

**B.C. UTILITIES COMMISSION -Project No. 1598968**

**ICBC 2018 Basic Insurance Rate Design Application**

**Information Requests Submitted by Richard McCandless**

**August 28, 2018.**

*Note on terminology. Unless specified, when I request financial or statistical information the period is the same as that used by ICBC to develop impacts of the new model compared to the existing model. All are for a 12-month period.*

*All else being equal (AEBE) assumes other factors are fixed.*

**1.0 JUSTIFICATION**

The proposed revisions to the Basic premium design are the most extensive since the changes of the early 1980's when ICBC was directed to stop using age, sex and marital status to assign risk. Instead, experience and actual at-fault crash experience would be the main factors in a bonus-malus system called the Claim-Rated Scale (CRS).

The government's main justification for the major change to the current design is that it is not fair, stating that good drivers (low risk) are paying too much compared to bad drivers (higher risk). The example most often cited to justify the change is that approximately 80% of private vehicle policyholders qualify for the full 43% discount. (see

[http://www.bcpolicyperspectives.com/media/attachments/view/doc/occasional\\_paper\\_no\\_59\\_16august\\_2018/pdf/occasional\\_paper\\_no\\_59\\_16august\\_2018.pdf](http://www.bcpolicyperspectives.com/media/attachments/view/doc/occasional_paper_no_59_16august_2018/pdf/occasional_paper_no_59_16august_2018.pdf)).

In 2007 ICBC received BCUC approval for changes to the Basic rate design. Some 10 years later the government and the chair say that the rate design model is "broken" and in need of fundamental change.

1.1 What are the main reasons why the rate design model approved in 2007 is now no longer fair?

1.2 Why is having approximately 80% of private vehicle policyholders qualified to receive the 43% maximum discount (low risk) an indicator that the current model is "broken" or unfair to good drivers?

1.3 What percentage of private vehicle policyholders qualified for the full discount in 2006 or 2007 when the last rate design application was submitted to the Commission?

1.4 The public auto insurers in Saskatchewan and Manitoba use a bonus-malus system. What is the maximum discount percentage used in each system?

1.5 Using the most recent year, what were the numbers of private policies in each of the 30 CRS (10 surcharge and 20 discount) levels?

Another justification for the proposed change is that 20% of crashes are caused by drivers not listed on the policy, with the implication being that other policyholders are paying significantly more because these individuals are not being assessed a financial penalty for the at-fault claim.

1.5 For the 20% is it not more accurate to say that the penalty (a loss of an earned waiver or an actual increase to the premium) is paid by the policyholder?

1.6 What is the net annual loss in premium revenue caused by these 20% of at-fault drivers after accounting for the payment by the policyholder?

1.7 The 2007 rate design application provided a useful summary of principles; other than assuaging public opinion what principles underly the current proposal?

## **2.0 IMPACT ANALYSIS**

In the justification material ICBC stated that, using the most recent data to construct an impact analysis, 2/3rds of current drivers would see a reduction in their premium and inexperienced drivers and those with at-fault claims would see an increase.

2.1 Using the same data that was used to develop the impact analysis please provide:

- The number of policyholders at each level of the current Claims-Related Scale (from plus 10 to minus 20).
- The number of drivers at each experience level (zero to 40 years) of the Experience Factor.
- The number by experience level of those drivers with one at-fault crash, and the number with two at fault crashes incurred during the 12-month period used to construct the impact analysis

The Experience Adjustment Factor is designed to shelter inexperienced drivers from the higher rates suggested by actuarial analysis.

2.2 Is the actuarially determined level for inexperienced drivers reflected in the Experience Factor?

2.2.1 Why are two experience factors being proposed; is not a combined factor simpler?

2.3 What would the actuarial analysis suggest as the premium for a claims-free driver with 2 years of experience? For 5 years?

2.4 In the transition period a cap of 20% is applied on the annual increase in Basic premiums. What increase would normally be considered as “rate shock?”

Figure 3.14 in the application shows the Year 1 impact before transition factors.

2.5 Please provide the numbers of policies in each dollar grouping.

2.5.1 Before transition factors, what is the net increase or decrease in overall premium revenue for Year 1 and for each year to Year 6?

2.6 Do the policies used to construct Figure 3.14 include utility trailers and off-road vehicles?

2.6.1 If the simulation did include these two classes of low-cost policies what would the array show if they were excluded?

### **3.0 REVENUE NEUTRALITY**

The new model is designed to be revenue neutral in the first year.

3.1 Is the proposed model revenue neutral before or after the 20% cap on the annual increase?

3.1.1 If the answer to 3.1 is after the cap, what is the year 1 net premium revenue increase excluding the cap?

ICBC presented several comparisons of the impact of the new model compared to the current rate design. Some of the factors in the proposed model, such as the new distance factor, will result in less premium revenue compared to the current model. Other factors, such as the disability factor, did not change and therefore would have no impact.

3.2 Assuming revenue neutrality, what are the net year 1 premium revenue increases or decreases for each major factor shown in Figure 1.1 of the submission when the new model is compared to the current model? For example, eliminating the Experience Adjustment Factor would (I presume) result in additional premium revenue (AEBE). Please explain the methodology and key assumptions for the calculation of each factor.

3.3 What would be the net increase or decrease in each of years 2 to 5 for each factor?

The number of at-fault crashes appears to be the most significant factor influencing the annual premium. The proposed scan period for at-fault crashes is 10 years, beginning 1 March 2017. Therefore, the Year 1 revenue neutral period (September 2019 to August 2020) incorporates about 3.5 years out of a possible 10 years of at-fault claims.

3.4 Is it correct that, AEBE, ICBC will record positive or surplus revenue in years 2 to 6 due to more drivers/policyholders causing crashes and paying a higher premium each year (until the 10-year steady state is achieved), even accounting for five additional years of changes to the Experience and the Experience Adjustment factors, than was the case in Year 1?

3.5 ICBC suggests that the revenue neutrality will be preserved in future years through the annual rate request process. But where more premium revenue is being generated by the at-fault penalty factor until it reaches steady state (10 years), would not a

lowering of the average premium portion of the rate calculation benefit both high-risk and low-risk drivers?

3.5.1 Instead, would not an adjustment to (say) the experience factor only benefit low-risk drivers?

3.5.2 Would not an adjustment to another factor to maintain revenue neutrality and benefit only low-risk drivers in years 2 to 6 require annual rate design approvals by the B.C. Utilities Commission?

3.6 Would ICBC agree that because of the 10-year crash scan phase-in the model is only revenue neutral in the first year?

In the current CRS a policyholder with no at-fault claims can receive a 43% discount after nine years, while under the proposed model a 52% discount is proposed for those drivers with no at-fault claims after 40 years.

3.7 Is this correct?

3.7.1 Why was 40 years chosen rather than say 30, or 25 years?

3.7.2 What is the purpose of requiring more claim free years before receiving a low risk bonus (being considered an experienced driver)? What has changed in the general driving population's driving behaviour?

3.8 Does ICBC anticipate that the changes required to its information systems required by the new model can be made within the existing budget?

3.9 What is the estimated additional cost for brokers/appointed agents that will be required by the new model?

#### **4.0 THE COST of an AT-FAULT CLAIM**

Under the proposed framework a driver who does not qualify for a waiver will pay a financial penalty for an at-fault claim for 10 years. The penalty factor for each year of driving experience is shown on Schedule D, page 10 (pdf page 225) of the application.

4.1 Excluding all other factors, and where the base rate is \$1,000, is the additional penalty over the 10 years for a person with nine years of driving experience \$1,299?

Under the current CRS the financial penalty for an at-fault a driver with nine years of claim free driving single is four years; rising from a 25% discount to the maximum 43%. Using the same \$1,000 base rate as in the new model examples, the four-year difference between the 43% full discount and the four years of penalized premiums would be approximately \$420.

4.2 Does ICBC agree that the new model is much more financially onerous on drivers who are at-fault in a crash than is the current premium model?

Under the current model a driver could achieve a discount of 43% after nine years of claim-free driving. The new model requires some 15 years of claim-free driving to achieve a 44.5% discount.

4.3 Does ICBC agree that the new model is much less generous than the current model in awarding discounts for claim free driving experience?

Appendix B provides a comparison of the financial impact of a single at-fault claim over the ten-year penalty period using only the Experience Factor (EF) and the Experience Adjustment Factor (EAF). It would appear that, AEBE, a less experienced driver pays less penalty than a more experienced driver for a single accident over the 10-year period.

4.4 Is this intentional?

4.4.1 What public policy objective or rate design principle does this outcome achieve?

## **5.0 DISCOUNTS**

The 25% discount for handicapped individuals remains unchanged, but the seniors' discount for those 65 and older driving for pleasure is cut to 15%.

5.1 What is the reason that the seniors' discount has been reduced?

5.2 How many policies are affected, and what is the expected premium revenue increase of the 10% reduction in Year 1?

5.3 How many policies are affected, and what is the revenue loss in Year 1 due to the new braking discount?

5.3.1 What is the additional loss in each of years 2 to 6 as more vehicles equipped with this technology are insured?

5.4 How many policies are affected, and what is the revenue loss in Year 1 due to the new kilometer discount?

5.4.1 Does ICBC have an estimate of the additional loss in years 2 to 6?

## **6.0 MEASURING SUCCESS**

The new model sacrifices simplicity for a much more targeted approach to determining risk. The government and ICBC maintain that the move to pricing perfection is fairer and rebalances the cost of insurance between lower and higher-risk drivers/policyholders.

6.1 How will the B.C. Utilities Commission and the public know if the new model is a success?

6.2 Will ICBC be establishing a mechanism to monitor the incidence in driving without insurance due to the new model?

6.3 Will ICBC be determining the loss of potential younger policyholders due to the higher cost of insurance?

6.4 Will ICBC be tracking possible reductions in Optional coverage because of affordability issues resulting from the higher cost of Basic insurance for a significant number of policyholders?

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## APPENDIX

### A -- IMPACT OF EXPERIENCE FACTOR AND EXPERIENCE ADJUSTMENT FACTOR ON PREMIUM FOR DIFFERENT YEARS OF DRIVING EXPERIENCE

Example 1 shows the Basic premium for selected experience years using only the experience and experience adjustment factors.

#### Example 1 – First Year Impact with No At-Fault Claims Penalty

Experience	Base \$ X	EF X	EAF =	Premium
<b>1 Year</b>	1,000	1.820	0.595	\$1,083
<b>5 Years</b>	1,000	1.017	0.815	\$ 829
<b>9 Years</b>	1,000	0.706	0.890	\$ 628
<b>15 Years</b>	1,000	0.555	1.020	\$ 566
<b>30 Years</b>	1,000	0.431	1.195	\$ 515
<b>40 Years</b>	1,000	0.388	1.235	\$ 479

Assumes Base Rate is \$1,000 and no other factors. Experience and Experience Adjustment Factor. Experience Factor from Schedule D p. 10-11 and Experience Adjustment Factor p. 3-15.

Example 2 shows the premium at different experience levels where there is a single at-fault penalty.

## Example 2 – First Year Impact with One At-Fault Penalty

Experience	Base \$ X	EF X	EAF =	Premium
1 Year	1,000	2.107	0.798	\$1,681
5 Years	1,000	1.210	0.908	\$1,099
9 Years	1,000	0.863	0.945	\$ 816
15 Years	1,000	0.715	1.020	\$ 729
30 Years	1,000	0.596	1.195	\$ 712
40 Years	1,000	0.566	1.235	\$ 699

Assumes Base Rate is \$1,000 and no other factors. Experience and Experience Adjustment Factor. Experience Factor from Schedule D p. 10-11 and Experience Adjustment Factor p. 3-15.

## B -- WHY DO DRIVERS WITH MORE EXPERIENCE PAY MORE FOR AN AT-FAULT THAN THOSE WITH LESS EXPERIENCE?

The Experience Adjustment Factor (EAF) appears to provide a benefit to less experienced drivers in that the additional 10-year cost of an at-fault claim is less than the cost to a more experienced driver.

In Example 1 the individual with nine years of experience and no at-fault claims pays \$628 in year 1 and \$556 by year 10 (18 years of experience). If the same person had one at-fault claim in year 1 he/she pays \$816, declining to \$666 in year 10.

### Example 1- 9 Years Driving Experience with Zero and One Chargeable Claim

	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
0 Claim	628	607	595	587	577	569	566	563	560	556
1 Claim	816	763	750	734	718	703	691	682	674	666
Differ.	188	156	155	147	141	134	125	119	114	110

Assumes Base Rate is \$1,000 and no other factors. Proposed Experience and Experience Adjustment Factor.

The ten-year additional premium payment due to claim penalty is \$1,389.

In Example 2 the individual has 30 years of driving experience with no at-fault claims, then with one claim.

### Example 2- 30 Years Driving Experience with Zero and One Chargeable Claim

	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
0 Claim	515	511	509	502	500	497	493	490	485	482
1 Claim	712	704	698	688	681	674	667	659	652	645

Differ.	197	193	189	186	181	177	174	169	167	163
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Assumes Base Rate is \$1,000 and no other factors. Experience and Experience Adjustment Factor.

The ten-year additional premium payment due to claim penalty is \$1,796.