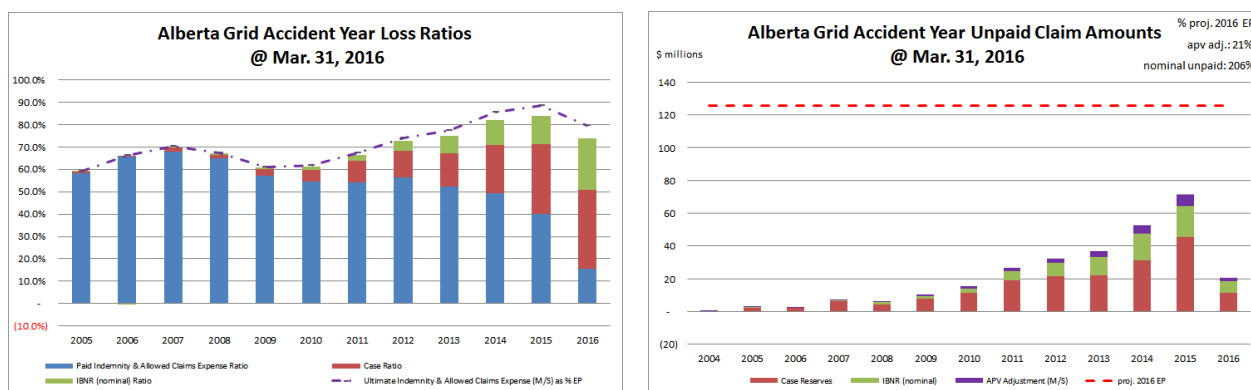
Consideration and assessment of potential impacts of legal decisions and changes in legislation / regulation constitutes a regular part of the valuation process. Descriptions of some of the more recent changes are provided below.

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 (\$25.9 million – see table below) represents 21% 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 periods.

claim liabilities (\$000s)		
	amt	%
case	184,569	64.9%
ibnr	73,799	26.0%
M/S apv adjust.	25,857	9.1%
M/S total	284,225	100.0%

The table to the left breaks down the Member Statement (M/S) claim liabilities total into component parts, showing that the majority of the claim liabilities for this pool is in case reserves. Approximately 36% of the IBNR balance relates to accident years 2015 and 2016 (see Exhibit B). Approximately 75% of the M/S

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

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.

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

premium liabilities (\$000s)			policy liabilities (\$000s)		
	amt	%		amt	%
unearned prem	54,775	124.5%	claim	258,368	78.7%
prem def/(dpac)	(14,252)	(32.4%)	premium	40,523	12.3%
M/S apv adjust.	3,489	7.9%	M/S apv adjust.	29,346	8.9%
M/S total	44,012	100.0%	M/S total	328,237	100.0%

2 Activity During the Month of March 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 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)	3,260	(531)	(2,118)	767	1,143	237
2014	(2)	(2)	712	(408)	(156)	564	556	156
2015	(106)	(106)	2,965	(75)	(1,792)	569	1,173	494
2016	10,383	(207)	2,709	(486)	3,349	(899)	6,058	(1,385)
TOTAL	10,270	(319)	9,647	(1,499)	(717)	1,000	8,930	(498)

(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.

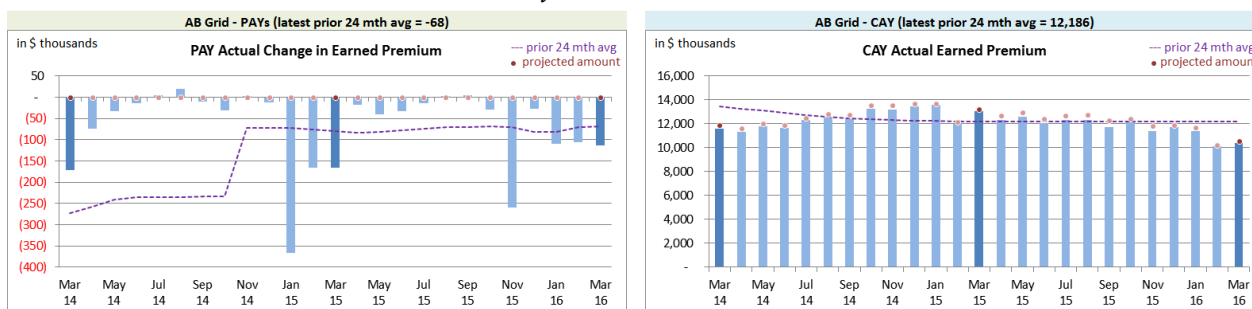
2.1.a Actual vs. Projected (AvsP): Earned Premium

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.

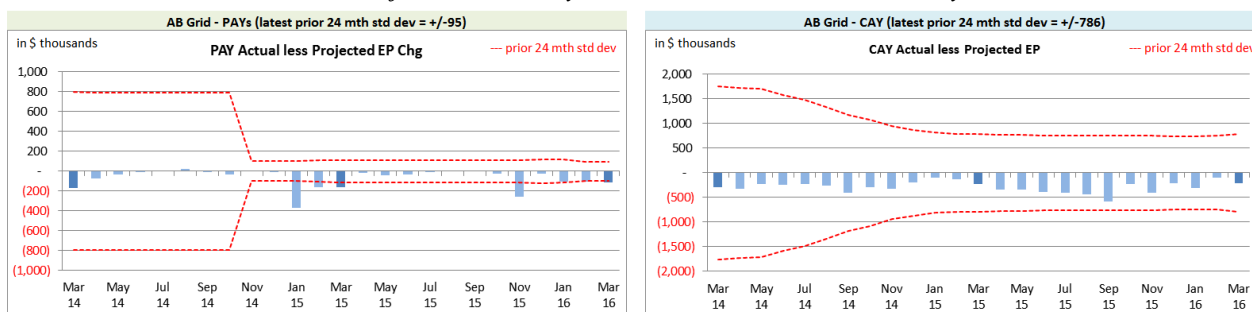
Alberta Grid RSP Actual Earned Premium by Calendar Month



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 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)		(68)	12,186
std dev		95	786
A-P <> std dev		6	-
% <> std dev		24.0%	0.0%
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.

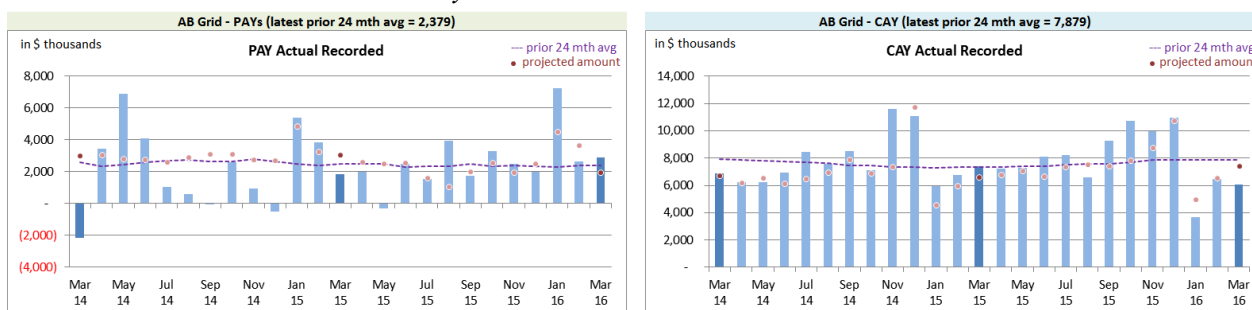
2.1.b AvsP: Recorded Indemnity & Allowed Claims Expense

Actual **recorded** activity (**paid** and case reserve changes) over the last 25-month period are 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.

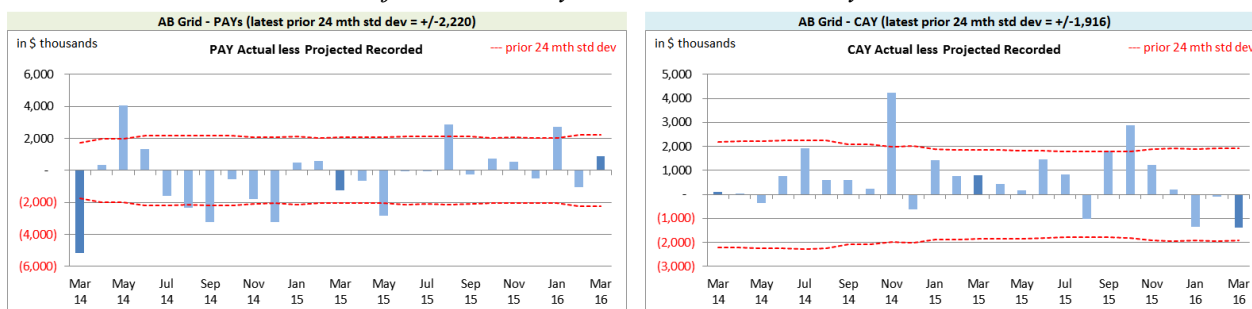
the charts immediately below, including the “prior 24-month average” level.

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



On Latest \$ thousands		
Recorded	PAYs	CAY
Mthly Avg Recorded (prior 24 mths)	2,379	7,879
std dev	2,220	1,916
A-P <> std dev	8	3
% <> std dev	32.0%	12.0%
norm <> std dev	31.7%	31.7%

With respect to **recorded** indemnity & allowed claims expense activity, 32% of the prior accident years’ (PAYs) variances (left chart above) over the last 25 months have fallen outside of one standard deviation of the actual **recorded** amounts, suggesting the projection process is performing no better than simply

projecting from the prior 24-month average. There was evidence of bias during the latter half of 2014 and first half of 2015, although the larger variances tend to correspond to months with unusually low levels of recorded activity (this is also evident in the **recorded** to beginning IBNR ratios shown in the middle of the next page). For example, from July 2014 to December 2014 there were 5 months with PAYs **recorded** amounts of \$1 million or less, whereas the 15-month period following only saw 1 such month (these correspond to months where the **recorded** to beginning IBNR ratio is less than 2%). This may reflect “stronger” reserve positions being established.

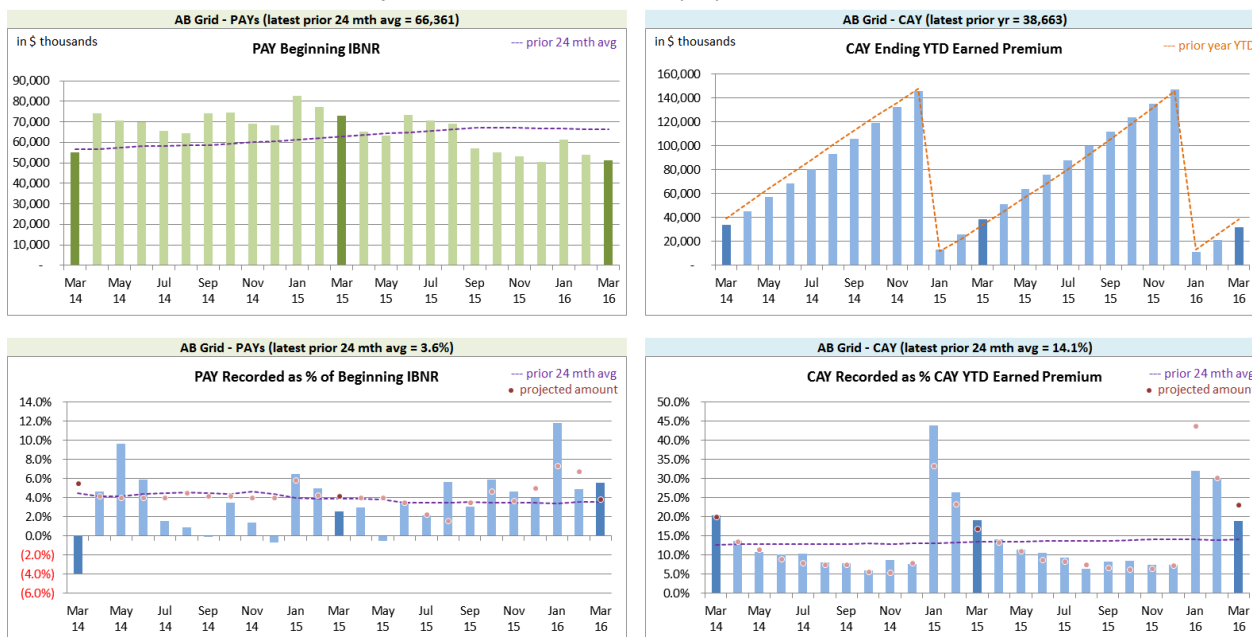
The current accident year (CAY) **recorded** variances (right chart above) may be indicating bias (where actuals have tended to be higher than projections). That said, at 12%, the number of variances falling outside of one standard deviation of actual activity over the period is lower than indicated by the normal distribution, suggesting the projection process is better than simply projecting from the 24 month average.

The method for establishing IBNR adjusts automatically for changes in **earned premium** and

recorded claims activity level (see sections 2.2 and 3).

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

Alberta 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:

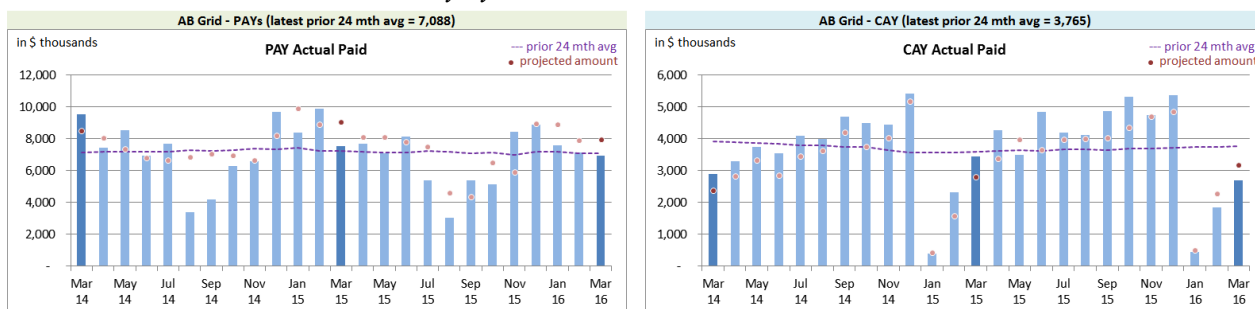
- to offset actual **recorded** activity (through loss ratio matching);
- the annual switchover as a current accident year becomes a prior accident year (occurs in January); and
- when a new valuation is implemented, where the valuation resulted in changes to the selection of prior accident years' ultimate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

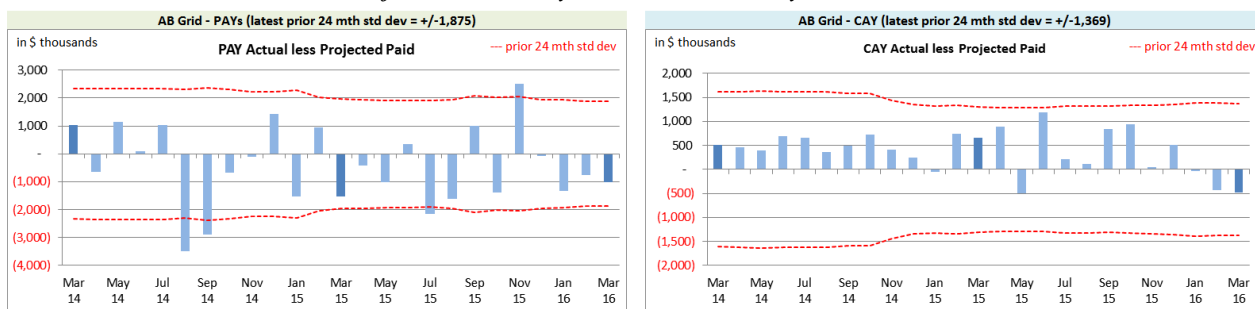
⁷Our recorded activity projections for the prior accident years are based on selected ratios of recorded activity to beginning unpaid balances, whereas the current accident year projections are based on selected ratios of year-to-date IBNR to year-to-date selected ultimate (i.e. selected LR x earned 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 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 Grid RSP Actual vs Projected Summary: **Paid** Variances by Calendar Month*



On Latest \$ thousands			
	Paid	PAYs	CAY
Mthly Avg Paid (prior 24 mths)		7,088	3,765
std dev		1,875	1,369
A-P <> std dev		4	-
% <> std dev		16.0%	0.0%
norm <> std dev		31.7%	31.7%

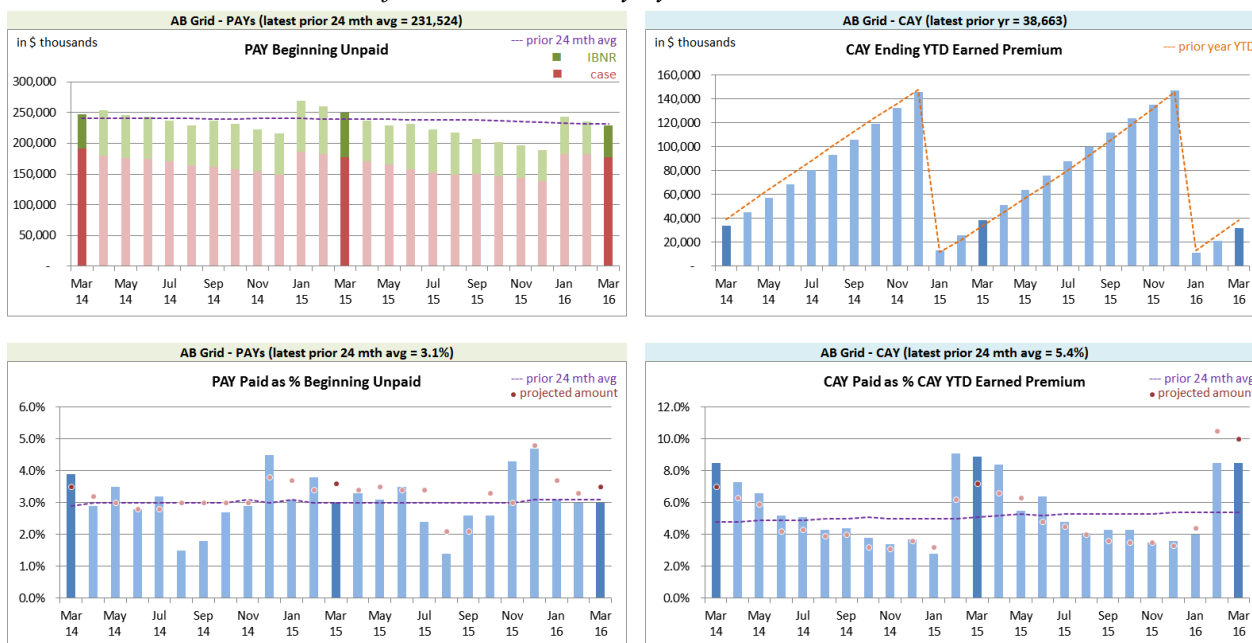
With respect to **paid** indemnity & allowed claims expense, the prior accident years’ (PAYs) variances (left chart above) have fallen outside one standard deviation of the overall period 16% of the time, a lower percent than suggested by a normal distribution, indicating the projection process may be better than simply projecting

from the preceding 24-month average.

The current accident year (CAY) **paid** variances (right chart above) indicate bias (where actuals tend to be higher than our projections), but efforts to address this may be working. The CAY **paid** variances have **not** fallen outside one standard deviation of the overall period, suggesting the projection process is better than simply projecting from the preceding 24-month average.

We have included, for reference, additional charts at the top of the next page related to levels influencing **paid** activity.

Alberta 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 2016 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 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	
			Discount Amount		Provisions for Adverse Deviations			
	Actual	Actual less Projected	Actual	Actual less Projected	Actual	Actual less Projected	Actual	Actual less Projected
Prior	31,255	2,059	(2,147)	38	14,084	344	43,192	2,441
2014	16,233	3,316	(999)	(38)	6,153	550	21,387	3,828
2015	18,938	11,625	(1,482)	(176)	8,383	2,058	25,839	13,507
2016	7,373	2,037	(389)	11	2,254	142	9,238	2,190
TOTAL	73,799	19,037	(5,017)	(165)	30,874	3,094	99,656	21,966

The IBNR provision is \$19.0 million higher than projected from last month, counterbalancing the recorded claims activity and adjusting for the earned premium variance impacts indicated in section 2.1, and due to the valuation implementation.

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

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

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

The table immediately below summarizes the variances in the provisions for deferred policy acquisition cost asset included in the March 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; actuarial present value adjustments have an impact on the asset value as the adjustments increase the expected future policy obligations (costs) associated with the unearned premium and therefore increase the write down of the asset value. The variances noted are mainly driven by the unearned premium variance, and due to the valuation implementation.

Alberta 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:	(14,252)	1,380	3,489	196	(10,763)	1,576
balance as % unearned premium:	(26.0%)	2.5%	6.4%	0.4%	(19.6%)	2.9%
actual unearned premium:	54,775					
less projected:	(56)					

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 74.5% rather than 73.7% (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 Grid RSP Summary of Operations due to rounding.)

Alberta 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	17,724	56.0%	722	2.3%	18,446	58.3%	19,907	65.1%
CAY	23,553	74.5%	1,865	5.9%	25,418	80.4%	8,772	2.5%
TOTAL	41,277	130.5%	2,587	8.2%	43,864	138.7%	28,679	67.6%

(“% 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.

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.

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 presented in section 6, Exhibit B, refer to the estimates derived on the basis of various actuarial methodologies applied to the experience of the Alberta 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
 0.70%

 interest rate margin
 25 basis pts

Amounts in \$000s					
Accident Year	Actual Feb. 2016	Actual Mar. 2016	Projected Apr. 2016	Projected May. 2016	Projected Dec. 2016
2004	(73)	(73)	(73)	(73)	(73)
2005	211	514	505	497	445
2006	(264)	(18)	(18)	(17)	(15)
2007	1,185	835	811	787	635
2008	2,167	1,874	1,819	1,764	1,426
2009	3,114	2,512	2,437	2,363	1,909
2010	3,233	4,104	3,981	3,861	3,120
2011	7,353	7,702	7,470	7,246	5,855
2012	11,483	10,630	10,312	10,002	8,082
2013	13,593	15,112	14,675	14,235	11,500
2014	18,078	21,387	20,798	20,175	16,299
2015	13,303	25,839	24,995	24,154	19,460
2016	6,524	9,238	9,855	10,618	26,735
TOTAL	79,907	99,656	97,567	95,612	95,378
Change		19,749	(2,089)	(1,955)	

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. 2016	Actual Mar. 2016	Projected Apr. 2016	Projected May. 2016	Projected Dec. 2016
51.6%	2004	(81)	(81)	(81)	(81)	(81)
59.1%	2005	(44)	284	275	267	215
66.2%	2006	(439)	(203)	(197)	(191)	(154)
70.0%	2007	570	242	235	228	184
67.1%	2008	1,505	1,365	1,324	1,284	1,038
60.7%	2009	2,238	1,691	1,640	1,591	1,285
61.2%	2010	2,091	2,871	2,785	2,701	2,182
66.5%	2011	5,264	5,602	5,434	5,271	4,259
72.7%	2012	8,869	8,034	7,793	7,559	6,107
75.0%	2013	10,129	11,450	11,106	10,773	8,704
82.1%	2014	13,317	16,233	15,746	15,274	12,341
84.0%	2015	7,992	18,938	18,370	17,727	14,323
73.7%	2016	5,240	7,373	7,612	8,003	20,861
	TOTAL	56,651	73,799	72,042	70,406	71,264
	Change		17,148	(1,757)	(1,636)	

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 Feb. 2016	Actual Mar. 2016	Projected Apr. 2016	Projected May. 2016	Projected Dec. 2016
(1) unearned premium (UP)	56,310	54,775	54,289	54,662	62,560
FOR MEMBER SHARING					
(2) expected future costs ratio {% of (1)}	77.5%	80.4%	80.4%	80.4%	80.6%
(3) expected future costs {(1) x (2)}	43,632	44,012	43,627	43,934	50,397
(4) premium deficiency / (deferred policy acquisition cost)	(12,678)	(10,763)	(10,662)	(10,728)	(12,163)
Excluding Actuarial Present Value Adjustments					
(5) expected future costs ratio {% of (1)}	71.5%	74.0%	74.0%	74.0%	74.2%
(6) expected future costs {(1) x (5)}	40,250	40,523	40,168	40,452	46,401
(7) premium deficiency / (deferred policy acquisition cost)	(16,060)	(14,252)	(14,121)	(14,210)	(16,159)

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 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	-	(81)	(81)	-	-	8	8	(73)
2005	2,311	215	2,526	(30)	10	250	230	2,756
2006	1,697	(154)	1,543	(19)	6	152	139	1,682
2007	4,788	184	4,972	(65)	25	491	451	5,423
2008	3,283	1,038	4,321	(60)	22	426	388	4,709
2009	5,775	1,285	7,060	(113)	42	695	624	7,684
2010	8,568	2,182	10,750	(193)	75	1,056	938	11,688
2011	14,440	4,259	18,699	(318)	112	1,802	1,596	20,295
2012	16,502	6,107	22,609	(384)	136	2,223	1,975	24,584
2013	16,775	8,704	25,479	(459)	153	3,102	2,796	28,275
2014	24,173	12,341	36,514	(767)	292	4,433	3,958	40,472
2015	33,631	14,323	47,954	(1,103)	384	5,856	5,137	53,091
PAYs (sub-total):	131,943	50,403	182,346	(3,511)	1,257	20,494	18,240	200,586
CAY (2016)	37,551	20,861	58,412	(1,227)	467	6,634	5,874	64,286
claims liabilities:	169,494	71,264	240,758	(4,738)	1,724	27,128	24,114	264,872
	Unearned Premium	Premium Deficiency / (DPAC)	Total Provision	discount	investment PfAD	development PfAD	Total apvs	TOTAL*
premium liabilities:	62,560	(16,159)	46,401	(740)	277	4,459	3,996	50,397
*Total may not be sum of parts, as apvs apply to future costs within UPR								
policy liabilities:	287,159			(5,478)	2,001	31,587	28,110	315,269

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%	9.5%	10.0%
2009	10.0%	10.0%	5.1%	10.0%
2010	10.0%	10.0%	8.6%	10.0%
2011	10.0%	10.0%	8.2%	9.8%
2012	10.0%	10.0%	8.8%	10.0%
2013	12.5%	10.0%	10.3%	12.4%
2014	12.5%	10.0%	10.8%	12.4%
2015	12.4%	10.0%	12.5%	12.5%
2016	12.0%	10.0%	7.1%	11.6%
prem liab	11.6%	10.0%	5.1%	9.8%
discount rate:				0.70%
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 (0.70%), the prior valuation assumption (0.75%) and the prior fiscal year end valuation assumption (0.75%) 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							
	0.20%	0.70%	1.20%	1.70%	2.20%	2.70%	0.75%	0.75%
2004	-	-	-	-	-	-	-	-
2005	1,574	1,561	1,547	1,534	1,521	1,508	1,560	1,560
2006	1,724	1,711	1,697	1,683	1,669	1,656	1,710	1,710
2007	4,874	4,834	4,791	4,749	4,708	4,668	4,830	4,830
2008	5,689	5,635	5,577	5,521	5,465	5,412	5,629	5,629
2009	8,240	8,156	8,065	7,976	7,890	7,805	8,146	8,146
2010	11,044	10,916	10,779	10,645	10,515	10,388	10,902	10,902
2011	17,656	17,459	17,245	17,036	16,835	16,638	17,437	17,437
2012	25,203	24,930	24,636	24,351	24,074	23,803	24,899	24,899
2013	30,922	30,554	30,157	29,774	29,402	29,041	30,513	30,513
2014	45,913	45,291	44,626	43,980	43,359	42,751	45,223	45,223
2015	58,408	57,527	56,579	55,667	54,783	53,919	57,425	57,425
2016	70,293	69,347	68,337	67,368	66,422	65,515	69,244	69,244
Total	281,540	277,921	274,036	270,284	266,643	263,104	277,518	277,518
	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							
	0.20%	0.70%	1.20%	1.70%	2.20%	2.70%	0.75%	0.75%
Total	3,619	-	(3,885)	(7,637)	(11,278)	(14,817)	(403)	(403)
	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							
	0.20%	0.70%	1.20%	1.70%	2.20%	2.70%	0.75%	0.75%
2004	-	-	-	-	-	-	-	-
2005	0.8%	-	(0.9%)	(1.7%)	(2.6%)	(3.4%)	(0.1%)	(0.1%)
2006	0.8%	-	(0.8%)	(1.6%)	(2.5%)	(3.2%)	(0.1%)	(0.1%)
2007	0.8%	-	(0.9%)	(1.8%)	(2.6%)	(3.4%)	(0.1%)	(0.1%)
2008	1.0%	-	(1.0%)	(2.0%)	(3.0%)	(4.0%)	(0.1%)	(0.1%)
2009	1.0%	-	(1.1%)	(2.2%)	(3.3%)	(4.3%)	(0.1%)	(0.1%)
2010	1.2%	-	(1.3%)	(2.5%)	(3.7%)	(4.8%)	(0.1%)	(0.1%)
2011	1.1%	-	(1.2%)	(2.4%)	(3.6%)	(4.7%)	(0.1%)	(0.1%)
2012	1.1%	-	(1.2%)	(2.3%)	(3.4%)	(4.5%)	(0.1%)	(0.1%)
2013	1.2%	-	(1.3%)	(2.6%)	(3.8%)	(5.0%)	(0.1%)	(0.1%)
2014	1.4%	-	(1.5%)	(2.9%)	(4.3%)	(5.6%)	(0.2%)	(0.2%)
2015	1.5%	-	(1.6%)	(3.2%)	(4.8%)	(6.3%)	(0.2%)	(0.2%)
2016	1.4%	-	(1.5%)	(2.9%)	(4.2%)	(5.5%)	(0.1%)	(0.1%)
Total	1.3%	-	(1.4%)	(2.7%)	(4.1%)	(5.3%)	(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 Grid** 
AccountCode Desc **IBNR - Discour** 

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	(73)	-	-	-	-	-	(73)
2005	211	1	325	(23)	303	143.6%	514
2006	(264)	8	(91)	329	246	(93.2%)	(18)
2007	1,185	(35)	14	(329)	(350)	(29.5%)	835
2008	2,167	(64)	392	(621)	(293)	(13.5%)	1,874
2009	3,114	(94)	46	(554)	(602)	(19.3%)	2,512
2010	3,233	(97)	(236)	1,204	871	26.9%	4,104
2011	7,353	(218)	129	438	349	4.7%	7,702
2012	11,483	(344)	(541)	32	(853)	(7.4%)	10,630
2013	13,593	(408)	(232)	2,159	1,519	11.2%	15,112
2014	18,078	(519)	(114)	3,942	3,309	18.3%	21,387
2015	13,303	(971)	(574)	14,081	12,536	94.2%	25,839
2016	6,524	524	1,271	919	2,714	41.6%	9,238
Grand Total	79,907	(2,217)	389	21,577	19,749	24.7%	99,656

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

RSP	Alberta Grid						
AccountCode Desc	IBNR - Undiscovered	IBNR - in \$000s					
	Values						
AccYear	Sum of Prior Month Actual Amount	Sum of Projected Change	Sum of Change Due to AvsP Variances	Sum of Change Due to Valuation Implementation	Sum of Total Change	Sum of % Total Change	Sum of Current Month Final Amount
2004	(81)	-	-	-	-	-	(81)
2005	(44)	1	327	-	328	(745.5%)	284
2006	(439)	13	(76)	299	236	(53.8%)	(203)
2007	570	(17)	(3)	(308)	(328)	(57.5%)	242
2008	1,505	(45)	481	(576)	(140)	(9.3%)	1,365
2009	2,238	(67)	39	(519)	(547)	(24.4%)	1,691
2010	2,091	(63)	(253)	1,096	780	37.3%	2,871
2011	5,264	(158)	96	400	338	6.4%	5,602
2012	8,869	(266)	(569)	-	(835)	(9.4%)	8,034
2013	10,129	(304)	(284)	1,909	1,321	13.0%	11,450
2014	13,317	(400)	(157)	3,473	2,916	21.9%	16,233
2015	7,992	(679)	(574)	12,199	10,946	137.0%	18,938
2016	5,240	96	1,238	799	2,133	40.7%	7,373
Grand Total	56,651	(1,889)	265	18,772	17,148	30.3%	73,799