



ALBERTA GRID RISK SHARING POOL

APRIL 2020 OPERATIONAL REPORT

ACTUARIAL HIGHLIGHTS

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ACTUARIAL HIGHLIGHTS**RSP ALBERTA GRID****OPERATIONAL REPORT****APRIL 2020**

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1 Summary

Key Points

- (a) The loss ratios being used under our current assumptions do NOT include any incurred impacts of adjustments related to COVID-19; any associated impacts and changes will be initially reflected in our March 31, 2020 valuation which will be implemented in the May 2020 Operational Reports; and
- (b) The month’s Current Accident Year recorded activities were lower than the projections from last month; the activity was reviewed and attributed to a reduction in written premium and physical damage claims experience in the month due to the impact of the COVID-19 pandemic. April’s reported claims projections for the next two months (May 2020 and June 2020) have been adjusted to reflect the impacts: a 30% decrease in Current Accident Year physical damage claim activity, as per discussion with FA’s Appointed Actuary. No adjustment has been made to this month’s premium projections).

1.1 Valuation Schedule (Fiscal Year 2020)

The April 2020 Operational Report leverages actuarial assumptions consistent with last month (that is, it does not reflect the results of an updated valuation). The table below summarizes the valuation implementations scheduled for fiscal year 2020.

ALBERTA GRID RISK SHARING POOL FISCAL YEAR 2020 – SCHEDULE OF VALUATIONS			
Valuation Date	Discount Rate (per annum)	Operational Report	Description of Changes
Sep. 30, 2019 (completed)	1.44% mfad 25 bp	Oct. 2019	updated valuation (roll forward): accident year 2019 loss ratio <u>de</u> creased 2.4 points to 84.4%; discount rate <u>in</u> creased 3 basis points; no change to selected margins for adverse deviations
Dec. 31, 2019	1.63% mfad 25 bp	Mar. 2020	update valuation: accident year 2019 loss ratio <u>de</u> creased 3.9 points to 80.5%; accident year 2020 loss ratio <u>de</u> creased 8.4 points to 81.4 %; discount rate <u>in</u> creased 19 basis points; no change to selected margins for adverse deviations
Mar. 31, 2020	% mfad -- bp	May 2020	update valuation (partial roll-forward)
Jun. 30, 2020	% mfad -- bp	Aug. 2020	update valuation
Sep. 30, 2020	% mfad -- bp	Oct. 2020	update valuation (roll-forward)

Under the proposed schedule for fiscal year 2020, the off-half valuation quarters ending March 31, 2020 and September 30, 2020 would not reflect a full valuation update of assumptions, but

would rather roll-forward key assumptions from the previous valuation. However, with disruption on the insurance environment from the COVID-19 pandemic, the valuation quarter ending March 31, 2020 will include partial update of key assumptions to reflect this impact. Other assumptions will continue and be roll-forward from the previous valuation.

1.2 Appointed Actuary and Hybrid Actuarial Services Model

Mr. Cosimo Pantaleo of Ernst & Young LLP (EY) was appointed as Actuary by the FA Board at its February 18, 2020 meeting.

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 / Regulation¹

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 (December 31, 2019), reform adjustments related to changes in the definition of minor injuries under the MIR, were included with the updated industry trend analysis (completed using industry data as at June 30, 2019), impacting the selection of ultimates.

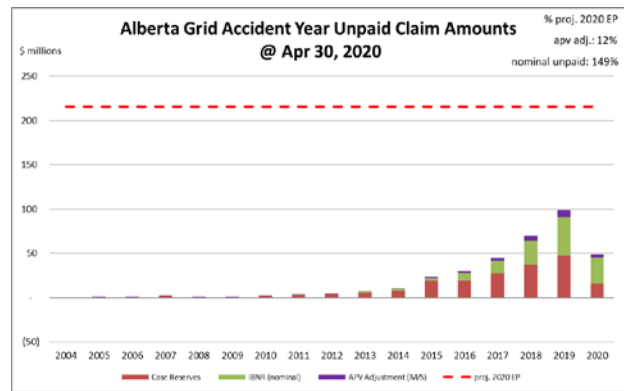
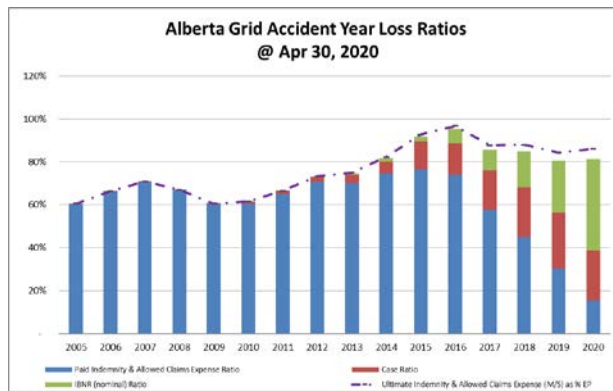
1.4 Current Provision Summary

The following charts 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 2020 full year earned premium (the red hash-mark line) to provide some perspective.

¹This 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>.

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.



“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 (\$24.9 million – see the following table) represents 12% of the earned premium projected for the full year 2020 (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	192,822	55.6%
ibnr	128,760	37.2%
M/S apv adjust.	24,941	7.2%
M/S total	346,523	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 57% of the IBNR balance relates to accident years 2019 and 2020 (see Exhibit B). Approximately 84% of the M/S total claim

liabilities are related to accident years 2016–2020 inclusive (i.e. the most recent 5 accident years), and approximately 1% is related to accident years 2010 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	98,202	114.9%
prem def/(dpac)	(17,884)	(20.9%)
M/S apv adjust.	5,156	6.0%
M/S total	85,474	100.0%

policy liabilities (\$000s)	amt	%
claim	321,582	74.4%
premium	80,318	18.6%
M/S apv adjust.	30,097	7.0%
M/S total	431,997	100.0%

2 Activity During the Month of April 2020

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 Report⁴.

⁴There 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 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	(2)	(2)	7,610	4,520	(4,283)	(2,685)	3,328	1,836
2018	(28)	(28)	1,984	925	(1,147)	(1,170)	837	(245)
2019	(313)	(313)	2,342	(851)	(2,609)	13	(267)	(838)
2020	16,889	(1,089)	3,404	(552)	241	(3,774)	3,645	(4,326)
TOTAL	16,547	(1,432)	15,340	4,043	(7,798)	(7,617)	7,542	(3,574)

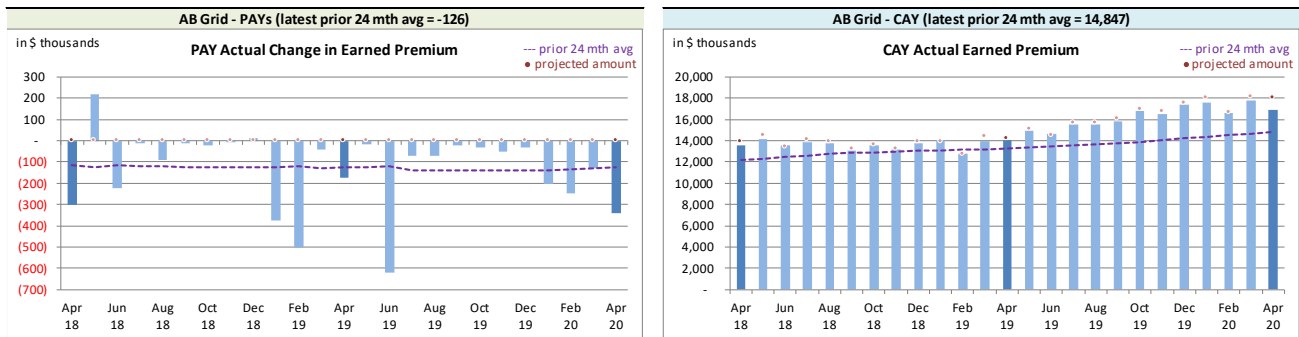
(Recorded transaction amounts exclude IBNR & other actuarial provisions)

Claims transaction activity is generally volatile and changes from one month to the next are anticipated due to this natural “process variance” (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**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.

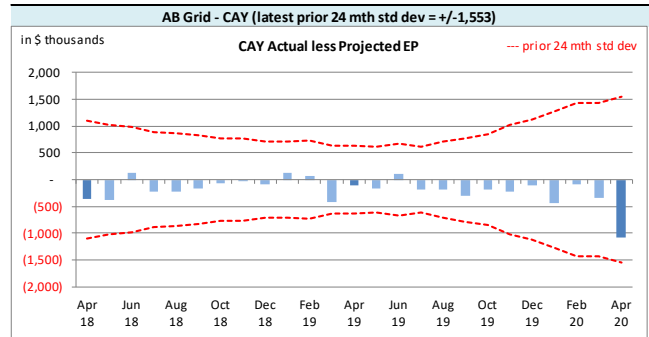
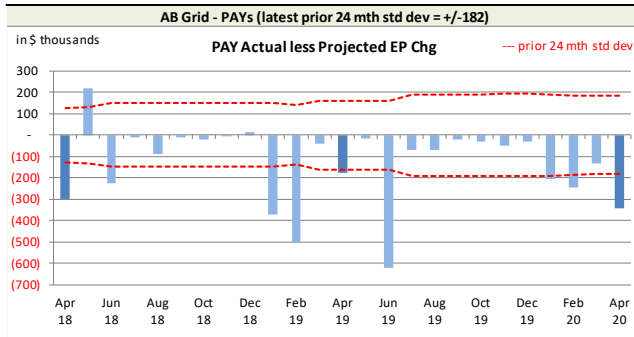
Alberta Grid RSP Actual Earned Premium by Calendar Month



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.

The associated variances between the actual changes and the projections from the previous month are shown in the charts 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.

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 vs. Projected Summary: Earned Premium Variances by Calendar Month


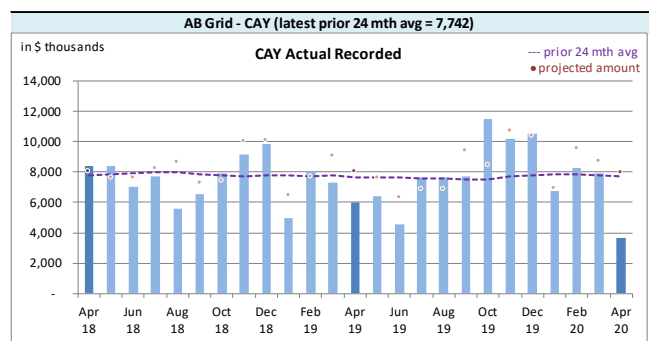
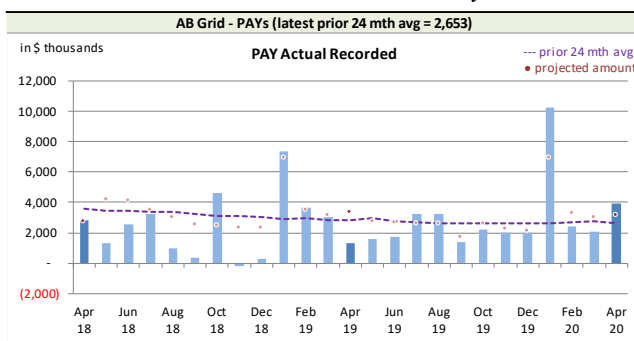
On Latest \$ thousands		
	Earned Premium	PAYs
Mthly Avg EP Chg (prior 24 mths)	(126)	14,847
std dev	182	1,553
A-P <> std dev	10	-
% <> std dev	40.0%	0.0%
norm <> std dev	31.7%	31.7%
performance vs 24-mth avg:	worse	better

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) bias⁶, 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 bias⁷, with actuals being generally lower than projected. With the March 2020 projections we adjusted our written premium projection process and how we project earned premium from written premium projections with a goal of narrowing monthly variances and addressing the bias issue.

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


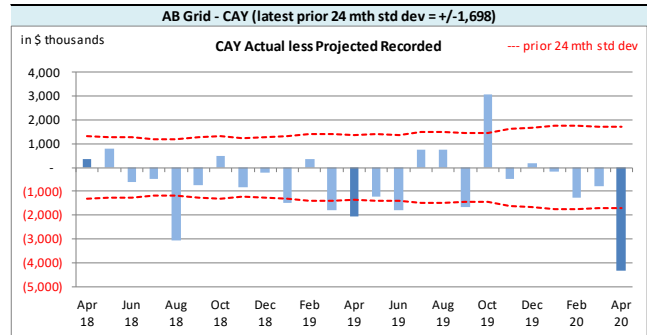
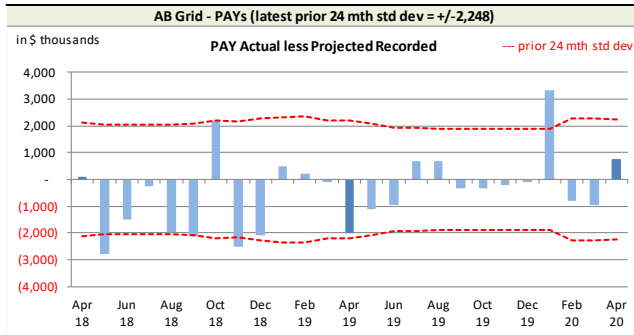
Recorded activity variances from the previous month’s projections are shown in the charts below, including the “prior 24-month standard deviation” levels to show how the variances from projection

⁶The PAYs’ variances will show bias as the projection upload forces all earned premium projections to be attributed to the CAY.

⁷We 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 April 2020 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.

compare with historical standard deviations.

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



On Latest \$ thousands		
Recorded	PAYs	CAY
Mthly Avg Recorded (prior 24 mths)	2,653	7,742
std dev	2,248	1,698
A-P <> std dev	5	8
% <> std dev	20.0%	32.0%
norm <> std dev	31.7%	31.7%
performance vs 24-mth avg:	better	no better

With respect to **recorded** indemnity & allowed claims expense activity, 20% 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

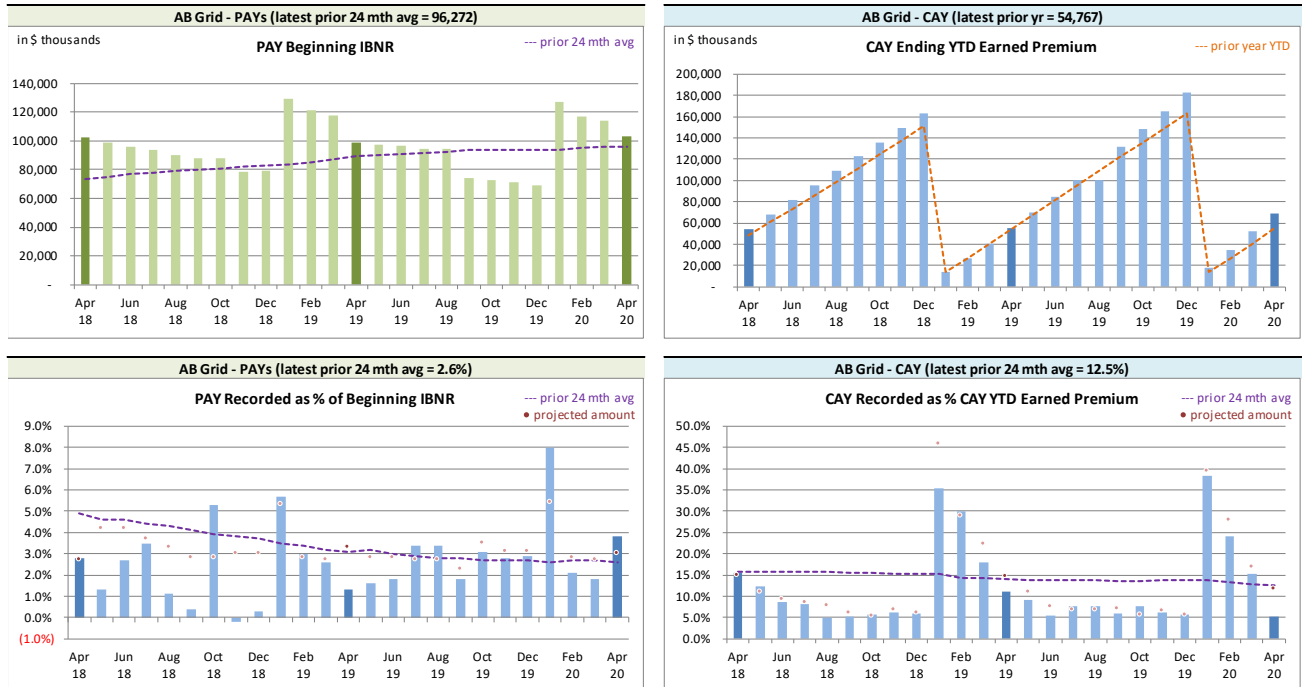
normal distribution). Bias has not been indicated at a 95% confidence level on a rolling 25-month basis (8 of 25 variances were positive).

The current accident year (CAY) **recorded** variances fell outside of one standard deviation 32% of the time over the last 25 calendar months (see table above), suggesting that the projection process has performed no better than simply projecting the prior 24-month average amount. Bias has not been indicated at a 95% confidence level on a lagging 24-month basis (8 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 significant lower than projected recorded activity was reviewed, and attributed to a reduction in written premium and physical damage claims experience in the month; this is consistent with discussion with FA's Appointed Actuary in relation to the COVID-19 pandemic impact. An adjustment has been made to projected CAY recorded claims activity for the next two projection months (May-June 2020).

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).

Alberta Grid RSP Levels that influence⁸ Recorded activity by Calendar Month


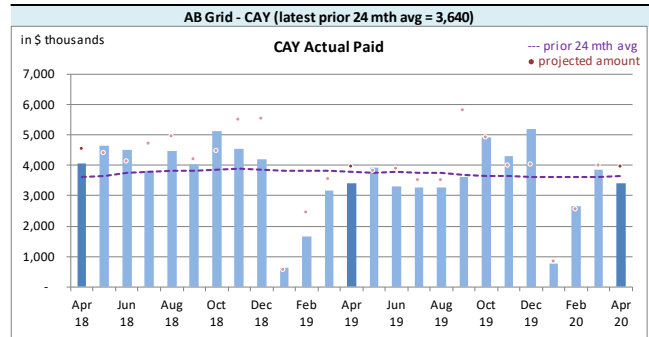
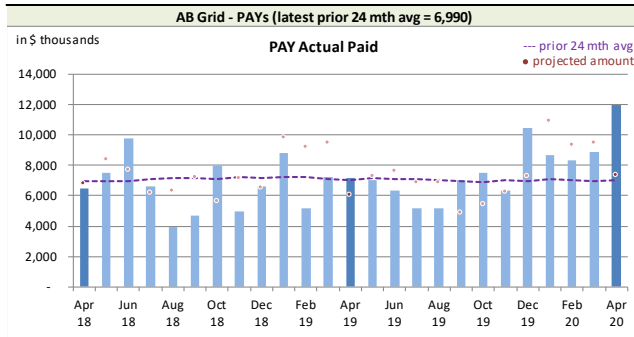
We track PAY beginning IBNR as **recorded** activity comes out of IBNR. Changes in the PAY beginning IBNR (see upper left chart above) occur for several possible reasons:

- 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).

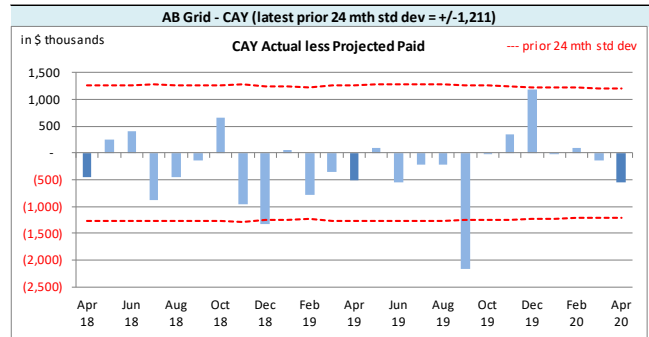
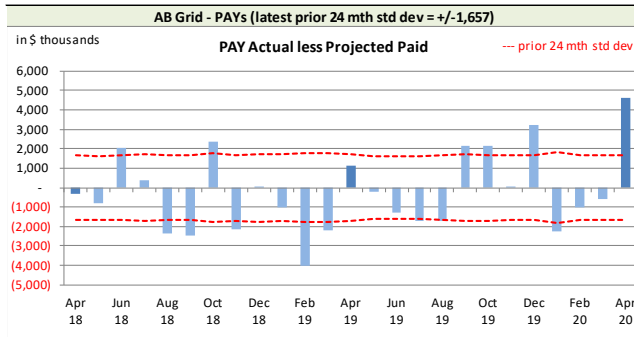
2.1.c AvsP: Paid Indemnity & Allowed Claims Expense

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.

⁸Our 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 are 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	
Mthly Avg Paid (prior 24 mths)	6,990	CAY 3,640
std dev	1,657	1,211
A-P <> std dev	14	2
% <> std dev	56.0%	8.0%
norm <> std dev	31.7%	31.7%
performance vs 24-mth avg:	worse	better

With respect to **paid** indemnity & allowed claims expense, 56% 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 (10 of 25 variances are positive).

The **PAY paid** variance was outside of the one standard deviation band this month (see preceding chart on the left). The activity was reviewed and confirmed, and attributed to one large claim settlement.

The current accident year (CAY) **paid** variances fell outside one standard deviation 8% of the time over the last 25 calendar months (see table above), suggesting the projection process has performed better than simply projecting the prior 24-month average amount. Bias has not been indicated at a 95% confidence level on a rolling 25-month basis (8 of 25 variances are positive).

As discussed with respect to CAY recorded claims activity in relation to the COVID-19 pandemic impact, an adjustment has been made to projected CAY paid claims activity for the next two projection

months (May-June 2020).

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

Alberta Grid RSP Levels that influence⁹ 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 chart above) 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 IBNR¹⁰, 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

⁹Our 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.

¹⁰For ease of discussion, “IBNR” is used in place of “provisions for incurred but not recorded (IBNR) and development”.

and actuals were based on the applicable valuation.

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

Accident Year	IBNR		actuarial present value adjustments				IBNR + actuarial present value adjustments	
	Actual	Actual less Projected	Discount Amount		Provisions for Adverse Deviations		Actual	Actual less Projected
			Actual	Actual less Projected	Actual	Actual less Projected		
Prior	28,493	(1,836)	(4,210)	163	13,312	(476)	37,595	(2,149)
2018	26,883	222	(2,695)	40	8,069	(120)	32,257	142
2019	43,913	587	(4,292)	(28)	11,431	75	51,052	634
2020	29,471	3,440	(2,179)	17	5,505	(41)	32,797	3,416
TOTAL	128,760	2,413	(13,376)	192	38,317	(562)	153,701	2,043

The IBNR provision is \$2.4 million higher than projected from last month, counterbalancing the recorded claims activity and adjusting for the earned premium variance impacts indicated in section 2.1.

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

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

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

The 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:	(17,884)	1,416	5,156	(413)	(12,728)	1,003
balance as % unearned premium:	(18.2%)	-	5.3%	-	(13.0%)	-
actual unearned premium:	98,202					
less projected:	(7,829)					

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 loss¹¹ 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 expenses¹², 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 82.5% rather than 81.4% (the valuation ultimate ratio for accident year 2020), 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.)

¹¹“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).

¹²Allowed 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.

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	(9,158)	(13.5%)	(4,014)	(5.9%)	(13,172)	(19.4%)	(1,186)	3.9%
CAY	56,075	82.5%	3,326	4.9%	59,401	87.4%	14,507	0.1%
TOTAL	46,917	69.0%	(688)	(1.0%)	46,229	68.0%	13,321	4.0%

("EP" based on 2020 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 are 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 Operational Report.

IBNR (including actuarial present value adjustments) presented in section 6, Exhibit A, were derived on a discounted basis, and therefore reflect the time value of money and include an explicit provision for adverse deviations in accordance with accepted actuarial practice in Canada.

IBNR presented in section 6, Exhibit B, does NOT include any actuarial present value adjustments. The "Total IBNR" from this exhibit is shown in the Operational Report as "Undiscounted IBNR".

The ultimate loss ratios 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
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EXHIBIT A

IBNR for Member Sharing – includes Actuarial Present Value Adjustments

TABLE EXHIBIT A

		Amounts in \$000s				
IBNR + M/S actuarial present value adjustments	Accident Year	Actual Mar. 2020	Actual Apr. 2020	Projected May. 2020	Projected Jun. 2020	Projected Dec. 2020
	2004	(71)	(71)	(69)	(66)	(53)
	2005	19	17	17	16	12
	2006	(100)	(102)	(100)	(94)	(79)
	2007	(472)	(472)	(460)	(437)	(361)
	2008	(54)	(74)	(73)	(69)	(55)
	2009	(94)	(162)	(160)	(152)	(124)
	2010	82	285	277	262	213
	2011	392	329	318	303	244
	2012	544	360	348	333	266
	2013	1,854	1,622	1,577	1,502	1,224
	2014	3,165	3,037	2,954	2,812	2,292
discount rate	2015	6,744	4,608	4,478	4,265	3,469
1.63%	2016	11,182	10,633	10,267	9,817	7,600
	2017	18,271	17,585	17,129	16,637	13,914
interest rate margin	2018	33,286	32,257	31,505	31,021	27,107
25 basis pts	2019	51,239	51,052	50,434	49,288	43,055
	2020	21,935	32,797	41,126	48,986	74,365
	TOTAL	147,922	153,701	159,568	164,424	173,089
	Change		5,779	5,867	4,856	

Please see Exhibit G, page 1 for Components of Change during Current Month

EXHIBIT B

IBNR

TABLE EXHIBIT B

Amounts in \$000s

IBNR	Ultimate Loss Ratio	Accident Year	Actual Mar. 2020	Actual Apr. 2020	Projected May. 2020	Projected Jun. 2020	Projected Dec. 2020
	51.6%	2004	(79)	(79)	(77)	(73)	(59)
	60.5%	2005	(20)	(22)	(21)	(20)	(17)
	66.3%	2006	(111)	(113)	(110)	(104)	(86)
	70.9%	2007	(580)	(580)	(565)	(537)	(441)
	67.1%	2008	(79)	(97)	(95)	(90)	(72)
	60.5%	2009	(106)	(173)	(169)	(161)	(132)
	61.5%	2010	(87)	118	115	109	90
	66.5%	2011	160	102	99	94	76
	73.1%	2012	223	43	42	40	32
	74.7%	2013	1,336	1,133	1,105	1,050	862
	81.8%	2014	2,403	2,310	2,252	2,139	1,754
	91.8%	2015	5,101	3,124	3,046	2,894	2,374
	95.4%	2016	9,114	8,758	8,443	8,029	6,120
	85.4%	2017	14,546	13,969	13,606	13,171	10,907
	84.8%	2018	27,743	26,883	26,238	25,844	22,470
	80.5%	2019	43,897	43,913	43,474	42,474	36,969
	81.4%	2020	19,368	29,471	37,029	44,121	65,202
		TOTAL	122,829	128,760	134,412	138,980	146,049
		Change		5,931	5,652	4,568	

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

EXHIBIT C
Premium Liabilities

TABLE EXHIBIT C

Premium Liabilities	Amounts in \$000s				
	Actual	Actual	Projected	Projected	Projected
	Mar. 2020	Apr. 2020	May. 2020	Jun. 2020	Dec. 2020
(1) unearned premium (UP)	102,032	98,202	101,949	107,382	126,777
FOR MEMBER SHARING					
(2) expected future costs ratio {% of (1)}	87.0%	87.0%	87.1%	87.2%	87.8%
(3) expected future costs {(1) x (2)}	88,769	85,474	88,802	93,617	111,318
(4) premium deficiency / (deferred policy acquisition cost)	(13,263)	(12,728)	(13,147)	(13,765)	(15,459)
Excluding Actuarial Present Value Adjustments					
(5) expected future costs ratio {% of (1)}	81.8%	81.8%	81.8%	81.9%	82.5%
(6) expected future costs {(1) x (5)}	83,413	80,318	83,445	87,969	104,603
(7) premium deficiency / (deferred policy acquisition cost)	(18,619)	(17,884)	(18,504)	(19,413)	(22,174)

EXHIBIT D

Projected Year-end Policy Liabilities

The table below presents the projected policy liabilities as at December 31, 2020, broken down by component.

Alberta Grid ending 2020		Projected Balances as at Dec. 31, 2020 (\$000s)									
		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	
2004	1	(59)	(58)	-	-	6	-	6	6	(52)	
2005	319	(17)	302	(1)	-	30	-	30	29	331	
2006	170	(86)	84	(1)	-	8	-	8	7	91	
2007	1,409	(441)	968	(18)	3	97	(2)	95	80	1,048	
2008	296	(72)	224	(5)	1	22	(1)	21	17	241	
2009	227	(132)	95	(2)	-	10	-	10	8	103	
2010	1,589	90	1,679	(47)	7	168	(5)	163	123	1,802	
2011	2,180	76	2,256	(61)	9	226	(6)	220	168	2,424	
2012	3,123	32	3,155	(85)	13	315	(9)	306	234	3,389	
2013	4,007	862	4,869	(131)	19	487	(13)	474	362	5,231	
2014	5,824	1,754	7,578	(235)	38	758	(23)	735	538	8,116	
2015	14,097	2,374	16,471	(576)	82	1,647	(58)	1,589	1,095	17,566	
2016	16,157	6,120	22,277	(802)	134	2,228	(80)	2,148	1,480	23,757	
2017	23,607	10,907	34,514	(1,346)	207	4,314	(168)	4,146	3,007	37,521	
2018	32,906	22,470	55,376	(2,326)	332	6,922	(291)	6,631	4,637	60,013	
2019	40,883	36,969	77,852	(3,659)	545	9,654	(454)	9,200	6,086	83,938	
PAYs (sub-total):	146,795	80,847	227,642	(9,295)	1,390	26,892	(1,110)	25,782	17,877	245,519	
CAY (2020)	59,915	65,202	125,117	(6,006)	876	15,014	(721)	14,293	9,163	134,280	
claims liabilities:	206,710	146,049	352,759	(15,301)	2,266	41,906	(1,831)	40,075	27,040	379,799	
	Unearned Premium	Premium Deficiency / (DPAC)	Total Provision	discount	investment PfAD	nominal development PfAD	development PfAD discount	development PfAD	Total apvs	TOTAL*	
premium liabilities:	126,777	(22,174)	104,603	(4,481)	625	11,046	(475)	10,571	6,715	111,318	
*Total may not be sum of parts, as apvs apply to future costs within UPR											
policy liabilities:			457,362	(19,782)	2,891	52,952	(2,306)	50,646	33,755	491,117	

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 (Dec. 31,
2019)

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%	9.5%	10.0%
2014	10.0%	10.0%	10.0%	10.0%
2015	10.0%	10.0%	9.8%	10.0%
2016	10.0%	10.0%	9.8%	10.0%
2017	12.5%	10.0%	12.5%	12.5%
2018	12.5%	10.0%	12.5%	12.5%
2019	12.5%	10.0%	10.9%	12.4%
2020	12.2%	10.0%	8.6%	12.0%
prem liab	11.9%	10.0%	5.1%	10.6%

discount rate: 1.63%
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 (1.63%), the prior valuation assumption (1.44%) 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	0.63%	1.13%	1.63%	2.13%	2.63%	3.13%	1.44%	1.44%
2004	-	-	-	-	-	-	-	-
2005	126	126	126	126	126	125	126	126
2006	152	151	151	150	150	149	151	151
2007	984	978	973	967	961	956	975	975
2009	182	181	179	178	177	175	180	180
2010	1,490	1,476	1,464	1,451	1,439	1,427	1,468	1,468
2011	2,263	2,244	2,225	2,207	2,189	2,171	2,232	2,232
2012	3,240	3,213	3,186	3,160	3,134	3,109	3,196	3,196
2013	5,112	5,069	5,027	4,986	4,945	4,905	5,043	5,043
2014	9,962	9,868	9,774	9,683	9,595	9,507	9,810	9,810
2015	19,545	19,334	19,126	18,923	18,725	18,531	19,204	19,204
2016	25,756	25,470	25,190	24,917	24,652	24,393	25,295	25,295
2017	37,375	36,922	36,478	36,047	35,628	35,219	36,648	36,648
2018	60,144	59,348	58,576	57,813	57,077	56,368	58,863	58,863
2019	90,677	89,352	88,065	86,817	85,604	84,426	88,556	88,556
2020	134,084	132,049	130,077	128,152	126,285	124,488	130,814	130,814
Total	391,300	385,988	380,822	375,781	370,889	366,150	382,767	382,767
	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	0.63%	1.13%	1.63%	2.13%	2.63%	3.13%	1.44%	1.44%
Total	10,478	5,166	-	(5,041)	(9,933)	(14,672)	1,945	1,945
	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	0.63%	1.13%	1.63%	2.13%	2.63%	3.13%	1.44%	1.44%
2004	-	-	-	-	-	-	-	-
2005	-	-	-	-	-	(0.8%)	-	-
2006	0.7%	-	-	(0.7%)	(0.7%)	(1.3%)	-	-
2007	1.1%	0.5%	-	(0.6%)	(1.2%)	(1.7%)	0.2%	0.2%
2009	1.7%	1.1%	-	(0.6%)	(1.1%)	(2.2%)	0.6%	0.6%
2010	1.8%	0.8%	-	(0.9%)	(1.7%)	(2.5%)	0.3%	0.3%
2011	1.7%	0.9%	-	(0.8%)	(1.6%)	(2.4%)	0.3%	0.3%
2012	1.7%	0.8%	-	(0.8%)	(1.6%)	(2.4%)	0.3%	0.3%
2013	1.7%	0.8%	-	(0.8%)	(1.6%)	(2.4%)	0.3%	0.3%
2014	1.9%	1.0%	-	(0.9%)	(1.8%)	(2.7%)	0.4%	0.4%
2015	2.2%	1.1%	-	(1.1%)	(2.1%)	(3.1%)	0.4%	0.4%
2016	2.2%	1.1%	-	(1.1%)	(2.1%)	(3.2%)	0.4%	0.4%
2017	2.5%	1.2%	-	(1.2%)	(2.3%)	(3.5%)	0.5%	0.5%
2018	2.7%	1.3%	-	(1.3%)	(2.6%)	(3.8%)	0.5%	0.5%
2019	3.0%	1.5%	-	(1.4%)	(2.8%)	(4.1%)	0.6%	0.6%
2020	3.1%	1.5%	-	(1.5%)	(2.9%)	(4.3%)	0.6%	0.6%
Total	2.8%	1.4%	-	(1.3%)	(2.6%)	(3.9%)	0.5%	0.5%
	curr - 100 bp	curr - 50 bp	curr val assumption	curr + 50bp	curr + 100bp	curr + 150bp	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 - Discounted**

M/S IBNR - in \$000s

AccYear	Values				Sum of Total Change	Sum of % Total Change	Sum of Current Month Final Amount
	Sum of Prior Month Actual Amount	Sum of Projected Change	Sum of Change Due to AvsP Variances	Sum of Change Due to Valuation Implementation			
2004	(71)	3	(3)	-	-	-	(71)
2005	19	-	(2)	-	(2)	(10.5%)	17
2006	(100)	3	(5)	-	(2)	2.0%	(102)
2007	(472)	17	(17)	-	-	-	(472)
2008	(54)	2	(22)	-	(20)	37.0%	(74)
2009	(94)	2	(70)	-	(68)	72.3%	(162)
2010	82	(2)	205	-	203	247.6%	285
2011	392	(12)	(51)	-	(63)	(16.1%)	329
2012	544	(16)	(168)	-	(184)	(33.8%)	360
2013	1,854	(59)	(173)	-	(232)	(12.5%)	1,622
2014	3,165	(104)	(24)	-	(128)	(4.0%)	3,037
2015	6,744	(221)	(1,915)	-	(2,136)	(31.7%)	4,608
2016	11,182	(452)	(97)	-	(549)	(4.9%)	10,633
2017	18,271	(879)	193	-	(686)	(3.8%)	17,585
2018	33,286	(1,171)	142	-	(1,029)	(3.1%)	32,257
2019	51,239	(821)	634	-	(187)	(0.4%)	51,052
2020	21,935	7,446	3,416	-	10,862	49.5%	32,797
Grand Total	147,922	3,736	2,043	-	5,779	3.9%	153,701

EXHIBIT G

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

RSP		Alberta Grid						IBNR - in \$000s
AccountCode Desc		IBNR - Undiscounted						
AccYear	Values							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	Sum of Total Change	Sum of % Total Change		
2004	(79)	3	(3)	-	-	-	(79)	
2005	(20)	1	(3)	-	(2)	10.0%	(22)	
2006	(111)	4	(6)	-	(2)	1.8%	(113)	
2007	(580)	19	(19)	-	-	-	(580)	
2008	(79)	3	(21)	-	(18)	22.8%	(97)	
2009	(106)	3	(70)	-	(67)	63.2%	(173)	
2010	(87)	3	202	-	205	(235.6%)	118	
2011	160	(5)	(53)	-	(58)	(36.3%)	102	
2012	223	(7)	(173)	-	(180)	(80.7%)	43	
2013	1,336	(44)	(159)	-	(203)	(15.2%)	1,133	
2014	2,403	(79)	(14)	-	(93)	(3.9%)	2,310	
2015	5,101	(168)	(1,809)	-	(1,977)	(38.8%)	3,124	
2016	9,114	(410)	54	-	(356)	(3.9%)	8,758	
2017	14,546	(815)	238	-	(577)	(4.0%)	13,969	
2018	27,743	(1,082)	222	-	(860)	(3.1%)	26,883	
2019	43,897	(571)	587	-	16	-	43,913	
2020	19,368	6,663	3,440	-	10,103	52.2%	29,471	
Grand Total	122,829	3,518	2,413	-	5,931	4.8%	128,760	