ALBERTA GRID RISK SHARING POOL

JANUARY 2021 OPERATIONAL REPORT

ACTUARIAL HIGHLIGHTS

Related Bulletin: F2021-013_AB_RSP_January_2021_Operational_Reports

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FACILITY Association

ACTUARIAL HIGHLIGHTS

RSP ALBERTA GRID

OPERATIONAL REPORT

JANUARY 2021

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1 Summary

Key Points

(a) The month's Current Accident Year claims activities were lower than projected; the activity was reviewed and attributed to low levels of reported physical damage claim activities in the month.

1.1 Valuation Schedule (Fiscal Year 2021)

The January 2021 Operational Report leverages actuarial assumptions consistent with last month (that is, it does not reflect the results of an updated valuation). The following table summarizes the valuation implementations scheduled for fiscal year 2021.

ALBERTA GRID RISK SHARING POOL FISCAL YEAR 2021 – SCHEDULE OF VALUATIONS			
Valuation Date	**Discount Rate (per annum)**	**Operational Report**	**Description of Changes**
Sep. 30, 2020 (completed)	0.20% mfad[1] 25 bp	Oct. 2020	update valuation (roll-forward): accident year 2020 loss ratio decreased 6.3 points to 70.6%; discount rate decreased 4 basis points; no change to selected margins for adverse deviations
Dec. 31, 2020	% mfad -- bp	Mar. 2021	update valuation:
Mar. 31, 2021	% mfad -- bp	May 2021	update valuation (roll-forward):
Jun. 30, 2021	% mfad -- bp	Aug. 2021	update valuation:
Sep. 30, 2021	% mfad -- bp	Oct. 2021	update valuation (roll-forward):

Under the proposed schedule for fiscal year 2021, the off-half valuation quarters ending March 31, 2021 and September 30, 2021 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

The Annual General Meeting of the members of Facility Association ("FA") appointed Mr. Cosimo Pantaleo as the Appointed Actuary at its meeting on February 20, 2020.

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

[1] The selected interest rate margin is limited to reducing the selected discount rate to 0%; the approach is that if the net impact is negative, the discount rate will be capped at 0%.

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[2]

There have been no changes in these descriptions since last month's Highlights.

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 (i.e. within the last five years) changes are provided below.

In the **Alberta Treasury Board and Finance Notice 04-2018** (Clarification of Minor Injury Regulation), dated **May 17, 2018**, the Alberta Superintendent of Insurance advised that clarifying amendments have been made to the definition of minor injuries under the Minor Injury Regulation (MIR). With the **most recent** valuation (September 30, 2020), consideration of changes in the definition of minor injuries under the MIR, were included with the updated industry trend analysis (completed using industry data as at December 31, 2019).

Amendments to the **Alberta Automobile Accident Insurance Benefits Regulation, Diagnostic and Treatment Protocols Regulation, and Minor Injury Regulation** came into force effective November 1, 2020, amending definitions and various benefit maximums defined in these regulations. **Alberta Bill 41** (Insurance (Enhancing Driver Affordability and Care) Amendment Act, 2020) **received royal assent on December 9, 2020**. Bill 41 amends the Insurance Act to: 1) control the use of expert witnesses in Court of Queen's Bench proceedings where damages for bodily injury or death arising from use or operation of a motor vehicle as defined in the Traffic Safety Act are claimed; 2) introduce direct compensation for property damage (DCPD) into the province; 3) amend the calculation of pre-judgment interest on damages awarded for bodily injury or death arising directly or indirectly form the use or operation of an automobile; and 4) amend provisions regarding the regulation of auto insurance rates by the Alberta Automobile Insurance Rate Board. At the current time, no explicit adjustments have been made to our valuation estimates or views based on the amendments to the various Regulations and introduction of Bill 41. The impact will be assessed with the next valuation (as at December 31, 2020) and as part of the next Industry valuation and trend analysis (as at June 30, 2020).

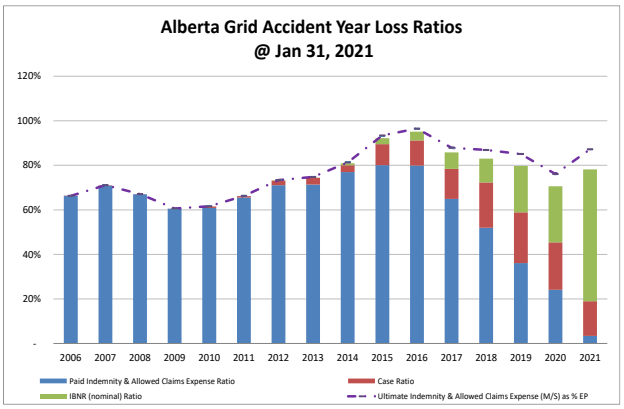
1.4 Current Provision Summary

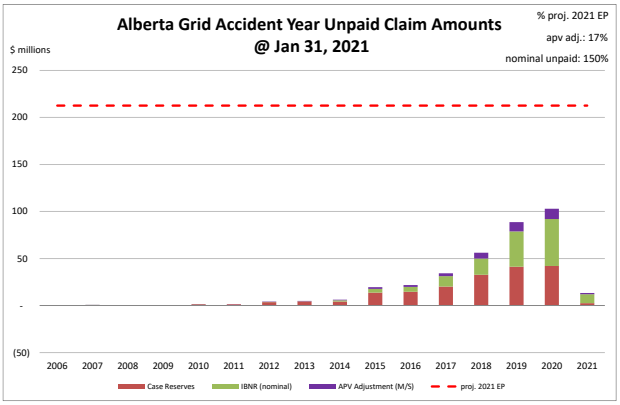
The following charts show the current levels of claim liabilities[3] booked by accident year[4]. The left chart displays life-to-date payments, case reserves, IBNR, and the total including actuarial present value adjustments against accident year earned premium. The right chart shows the associated dollar amounts for the components of the claim liabilities and the current projected amount of 2021full year earned premium (the red hash-mark line) to provide some perspective.

[2]This url to a pdf is to a helpful guide on how bills become laws: https://www.ola.org/sites/default/files/common/how-bills-become-law-en.pdf

[3]Claim liabilities refer to provision for unpaid indemnity and allowed claims expenses. Allowed claims expenses are first party legal and other expenes as listed in the RSP Claims Guide. Claims expenses paid through the member company expense allowance are NOT included in this discussion.

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





"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 ($37.1 million – see the following table) represents 17% of the earned premium projected for the full year 2021 (see the upper right corner of the preceding chart on the right). 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	183,870	51.5%
ibnr	135,834	38.1%
M/S apv adjust.	37,091	10.4%
M/S total	356,795	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 RSP is in case reserves. Approximately 44% of the IBNR balance relates to accident years 2020 and 2021 (see Exhibit B). Approximately 83% of the M/S total claim liabilities are related to accident years 2017-2021 inclusive (i.e. the most recent 5 accident years), and approximately 1% is related to accident years 2011 and prior (i.e. prior to the most recent 10 accident years).

The following tables summarize the premium liabilities and the total policy liabilities.

premium liabilities ($000s)

	amt	%
unearned prem	97,271	115.7%
prem def/(dpac)	(20,776)	(24.7%)
M/S apv adjust.	7,579	9.0%
M/S total	84,074	100.0%

policy liabilities ($000s)

	amt	%
claim	319,704	72.5%
premium	76,495	17.4%
M/S apv adjust.	44,670	10.1%
M/S total	440,869	100.0%

2 Activity During the Month of January 2021

2.1 Recorded Premium and Claims Activity

The following table summarizes the extent to which premiums and claims amounts recorded during the month differ from projections reflected in the prior month's Operational Report[5].

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

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

Table 01	Earned Premium		Paid Indemnity & Allowed Claims Expense		Case increase / (decrease)		Recorded increase / (decrease)	
Accident Year	Actual	Actual less Projected	Actual	Actual less Projected	Actual	Actual less Projected	Actual	Actual less Projected
Prior	(3)	(3)	2,974	483	(1,750)	(593)	1,223	(111)
2019	(16)	(16)	837	(279)	(63)	(405)	774	(684)
2020	(175)	(175)	3,963	(2,282)	(386)	1,573	3,577	(709)
2021	16,011	(1,017)	551	(116)	2,500	(3,233)	3,051	(3,349)
TOTAL	15,817	(1,210)	8,324	(2,195)	300	(2,659)	8,624	(4,854)

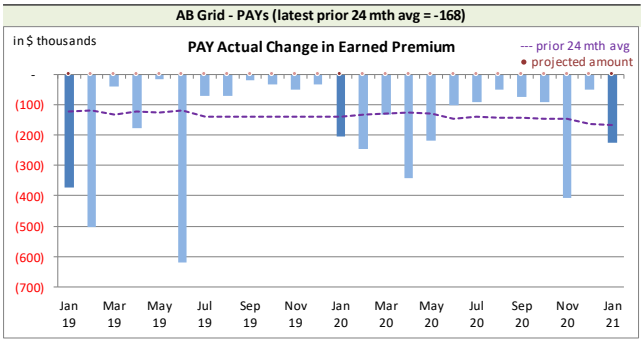
(Recorded transaction amounts exclude IBNR & other actuarial provisions)

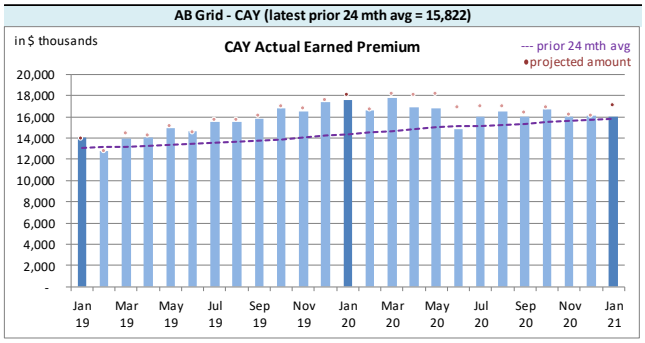
Claims transaction activity is generally volatile; changes from one month to the next are anticipated due to this natural "process variance" (i.e. random variation). Each month, the projection variances are reviewed for signs of projection bias and to identify potential ways to reduce the level of the variance. Commentary from our review is provided in the sub-sections that follow.

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

The following charts show actual **earned premium**[6] 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.

*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 generally occur at the beginning of each year.

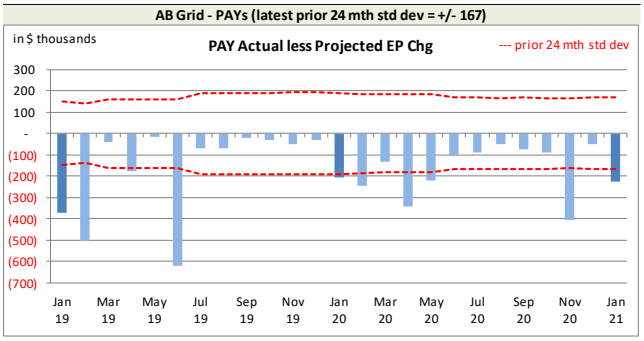
On Latest $ thousands		
Earned Premium	PAYs	CAY
Mthly Avg EP Chg (prior 24 mths)	(168)	15,822
std dev	167	1,281
A-P <> std dev	10	1
% <> std dev	40.0%	4.0%
norm <> std dev	31.7%	31.7%
performance vs 24-mth avg:	worse	better

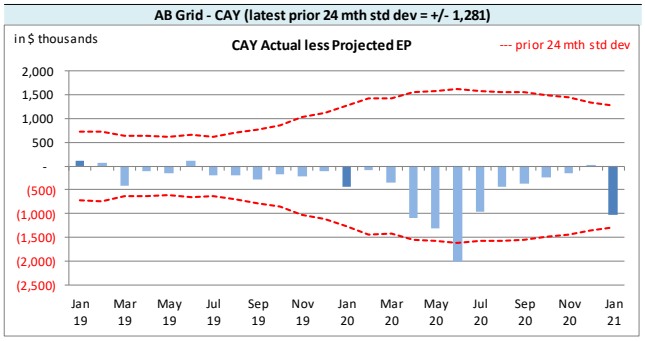
The associated variances between the actual changes and the projections from the previous month are shown in the following charts. **Earned premium** change projections are all attributed to the current accident year, as the projection upload does not accept earned premium changes for other accident 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

[6]Premium 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.

prior accident years.

Alberta Grid RSP Actual vs. Projected Summary: ***Earned Premium*** *Variances by Calendar Month*



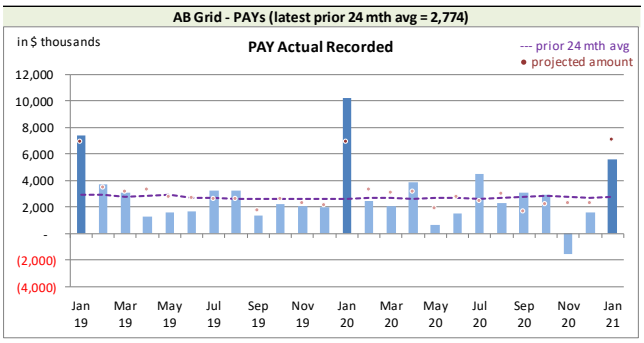


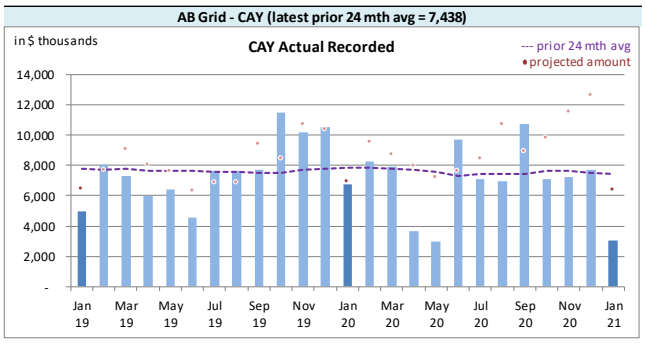
We project **earned premium** changes from known unearned premium balances and projected written premium levels, but upload the total projections as current accident year (CAY). This process has generated prior accident years' (PAYs) bias[7], with actuals generally lower than projected, although the magnitude is not high relative to monthly premium. In addition to the PAYs' bias, the CAY has also shown bias[8], with actuals being generally lower than projected, and while we modified our projections processes in response, bias still exists. Over time, we may consider other projection approaches to address the bias issue, but it has not currently deemed as a priority.

2.1.b AvsP: Recorded Indemnity & Allowed Claims Expense

The following charts show actual **recorded** activity (**paid** and case reserve changes), 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.

Alberta Grid RSP Actual **Recorded** *by Calendar Month*



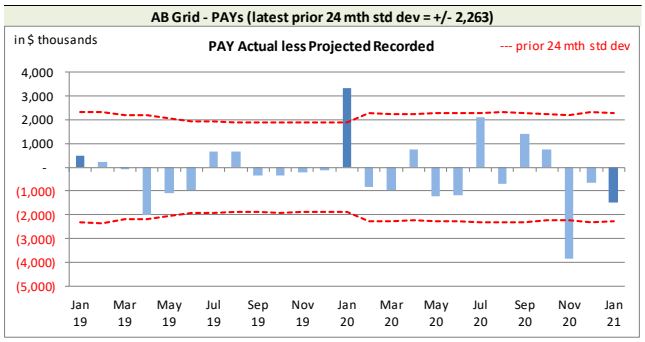


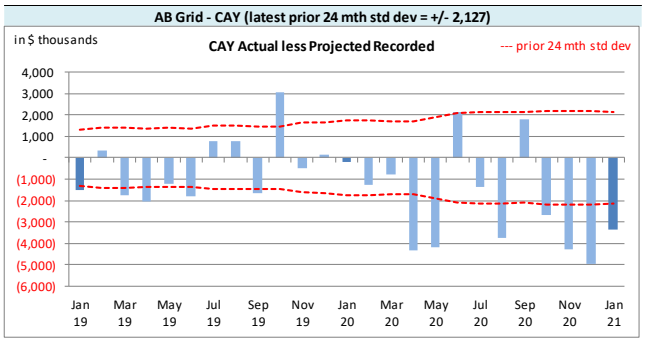
Recorded activity variances from the previous month's projections shown in the following charts, including the "prior 24-month standard deviation" levels to show how the variances from projection compare with historical standard deviations.

[7]The PAYs' variances will show bias as the projection upload forces all earned premium projections to be attributed to the CAY.

[8]We measure bias based on a 95% confidence range for a binominal distribution with trials based on the range being considered (25 in this case) and 50% probability of success. The rolling 25-month CAY variances at January 2021 has only 4 months where the actuals were higher than projected, and as the 95% confidence range is 8 to 17, bias continues to be indicated.

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





On Latest $ thousands		
Recorded	PAYs	CAY
Mthly Avg Recorded (prior 24 mths)	2,774	7,438
std dev	2,263	2,127
A-P <> std dev	2	14
% <> std dev	8.0%	56.0%
norm <> std dev	31.7%	31.7%
performance vs 24-mth avg:	better	worse

With respect to **recorded** indemnity & allowed claims expense activity, 8% of the prior accident years' (PAYs) variances over the last 25 calendar months have fallen outside of one standard deviation of the actual **recorded** amounts (see table on left), suggesting the projection process has performed better than simply projecting the prior 24-month average amount (assuming it follows a normal distribution). Bias[9] has not been indicated at a 95% confidence level on a rolling 25-month basis (9 of 25 variances were positive).

The current accident year (CAY) **recorded** variances fell outside of one standard deviation 56% of the time over the last 25 calendar months (see preceding table on the left), suggesting that the projection process has performed worse than simply projecting the prior 24-month average amount. Bias has been indicated at a 95% confidence level on a lagging 24-month basis (7 of 25 variances were positive).

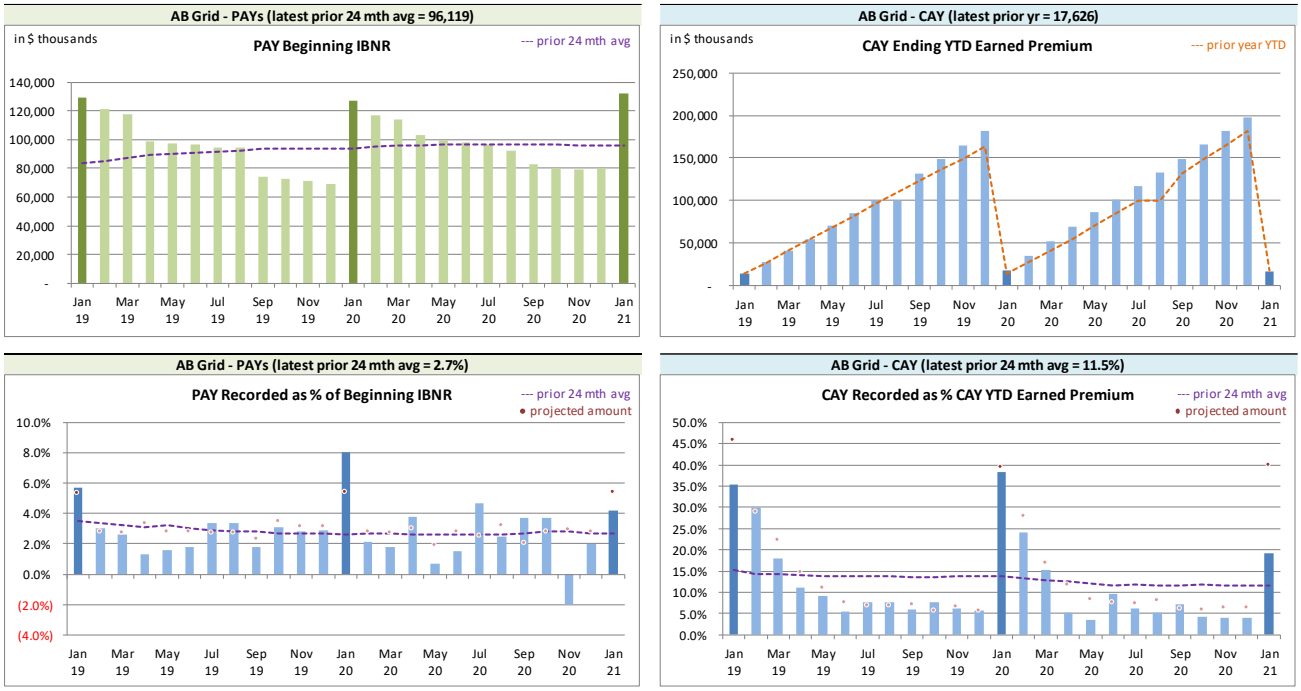
The CAY **recorded** variance was outside of the one standard deviation band this month (see preceding chart on the right). The lower than projected recorded activity was reviewed and attributed to low levels of reported physical damage claims activities in the month.

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 below related to levels influencing **recorded** activity. Note in particular the changes in the level of PAY beginning IBNR over the months, as a response to valuations and showing up as a beginning IBNR change one month after the valuation is implemented (i.e. April, June, September, and November).

[9] For the binomial distribution with 25 trials and an assumed 50% success probability, the 95% confidence range is 8 to 17 successes. That is, favourable or unfavourable counts of 0 to 7 or 18 to 25 out of 25 outcomes would suggest bias.

Alberta Grid RSP Levels that influence[10] ***Recorded*** *activity by Calendar Month*



We track PAY beginning IBNR as **recorded** activity comes out of IBNR. Changes in the PAY beginning IBNR (see upper left of the preceding group of charts) occur for several possible reasons:

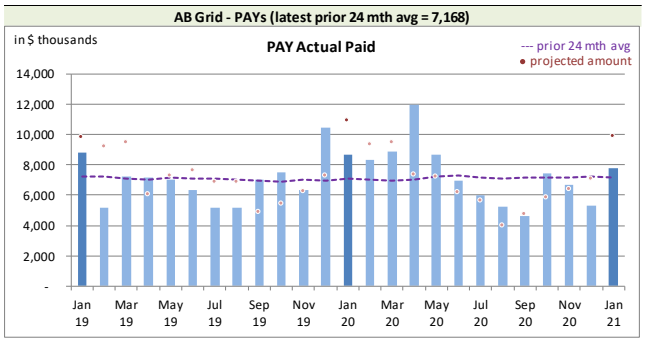
- to offset actual **recorded** activity (through loss ratio matching);
- the annual switchover as a CAY becomes a PAY (occurs in January); and
- when a new valuation is implemented, where the valuation resulted in changes to the selection of PAYs' ultimates (will show up as a beginning IBNR change one month after the valuation is implemented, i.e. the change will generally show in April, June, September, and November).

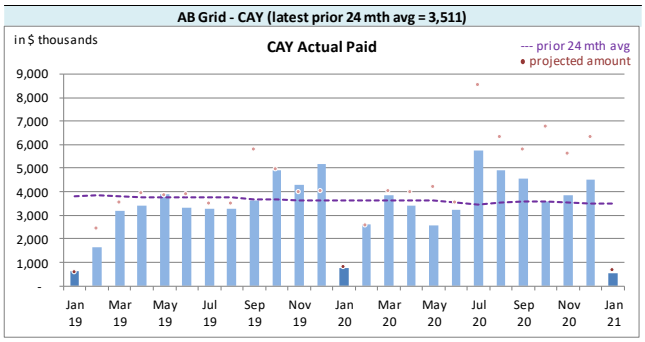
2.1.c AvsP: Paid Indemnity & Allowed Claims Expense

The following charts 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.

[10]Our 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.

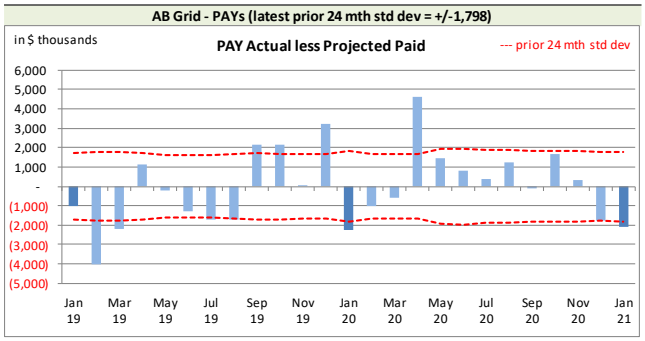
*Alberta Grid RSP Actual **Paid** activity by Calendar Month*

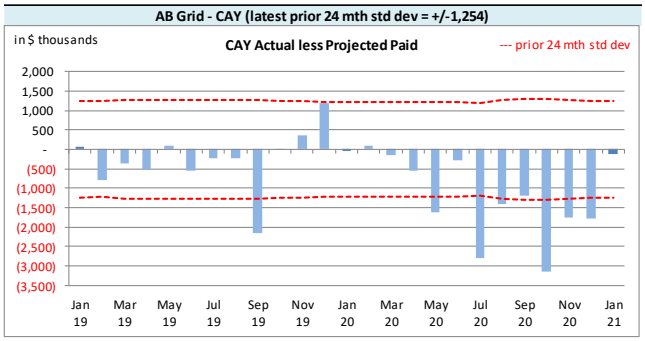




Paid activity variances from the previous month's projections shown in the following charts, including the prior 24-month standard deviation levels to show how the variances from projection compare with historical standard deviations.

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





On Latest $ thousands		
Paid	PAYs	CAY
Mthly Avg Paid (prior 24 mths)	7,168	3,511
std dev	1,798	1,254
A-P <> std dev	11	7
% <> std dev	44.0%	28.0%
norm <> std dev	31.7%	31.7%
performance vs 24-mth avg:	worse	no better

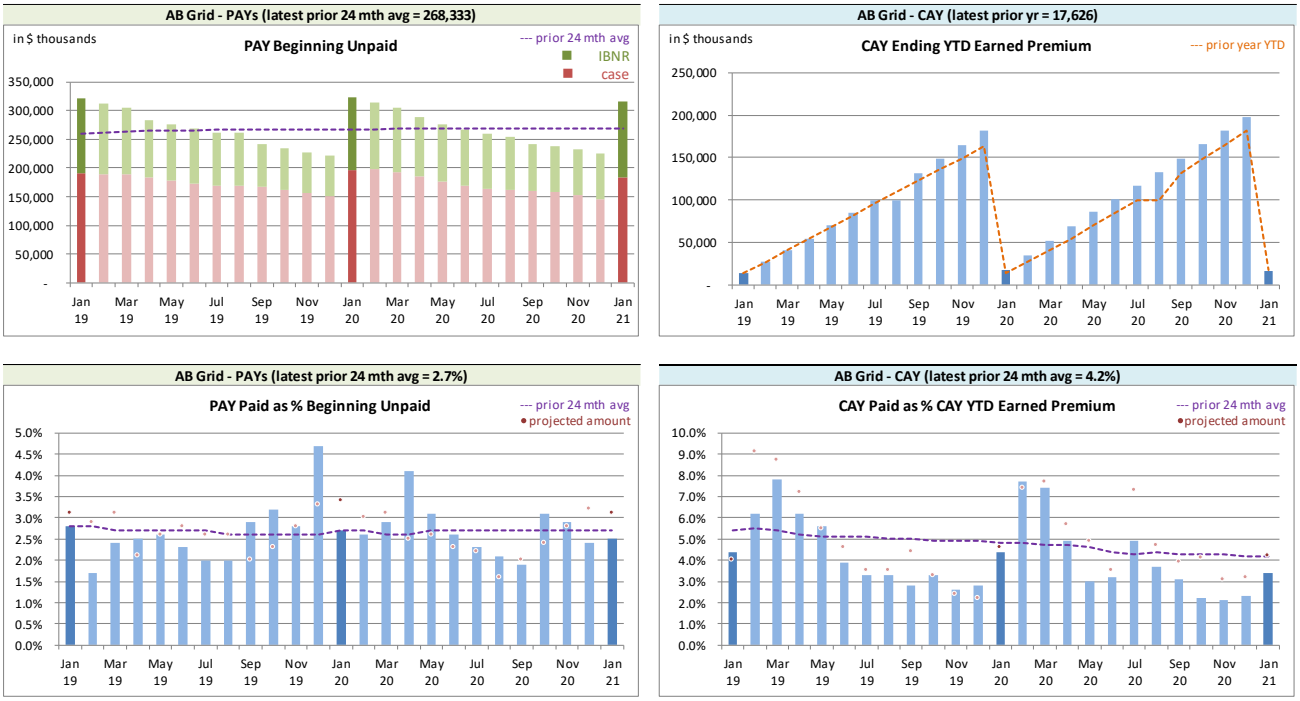
With respect to **paid** indemnity & allowed claims expense, 44% of the prior accident years' (PAYs) variances over the last 25 calendar months have fallen outside of one standard deviation of the actual **paid** amounts (see table on left), suggesting the projection process has performed worse than simply projecting the prior 24-month average amount (assuming it follows a normal distribution), and we are actively looking into the projection process for means of improving this result. Bias has not been indicated at a 95% confidence level on a rolling 25-month basis (12 of 25 variances are positive).

The PAY **paid** variance was just outside the one standard deviation band this month (see preceding chart on the left), the lower than projected recorded activity was reviewed and attributed to process variance.

The current accident year (CAY) **paid** variances fell outside one standard deviation 28% of the time over the last 25 calendar months (see preceding table on the left), suggesting the projection process has performed no better than simply projecting the prior 24-month average amount. Bias has been indicated at a 95% confidence level on a rolling 25-month basis (5 of 25 variances are positive).

We have included, for reference, the following charts related to levels influencing **paid** activity.

Alberta Grid RSP Levels that influence[11] ***Paid*** *activity by Calendar Month*



We track the PAY beginning unpaid balance (case and IBNR) as **paid** activity comes out of the unpaid balance. Changes in the PAY beginning unpaid balance (see upper left of the preceding group of charts) occur for several possible reasons:

- to offset actual **paid** activity (may reduce case or IBNR or both);
- the annual switchover as a CAY becomes a PAY (occurs in January); and
- when a new valuation is implemented, where the valuation resulted in changes to the selection of PAYs' ultimates (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 IBNR[12], 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 based on the applicable valuation.

[11]Our 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.

[12]For ease of discussion, "IBNR" is used in place of "provisions for incurred but not recorded (IBNR) and development".

The following table summarizes variances in provisions included in this month's Operational Report and the associated one-month projections from last month's Report.

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

Table 02

			actuarial present value adjustments					
	IBNR		Discount Amount		Provisions for Adverse Deviations		IBNR + actuarial present value adjustments	
Accident Year	Actual	Actual less Projected	Actual	Actual less Projected	Actual	Actual less Projected	Actual	Actual less Projected
Prior	38,881	82	(634)	1	15,512	(59)	53,759	24
2019	37,593	671	(394)	(1)	10,205	34	47,404	704
2020	49,874	586	(552)	(13)	11,525	271	60,847	844
2021	9,486	2,553	(72)	4	1,501	(86)	10,915	2,471
TOTAL	135,834	3,892	(1,652)	(9)	38,743	160	172,925	4,043

The IBNR provision is $3.9 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 years IBNR amount change from last month to this month are broken down:

(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 following table summarizes the variances in the provisions for premium deficiency liability / (deferred policy acquisition cost asset) included in this month's Operational Report and the one-month projections from last month's Report. This RSP is in a deferred policy acquisition cost asset position (shown as a negative amount) prior to and after actuarial present value adjustments. Actuarial present value adjustments decrease the asset value as the adjustments increase the expected future policy obligations (costs) associated with the unearned premium. 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:	(20,776)	780	7,579	(288)	(13,197)	492
balance as % unearned premium:	(21.4%)	-	7.8%	-	(13.6%)	-
actual unearned premium:	97,271					
less projected:	(3,678)					

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 loss[13] 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 following table summarizes the calendar year-to-date results for indemnity & allowed claims expenses[14], 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 79.4% rather than 78.3% (the valuation ultimate ratio for accident year 2021), 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	
	Amount	% EP	Amount	% EP	Amount	% EP
PAYs	(165)	(1.0%)	(901)	(5.7%)	(1,066)	(6.8%)
CAY	12,537	79.4%	1,429	9.1%	13,966	88.5%
TOTAL	12,371	78.4%	528	3.3%	12,899	81.7%

("% EP" based on 2021 calendar year-to-date earned premium; ratios may not total due to rounding)

In general, prior accident years (PAYs) changes from last month are due to the release of the actuarial present value adjustments with claims payments, except when valuations implemented. The loss ratio change year-to-date in Table 04 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 (CAY), changes in the year-to-date total reflects the additional month's exposure and regular changes to actuarial present value adjustments as the year ages.

5 Current Operational Report – Additional Exhibits

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

[13] "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).

[14] 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 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 shown in the Operational Report as "Undiscounted IBNR".

The ultimate loss ratios presented in section 6, Exhibit B, refer to the estimates derived based on 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 0.20%

interest rate margin 25 basis pts

Amounts in $000s					
Accident Year	Actual Dec. 2020	Actual Jan. 2021	Projected Feb. 2021	Projected Mar. 2021	Projected Dec. 2021
2005	13	13	13	12	9
2006	(119)	(119)	(116)	(114)	(85)
2007	150	150	146	142	105
2008	29	11	10	9	5
2009	44	45	44	42	31
2010	125	152	148	144	106
2011	147	73	70	68	48
2012	694	682	665	648	480
2013	927	585	568	551	407
2014	1,891	1,871	1,828	1,784	1,329
2015	5,716	5,763	5,630	5,493	4,097
2016	7,213	7,012	6,851	6,687	4,989
2017	14,758	14,166	13,893	13,284	9,442
2018	23,811	23,425	22,449	22,017	16,643
2019	48,286	47,404	46,730	45,602	36,324
2020	65,035	60,847	58,530	56,822	47,112
2021	-	10,915	15,905	20,985	72,008
TOTAL	168,650	172,925	173,296	174,109	193,001
Change		4,275	371	813	

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. 2020	Actual Jan. 2021	Projected Feb. 2021	Projected Mar. 2021	Projected Dec. 2021
60.5%	2005	(26)	(26)	(25)	(24)	(18)
66.3%	2006	(129)	(129)	(126)	(123)	(92)
71.1%	2007	83	83	81	79	59
67.1%	2008	8	(9)	(9)	(9)	(9)
60.6%	2009	24	25	24	23	17
61.5%	2010	(19)	20	20	20	15
66.2%	2011	(37)	(58)	(57)	(56)	(43)
73.2%	2012	303	294	288	282	212
74.5%	2013	469	133	130	127	96
80.9%	2014	1,319	1,311	1,285	1,258	943
92.2%	2015	3,887	3,996	3,916	3,834	2,879
95.0%	2016	5,242	5,045	4,944	4,840	3,634
85.8%	2017	11,589	11,060	10,839	10,297	7,156
83.0%	2018	17,498	17,214	16,319	16,009	11,791
79.7%	2019	38,380	37,593	37,067	36,103	28,356
70.6%	2020	53,574	49,874	48,128	46,877	38,872
78.3%	2021	-	9,486	13,273	17,240	57,497
	TOTAL	132,087	135,834	136,021	136,703	151,310
	Change		3,747	187	682	

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. 2020	Actual Jan. 2021	Projected Feb. 2021	Projected Mar. 2021	Projected Dec. 2021
(1) unearned premium (UP)	101,914	97,271	96,493	99,133	132,046
FOR MEMBER SHARING					
(2) expected future costs ratio {% of (1)}	86.4%	86.4%	86.5%	86.6%	88.6%
(3) expected future costs {(1) x (2)}	88,074	84,074	83,448	85,825	117,019
(4) premium deficiency / (deferred policy acquisition cost)	(13,840)	(13,197)	(13,045)	(13,308)	(15,027)
Excluding Actuarial Present Value Adjustments					
(5) expected future costs ratio {% of (1)}	78.6%	78.6%	78.7%	78.8%	80.6%
(6) expected future costs {(1) x (5)}	80,134	76,495	75,925	78,088	106,469
(7) premium deficiency / (deferred policy acquisition cost)	(21,780)	(20,776)	(20,568)	(21,045)	(25,577)

EXHIBIT D

Projected Year-end Policy Liabilities

The table below presents the projected policy liabilities as at December 31, 2021, broken down by component.

Alberta Grid	Projected Balances as at Dec. 31, 2021 ($000s)									
ending 2021	nominal values			actuarial present value adjustments (apvs)						
Acc Yr	Case	IBNR	Total Unpaid	discount	investment PfAD	nominal development PfAD	development PfAD discount	development PfAD	Total apvs	TOTAL
2005	284	(18)	266	-	-	27	-	27	27	293
2006	161	(92)	69	-	-	7	-	7	7	76
2007	403	59	462	(1)	1	46	-	46	46	508
2008	145	(9)	136	-	-	14	-	14	14	150
2009	123	17	140	-	-	14	-	14	14	154
2010	894	15	909	(3)	3	91	-	91	91	1,000
2011	950	(43)	907	(4)	4	91	-	91	91	998
2012	2,480	212	2,692	(11)	11	269	(1)	268	268	2,960
2013	3,026	96	3,122	(9)	9	312	(1)	311	311	3,433
2014	2,931	943	3,874	(12)	12	387	(1)	386	386	4,260
2015	9,349	2,879	12,228	(49)	49	1,223	(5)	1,218	1,218	13,446
2016	9,986	3,634	13,620	(68)	68	1,362	(7)	1,355	1,355	14,975
2017	15,816	7,156	22,972	(115)	115	2,297	(11)	2,286	2,286	25,258
2018	27,217	11,791	39,008	(195)	195	4,876	(24)	4,852	4,852	43,860
2019	35,709	28,356	64,065	(320)	320	8,008	(40)	7,968	7,968	72,033
2020	30,209	38,872	69,081	(414)	414	8,290	(50)	8,240	8,240	77,321
PAYs (sub-total):	139,683	93,813	233,496	(1,201)	1,201	27,320	(140)	27,180	27,180	260,676
CAY (2021)	64,163	57,497	121,660	(730)	730	14,599	(88)	14,511	14,511	136,171
claims liabilities:	203,846	151,310	355,156	(1,931)	1,931	41,919	(228)	41,691	41,691	396,847
	Unearned Premium	Premium Deficiency / (DPAC)	Total Provision	discount	investment PfAD	nominal development PfAD	development PfAD discount	development PfAD	Total apvs	TOTAL*
premium liabilities:	132,046	(25,577)	106,469	(530)	530	10,603	(53)	10,550	10,550	117,019
									*Total may not be sum of parts, as apvs apply to future costs within UPR	
policy liabilities:			**461,625**	**(2,461)**	**2,461**	**52,522**	**(281)**	**52,241**	**52,241**	**513,866**

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, 2020 from the valuation), followed by the selected discount rate and the associated margin for investment income.

Selected Claims Development MfADs (Sep. 30, 2020)

Accident Year	Third Party Liability Margins	Accident Benefits Margins	Other Coverages Margins	Total Margins
2004	10.0%	10.0%	10.0%	10.0%
2005	10.0%	10.0%	10.0%	10.0%
2006	10.0%	10.0%	10.0%	10.0%
2007	10.0%	10.0%	10.0%	10.0%
2008	10.0%	10.0%	10.0%	10.0%
2009	10.0%	10.0%	10.0%	10.0%
2010	10.0%	10.0%	10.0%	10.0%
2011	10.0%	10.0%	10.0%	10.0%
2012	10.0%	10.0%	10.0%	10.0%
2013	10.0%	10.0%	10.0%	10.0%
2014	10.0%	10.0%	10.0%	10.0%
2015	10.0%	10.0%	10.0%	10.0%
2016	10.0%	10.0%	9.6%	10.0%
2017	10.0%	10.0%	10.0%	10.0%
2018	12.5%	10.0%	12.5%	12.5%
2019	12.5%	10.0%	12.5%	12.5%
2020	12.2%	10.0%	8.4%	12.0%
2021	11.9%	10.0%	5.1%	10.0%
prem liab	11.9%	10.0%	5.1%	10.0%

discount rate:	0.20%
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, 2020 from the latest valuation date (projections in exhibits A to D are to Dec. 31, 2020, and are based on more up-to-date information). We have included the most recent valuation selection (0.20%), the prior valuation assumption (0.24%) and the prior fiscal year end valuation assumption (1.44%) for comparative purposes. A 25 basis point margin for investment return adverse deviation is used in all scenarios presented.

$ Format: $000s

	Actuarial Present Value of Provisions at Various Discount Rates - Dec. 31, 2020 projected Unpaid							
AY	0.00%	0.00%	0.20%	0.70%	1.20%	1.70%	0.24%	1.44%
2004	-	-	-	-	-	-	-	-
2005	228	228	228	228	228	227	228	227
2006	216	216	216	215	214	213	216	214
2007	702	702	702	699	695	691	702	693
2008	313	313	313	311	309	306	313	308
2009	202	202	202	200	199	197	202	198
2010	1,297	1,297	1,297	1,286	1,275	1,264	1,297	1,270
2011	1,914	1,914	1,914	1,899	1,882	1,866	1,914	1,874
2012	3,606	3,606	3,605	3,577	3,547	3,518	3,605	3,533
2013	5,451	5,451	5,449	5,407	5,361	5,316	5,449	5,339
2014	7,596	7,596	7,593	7,523	7,448	7,373	7,593	7,412
2015	20,119	20,119	20,110	19,903	19,679	19,460	20,110	19,575
2016	22,484	22,484	22,474	22,246	22,001	21,760	22,474	21,886
2017	34,436	34,436	34,420	34,045	33,642	33,250	34,417	33,452
2018	57,644	57,644	57,612	56,928	56,190	55,478	57,605	55,848
2019	89,348	89,348	89,289	88,105	86,828	85,588	89,279	86,232
2020	104,517	104,517	104,450	103,010	101,458	99,964	104,439	100,750
Total	350,073	350,073	349,874	345,582	340,956	336,471	349,843	338,811
	curr - 100 bp	curr - 50 bp	curr val assumption	curr + 50bp	curr + 100bp	curr + 150bp	prior val assumption	prior fyr end assumption

	Dollar Impact Relative to Valuation Assumption							
AY	0.00%	0.00%	0.20%	0.70%	1.20%	1.70%	0.24%	1.44%
Total	199	199	-	(4,292)	(8,918)	(13,403)	(31)	(11,063)
	curr - 100 bp	curr - 50 bp	curr val assumption	curr + 50bp	curr + 100bp	curr + 150bp	prior val assumption	prior fyr end assumption

	Percentage Impact Relative to Valuation Assumption							
AY	0.00%	0.00%	0.20%	0.70%	1.20%	1.70%	0.24%	1.44%
2004	-	-	-	-	-	-	-	-
2005	-	-	-	-	-	(0.4%)	-	(0.4%)
2006	-	-	-	(0.5%)	(0.9%)	(1.4%)	-	(0.9%)
2007	-	-	-	(0.4%)	(1.0%)	(1.6%)	-	(1.3%)
2008	-	-	-	(0.6%)	(1.3%)	(2.2%)	-	(1.6%)
2009	-	-	-	(1.0%)	(1.5%)	(2.5%)	-	(2.0%)
2010	-	-	-	(0.8%)	(1.7%)	(2.5%)	-	(2.1%)
2011	-	-	-	(0.8%)	(1.7%)	(2.5%)	-	(2.1%)
2012	0.0%	0.0%	-	(0.8%)	(1.6%)	(2.4%)	-	(2.0%)
2013	0.0%	0.0%	-	(0.8%)	(1.6%)	(2.4%)	-	(2.0%)
2014	0.0%	0.0%	-	(0.9%)	(1.9%)	(2.9%)	-	(2.4%)
2015	0.0%	0.0%	-	(1.0%)	(2.1%)	(3.2%)	-	(2.7%)
2016	0.0%	0.0%	-	(1.0%)	(2.1%)	(3.2%)	-	(2.6%)
2017	0.0%	0.0%	-	(1.1%)	(2.3%)	(3.4%)	(0.0%)	(2.8%)
2018	0.1%	0.1%	-	(1.2%)	(2.5%)	(3.7%)	(0.0%)	(3.1%)
2019	0.1%	0.1%	-	(1.3%)	(2.8%)	(4.1%)	(0.0%)	(3.4%)
2020	0.1%	0.1%	-	(1.4%)	(2.9%)	(4.3%)	(0.0%)	(3.5%)
Total	0.1%	0.1%	-	(1.2%)	(2.5%)	(3.8%)	(0.0%)	(3.2%)
	curr - 100 bp	curr - 50 bp	curr val assumption	curr + 50bp	curr + 100bp	curr + 150bp	prior val assumption	prior fyr end assumption

EXHIBIT G

Components of Member Statement IBNR (i.e. "Discounted") Change During Month

RSP	**Alberta Grid**
AccountCode Desc	**IBNR - Discounted**

M/S 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
2005	13	-	-	-	-	-	13
2006	(119)	3	(3)	-	-	-	(119)
2007	150	(4)	4	-	-	-	150
2008	29	-	(18)	-	(18)	(62.1%)	11
2009	44	(1)	2	-	1	2.3%	45
2010	125	(2)	29	-	27	21.6%	152
2011	147	(3)	(71)	-	(74)	(50.3%)	73
2012	694	(18)	6	-	(12)	(1.7%)	682
2013	927	(23)	(319)	-	(342)	(36.9%)	585
2014	1,891	(48)	28	-	(20)	(1.1%)	1,871
2015	5,716	(143)	190	-	47	0.8%	5,763
2016	7,213	(184)	(17)	-	(201)	(2.8%)	7,012
2017	14,758	(573)	(19)	-	(592)	(4.0%)	14,166
2018	23,811	(600)	214	-	(386)	(1.6%)	23,425
2019	48,286	(1,586)	704	-	(882)	(1.8%)	47,404
2020	65,035	(5,032)	844	-	(4,188)	(6.4%)	60,847
2021	-	8,444	2,471	-	10,915	100.0%	10,915
Grand Total	**168,650**	**232**	**4,043**	**-**	**4,275**	**2.5%**	**172,925**

EXHIBIT G

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

RSP	**Alberta Grid**
AccountCode Desc	**IBNR - Undiscounted**

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
2005	(26)	1	(1)	-	-	-	(26)
2006	(129)	3	(3)	-	-	-	(129)
2007	83	(2)	2	-	-	-	83
2008	8	-	(17)	-	(17)	(212.5%)	(9)
2009	24	(1)	2	-	1	4.2%	25
2010	(19)	-	39	-	39	(205.3%)	20
2011	(37)	1	(22)	-	(21)	56.8%	(58)
2012	303	(8)	(1)	-	(9)	(3.0%)	294
2013	469	(12)	(324)	-	(336)	(71.6%)	133
2014	1,319	(34)	26	-	(8)	(0.6%)	1,311
2015	3,887	(101)	210	-	109	2.8%	3,996
2016	5,242	(136)	(61)	-	(197)	(3.8%)	5,045
2017	11,589	(522)	(7)	-	(529)	(4.6%)	11,060
2018	17,498	(525)	241	-	(284)	(1.6%)	17,214
2019	38,380	(1,458)	671	-	(787)	(2.1%)	37,593
2020	53,574	(4,286)	586	-	(3,700)	(6.9%)	49,874
2021	-	6,933	2,553	-	9,486	100.0%	9,486
Grand Total	**132,087**	**(145)**	**3,892**	**-**	**3,747**	**2.8%**	**135,834**