



ALBERTA GRID RISK SHARING POOL

JANUARY 2016 OPERATIONAL REPORT

ACTUARIAL HIGHLIGHTS

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

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1 Summary

1.1 Valuation Schedule (Fiscal Year 2016)

The January 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 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	update 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		Mar. 2016	updated valuation:
Mar. 31, 2016		May 2016	update valuation (roll forward):
Jun. 30, 2016		Aug. 2016	updated 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.

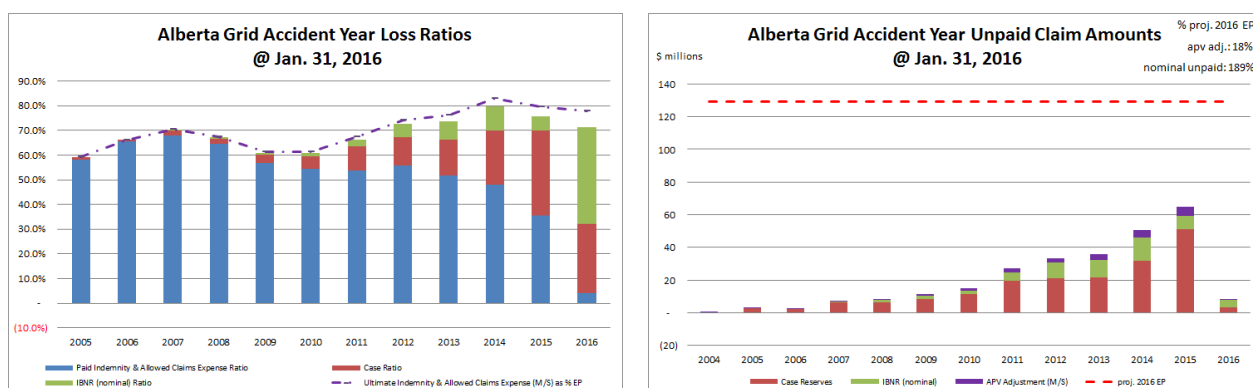
1.3 Consideration of Recent Legal Decisions and Changes in Legislation / Regulation

Consideration and assessment of potential impacts of legal decisions and changes in legislation / regulation constitutes a regular part of the valuation process. Description of some of the more recent changes is 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 (\$23.4 million – see table below) represents 18% 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	185,165	69.3%
ibnr	58,607	21.9%
M/S apv adjust.	23,427	8.8%
M/S total	267,199	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 22% of the IBNR balance relates to accident years 2015 and 2016 (see Exhibit B). Approximately 72% of the M/S total claim liabilities are related to accident years 2012-2016 inclusive (i.e. the most recent 5 accident years).

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.

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

premium liabilities (\$000s)			policy liabilities (\$000s)		
	amt	%		amt	%
unearned prem	59,304	129.1%	claim	243,772	77.9%
prem def/(dpac)	(16,788)	(36.6%)	premium	42,516	13.6%
M/S apv adjust.	3,413	7.4%	M/S apv adjust.	26,840	8.6%
M/S total	45,929	100.0%	M/S total	313,128	100.0%

2 Activity During the Month of January 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 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	(1)	(1)	2,111	(1,880)	(214)	2,765	1,897	885
2014	3	3	813	(588)	(36)	924	777	336
2015	(111)	(111)	4,670	1,145	(97)	361	4,573	1,506
2016	11,423	(301)	459	(42)	3,209	(1,298)	3,668	(1,340)
TOTAL	11,314	(409)	8,053	(1,365)	2,862	2,752	10,915	1,387

(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.

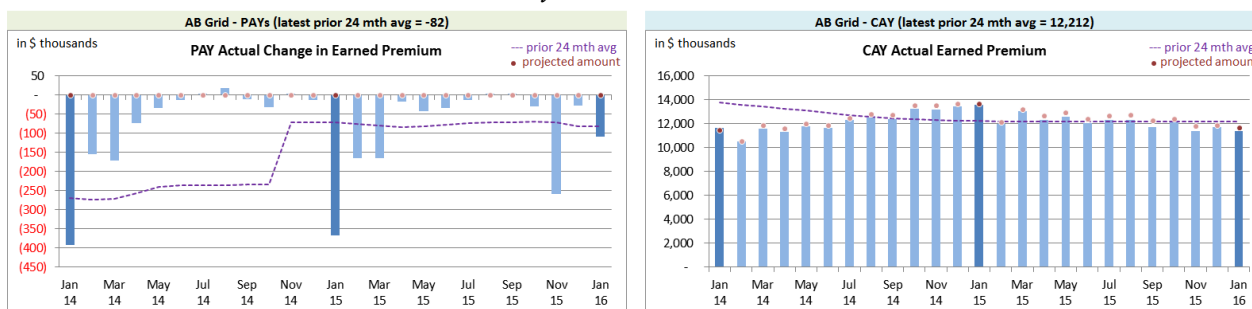
2.1.a Actual vs. Projected (AvsP): Earned Premium

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.

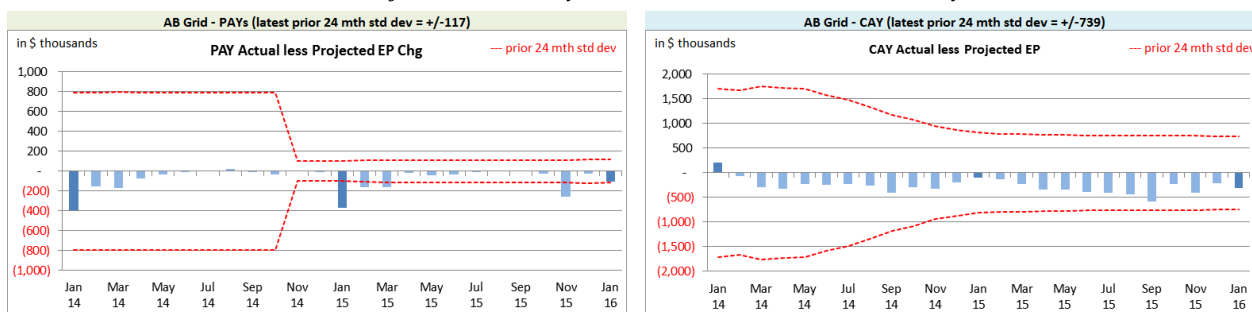
Alberta Grid RSP Actual Earned Premium by Calendar Month



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)	(82)	12,212
std dev	117	739
A-P <> std dev	4	-
% <> std dev	16.0%	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 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.

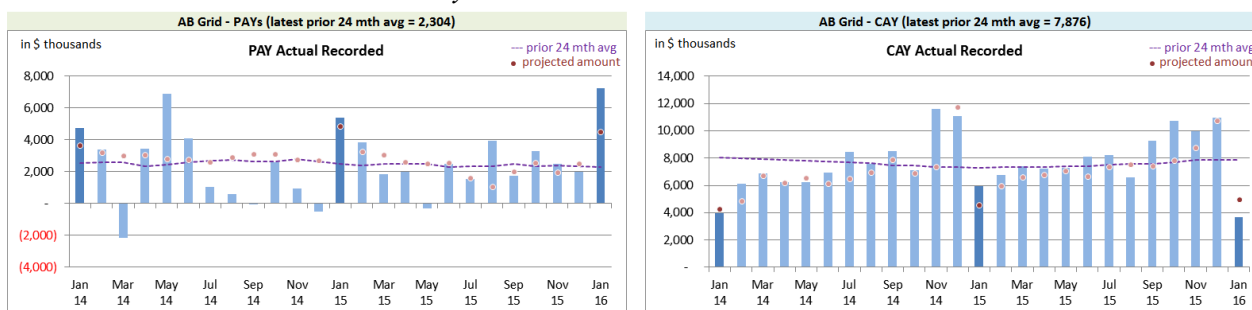
2.1.b AvsP: Recorded Indemnity & Allowed Claims Expense

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

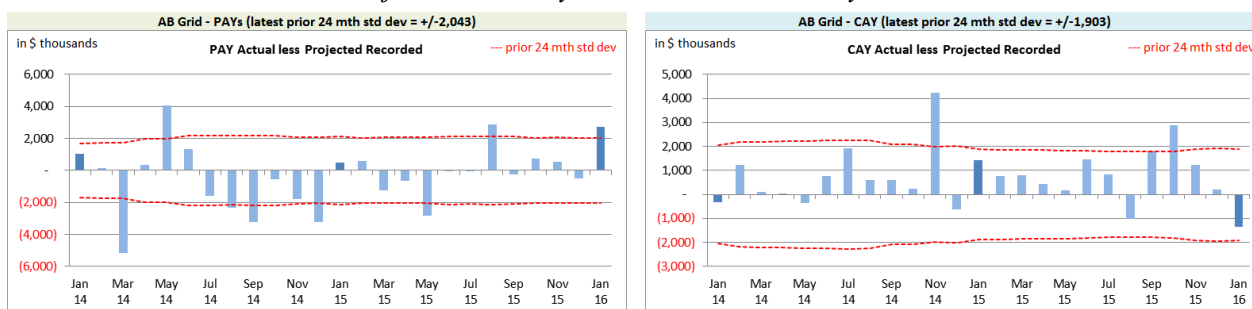
the charts immediately below, including the “prior 24-month average” level.

Alberta 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)		2,304	7,876
std dev		2,043	1,903
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 13-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 PAYs **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.

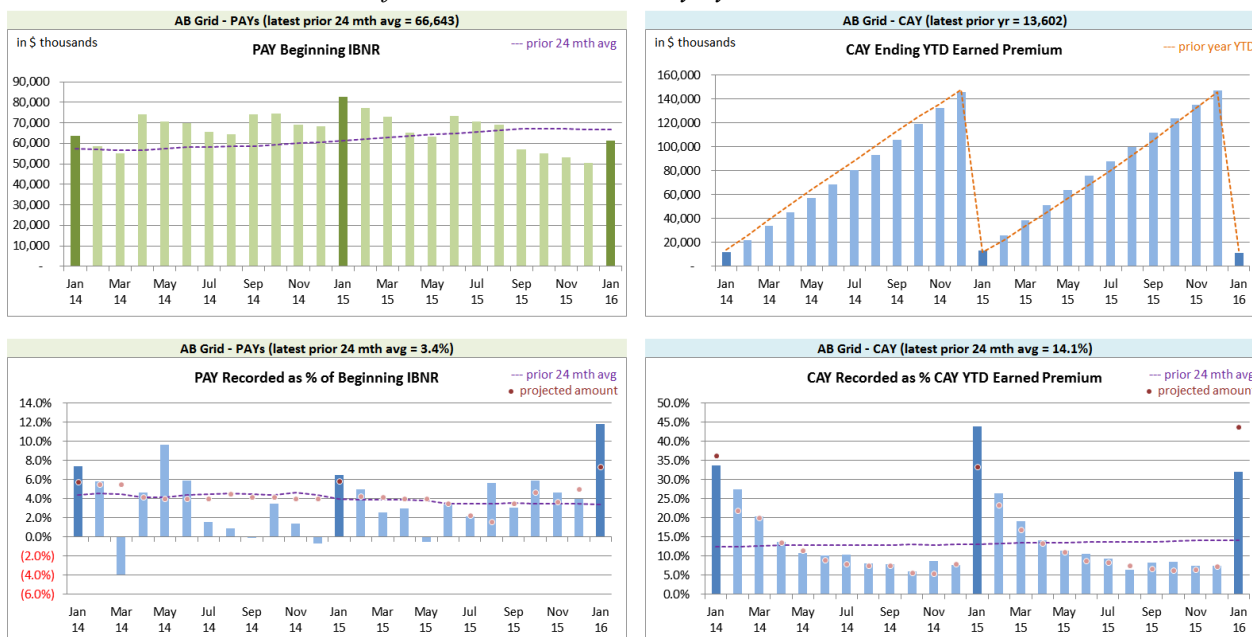
The current accident year (CAY) **recorded** variances (right chart above) may be indicating bias (where actuals have tended to be higher than projections). That said, at 12%, the number of variances falling outside of one standard deviation of actual activity over the period is lower than indicated 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 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).

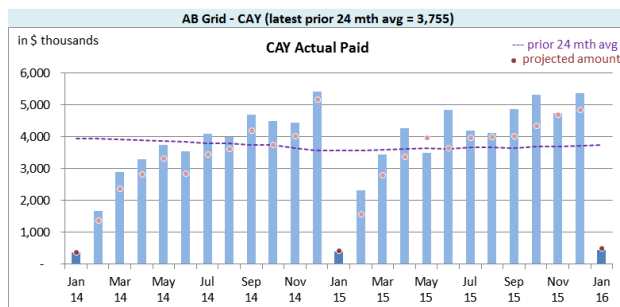
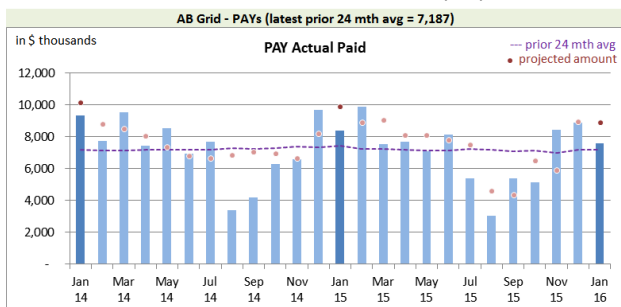
2.1.c AvsP: Paid Indemnity & Allowed Claims Expense

The charts immediately below show actual **paid** activity in each of the most recent 25 calendar months, along with a "prior 24-month average" to show how each month's actual compares with the

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.

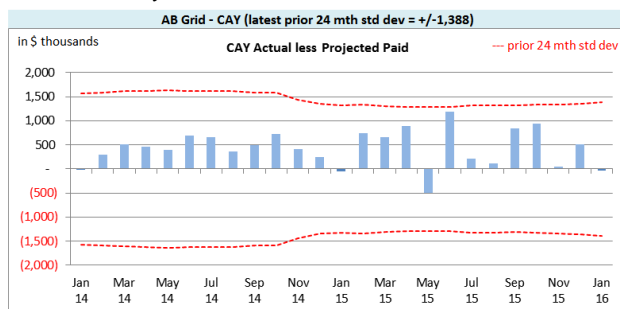
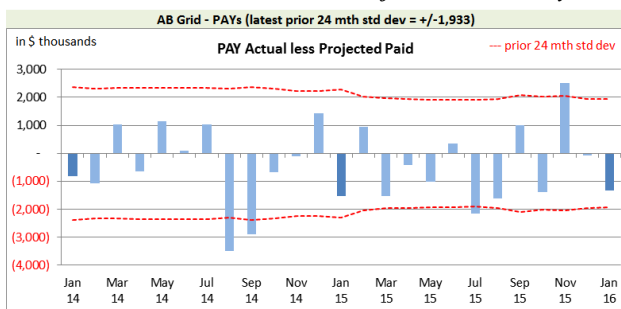
average amount of the preceding 24 calendar months.

*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)		7,187	3,755
std dev		1,933	1,388
A-P <> std dev		4	-
% <> std dev		16.0%	0.0%
norm <> std dev		31.7%	31.7%

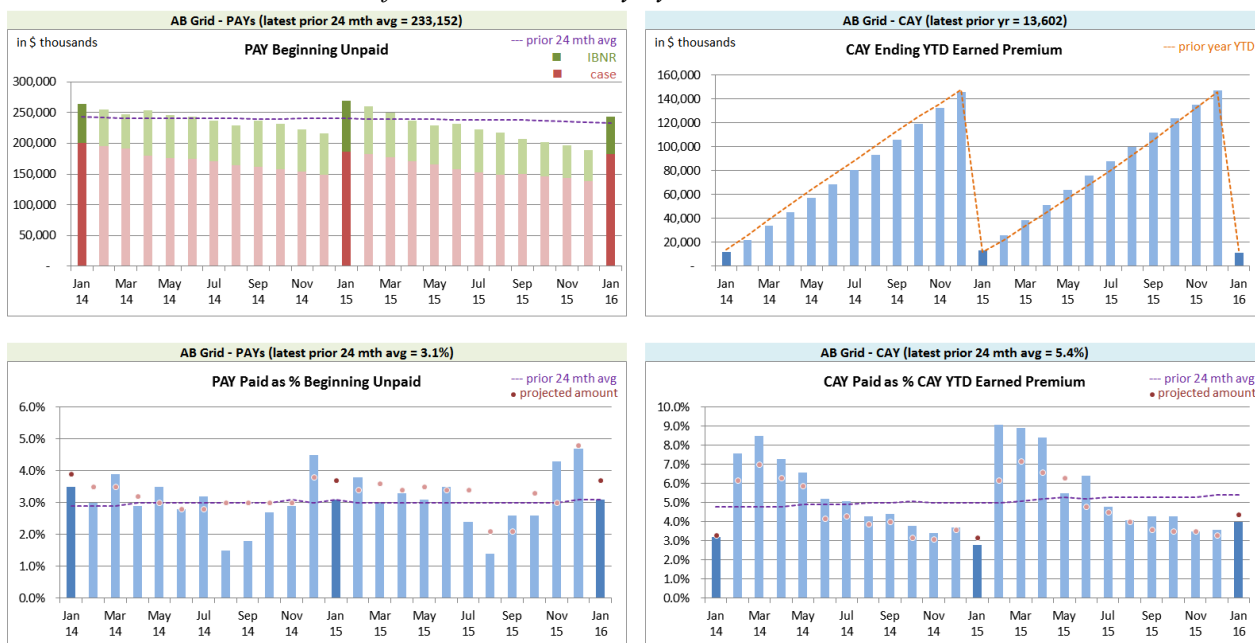
With respect to **paid** indemnity & allowed claims expense, the prior accident years’ (PAYs) variances (left chart above) have fallen outside one standard deviation of the overall period 16% of the time, a lower percent than suggested by a normal distribution, indicating the projection process may be 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). To-date, we have not been successful in adjusting our projections to reflect this apparent bias, and we continue to look for ways to improve. That said, 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 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 projections and actuals were based on the applicable valuation. The table immediately below summarizes variances in provisions included in the January 2016 Operational Report and the associated one-month projections from last month's Report.

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".

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	31,814	(887)	(2,291)	(34)	14,384	212	43,907	(709)
2014	13,935	(333)	(1,009)	(13)	5,885	77	18,811	(269)
2015	8,393	(1,590)	(1,484)	30	7,187	(148)	14,096	(1,708)
2016	4,465	1,126	(176)	4	931	(21)	5,220	1,109
TOTAL	58,607	(1,684)	(4,960)	(13)	28,387	120	82,034	(1,577)

The IBNR provision is \$1.7 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.

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 January 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.

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:	(16,788)	1,178	3,413	(368)	(13,375)	810
balance as % unearned premium:	(28.3%)	0.2%	5.8%	(0.3%)	(22.6%)	(0.1%)
actual unearned premium:	59,304					
less projected:	(3,666)					

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 71.9% rather than 71.2% (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	(83)	(0.7%)	(598)	(5.3%)	(681)	(6.0%)	(681)	(6.0%)
CAY	8,133	71.9%	755	6.7%	8,888	78.6%	8,888	78.6%
TOTAL	8,050	71.2%	157	1.4%	8,207	72.5%	8,207	72.5%

(“% 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 Operational Report.

IBNR (including actuarial present value adjustments) presented in section 6, Exhibit A, were derived

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.

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
 0.75%

 interest rate margin
 25 basis pts

Amounts in \$000s					
Accident Year	Actual Dec. 2015	Actual Jan. 2016	Projected Feb. 2016	Projected Mar. 2016	Projected Dec. 2016
2004	(73)	(73)	(73)	(73)	(73)
2005	199	202	204	206	215
2006	(200)	(266)	(257)	(250)	(189)
2007	1,163	1,025	994	965	734
2008	2,362	2,166	2,101	2,038	1,549
2009	3,260	3,168	3,074	2,981	2,265
2010	3,435	3,503	3,397	3,295	2,505
2011	7,931	7,594	7,366	7,145	5,430
2012	13,194	12,314	11,944	11,586	8,807
2013	14,559	14,274	13,845	13,429	10,209
2014	19,559	18,811	18,247	17,698	13,454
2015	19,353	14,096	11,531	10,590	8,010
2016	-	5,220	6,483	7,629	21,152
TOTAL	84,742	82,034	78,856	77,239	74,068
Change		(2,708)	(3,178)	(1,617)	

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 Dec. 2015	Actual Jan. 2016	Projected Feb. 2016	Projected Mar. 2016	Projected Dec. 2016
51.6%	2004	(81)	(81)	(81)	(81)	(81)
59.1%	2005	(31)	(53)	(51)	(49)	(40)
66.1%	2006	(395)	(443)	(430)	(417)	(317)
70.1%	2007	533	405	393	381	290
67.3%	2008	1,687	1,487	1,442	1,399	1,064
60.9%	2009	2,360	2,266	2,198	2,132	1,621
60.7%	2010	2,232	2,331	2,261	2,193	1,667
66.3%	2011	5,797	5,478	5,314	5,155	3,918
72.7%	2012	10,538	9,664	9,374	9,093	6,913
73.7%	2013	11,073	10,760	10,437	10,124	7,696
79.7%	2014	14,709	13,935	13,517	13,111	9,967
75.7%	2015	13,050	8,393	6,085	5,416	4,118
71.2%	2016	-	4,465	5,233	5,935	15,669
	TOTAL	61,472	58,607	55,692	54,392	52,485
	Change		(2,865)	(2,915)	(1,300)	

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 Dec. 2015	Actual Jan. 2016	Projected Feb. 2016	Projected Mar. 2016	Projected Dec. 2016
(1) unearned premium (UP)	64,306	59,304	56,333	54,683	61,882
FOR MEMBER SHARING					
(2) expected future costs ratio {% of (1)}	77.5%	77.4%	77.5%	77.5%	77.9%
(3) expected future costs {(1) x (2)}	49,822	45,929	43,649	42,376	48,211
(4) premium deficiency / (deferred policy acquisition cost)	(14,484)	(13,375)	(12,684)	(12,307)	(13,671)
Excluding Actuarial Present Value Adjustments					
(5) expected future costs ratio {% of (1)}	71.5%	71.4%	71.5%	71.5%	71.9%
(6) expected future costs {(1) x (5)}	45,960	42,368	40,266	39,093	44,474
(7) premium deficiency / (deferred policy acquisition cost)	(18,346)	(16,788)	(16,067)	(15,590)	(17,408)

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 ending 2016	Projected Balances as at Dec. 31, 2016 (\$000s)							
	nominal values			actuarial present value adjustments (apvs)				TOTAL
	Case	IBNR	Total Unpaid	discount	investment PfAD	development PfAD	Total apvs	
Acc Yr								
2004	-	(81)	(81)	-	-	8	8	(73)
2005	2,590	(40)	2,550	-	-	255	255	2,805
2006	1,732	(317)	1,415	(18)	6	140	128	1,543
2007	4,649	290	4,939	(64)	20	488	444	5,383
2008	4,416	1,064	5,480	(77)	22	540	485	5,965
2009	5,770	1,621	7,391	(126)	44	726	644	8,035
2010	8,049	1,667	9,716	(175)	58	955	838	10,554
2011	13,833	3,918	17,751	(320)	107	1,725	1,512	19,263
2012	15,067	6,913	21,980	(396)	132	2,158	1,894	23,874
2013	15,454	7,696	23,150	(463)	162	2,814	2,513	25,663
2014	22,839	9,967	32,806	(722)	230	3,979	3,487	36,293
2015	36,378	4,118	40,496	(1,012)	324	4,580	3,892	44,388
PAYs (sub-total):	130,777	36,816	167,593	(3,373)	1,105	18,368	16,100	183,693
CAY (2016)	40,095	15,669	55,764	(1,283)	446	6,320	5,483	61,247
claims liabilities:	170,872	52,485	223,357	(4,656)	1,551	24,688	21,583	244,940
	Unearned Premium	Premium Deficiency / (DPAC)	Total Provision	discount	investment PfAD	development PfAD	Total apvs	TOTAL
premium liabilities:	61,882	(17,408)	44,474	(753)	222	4,268	3,737	48,211
policy liabilities:			267,831	(5,409)	1,773	28,956	25,320	293,151

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, 2015 from the valuation), followed by the selected discount rate and the associated margin for investment income.

Selected Claims Development MfADs (Sep. 30, 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%	5.0%	10.0%
2010	10.0%	10.0%	8.5%	10.0%
2011	10.0%	10.0%	8.4%	9.9%
2012	10.0%	10.0%	8.5%	10.0%
2013	12.5%	10.0%	10.8%	12.4%
2014	12.4%	10.0%	12.5%	12.4%
2015	12.0%	10.0%	6.9%	11.6%
2016	12.5%	10.0%	12.5%	12.5%
prem liab	11.6%	10.0%	5.2%	9.8%
discount rate:				0.75%
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, 2015 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 (0.75%) and the prior valuation assumption (0.93%) 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, 2015 projected Unpaid							
	0.25%	0.75%	0.93%	1.25%	1.75%	2.25%	2.75%	3.25%
2004	-	-	-	-	-	-	-	-
2005	3,579	3,547	3,536	3,517	3,487	3,458	3,429	3,401
2006	2,575	2,552	2,544	2,529	2,507	2,485	2,464	2,443
2007	8,198	8,119	8,090	8,041	7,965	7,890	7,817	7,746
2008	9,241	9,136	9,098	9,033	8,932	8,835	8,738	8,644
2009	11,040	10,905	10,858	10,774	10,646	10,521	10,399	10,280
2010	16,477	16,275	16,202	16,078	15,886	15,700	15,518	15,341
2011	29,983	29,621	29,494	29,269	28,928	28,595	28,273	27,954
2012	35,844	35,371	35,205	34,915	34,465	34,032	33,612	33,200
2013	37,506	36,944	36,747	36,399	35,875	35,361	34,863	34,376
2014	53,767	52,860	52,540	51,988	51,138	50,319	49,526	48,751
2015	72,520	71,421	71,036	70,366	69,339	68,352	67,390	66,452
Total	280,730	276,751	275,350	272,909	269,168	265,548	262,029	258,588
		valuation assumption	prior val assumption					

AY	Dollar Impact Relative to Valuation Assumption							
	0.25%	0.75%	0.93%	1.25%	1.75%	2.25%	2.75%	3.25%
Total	3,979	-	(1,401)	(3,842)	(7,583)	(11,203)	(14,722)	(18,163)
		valuation assumption	prior val assumption					

AY	Percentage Impact Relative to Valuation Assumption							
	0.25%	0.75%	0.93%	1.25%	1.75%	2.25%	2.75%	3.25%
2004	-	-	-	-	-	-	-	-
2005	0.9%	-	(0.3%)	(0.8%)	(1.7%)	(2.5%)	(3.3%)	(4.1%)
2006	0.9%	-	(0.3%)	(0.9%)	(1.8%)	(2.6%)	(3.4%)	(4.3%)
2007	1.0%	-	(0.4%)	(1.0%)	(1.9%)	(2.8%)	(3.7%)	(4.6%)
2008	1.1%	-	(0.4%)	(1.1%)	(2.2%)	(3.3%)	(4.4%)	(5.4%)
2009	1.2%	-	(0.4%)	(1.2%)	(2.4%)	(3.5%)	(4.6%)	(5.7%)
2010	1.2%	-	(0.4%)	(1.2%)	(2.4%)	(3.5%)	(4.7%)	(5.7%)
2011	1.2%	-	(0.4%)	(1.2%)	(2.3%)	(3.5%)	(4.6%)	(5.6%)
2012	1.3%	-	(0.5%)	(1.3%)	(2.6%)	(3.8%)	(5.0%)	(6.1%)
2013	1.5%	-	(0.5%)	(1.5%)	(2.9%)	(4.3%)	(5.6%)	(7.0%)
2014	1.7%	-	(0.6%)	(1.6%)	(3.3%)	(4.8%)	(6.3%)	(7.8%)
2015	1.5%	-	(0.5%)	(1.5%)	(2.9%)	(4.3%)	(5.6%)	(7.0%)
Total	1.4%	-	(0.5%)	(1.4%)	(2.7%)	(4.0%)	(5.3%)	(6.6%)
		valuation assumption	prior val 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)	2	(2)	-	-	-	(73)
2005	199	19	(16)	-	3	1.5%	202
2006	(200)	5	(71)	-	(66)	33.0%	(266)
2007	1,163	(26)	(112)	-	(138)	(11.9%)	1,025
2008	2,362	(61)	(135)	-	(196)	(8.3%)	2,166
2009	3,260	(86)	(6)	-	(92)	(2.8%)	3,168
2010	3,435	(104)	172	-	68	2.0%	3,503
2011	7,931	(237)	(100)	-	(337)	(4.2%)	7,594
2012	13,194	(360)	(520)	-	(880)	(6.7%)	12,314
2013	14,559	(366)	81	-	(285)	(2.0%)	14,274
2014	19,559	(479)	(269)	-	(748)	(3.8%)	18,811
2015	19,353	(3,549)	(1,708)	-	(5,257)	(27.2%)	14,096
2016	-	4,111	1,109	-	5,220	100.0%	5,220
Grand Total	84,742	(1,131)	(1,577)	-	(2,708)	(3.2%)	82,034

Page 2 of 2

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

RSP		Alberta Grid					
AccountCode Desc		IBNR - Undiscovered				IBNR - in \$000s	
AccYear	Values						
	Sum of Prior Month Actual Amount	Sum of Projected Change	Sum of Change Due to AvsP Variances	Sum of Change Due to Valuation Implementation	Sum of Total Change	Sum of % Total Change	Sum of Current Month Final Amount
2004	(81)	2	(2)	-	-	-	(81)
2005	(31)	1	(23)	-	(22)	71.0%	(53)
2006	(395)	12	(60)	-	(48)	12.2%	(443)
2007	533	(16)	(112)	-	(128)	(24.0%)	405
2008	1,687	(51)	(149)	-	(200)	(11.9%)	1,487
2009	2,360	(71)	(23)	-	(94)	(4.0%)	2,266
2010	2,232	(67)	166	-	99	4.4%	2,331
2011	5,797	(174)	(145)	-	(319)	(5.5%)	5,478
2012	10,538	(316)	(558)	-	(874)	(8.3%)	9,664
2013	11,073	(332)	19	-	(313)	(2.8%)	10,760
2014	14,709	(441)	(333)	-	(774)	(5.3%)	13,935
2015	13,050	(3,067)	(1,590)	-	(4,657)	(35.7%)	8,393
2016	-	3,339	1,126	-	4,465	100.0%	4,465
Grand Total	61,472	(1,181)	(1,684)	-	(2,865)	(4.7%)	58,607