



**ICBC's 2018 Basic Insurance Rate Design Application
ICBC's Responses to BC Utilities Commission's Questions**

Question Number	Question	Response
BCUC.1.1	<p>INTRODUCTION AND OVERVIEW Exhibit B-1, pp. 1-1 & 2-4 Amendments to the Basic Insurance Tariff (Tariff)</p> <p>The Insurance Corporation of British Columbia (ICBC) states on page 1-1 of the 2018 Basic Insurance Rate Design Application (Application):</p> <p>This Application describes the features of the new Basic insurance rate design (rate design) and how it functions, and provides an overview of ICBC's approach to managing this change. It outlines the legislative and regulatory framework for these changes, and seeks the Commission's approval of the required amendments to the Basic Insurance Tariff (Tariff) in accordance with this framework.</p> <p>Please confirm that the Tariff amendments that ICBC is seeking British Columbia Utilities Commission (BCUC) approval for in the Application are identical to the Tariff pages that were directed in Order in Council (OIC) No. 458/18. If not confirmed, please specify and fully explain the differences.</p>	<p>ICBC confirms that the Tariff amendments included in ICBC's 2018 Basic Insurance Rate Design Application, for which Commission approval is sought, are identical to the directed Tariff pages in Order in Council (OIC) No. 458/18. There is a minor mislabelling on one of the Tariff pages, which ICBC has noted in its errata.</p>
BCUC.1.2-3	<p>INTRODUCTION AND OVERVIEW Exhibit B-1, pp. 1-1 & 2-4 Amendments to the Basic Insurance Tariff (Tariff)</p> <p>On page 1-1, ICBC states:</p> <p>With the implementation of the new rate design, approximately two-thirds of customers will pay lower Basic insurance premiums than they do now (excluding the impact of a general rate change order or changes to DPP and DRP). Approximately one-third of customers will see an increase in Basic insurance premiums. The customers seeing the largest rate increases are those drivers who are at greatest risk of being at-fault for a crash.</p> <p>On page 2-4, ICBC references the August 3, 2018 Government Directive regarding the Rate Design:</p>	<p>ICBC confirms that the directed Tariff pages for which ICBC is seeking approval meet the objective from the 2018 Government Directive regarding Rate Design of the two-thirds/one-thirds split.</p> <p>The Commission has asked about an alternative scenario where the rate design results in a different split. The proportion of customers seeing an increase is a function of the combination of all the changes provided in the amended Tariff pages from the 2018 Government Directive regarding Rate Design. Achieving a different split such as 25% would involve changing multiple elements of the rate design reflected in the Tariff pages included as part of the 2018 Government Directive regarding Rate Design. ICBC respectfully submits that a different split could not be achieved while remaining compliant with the 2018 Government Directive regarding Rate Design.</p> <p>In response to BCUC.1.3, the analysis undertaken to demonstrate the two-thirds/one-third split was based on using two years of historical data (2015 and 2016) to capture a representative view of typical movements within a customer's profile from one year to</p>



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	<p>No more than 35% of Basic policyholders are to experience a premium increase due to the combined effect of rate design changes effective September 1, 2019, (excluding the impact of a general rate change order or changes to DPP/DRP).</p> <p>1.2 Please confirm that the Tariff pages amendment filed in the Application is designed for the two-thirds/one-thirds split as referenced above. In other words, as a hypothetical scenario, what are the implications if ICBC is to consider a scenario where no more than 25% of Basic policyholders are to experience a premium increase due to the combined effect of rate design changes?</p> <p>1.3 Please explain the approach that was used to determine and demonstrate the two-thirds/one-thirds split referenced above. Discuss the assumptions made.</p>	<p>the next (e.g., changing rate class, gaining experience, involved in at-fault crash, etc.). It was assumed that the change in a customer's profile from 2015 to 2016 is representative of the changes that will occur from 2018 to 2019 when this new rate design is implemented. Then in order to capture the change from implementing the new rate design, the current rate design was applied to the first year of data and the new rate design was applied to second year of data. The difference in premium collected between these two representative years demonstrated that two-thirds of customers will see decreases (excluding the impact of a general rate change order or changes to DRP/DPP) upon renewal after the new rate design takes effect in September 1, 2019.</p> <p>Specific assumptions that were used include:</p> <ul style="list-style-type: none"> • the data used in this analysis captured calendar policy year [see Note 1 below] 2015 certificates that renewed into calendar policy year 2016; • the data excluded trailers certificates, garage policies, fleet reporting certificates and additional products; • the 2015 premiums are based on the current rate design while the 2016 premiums are based on the new rate design; • the 2016 premiums under the new rate design include the effect of the transition rules (20% cap and minimum CDF). <p>Note 1 – a "calendar policy year" refers to policies written between Jan 1 – Dec 31.</p>
BCUC.2.1	<p>INTRODUCTION AND OVERVIEW Exhibit B-1, p. 1-2 At-fault crashes</p> <p>On page 1-2, ICBC states:</p> <p>The risk for an automobile insurance policy is defined in terms of the claim costs (i.e., the incidence and cost of at-fault crashes) expected from that policy during the policy term as compared to the average policy.</p> <p>What is the definition of at-fault crashes? Who determines fault and what is the appeal process?</p>	<p>"At-fault" crashes refer to "chargeable claim payments" as defined in the Tariff in the 2018 Government Directive regarding Rate Design, provided in the Application, Appendix B, Schedule D, Section 1. A chargeable claim payment is a payment made by ICBC or another insurer with respect to the type of coverages and in the situations described in the definition. Fault is determined by the insurer. ICBC has internal processes by which a person can appeal an adjuster's decision, and other insurers likely have as well. Ultimately fault would be determined in court.</p>

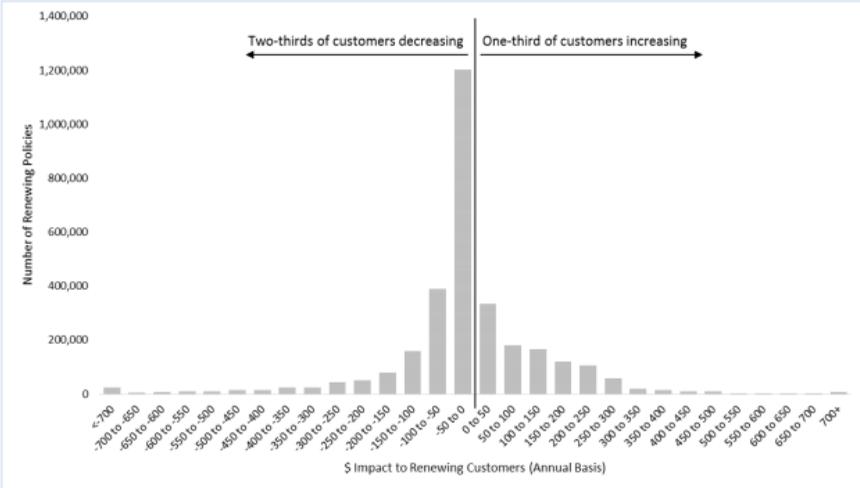


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BCUC.2.2	<p>INTRODUCTION AND OVERVIEW Exhibit B-1, p. 1-2 At-fault crashes</p> <p>On page 1-2, ICBC states:</p> <p>The risk for an automobile insurance policy is defined in terms of the claim costs (i.e., the incidence and cost of at-fault crashes) expected from that policy during the policy term as compared to the average policy.</p> <p>2.2 With the new rate design Tariff amendments, how would partial fault impact policyholders (e.g. 25%, 50%, or 75% at-fault)?</p> <p>2.2.1 Are there any differences in ICBC's practices and procedures when applying partial fault in the new rate design vs. the existing rate design? Please explain.</p> <p>2.2.2 If possible, please provide the approximate proportion of crashes at which shared or undetermined fault occurred for each year in the past five years.</p>	<p>2.2 The definition of "chargeable claim payments" in the Tariff excludes claims where a person is 25% or less at fault. This has not changed in the new rate design Tariff amendments.</p> <p>2.2.1 There are no differences in ICBC's practices and procedures when applying partial fault in the new rate design vs. the existing rate design.</p> <p>2.2.2 Approximately 1% of claims had a shared fault in 2013. Approximately 2% of claims had a shared fault for each of the years 2014, 2015, 2016, and 2017.</p>																
BCUC.3.1	<p>INTRODUCTION AND OVERVIEW Exhibit B-1, p. 1-10 Overall customer impacts</p>	<p>The requested numbers are provided in the table below. Note that the number of policies are based on a forecast to the first policy year (starting September 1, 2019) onto the new Tariff. Please refer to the answer to BCUC 1.2-3 for more information on the policies that are captured.</p> <table border="1" data-bbox="1368 1097 1978 1396"> <thead> <tr> <th data-bbox="1373 1101 1631 1157">\$ Change</th> <th data-bbox="1639 1101 1972 1157">Number of Policies</th> </tr> </thead> <tbody> <tr> <td data-bbox="1373 1162 1631 1195"><-700</td> <td data-bbox="1639 1162 1972 1195">23,218</td> </tr> <tr> <td data-bbox="1373 1200 1631 1232">-700 to -650</td> <td data-bbox="1639 1200 1972 1232">5,998</td> </tr> <tr> <td data-bbox="1373 1237 1631 1269">-650 to -600</td> <td data-bbox="1639 1237 1972 1269">7,389</td> </tr> <tr> <td data-bbox="1373 1274 1631 1307">-600 to -550</td> <td data-bbox="1639 1274 1972 1307">9,028</td> </tr> <tr> <td data-bbox="1373 1312 1631 1344">-550 to -500</td> <td data-bbox="1639 1312 1972 1344">10,852</td> </tr> <tr> <td data-bbox="1373 1349 1631 1382">-500 to -450</td> <td data-bbox="1639 1349 1972 1382">13,943</td> </tr> <tr> <td data-bbox="1373 1386 1631 1419">-450 to -400</td> <td data-bbox="1639 1386 1972 1419">15,644</td> </tr> </tbody> </table>	\$ Change	Number of Policies	<-700	23,218	-700 to -650	5,998	-650 to -600	7,389	-600 to -550	9,028	-550 to -500	10,852	-500 to -450	13,943	-450 to -400	15,644
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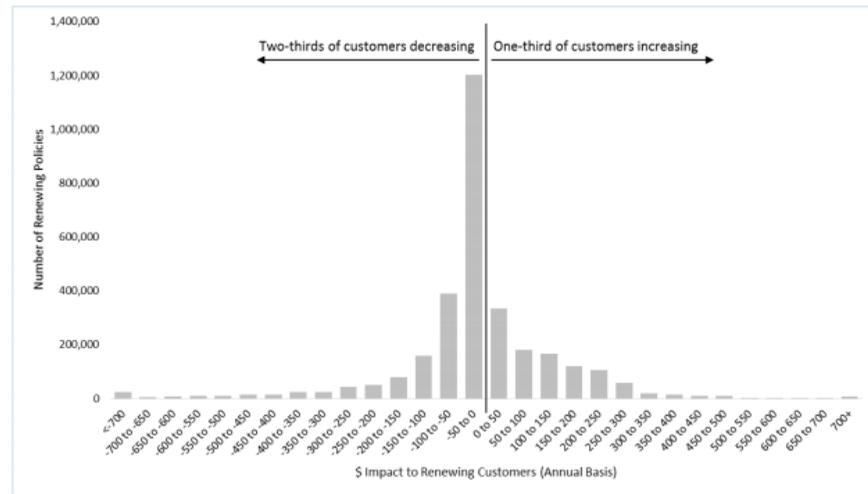
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	<p>ICBC provides the following Figure 1.2 on page 1-10:</p>  <p>Please provide a table of numbers underlying the graph.</p>	<table border="1"> <tbody> <tr><td>-400 to -350</td><td>23,311</td></tr> <tr><td>-350 to -300</td><td>23,651</td></tr> <tr><td>-300 to -250</td><td>43,777</td></tr> <tr><td>-250 to -200</td><td>50,053</td></tr> <tr><td>-200 to -150</td><td>79,269</td></tr> <tr><td>-150 to -100</td><td>159,960</td></tr> <tr><td>-100 to -50</td><td>388,616</td></tr> <tr><td>-50 to 0</td><td>1,202,762</td></tr> <tr><td>0 to 50</td><td>333,307</td></tr> <tr><td>50 to 100</td><td>180,736</td></tr> <tr><td>100 to 150</td><td>165,185</td></tr> <tr><td>150 to 200</td><td>119,305</td></tr> <tr><td>200 to 250</td><td>105,888</td></tr> <tr><td>250 to 300</td><td>58,617</td></tr> <tr><td>300 to 350</td><td>19,446</td></tr> <tr><td>350 to 400</td><td>14,592</td></tr> <tr><td>400 to 450</td><td>10,017</td></tr> <tr><td>450 to 500</td><td>9,677</td></tr> <tr><td>500 to 550</td><td>3,184</td></tr> <tr><td>550 to 600</td><td>2,566</td></tr> <tr><td>600 to 650</td><td>1,762</td></tr> <tr><td>650 to 700</td><td>1,639</td></tr> <tr><td>700+</td><td>8,316</td></tr> </tbody> </table>		-400 to -350	23,311	-350 to -300	23,651	-300 to -250	43,777	-250 to -200	50,053	-200 to -150	79,269	-150 to -100	159,960	-100 to -50	388,616	-50 to 0	1,202,762	0 to 50	333,307	50 to 100	180,736	100 to 150	165,185	150 to 200	119,305	200 to 250	105,888	250 to 300	58,617	300 to 350	19,446	350 to 400	14,592	400 to 450	10,017	450 to 500	9,677	500 to 550	3,184	550 to 600	2,566	600 to 650	1,762	650 to 700	1,639	700+	8,316
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BCUC.3.2	<p>INTRODUCTION AND OVERVIEW Exhibit B-1, p. 1-10 Overall customer impacts</p>	<p>Please see the table below which provides additional detail on the > +\$700 and < -\$700 segments for the graph provided in the Application, Chapter 1, Figure 1.2. Please note ICBC expanded the \$50 increment for cases where there were less than 5 policies.</p> <table border="1"> <thead> <tr> <th>\$ Change</th> <th>Number of Policies</th> </tr> </thead> <tbody> <tr><td>700 to 750</td><td>1,205</td></tr> <tr><td>750 to 800</td><td>848</td></tr> <tr><td>800 to 850</td><td>596</td></tr> <tr><td>850 to 900</td><td>583</td></tr> </tbody> </table>		\$ Change	Number of Policies	700 to 750	1,205	750 to 800	848	800 to 850	596	850 to 900	583																																				
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ICBC provides the following Figure 1.2 on page 1-10:



Please provide additional tables which provide further detail on the < -700 and 700+ groups. In the table, display groups of 700-750, 750-800, etc. Expand the groups in increments of \$50 until all customers are recorded in this manner.

900 to 950	519
950 to 1000	351
1000 to 1050	408
1050 to 1100	443
1100 to 1150	203
1150 to 1200	160
1200 to 1250	200
1250 to 1300	201
1300 to 1350	175
1350 to 1400	123
1400 to 1450	83
1450 to 1500	77
1500 to 1550	121
1550 to 1600	243
1600 to 1650	156
1650 to 1700	267
1700 to 1750	92
1750 to 1800	90
1800 to 1850	47
1850 to 1900	52
1900 to 1950	28
1950 to 2000	83
2000 to 2050	37
2050 to 2100	43
2100 to 2150	27
2150 to 2200	148
2200 to 2250	24
2250 to 2300	67
2300 to 2350	14
2350 to 2400	98
2400 to 2450	20
2450 to 2500	35
2500 to 2550	29



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Question Number	Question	Response	
		2550 to 2600	28
		2600 to 2650	11
		2650 to 2700	14
		2700 to 2750	16
		2750 to 2800	18
		2800 to 2850	13
		2850 to 2900	12
		2900 to 2950	15
		2950 to 3000	27
		3000 to 3100	20
		3100 to 3200	9
		3200 to 3300	20
		3300 to 3400	12
		3400 to 3500	12
		3500 to 3600	18
		3600 to 3700	13
		3700 to 3800	9
		3800 to 3900	5
		3900 to 4000	8
		4000 to 4100	5
		4100 to 4200	14
		4200 to 4300	15
		4200 to 4400	5
		4400 to 4500	4
		4500 to 4600	2
		4600 to 4700	9
		4700 to 4800	11
		4800 to 4900	35
		4900 to 5000	3
		5000 to 5500	9
		5500 to 6000	10



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Question Number	Question	Response	
		-1800 to -1850	137
		-1850 to -1900	119
		-1900 to -1950	178
		-1950 to -2000	104
		-2000 to -2050	89
		-2050 to -2100	99
		-2100 to -2150	101
		-2150 to -2200	50
		-2200 to -2250	99
		-2250 to -2300	78
		-2300 to -2350	63
		-2350 to -2400	48
		-2400 to -2450	35
		-2450 to -2500	42
		-2500 to -2550	38
		-2550 to -2600	42
		-2600 to -2650	34
		-2650 to -2700	43
		-2700 to -2750	21
		-2750 to -2800	36
		-2800 to -2850	27
		-2850 to -2900	27
		-2900 to -2950	30
		-2950 to -3000	23
		-3000 to -3050	21
		-3050 to -3100	35
		-3100 to -3150	16
		-3150 to -3200	12
		-3200 to -3250	25
		-3250 to -3300	28
		-3300 to -3350	14

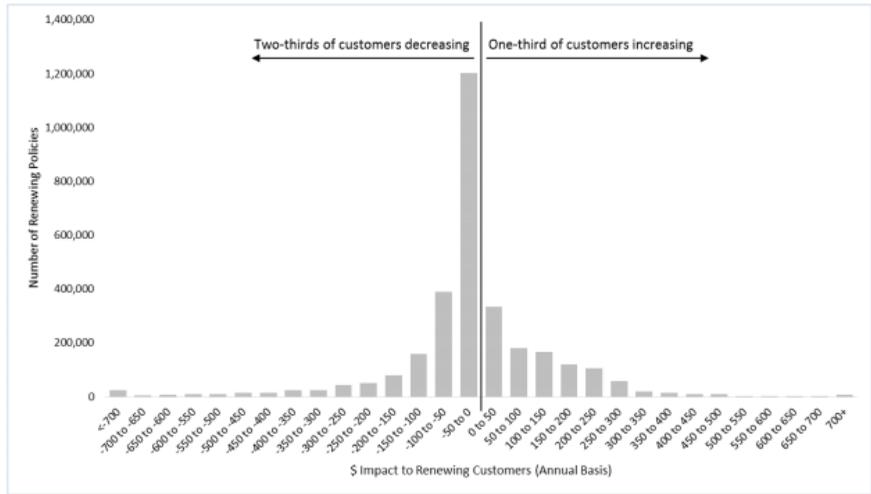


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Question Number	Question	Response	
		-3350 to -3400	26
		-3400 to -3450	11
		-3450 to -3500	11
		-3500 to -3550	20
		-3550 to -3600	11
		-3600 to -3650	20
		-3650 to -3700	8
		-3700 to -3750	11
		-3750 to -3800	9
		-3800 to -3850	10
		-3850 to -3900	11
		-3900 to -3950	12
		-3950 to -4000	7
		-4000 to -4100	14
		-4100 to -4200	11
		-4200 to -4300	9
		-4300 to -4400	16
		-4400 to -4500	12
		-4500 to -4600	7
		-4600 to -4700	7
		-4700 to -4800	15
		-4800 to -4900	14
		-4900 to -5000	2
		-5000 to -6000	45
		-6000 to -7000	7
		-7000 to -8000	6
		-8000 to -10000	3
		-10000+	4

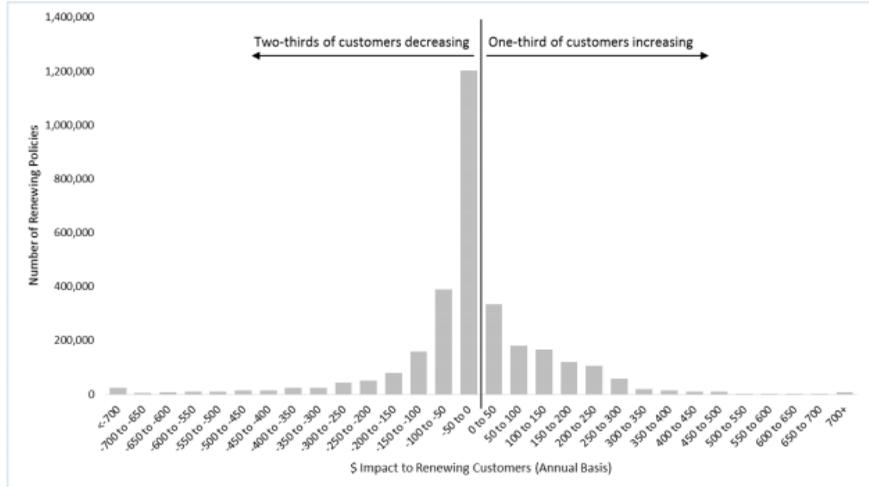


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BCUC.3.3	<p>INTRODUCTION AND OVERVIEW Exhibit B-1, p. 1-10 Overall customer impacts ICBC provides the following Figure 1.2 on page 1-10:</p>  <p>Please provide risk profiles and the premium derivation using the new rating algorithm of five customers receiving increases (prior to consideration of the 20% upper cap). Indicate their risk characteristics. In one of the five examples, include a customer in the 700+ group.</p>	<table border="1"> <thead> <tr> <th>Profile</th> <th>Territory</th> <th>RC</th> <th>Experience</th> <th>YSLC</th> <th>Add Recent Crashes</th> <th>Add Older Crashes</th> <th>Contrib to Increase</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>D</td> <td>3</td> <td>15</td> <td>Crash Free</td> <td>0</td> <td>0</td> <td>Territory Impact</td> </tr> <tr> <td>2</td> <td>D</td> <td>1</td> <td>4</td> <td>Crash Free</td> <td>0</td> <td>0</td> <td>Territory Impact and Low Experience</td> </tr> <tr> <td>3</td> <td>V</td> <td>1</td> <td>31</td> <td>0</td> <td>0</td> <td>0</td> <td>Recent Crash</td> </tr> <tr> <td>4</td> <td>R</td> <td>1</td> <td>30</td> <td>0</td> <td>0</td> <td>1</td> <td>Recent Crash</td> </tr> <tr> <td>5a</td> <td>D</td> <td>3</td> <td>34</td> <td>Crash Free</td> <td>0</td> <td>0</td> <td>Adding Inexperienced Driver (5b) with Crash</td> </tr> <tr> <td>5b</td> <td>D</td> <td>3</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>This is the added listed driver to above (5a)</td> </tr> </tbody> </table>	Profile	Territory	RC	Experience	YSLC	Add Recent Crashes	Add Older Crashes	Contrib to Increase	1	D	3	15	Crash Free	0	0	Territory Impact	2	D	1	4	Crash Free	0	0	Territory Impact and Low Experience	3	V	1	31	0	0	0	Recent Crash	4	R	1	30	0	0	1	Recent Crash	5a	D	3	34	Crash Free	0	0	Adding Inexperienced Driver (5b) with Crash	5b	D	3	0	0	0	0	This is the added listed driver to above (5a)	<table border="1"> <thead> <tr> <th>Profile</th> <th colspan="8">Factors</th> </tr> <tr> <th></th> <th>RCT</th> <th>EF</th> <th>EAF</th> <th>MCF</th> <th>SDF</th> <th>NRDF</th> <th>Discounts</th> <th>Weight</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>1.950</td> <td>0.555</td> <td>1.020</td> <td>1.000</td> <td>1.000</td> <td>1.000</td> <td>1.000</td> <td>1.0</td> </tr> <tr> <td>2</td> <td>1.925</td> <td>1.174</td> <td>0.755</td> <td>1.000</td> <td>1.000</td> <td>1.000</td> <td>1.000</td> <td>1.0</td> </tr> <tr> <td>3</td> <td>1.186</td> <td>0.593</td> <td>1.200</td> <td>1.000</td> <td>1.000</td> <td>1.000</td> <td>1.000</td> <td>1.0</td> </tr> <tr> <td>4</td> <td>1.200</td> <td>0.596</td> <td>1.195</td> <td>1.312</td> <td>1.000</td> <td>1.000</td> <td>1.000</td> <td>1.0</td> </tr> <tr> <td>5a</td> <td>1.950</td> <td>0.413</td> <td>1.210</td> <td>1.000</td> <td>1.000</td> <td>1.000</td> <td>1.000</td> <td>0.75</td> </tr> <tr> <td>5b</td> <td>1.950</td> <td>3.100</td> <td>0.718</td> <td>1.000</td> <td>1.000</td> <td>1.000</td> <td>1.000</td> <td>0.25</td> </tr> </tbody> </table>	Profile	Factors									RCT	EF	EAF	MCF	SDF	NRDF	Discounts	Weight	1	1.950	0.555	1.020	1.000	1.000	1.000	1.000	1.0	2	1.925	1.174	0.755	1.000	1.000	1.000	1.000	1.0	3	1.186	0.593	1.200	1.000	1.000	1.000	1.000	1.0	4	1.200	0.596	1.195	1.312	1.000	1.000	1.000	1.0	5a	1.950	0.413	1.210	1.000	1.000	1.000	1.000	0.75	5b	1.950	3.100	0.718	1.000	1.000	1.000	1.000	0.25
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1	1.950	0.555	1.020	1.000	1.000	1.000	1.000	1.0																																																																																																																											
2	1.925	1.174	0.755	1.000	1.000	1.000	1.000	1.0																																																																																																																											
3	1.186	0.593	1.200	1.000	1.000	1.000	1.000	1.0																																																																																																																											
4	1.200	0.596	1.195	1.312	1.000	1.000	1.000	1.0																																																																																																																											
5a	1.950	0.413	1.210	1.000	1.000	1.000	1.000	0.75																																																																																																																											
5b	1.950	3.100	0.718	1.000	1.000	1.000	1.000	0.25																																																																																																																											



**ICBC's 2018 Basic Insurance Rate Design Application
ICBC's Responses to BC Utilities Commission's Questions**

Question Number	Question	Response									
		Profile	Premiums (prior to 20% cap)					New Premium (Uncapped)	Old Premium	Difference (Uncapped)	
		1	\$1,104	\$1,094	\$10		2	\$1,706	\$1,608	\$98	
		3	\$844	\$704	\$140		4	\$1,121	\$702	\$419	
		5 (combined 5a and 5b)	\$1,816	\$1,094	\$722						
BCUC.3.4	<p>INTRODUCTION AND OVERVIEW Exhibit B-1, p. 1-10 Overall customer impacts</p> <p>ICBC provides the following Figure 1.2 on page 1-10:</p> 	Profile	Territory	RC	Experience	YSLC	Add Recent Crashes	Add Older Crashes	Contrib to Decrease		
		1	F	1	14	Crash Free	0	0	Territory Impact		
		2	Y	1	51	Crash Free	0	0	Territory Impact and Experience (Senior)		
		3	F	1	26	Crash Free	0	0	Territory Impact and AST		
		4	P	2	40	Crash Free	0	0	Territory Impact and Experience		
		5	D	1	40	Crash Free	0	0	Removing crash due to other driver		



**ICBC's 2018 Basic Insurance Rate Design Application
ICBC's Responses to BC Utilities Commission's Questions**

Question Number	Question	Response																																																																																																										
	<p>Please provide risk profiles and the premium derivation using the new rating algorithm of five customers receiving decreases (prior to consideration of a negative cap). Indicate their risk characteristics. In one of the five examples, include a customer in the < -700 group.</p>	<table border="1" data-bbox="1365 256 2556 630"> <thead> <tr> <th>Profile</th> <th>Factors</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> </tr> <tr> <th></th> <th>RCT</th> <th>EF</th> <th>EAF</th> <th>MCF</th> <th>SDF</th> <th>NRDF</th> <th>Discounts</th> <th>Weight</th> <th></th> </tr> </thead> <tbody> <tr> <td>1</td> <td>1.652</td> <td>0.572</td> <td>0.995</td> <td>1.000</td> <td>1.000</td> <td>1.000</td> <td>1.000</td> <td>1.0</td> <td></td> </tr> <tr> <td>2</td> <td>1.410</td> <td>0.388</td> <td>1.235</td> <td>1.000</td> <td>0.850</td> <td>1.000</td> <td>1.000</td> <td>1.0</td> <td></td> </tr> <tr> <td>3</td> <td>1.652</td> <td>0.449</td> <td>1.175</td> <td>1.000</td> <td>1.000</td> <td>1.000</td> <td>0.900</td> <td>1.0</td> <td></td> </tr> <tr> <td>4</td> <td>1.509</td> <td>0.388</td> <td>1.235</td> <td>1.000</td> <td>1.000</td> <td>1.000</td> <td>1.000</td> <td>1.0</td> <td></td> </tr> <tr> <td>5</td> <td>1.925</td> <td>0.388</td> <td>1.235</td> <td>1.000</td> <td>1.000</td> <td>1.000</td> <td>1.000</td> <td>1.0</td> <td></td> </tr> </tbody> </table> <table border="1" data-bbox="1365 695 2435 1122"> <thead> <tr> <th>Profile</th> <th>Premiums (prior to applying minimum CDF)</th> <th></th> <th></th> </tr> <tr> <th></th> <th>New Premium (prior to Min CDF)</th> <th>Old Premium</th> <th>Difference (prior to Min CDF)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>\$940</td> <td>\$960</td> <td>-\$20</td> </tr> <tr> <td>2</td> <td>\$574</td> <td>\$617</td> <td>-\$43</td> </tr> <tr> <td>3</td> <td>\$784</td> <td>\$960</td> <td>-\$176</td> </tr> <tr> <td>4</td> <td>\$723</td> <td>\$902</td> <td>-\$179</td> </tr> <tr> <td>5</td> <td>\$922</td> <td>\$1,703</td> <td>-\$781</td> </tr> </tbody> </table>									Profile	Factors										RCT	EF	EAF	MCF	SDF	NRDF	Discounts	Weight		1	1.652	0.572	0.995	1.000	1.000	1.000	1.000	1.0		2	1.410	0.388	1.235	1.000	0.850	1.000	1.000	1.0		3	1.652	0.449	1.175	1.000	1.000	1.000	0.900	1.0		4	1.509	0.388	1.235	1.000	1.000	1.000	1.000	1.0		5	1.925	0.388	1.235	1.000	1.000	1.000	1.000	1.0		Profile	Premiums (prior to applying minimum CDF)				New Premium (prior to Min CDF)	Old Premium	Difference (prior to Min CDF)	1	\$940	\$960	-\$20	2	\$574	\$617	-\$43	3	\$784	\$960	-\$176	4	\$723	\$902	-\$179	5	\$922	\$1,703	-\$781
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BCUC.4.1	<p>NEW RATE DESIGN AND RATING ALGORITHM Exhibit B-1, p. 3-10; Appendix B, Basic Insurance Tariff, Schedule D: Combined Driver Factor Page 5 Claim forgiveness</p> <p>On page 3-10, ICBC states:</p> <p>Claim Forgiveness: A forgiven claim will not be part of an individual's claim payment record or personal claim payment record for the</p>	<p>It is a consecutive 10 years. If a person has their driver's licence suspended during the 10-year period and does not have an at-fault crash, they would be at-fault crash-free for those 10 years.</p>																																																																																																										



**ICBC's 2018 Basic Insurance Rate Design Application
ICBC's Responses to BC Utilities Commission's Questions**

Question Number	Question	Response
	<p>purpose of calculating the IDF [Individual Driver Factor]. In accordance with the 2018 Government Directive regarding Rate Design, all drivers with a minimum of 20 years of experience who have 10 years of at-fault crash-free experience will be eligible for forgiveness of one at-fault claim. Once claim forgiveness is used, customers must accrue another 10 years of at-fault claims-free experience before regaining eligibility.</p> <p>Please clarify whether the "10 years of at-fault crash-free experience" is a cumulative 10 years or consecutive 10 years. For example, what happens if a person has their driver's license suspended during the 10 year period and does not have an at-fault crash?</p>	
BCUC.5.1	<p>NEW RATE DESIGN AND RATING ALGORITHM Exhibit B-1, pp. 3-11, 1-8, footnote 8; Appendix B, Basic Insurance Tariff, Schedule D: Combined Driver Factor Page 3 Claim repayment</p> <p>On page 3-11, ICBC states:</p> <p>Claim Repayment: Claim repayment is a current insurance feature that allows the insured to repay an at-fault claim and avoid the premium increase that would otherwise result from the claim. The new rate design permits claims to be repaid if they are \$2,000 or less.</p> <p>In footnote 8 on page 1-8, ICBC states:</p> <p>\$2,000 is a September 1, 2019 dollar threshold and is adjusted for historical years to reflect the impact from inflation. The rate of inflation was based on the BC all-items CPI produced by Statistics Canada.</p> <p>In Tariff amendment Schedule D: Combined Driver Factor Page 3, ICBC provides the following table:</p>	<p>The inflation adjustment is only applied to historical years as shown in the table. There is no inflation applied for future years.</p>



**ICBC's 2018 Basic Insurance Rate Design Application
ICBC's Responses to BC Utilities Commission's Questions**

Question Number	Question	Response																
	<p>(Q) a claim where the total amount of all payments and any deductible amounts paid by an insured is equal to or less than the amounts set out below:</p> <table border="1" data-bbox="443 381 1051 654"> <thead> <tr> <th>Date of CCP</th> <th>Amount of CCP</th> </tr> </thead> <tbody> <tr> <td>Prior to September 1, 2009</td> <td>\$1,700</td> </tr> <tr> <td>September 1, 2009 to August 31, 2011</td> <td>\$1,750</td> </tr> <tr> <td>September 1, 2011 to August 31, 2013</td> <td>\$1,800</td> </tr> <tr> <td>September 1, 2013 to August 31, 2015</td> <td>\$1,850</td> </tr> <tr> <td>September 1, 2015 to August 31, 2017</td> <td>\$1,900</td> </tr> <tr> <td>September 1, 2017 to August 31, 2019</td> <td>\$1,950</td> </tr> <tr> <td>On or after September 1, 2019</td> <td>\$2,000</td> </tr> </tbody> </table> <p>Please confirm that the inflation adjustment is applied to historical years as shown in the table above. In other words, the \$2,000 threshold is the maximum for all future years and will not increase to adjust for inflation in future years.</p>	Date of CCP	Amount of CCP	Prior to September 1, 2009	\$1,700	September 1, 2009 to August 31, 2011	\$1,750	September 1, 2011 to August 31, 2013	\$1,800	September 1, 2013 to August 31, 2015	\$1,850	September 1, 2015 to August 31, 2017	\$1,900	September 1, 2017 to August 31, 2019	\$1,950	On or after September 1, 2019	\$2,000	
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	<p>In Tariff amendment Schedule D: Combined Driver Factor Page 3, ICBC provides the following table:</p> <p>(Q) a claim where the total amount of all payments and any deductible amounts paid by an insured is equal to or less than the amounts set out below:</p> <table border="1" data-bbox="443 479 1051 751"> <thead> <tr> <th>Date of CCP</th> <th>Amount of CCP</th> </tr> </thead> <tbody> <tr> <td>Prior to September 1, 2009</td> <td>\$1,700</td> </tr> <tr> <td>September 1, 2009 to August 31, 2011</td> <td>\$1,750</td> </tr> <tr> <td>September 1, 2011 to August 31, 2013</td> <td>\$1,800</td> </tr> <tr> <td>September 1, 2013 to August 31, 2015</td> <td>\$1,850</td> </tr> <tr> <td>September 1, 2015 to August 31, 2017</td> <td>\$1,900</td> </tr> <tr> <td>September 1, 2017 to August 31, 2019</td> <td>\$1,950</td> </tr> <tr> <td>On or after September 1, 2019</td> <td>\$2,000</td> </tr> </tbody> </table> <p>Please confirm that the \$2,000 claim repayment threshold is only applicable to material damage. If confirmed, please cite the specific section(s) in the Tariff amendments. If not confirmed, please clarify.</p>	Date of CCP	Amount of CCP	Prior to September 1, 2009	\$1,700	September 1, 2009 to August 31, 2011	\$1,750	September 1, 2011 to August 31, 2013	\$1,800	September 1, 2013 to August 31, 2015	\$1,850	September 1, 2015 to August 31, 2017	\$1,900	September 1, 2017 to August 31, 2019	\$1,950	On or after September 1, 2019	\$2,000	
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BCUC.6.1	<p>NEW RATE DESIGN AND RATING ALGORITHM Exhibit B-1, pp. 3-19 to 3-20; Appendix B, Basic Insurance Tariff, Schedule X: Advanced Safety Technology Factor Page 1 Advanced Safety Technology Factor (ASTF)</p> <p>On pages 3-19 and 3-20, ICBC states:</p> <p>Based on the 2018 Government Directive regarding Rate Design, a 10% discount for vehicles with manufacturer installed autonomous emergency braking systems is applied to reflect the lower risk associated with vehicles with this technology... Going forward, as other advanced safety technologies are incorporated into vehicles, additional technologies may be added to the eligibility criteria for this discount.</p>	<p>Based on the language used in the Tariff amendments, the discount only applies if the system is active (please see Schedule X, Section 1.(a) of the Tariff in the 2018 Government Directive regarding Rate Design, provided in Appendix B of this Application.</p>																



**ICBC's 2018 Basic Insurance Rate Design Application
ICBC's Responses to BC Utilities Commission's Questions**

Question Number	Question	Response
	<p>Please clarify if the 10% ASTF discount applies whether or not the manufacturer installed autonomous emergency braking system is active or disabled (i.e. disabled by the user or otherwise malfunctioned).</p>	
BCUC.6.2	<p>NEW RATE DESIGN AND RATING ALGORITHM Exhibit B-1, pp. 3-19 to 3-20; Appendix B, Basic Insurance Tariff, Schedule X: Advanced Safety Technology Factor Page 1 Advanced Safety Technology Factor (ASTF)</p> <p>On pages 3-19 and 3-20, ICBC states:</p> <p>Based on the 2018 Government Directive regarding Rate Design, a 10% discount for vehicles with manufacturer installed autonomous emergency braking systems is applied to reflect the lower risk associated with vehicles with this technology... Going forward, as other advanced safety technologies are incorporated into vehicles, additional technologies may be added to the eligibility criteria for this discount.</p> <p>If ICBC believes that additional technologies may be added to the eligibility criteria for the ASTF discount, please clarify how such a process would take place.</p>	<p>Future changes to the Tariff would require Commission approval. In the event that ICBC determines in the future that additional technologies should be added to the eligibility criteria for the ASTF, ICBC would submit an application to the Commission for a modification of the Tariff.</p> <p>The 2018 Government Directive regarding Rate Design has stipulated the Tariff pages to take effect on September 1, 2019. As such, any changes to the directed rate design would have to follow that date. Adding additional technologies that are eligible for a discount would decrease the amount of premium received to ICBC. As a result, an offsetting factor would also have to be applied to the \$1,000 base rate to maintain overall revenue neutrality.</p>
BCUC.7.1	<p>NEW RATE DESIGN AND RATING ALGORITHM Exhibit B-1, pp. 3-23 to 3-24; Appendix B, Basic Insurance Tariff, Schedule AA: Unlisted Driver Protection Premium Page 2; Appendix B, Government Directive Regarding Rate Design, Letter of Direction, p. 2 Unlisted Driver Protection Premium (UDPP)</p> <p>The Government Directive regarding Rate Design states: "Additional coverage is to be provided, at a price, to protect customers from this charge who have unlisted incidental non- household, non-employee drivers."</p> <p>In the Application, on pages 3-23 and 3-24, ICBC states:</p>	<p>Section 34(2) of the Insurance (Vehicle) Act provides that a premium for a certificate may be based on:</p> <p>"(f) the failure of the applicant to name ... a person who drives a vehicle; ... (j) prescribed criteria; (k) any other criteria approved by the commission."</p> <p>Effective September 1, 2019, the Insurance (Vehicle) Regulation will provide, in section 15.41, that the corporation "may" assess a premium following an accident if the driver of the vehicle is not named on the certificate as a driver. This authorizes ICBC to establish when the Unlisted Driver Accident Premium is payable and when it is not payable. This is done in the new rate design Tariff amendments in the 2018 Government Directive regarding Rate Design, provided in Appendix B of this Application, which set out that the unlisted driver accident premium is not payable if the Unlisted Driver Protection Premium</p>



**ICBC's 2018 Basic Insurance Rate Design Application
ICBC's Responses to BC Utilities Commission's Questions**

Question Number	Question	Response
	<p>Given that this is a new premium, the \$50 was a high-level estimate to cover the cost of this protection based on the estimated number of unlisted driver claims (non-household and non-employee) and the estimated percent of customers that would purchase this protection.</p> <p>The premium amounts between \$50 and \$1,500 were based on judgment acknowledging that registered owners with multiple crashes incur higher costs to the system. As additional data is collected, ICBC will revisit this premium to ensure that it accurately reflects the cost.</p> <p>Please specify the jurisdiction in which Basic insurance includes additional coverage in the form of the UDPP.</p>	<p>is paid. Effectively, this makes the Unlisted Driver Protection Premium an integral component of the Unlisted Driver Accident Premium even though, for the sake of simplicity it is set out as a separate premium in the new rate design Tariff amendments. Following approval by the Commission of the new rate design Tariff amendments in accordance with government direction, the Unlisted Driver Protection Premium will become criteria approved by the Commission in accordance with section 34 (k) set out above.</p>
BCUC.7.2	<p>NEW RATE DESIGN AND RATING ALGORITHM Exhibit B-1, pp. 3-23 to 3-24; Appendix B, Basic Insurance Tariff, Schedule AA: Unlisted Driver Protection Premium Page 2; Appendix B, Government Directive Regarding Rate Design, Letter of Direction, p. 2 Unlisted Driver Protection Premium (UDPP)</p> <p>The Government Directive regarding Rate Design states: "Additional coverage is to be provided, at a price, to protect customers from this charge who have unlisted incidental non- household, non-employee drivers."</p> <p>In the Application, on pages 3-23 and 3-24, ICBC states:</p> <p>Given that this is a new premium, the \$50 was a high-level estimate to cover the cost of this protection based on the estimated number of unlisted driver claims (non-household and non-employee) and the estimated percent of customers that would purchase this protection.</p> <p>The premium amounts between \$50 and \$1,500 were based on judgment acknowledging that registered owners with multiple crashes incur higher costs to the system. As additional data is</p>	<p>ICBC will not amend the UDPP premium table as part of a revenue requirements application.</p>



**ICBC's 2018 Basic Insurance Rate Design Application
ICBC's Responses to BC Utilities Commission's Questions**

Question Number	Question	Response
	<p>collected, ICBC will revisit this premium to ensure that it accurately reflects the cost.</p> <p>Please clarify whether ICBC intends to amend the UDPP premium table when a general rate change occurs.</p>	
BCUC.7.3	<p>NEW RATE DESIGN AND RATING ALGORITHM Exhibit B-1, pp. 3-23 to 3-24; Appendix B, Basic Insurance Tariff, Schedule AA: Unlisted Driver Protection Premium Page 2; Appendix B, Government Directive Regarding Rate Design, Letter of Direction, p. 2 Unlisted Driver Protection Premium (UDPP)</p> <p>The Government Directive regarding Rate Design states: "Additional coverage is to be provided, at a price, to protect customers from this charge who have unlisted incidental non- household, non-employee drivers."</p> <p>In the Application, on pages 3-23 and 3-24, ICBC states:</p> <p>Given that this is a new premium, the \$50 was a high-level estimate to cover the cost of this protection based on the estimated number of unlisted driver claims (non-household and non-employee) and the estimated percent of customers that would purchase this protection.</p> <p>The premium amounts between \$50 and \$1,500 were based on judgment acknowledging that registered owners with multiple crashes incur higher costs to the system. As additional data is collected, ICBC will revisit this premium to ensure that it accurately reflects the cost.</p> <p>If ICBC determines that the UDPP should be changed in the future after additional data is collected, please clarify how ICBC would make those changes recognizing that the UDPP is established by a Government Directive.</p>	<p>Future changes to the Tariff would require Commission approval. In the event that ICBC determines in the future that the UDPP should be changed after additional data is collected, then ICBC would submit an application to the Commission for a modification of the Tariff. Any changes to UDPP may change the amount of premium received to ICBC, if so, an offsetting factor would also have to be applied to the \$1,000 base rate to maintain overall revenue neutrality.</p> <p>ICBC notes that the 2018 Government Directive regarding Rate Design has stipulated the Tariff pages to take effect on September 1, 2019. As such, any changes to the rate design would have to follow that date. This legislative restriction may not have any practical impact in the case of UDPP, as it will take time to collect the data necessary to assess whether changes to the UDPP are appropriate.</p>



**ICBC's 2018 Basic Insurance Rate Design Application
ICBC's Responses to BC Utilities Commission's Questions**

Question Number	Question	Response
BCUC.7.4	<p>NEW RATE DESIGN AND RATING ALGORITHM Exhibit B-1, pp. 3-23 to 3-24; Appendix B, Basic Insurance Tariff, Schedule AA: Unlisted Driver Protection Premium Page 2; Appendix B, Government Directive Regarding Rate Design, Letter of Direction, p. 2 Unlisted Driver Protection Premium (UDPP)</p> <p>The Government Directive regarding Rate Design states: "Additional coverage is to be provided, at a price, to protect customers from this charge who have unlisted incidental non- household, non-employee drivers."</p> <p>In the Application, on pages 3-23 and 3-24, ICBC states:</p> <p>Given that this is a new premium, the \$50 was a high-level estimate to cover the cost of this protection based on the estimated number of unlisted driver claims (non-household and non-employee) and the estimated percent of customers that would purchase this protection.</p> <p>The premium amounts between \$50 and \$1,500 were based on judgment acknowledging that registered owners with multiple crashes incur higher costs to the system. As additional data is collected, ICBC will revisit this premium to ensure that it accurately reflects the cost.</p> <p>In the event that the BCUC directs ICBC to provide reporting after additional data is collected, when is an appropriate timeline for such reporting? Also, please explain the content for such reporting.</p>	<p>UDPP reporting could include counts of certificates where UDPP is purchased as well as proportions of purchases against the total customer base. The reporting could include various transactional counts to gauge purchasing behaviour and claims outcomes such as counts of unlisted claims where UDPP protected the customer's premium and counts of unlisted claims where UDPP was determined to be ineligible to protect the customer's premium. The earliest that ICBC could deliver such a report would be 2021, once one full policy cycle has occurred after the implementation of the new rate design and allowing ICBC enough time to analyze the results.</p>
BCUC.8.1	<p>NEW RATE DESIGN AND RATING ALGORITHM Exhibit B-1, pp. 3-25 to 3-26 Revenue neutrality</p> <p>On page 3-25, ICBC states:</p>	<p>The off-balance factor of 1.005 is directed. It is implicit in the 2018 Government Directive regarding Rate Design both by the attached Tariff pages and by the requirement that the first year of implementation be revenue neutral (excluding DPP/DRP considerations).</p> <p>Although the 8.1.2 series of questions is predicated on the off-balance factor being not directed, ICBC nonetheless provides the following information on the off-balance factor as context for ICBC's response above.</p>



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ICBC's Responses to BC Utilities Commission's Questions**

Question Number	Question	Response
	<p>Policy or vehicle-based elements – revenue neutrality achieved through an off-balance factor applied to all Rate Class and Territory Factors.</p> <p>Rate Class and Territory Factors were first calculated using actuarial analysis based on historical data and statistical models representing the actual risk relativities between each rate class and territory segment. However, the introduction of the additional rating factors including the ASTF, Distance Factor, and Learner Premium resulted in an overall reduction in premium. In order to offset these decreases, all Rate Class and Territory Factors were adjusted by an off-balance factor of 1.005.</p> <p>8.1 Please clarify whether the off-balance factor of 1.005 is part of the Government Directive regarding Rate Design.</p> <p>8.1.1 If the 1.005 off-balance factor is a Government Directive, please provide the reference.</p> <p>8.1.2 If not related to the Government Directive regarding Rate Design:</p> <p>8.1.2.1 Please explain how the factor of 1.005 was determined. What portion relates to each individual additional rating factor? Provide supporting calculations.</p> <p>8.1.2.2 What percentage of policyholders is assumed to qualify for the ASTF and what is the basis/support for that assumption?</p> <p>8.1.2.3 What percentage of policyholders is assumed to qualify for the Distance Factor and what is the basis/support for that assumption?</p> <p>8.1.2.4 What assumptions were made regarding the learner premium that will be collected, and what is the basis/support for those assumptions?</p> <p>8.1.2.5 Does the offset consider any rating factors not listed in the passage quoted above? If so, itemize all rating factors considered in the offset, and explain associated assumptions.</p>	<p>The off-balance factor of 1.005 is the combined effect of four elements:</p> <ul style="list-style-type: none"> • The ASTF, which decreases revenue • The Distance Factor, which decreases revenue • The Learner Premium, which increases revenue • The 10 year spread of the RCTF, which decreases revenue <p>The off-balance factor is computed by comparing expected premium revenues before and after accounting for these four elements. The simulation showed that the combined effect of all relevant rating elements results in a premium deficit and that an off-balance factor of 1.005 must be applied to maintain revenue neutrality in year 1.</p> <p>ASTF: It is assumed that 5% of policies (excluding trailer policies) will qualify for the ASTF in the first year of implementation. The technology is assumed to have a low penetration in the current BC auto fleet based on the known make and models that have this technology as a standard feature. The technology will continue to enter the fleet via new vehicle purchases. The first appearance of the technology by a mass-market auto manufacturer in North America was in 2006. By 2017, the technology has been adopted by some mid-market auto manufacturers and most often as an optional add-on package feature.</p> <p>Distance Factor: It is assumed that 5% of certificates will qualify for the low distance discount. This assumption is based on considering three data sources:</p> <ul style="list-style-type: none"> • the distribution of Average Vehicle Kilometre Travel (VKT) data from 2012 Community Energy and Emissions Inventory (CEEI) report, published by the BC Ministry of Environment • odometer information recorded at body shops for repairs as a result of ICBC claims (between years 2000 to 2017), and converted to annual VKT figures • the VKT distribution from results of a 2017 ICBC VKT survey which involved 1,043 panelists being asked questions regarding how far customers drive and how that has changed over time. <p>Learner Premium: It is assumed that 50% of Basic insurance certificates where a learner could be listed (based on matching addresses of certificates and of driver licences) would list their learner and pay the Learner Premium. The 50% assumption is based on</p>



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		actuarial judgment. It is reasonable to assume that many will list a learner but not in all identified cases (i.e., those households with multiple vehicles may only list a learner on one vehicle).
BCUC.8.2	<p>NEW RATE DESIGN AND RATING ALGORITHM Exhibit B-1, pp. 3-25 to 3-26 Revenue neutrality</p> <p>On page 3-25, ICBC also states:</p> <p>IDF elements – revenue neutrality achieved through an off-balance factor applied to Experience Factor.</p> <p>The Experience Factor and the MCF were set at a level using actuarial analysis based on historical data and statistical models. However, with the introduction of additional rating factors and design elements, including the SDF, claim forgiveness, claim repayment and the phase-in to the full 10-year scan period, resulted in an overall reduction in premium. In order to offset these decreases, all values of the Experience Factor table were adjusted by an off-balance factor of 1.151.</p> <p>8.2 Please clarify whether the off-balance factor of 1.151 is part of the Government Directive regarding Rate Design.</p> <p>8.2.1 If the 1.151 off-balance factor is a Government Directive, please provide the reference.</p> <p>8.2.2 If not related to the Government Directive regarding Rate Design:</p> <p>8.2.2.1 Please explain how the factor of 1.151 was determined.</p> <p>8.2.2.2 What is the percentage of policyholders assumed to qualify for the SDF, and what is the basis/support for that assumption?</p> <p>8.2.2.3 What assumptions underlie the assumed impact of claim forgiveness, and what is the basis/support for these assumptions?</p> <p>8.2.2.4 What assumptions underlie the assumed impact of claim repayment, and what is the basis/support for these assumptions?</p>	<p>The off-balance factor of 1.151 is directed. It is implicit in the 2018 Government Directive regarding Rate Design both by the attached Tariff and by the requirement that the first year of implementation be revenue neutral (excluding DPP/DRP considerations).</p> <p>Although the 8.2.2 series of questions is predicated on the off-balance factor being not directed, ICBC nonetheless provides the following information on the off-balance factor as context for ICBC's response above.</p> <p>The off-balance factor of 1.151 is the combined effect of six directed elements:</p> <ul style="list-style-type: none"> • The Senior Driver Factor • The New Resident Driver Factor • The Experience Adjustment Factor • Claim forgiveness • "claim repayment" of historical at-fault claims of less than \$2,000 • Phasing-in of the 10-year scan <p>The off-balance factor is computed by comparing expected premium revenues without accounting for these six directed elements and while accounting for them. These simulations showed that the combined effect of these directed rating elements resulted in an overall Basic insurance premium deficit and that an off-balance factor of 1.151 must be applied to maintain revenue neutrality.</p> <p>As with all revenue neutrality calculations, policy year 2016 (including transactions up to October 31, 2017) is used to represent the mix of drivers and policies and as stated in Application, Chapter 3, paragraph 64, "It was assumed that these transactions are a reasonable representation of the mix of drivers and policies to assess revenue neutrality for the first year of implementation."</p> <p>The six elements that combined into the 1.151 off balance are based on identifying impacted drivers so that their Basic insurance premium under the new rate design is computed correctly.</p>



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	<p>8.2.2.5 What assumptions underlie the assumed impact of the 10-year scan period phase-in, and what is the basis/support for these assumptions?</p> <p>8.2.2.6 Does the offset of the off-balance factor of 1.151 consider any rating factors not listed in the passage quoted above? If so, itemize all rating factors considered in the offset, and explain associated assumptions.</p> <p>8.2.2.7 Will the impact of the phase-in of the 10-year scan period diminish as the phase-in progresses? If yes, will the off-balance factor be recalculated with each annual update (or otherwise considered in the overall annual rate need calculation)? Provide details.</p> <p>8.2.2.8 Does the Experience Adjustment Factor generate any need for an off-balance factor? Please provide support for your response.</p>	<p>A simplifying assumption was used for estimating the drivers who are impacted as a result of the 10-year scan period phase-in compared to what was provided in the amended Tariff pages included with the 2018 Government Directive regarding Rate Design provided in the Appendix B of this Application. The analysis used a 3-year scan for all certificates written in the first 12 months after implementation regardless of the policy effective date while the Tariff states a fix date of March 1st, 2017 should be applied. This created a scan period of 2.5 to 3.5 years during the first year of implementation. This difference is deemed immaterial.</p> <p>Though the impact of a reduced crash scan will diminish over time, there will not be annual updates to change the off-balance factor.</p> <p>For years 2 and 3 of this rate design, the impact of the phase-in is offset by reducing the minimum CDF from 0.54 in year 1 to 0.48 in year 3, thus enabling customers to achieve higher discounts. Any further deviation from expected revenues for these years and impact of the phase-in on subsequent years will form part of the actuarial rate indication in subsequent revenue requirements applications.</p>
BCUC.8.3	<p>NEW RATE DESIGN AND RATING ALGORITHM Exhibit B-1, pp. 3-25 to 3-26 Revenue neutrality</p> <p>On page 3-26, ICBC also states:</p> <p>Each of the steps described above used actual Basic insurance transactional data from January 1, 2016 to October 31, 2017. It was assumed that these transactions are a reasonable representation of the mix of drivers and policies to assess revenue neutrality for the first year of implementation. Given that ICBC has no knowledge or other comparative data on how customers will respond to these changes, it was also assumed that there would be no change in either customer mix or customer behaviour as a result of the new rate design.</p> <p>As the impact of the new rate design on customer mix or customer behaviour is unknown at this point, would it be appropriate to assess</p>	<p>The 2018 Government Directive regarding Rate Design stipulates that the changes to the rate design with the exception of changes to the Driver Penalty Point Premium and Driver Risk Premium (DPP/DRP) are to be revenue neutral for Basic insurance for 12 months following the implementation date of September 1, 2019. As indicated in the Application, Chapter 3, page 3-24, ICBC has interpreted revenue neutrality to mean, " ... that the collected premiums from the new rate design must not materially differ from the aggregate amount if the current rate design were to be maintained." This means that a single distribution of drivers (or customer mix) must be used to estimate the aggregate amount of premium under the current rate design and the new rate design. Since the distribution of drivers for the 12-month period beginning September 1, 2019 is not known at this time, ICBC has made an estimate of the distribution for that period and that estimate is the distribution of drivers that existed for the 12-month period beginning January 1, 2016 (using all transactional data associated with that 12-month period from January 1, 2016 to October 21, 2017).</p> <p>It is necessary and important that the same distribution of drivers is used to estimate the aggregate premium under both the current rate design and the new rate design. It is also important that the estimated distribution of drivers used for the purpose of measuring revenue neutrality be reasonable, which ICBC submits is the case. ICBC is of</p>



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	<p>whether or not the revenue neutrality objective has been met? Please explain.</p>	<p>the view that the revenue neutrality objective does not need to be assessed other than in relation to accepted actuarial practice. It is required under accepted actuarial practice that the actuary compute appropriate off-balance factors so that changes to the rating factors from the rate design process do not generate more or less revenue than is determined through the overall rate level indication. ICBC has followed accepted actuarial practice in assessing revenue neutrality.</p> <p>One of the realities about making actuarial estimates, whether they be in a rate design context or a revenue requirements context, is that there always will be differences between the actual result, which will be known only in the fullness of time, and the estimate that was made. These sorts of deviations are to be expected and about them we can say that:</p> <ul style="list-style-type: none"> • Differences between the forecasted and actual (when it is known in the fullness of time) distribution of drivers will, in many cases be accompanied by a change in the losses expected. For instance, if a driver stops driving their vehicle to work and begins to use it only for pleasure use, then the premium collected will be lower than forecasted but so will the expected losses be lower. • If there are cases where the movement in premium is not offset by a movement in costs, that difference will form part of the actuarial rate indication in the next revenue requirements application.
BCUC.8.4	<p>NEW RATE DESIGN AND RATING ALGORITHM Exhibit B-1, pp. 3-25 to 3-26 Revenue neutrality</p> <p>On page 3-26, ICBC also states:</p> <p>Each of the steps described above used actual Basic insurance transactional data from January 1, 2016 to October 31, 2017. It was assumed that these transactions are a reasonable representation of the mix of drivers and policies to assess revenue neutrality for the first year of implementation. Given that ICBC has no knowledge or other comparative data on how customers will respond to these changes, it was also assumed that there would be no change in either customer mix or customer behaviour as a result of the new rate design.</p>	<p>The impact assessment would be in the anticipated form of variance metrics. The content would be metrics such as the extent to which actual customer mix varies from the modelled customer mix, or the extent to which customer behaviour (such as the listed driver base) varies from the modelled customer behaviour. ICBC is currently in the early stages of evaluating impact assessment reporting viability so cannot provide a timeline at this time.</p>



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	<p>Suppose the BCUC finds that an assessment on the new rate design impacts is warranted. Please provide a timeline and anticipated content of such assessment.</p>	
BCUC.9.1	<p>NEW RATE DESIGN AND RATING ALGORITHM Exhibit B-1, pp. 3-28 to 3-29; Actuarial analysis</p> <p>On page 3-29, ICBC states:</p> <p>Given the 2018 Government Directive regarding Rate Design, the following components of the new rate design required actuarial analysis:</p> <ul style="list-style-type: none"> • Experience Factor. • Multiple CCP Factor (MCF). • Rate Class and Territory Factors. • Revenue neutrality during the first year of implementation. <p>...</p> <p>The actuarially indicated factors were developed using a Generalized Linear Model (GLM). GLMs are commonly used by actuaries in insurance to derive predictions based on historical experience...</p> <p>Was revenue neutrality analyzed as part of the GLM? Or was it a separate analysis based on the results of the rating plan that was proposed based on the combination of (a) the GLM, (b) items prescribed by the Government Directive regarding Rate Design, and (c) other components that were retained from the current rating plan?</p>	<p>As suggested in this question, revenue neutrality was a separate analysis based on the results from the GLMs combined with the other elements of the Tariff.</p> <p>As discussed in the Application, Chapter 3, paragraph 63, bullets i) and ii), the off-balance factors computed to maintain revenue neutrality were based on the adjustments needed to account for the additional rating factors and design elements not already imbedded in the statistical models. ICBC's response to question BCUC.8.2 includes additional discussion of off-balance factors.</p>
BCUC.10.1-2	<p>NEW RATE DESIGN AND RATING ALGORITHM Exhibit B-1, p. 3-30 Materiality</p> <p>On page 3-30, ICBC states:</p> <p>For the overall Basic insurance premium, the materiality standard is set to be 1% of the overall Basic insurance premium. For individual</p>	<p>ICBC confirms that the 2018 Government Directive regarding Rate Design does not contain any directives or guidance on application of the materiality standard.</p> <p>The materiality standard and its application for the rate design submission are discussed in the Application, Chapter 3, page 3-30, paragraphs 76 to 79. There is one instance where the materiality standard used affected the selection of rating factors before and after capping. During the modeling process for rate class and territories there was a</p>



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	<p>Basic insurance premiums, the standard is set at the greater of 2% impact or about a \$20 impact on an individual's annual Basic insurance premium.</p> <p>10.1 Please clarify whether the Government Directive regarding Rate Design has any directives or guidance on practicing the materiality standard.</p> <p>10.2 If there are no related Government directives or guidance on materiality standard, please explain specifically how the following were taken into consideration:</p> <p>10.2.1 Did these materiality standards affect the selection of the rating factors before and/or after capping?</p> <p>10.2.2 Did these materiality standards impact the estimation of certain items required for the calculations of revenue neutrality, approximately 1/3 to 2/3 mix of increases and decreases?</p> <p>10.2.3 Did these materiality standards impact the reconciliation and validation of data used in the model?</p>	<p>change made to the definition of dump trucks to group all categories of dump trucks rather than have several such categories. However, that change was not carried through to the actuarial model which has dump truck landscape vehicles treated as a separate variable. During the Eckler model validation process, it was revealed that there was an additional variable in the actuarial model reflecting the separate treatment of landscape trucks. The impact of the different treatment in the actuarial model on the rating factors was evaluated and was determined by ICBC actuaries to be not material, which led to a decision not to change the actuarial model.</p> <p>The materiality standard used by ICBC did not affect the estimation of items required for the calculation of revenue neutrality or the estimation of the 1/3 to 2/3 mix of increases and decreases.</p> <p>The materiality standard used by ICBC did not impact the reconciliation and validation of data used in the rate design models.</p>
BCUC.11.1-3	<p>CHANGE MANAGEMENT Exhibit B-1, p. 4-1, footnote 1 General</p> <p>On page 4-1, ICBC states:</p> <p>ICBC has retained Accenture, a firm with expertise in delivering major change management projects and experience with ICBC specifically, in developing the readiness for change among ICBC's customers, brokers, and employees. ICBC has retained Ernst & Young to provide support for the development and implementation of systems changes...</p> <p>The change management approach for rate design will be coordinated with the other Government directed initiatives that are part of the</p>	<p>The Government Directive of February 13, 2018 with respect to the Rate Affordability Action Plan project approved by Order in Council 084/18, March 5, 2018, directs ICBC to fund RAAP project costs from Optional insurance. No change management costs related to the new rate design were incurred prior to March 5, 2018.</p>



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Question Number	Question	Response						
	<p>Rate Affordability Action Plan (RAAP). This coordination will reduce duplication of effort, limit undue stakeholder impact through integration of change management tactics (e.g., combining communications and training events), and manage timing of changes.</p> <p>In footnote 1 on page 4-1, ICBC states: "The RAAP is funded from Optional insurance pursuant to Order in Council 048/18, March 5, 2018."</p> <p>11.1 Please describe the total cost associated with ICBC's change management approach for the new rate design. Include the allocation of these costs to Basic insurance, if applicable.</p> <p>11.2 Please provide a breakdown of the cost associated with Accenture, Ernst & Young and other third party firms contracted for this transition. Indicate the allocation of these costs to Basic insurance, if applicable.</p> <p>11.3 For change management initiatives that will be coordinated with RAAP initiatives, please indicate if this will be funded by Optional insurance, Basic insurance or some combination.</p>							
BCUC.11.4	<p>CHANGE MANAGEMENT Exhibit B-1, p. 4-1, footnote 1 General</p> <p>On page 4-1, ICBC states: "The change management plan to support implementation of the new rate design is in place. As the project progresses the change management plan will continually be updated."</p> <p>Please summarize the most recent version of the change management plan that is currently in place.</p>	<p>ICBC has developed the following change journey to outline the awareness, knowledge and skill-building activities that employees and brokers can expect. See ICBC's response to question 12.3 for information related to building knowledge and awareness with customers.</p> <table border="1" data-bbox="1365 1101 2456 1356"> <thead> <tr> <th data-bbox="1365 1101 1607 1166">Timeline</th> <th data-bbox="1607 1101 2456 1166">Key Activities (Employees and Brokers)</th> </tr> </thead> <tbody> <tr> <td data-bbox="1365 1166 1607 1230">Early 2018</td> <td data-bbox="1607 1166 2456 1230">Communications (internal and external) announcing that changes are being proposed for rate design</td> </tr> <tr> <td data-bbox="1365 1230 1607 1356">Summer 2018</td> <td data-bbox="1607 1230 2456 1356">Rate Design announcement, explaining in more detail the proposed changes; designated page on internal and broker-facing webpages outlining details of new model, including customer talking points. Tent cards at broker offices.</td> </tr> </tbody> </table>	Timeline	Key Activities (Employees and Brokers)	Early 2018	Communications (internal and external) announcing that changes are being proposed for rate design	Summer 2018	Rate Design announcement, explaining in more detail the proposed changes; designated page on internal and broker-facing webpages outlining details of new model, including customer talking points. Tent cards at broker offices.
Timeline	Key Activities (Employees and Brokers)							
Early 2018	Communications (internal and external) announcing that changes are being proposed for rate design							
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Question Number	Question	Response	
		Fall 2018	Launch of Change Network (internal) and On-site Coordinator Network (brokers) to help prepare employees and brokers
		Fall 2018	To help employees and brokers understand new rating model: <ul style="list-style-type: none"> • Internal Leadership and Change Network Deep-Dive sessions (monthly) • Broker On-site Coordinator meetings (monthly)
		Early 2019	Change Guides – internal guide on how rate design changes impact specific roles
		Spring 2019	To build knowledge and skills on new rating model: <ul style="list-style-type: none"> • Employee training • Broker training • Broker office materials
		Summer 2019	Procedures & job aid updates
BCUC.11.5	<p>CHANGE MANAGEMENT Exhibit B-1, p. 4-1, footnote 1 General</p> <p>On page 4-1, ICBC states: "The change management plan to support implementation of the new rate design is in place. As the project progresses the change management plan will continually be updated."</p> <p>Please include a project schedule for the change management plan.</p>	Please refer to ICBC's response to question BCUC.11.4.	
BCUC.11.6	<p>CHANGE MANAGEMENT Exhibit B-1, p. 4-1, footnote 1 General</p> <p>On page 4-1, ICBC states: "The change management plan to support implementation of the new rate design is in place. As the project progresses the change management plan will continually be updated."</p> <p>What are the criteria for amendments in the change management plan?</p>	ICBC will assess and update change activities to support employees, customers and brokers (including communications, training and procedures) on an iterative basis. These activities will be developed in consultation with designated representatives from impacted business areas, and be updated in the overall change management plan. ICBC will also seek feedback from key stakeholders to measure the efficacy of its change management efforts and make amendments to the plan in response. Please also see ICBC's response to BCUC.11.7.	



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Question Number	Question	Response
BCUC.11.7	<p>CHANGE MANAGEMENT Exhibit B-1, p. 4-1, footnote 1 General</p> <p>On page 4-1, ICBC states: "The change management plan to support implementation of the new rate design is in place. As the project progresses the change management plan will continually be updated."</p> <p>How does ICBC measure success in the change management plan?</p>	<p>ICBC will consult with key business areas and stakeholders to measure the efficacy of its RAAP change management activities, and adjust plans accordingly. The following measurement activities are proposed:</p> <p>Employee</p> <ul style="list-style-type: none"> • Change Network to provide conduit for 2-way communication with the business • Dedicated RAAP email inbox • Change Readiness Surveys (planned for Summer 2018, Early 2019 and Spring 2019) <p>Broker</p> <ul style="list-style-type: none"> • Broker survey (planned for early 2019) • Pulse polls on broker connect • Broker Talkback and feedback from Broker Account Representatives and Broker On-site Coordinators <p>Customer</p> <p>ICBC will gauge customer response to messaging and marketing in the lead up to the change. ICBC is currently engaged in measuring customer experience and getting feedback through different moments of truth, which will continue.</p>
BCUC.12.1	<p>CHANGE MANAGEMENT Exhibit B-1, p. 4-4 Customers</p> <p>On page 4-4, ICBC states:</p> <p>To help customers understand the new rate design and the implications for their Basic insurance premiums, ICBC will advise and educate customers by sharing relevant and appropriate information in a timely way, coordinated with the rollout of the new rate design. The information provided to customers will be designed to be meaningful and understandable, and will be delivered through multiple channels as part of awareness-building communications campaigns. Examples of channels to be used are renewal reminders, icbc.com, earned media, etc.</p>	<p>In order to support customers, ICBC plans to provide them with:</p> <ul style="list-style-type: none"> • a method of obtaining their IDF online, and • an online tool that will provide customers with an approximate cost of their Basic insurance premiums based on inputs selected. <p>The initial renewal reminders at implementation will focus on helping customers understand how to prepare for the renewal of their Basic insurance under a driver-based model. Given the increased number of factors of the new rate design model including listing drivers, factored with customer behaviour, the initial renewal reminder will provide limited premium details.</p>



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BCUC.12.2	<p>Will customers be provided with a detailed premium derivation which outlines all calculation steps and associated rating factors?</p> <p>CHANGE MANAGEMENT Exhibit B-1, p. 4-4 Customers</p> <p>On page 4-4, ICBC states:</p> <p>To help customers understand the new rate design and the implications for their Basic insurance premiums, ICBC will advise and educate customers by sharing relevant and appropriate information in a timely way, coordinated with the rollout of the new rate design. The information provided to customers will be designed to be meaningful and understandable, and will be delivered through multiple channels as part of awareness-building communications campaigns. Examples of channels to be used are renewal reminders, icbc.com, earned media, etc.</p> <p>Will customers be made aware that certain changes are being phased in over a 10-year period, to manage expectations about the direction of future changes they may experience?</p>	<p>Yes. Information has been published on icbc.com, and will continue to be shared through subsequent customer communications.</p>								
BCUC.12.3	<p>CHANGE MANAGEMENT Exhibit B-1, p. 4-4 Customers</p> <p>On page 4-4, ICBC states:</p> <p>To help customers understand the new rate design and the implications for their Basic insurance premiums, ICBC will advise and educate customers by sharing relevant and appropriate information in a timely way, coordinated with the rollout of the new rate design. The information provided to customers will be designed to be meaningful and understandable, and will be delivered through multiple channels as part of awareness-building communications campaigns. Examples of channels to be used are renewal reminders, icbc.com, earned media, etc.</p>	<p>Please see the table below that outlines the upcoming initiatives and timeline planned to educate customers. With respect to cost, the Government Directive of February 13, 2018 with respect to the Rate Affordability Action Plan project approved by Order in Council 084/18, March 5, 2018, directs ICBC to fund RAAP project costs from Optional insurance.</p> <table border="1" data-bbox="1365 1133 2569 1427"> <thead> <tr> <th data-bbox="1365 1133 1688 1198">Timing</th> <th data-bbox="1688 1133 2569 1198">Activity</th> </tr> </thead> <tbody> <tr> <td data-bbox="1365 1198 1688 1263">Ongoing</td> <td data-bbox="1688 1198 2569 1263">Insert in renewal reminder indicating changes coming to auto insurance in BC</td> </tr> <tr> <td data-bbox="1365 1263 1688 1328">March 2018</td> <td data-bbox="1688 1263 2569 1328">Information on icbc.com on public engagement of potential rate design changes</td> </tr> <tr> <td data-bbox="1365 1328 1688 1427">August 2018</td> <td data-bbox="1688 1328 2569 1427">Update to icbc.com with rate design proposal; tent cards at broker offices highlighting proposed changes and directing customers to icbc.com</td> </tr> </tbody> </table>	Timing	Activity	Ongoing	Insert in renewal reminder indicating changes coming to auto insurance in BC	March 2018	Information on icbc.com on public engagement of potential rate design changes	August 2018	Update to icbc.com with rate design proposal; tent cards at broker offices highlighting proposed changes and directing customers to icbc.com
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	<p>12.3 Please provide a list of initiatives and timeline planned to educate customers on the new rate design.</p> <p>12.3.1 Please include an estimated start and completion date and approximate cost for each initiative category.</p>	September 2018	Presentations at various broker summits and stakeholder meetings
		Fall/Winter 2018/19	Updates to icbc.com as more information is known
		Spring 2019	Communications tools to help customers understand what information they need to provide at renewal, and the factors included in calculating their rate
		Spring 2019	Promotion of changes at auto shows and ICBC sponsored events, release of information to brokers and driver licensing offices
		Spring/Summer 2019	Launch of rate design customer campaign
		Spring/Summer 2019	Launch of online tool to help customers understand their Basic insurance premium under new model
		July 2019	Updated renewal reminder with information how to prepare for renewal
BCUC.12.4	<p>CHANGE MANAGEMENT Exhibit B-1, p. 4-4 Customers</p> <p>On page 4-4, ICBC states:</p> <p>To help customers understand the new rate design and the implications for their Basic insurance premiums, ICBC will advise and educate customers by sharing relevant and appropriate information in a timely way, coordinated with the rollout of the new rate design. The information provided to customers will be designed to be meaningful and understandable, and will be delivered through multiple channels as part of awareness-building communications campaigns. Examples of channels to be used are renewal reminders, icbc.com, earned media, etc.</p> <p>Please explain what is meant by earned media and elaborate on those initiatives.</p>	Unpaid media opportunities to raise awareness and knowledge. Examples could include: news releases, editorials and media interviews.	
BCUC.12.5	<p>CHANGE MANAGEMENT Exhibit B-1, p. 4-4 Customers</p>	<p>Examples of channels to be used are renewal reminders, icbc.com, and earned media. Additional channels that may be employed include:</p> <ul style="list-style-type: none"> • Social media: Facebook, Twitter and YouTube • Information posted at drivers licensing offices 	



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ICBC's Responses to BC Utilities Commission's Questions**

Question Number	Question	Response
	<p>On page 4-4, ICBC states:</p> <p>To help customers understand the new rate design and the implications for their Basic insurance premiums, ICBC will advise and educate customers by sharing relevant and appropriate information in a timely way, coordinated with the rollout of the new rate design. The information provided to customers will be designed to be meaningful and understandable, and will be delivered through multiple channels as part of awareness-building communications campaigns. Examples of channels to be used are renewal reminders, icbc.com, earned media, etc.</p> <p>Please list out all communication channels under "etc."</p>	<ul style="list-style-type: none"> • Information shared with brokers and posted at broker offices • Information posted in trade publications • Community events <p>ICBC will gauge customer response to messaging and marketing in the lead up to the change, and adjust as required.</p>
BCUC.12.6	<p>CHANGE MANAGEMENT Exhibit B-1, p. 4-4 Customers</p> <p>On page 4-4, ICBC states:</p> <p>To help customers understand the new rate design and the implications for their Basic insurance premiums, ICBC will advise and educate customers by sharing relevant and appropriate information in a timely way, coordinated with the rollout of the new rate design. The information provided to customers will be designed to be meaningful and understandable, and will be delivered through multiple channels as part of awareness-building communications campaigns. Examples of channels to be used are renewal reminders, icbc.com, earned media, etc.</p> <p>Please explain how ICBC ensure the efficiency and effectiveness of its awareness-building communications campaigns.</p>	Please refer to ICBC's response to question BCUC.11.7.
BCUC.12.7	<p>CHANGE MANAGEMENT Exhibit B-1, p. 4-4 Customers</p>	Please refer to ICBC's responses to the other questions in the BCUC.12 series.



**ICBC's 2018 Basic Insurance Rate Design Application
ICBC's Responses to BC Utilities Commission's Questions**

Question Number	Question	Response
	<p>ICBC states on page 4-4 that "ICBC recognizes the importance of informing customers about the new rate design before they approach their brokers."</p> <p>Please indicate how ICBC will ensure customers are aware of the new rate design before approaching their brokers as it relates to their new premiums, how the premiums were calculated, changes from previous their plan and additional driver details now required.</p>	
BCUC.12.8	<p>CHANGE MANAGEMENT Exhibit B-1, p. 4-4 Customers</p> <p>ICBC states on page 4-4 that "ICBC recognizes the importance of informing customers about the new rate design before they approach their brokers."</p> <p>Does ICBC have any online self-serve tools available for customers to estimate or renew their own policies? If so, what is the timeline for this tool? If not, discuss the feasibility of such self-serve tool.</p>	<p>ICBC currently has a rate calculator tool on icbc.com. In Spring/Summer 2019, ICBC plans to provide an online tool that will provide customers with an approximate cost of their Basic insurance premiums based on inputs selected. Customers cannot renew their own policies online.</p>
BCUC.13.1-2	<p>CHANGE MANAGEMENT Exhibit B-1, pp. 4-4 to 4-5 Brokers</p> <p>On page 4-4, ICBC states:</p> <p>In conjunction with the Government's public engagement process, ICBC established a rate design broker task force made up of multiple broker representatives from the Insurance Brokers Association of British Columbia and the Credit Union Insurance Services Association. Brokers fully support the need for rate design changes, and the sessions with the task force helped identify key broker issues for consideration regarding the new rate design change management and implementation. ICBC will continue to work with brokers and broker associations, as appropriate, on an ongoing basis, keeping brokers updated on developments and eliciting feedback regarding key issues and implementation of the new rate design.</p>	<p>The Broker Task Force commenced on March 7, 2018. The objective of the task force is to obtain feedback from brokers on potential rate design changes with a focus on the customer and broker experience.</p> <p>To date, the Broker Task Force has met seven times. Task Force members are under a non-disclosure agreement, but in summary the sessions focused on a review of various aspects of the proposed model, such as moving to a driver-based model, distance and vehicle technology discounts. ICBC incorporated feedback from members (e.g. data collection for the Distance Factor).</p>



**ICBC's 2018 Basic Insurance Rate Design Application
ICBC's Responses to BC Utilities Commission's Questions**

Question Number	Question	Response
	<p>13.1 Please provide the commencement date of ICBC's engagement with brokers and the objective of the task force.</p> <p>13.2 Please provide an overview of each session with the task force. Explain what issues were identified by a rate design broker task force.</p> <p>13.2.1 How have these issues been addressed?</p>	
BCUC.13.3	<p>CHANGE MANAGEMENT Exhibit B-1, pp. 4-4 to 4-5 Brokers</p> <p>ICBC notes that there are over 900 broker offices in BC with 7,500 people handling Autoplan transaction. Please indicate the broker's participation levels in the public engagement process leading up to the new rate design application.</p>	<p>ICBC communicated to broker offices the March 5, 2018 launch of the online public engagement, and encouraged all brokers to participate. Almost 35,000 British Columbians responded. Responses were confidential and not identified by individuals.</p>
BCUC.13.4	<p>CHANGE MANAGEMENT Exhibit B-1, pp. 4-4 to 4-5 Brokers</p> <p>ICBC notes that there are over 900 broker offices in BC with 7,500 people handling Autoplan transaction.</p> <p>13.4 Please indicate what ongoing consultation is planned with brokers.</p> <p>13.4.1 Please include an estimated start and completion date of each consultation activity.</p>	<p>ICBC will continue to engage the Broker Task Force, as well as the broker community. ICBC is in the process of building out the dates for the fall/winter Broker Task Force schedule. Additional information is provided in response to question BCUC.13.5.</p>
BCUC.13.5	<p>CHANGE MANAGEMENT Exhibit B-1, pp. 4-4 to 4-5 Brokers</p> <p>On page 4-5, ICBC states:</p> <p>Based on previous experience, online skills-building activities could be used to support broker adaptation to the new rate design. Training</p>	<p>The following activities and tactics have been identified to support brokers through changes associated with the new rate design. Plans are being developed on an on-going basis, and tactics will be refined over time. With respect to cost, the Government Directive of February 13, 2018 with respect to the Rate Affordability Action Plan project approved by Order in Council 084/18, March 5, 2018, directs ICBC to fund RAAP project costs from Optional insurance.</p>



**ICBC's 2018 Basic Insurance Rate Design Application
ICBC's Responses to BC Utilities Commission's Questions**

Question Number	Question	Response
	<p>modules in the past have included broker-specific learning resources designed to assist brokers in adapting to change.</p> <p>13.5 Please provide a list of knowledge and skill building initiatives planned for brokers.</p> <p>13.5.1 Please include an estimated start and completion date and approximate cost for each initiative.</p>	<p>Currently, ICBC's plans consist of the following components:</p> <p>On-site Coordinators ICBC is working with brokers to identify broker On-site Coordinators to act as a conduit between broker offices and the project. The On-site Coordinator network aims to provide brokers with timely information about the rate design changes, and create a point of contact for pre and post-implementation support. In collaboration with ICBC Broker Account Representatives, the On-site coordinator network is intended to serve as a two-way communication vehicle between ICBC and brokers, enabling ICBC to understand and respond to feedback from brokers.</p> <p>Printed Materials Printed materials (i.e. tent cards) have been provided to broker offices highlighting the proposed changes. ICBC will develop tent cards that highlight information customers will need to know when renewing/purchasing Basic insurance.</p> <p>Broker Connect Broker Connect (extranet) is the primary vehicle for communicating change information directly to brokers, in keeping with ICBC standard communication practices. ICBC has a designated section on Broker Connect for rate design that includes details of the proposed changes, frequently asked questions, etc.</p> <p>Broker Engagement ICBC will meet in person with brokers to share information about the new rate design through a variety of forums, such as Broker Task Force meetings, office visits, roadshows, conferences and broker summits.</p> <p>Training & Procedures System, product and rating knowledge learning will be made available to brokers in advance of renewal reminders being issued. Brokers will receive a mix of eLearning and webcasts. A train-the-trainer session will be delivered to Broker Account Representatives and brokerages with in-house training departments will be provided with tools and materials to support delivery of classroom training for brokers. Learning will be supplemented with on-the-job support tools in the form of procedures and job aids, as well as informal learning interventions.</p>



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Question Number	Question	Response
		Please refer to ICBC's responses to BCUC.11.1 and BCUC.11.4 for details on start and completion dates.
BCUC.14.1	<p>CHANGE MANAGEMENT Exhibit B-1, p. 4-6 ICBC employees</p> <p>On page 4-6, ICBC states: "Many of the initiatives outlined for use in supporting brokers in adapting to the new rate design will also apply to ICBC employees."</p> <p>14.1 Please list all initiatives ICBC will use to train and educate employees of the new rate design.</p> <p>14.1.1 Please include an estimated start and completion date and approximate cost for each initiative.</p>	<p>The following activities and tactics have been identified to support employees through changes associated with the new rate design. Plans are being developed on an on-going basis, and tactics will be refined over time.</p> <p>With respect to cost, the Government Directive of February 13, 2018 with respect to the Rate Affordability Action Plan project approved by Order in Council 084/18, March 5, 2018, directs ICBC to fund RAAP project costs from Optional insurance.</p> <p>Currently, ICBC's plans consist of the following components:</p> <p>Leader Alignment In August, a live webcast walked all ICBC managers through the proposed changes. In addition, a series of deep-dive information sessions are being held for ICBC leadership (managers and above) from highly impacted departments. These sessions aim to support the cascade of sponsorship for rate design changes from executive leadership through to frontline employees.</p> <p>Change Network To support the implementation of the new rate design, a Change Network has been established to serve as a conduit between the project and the business. The network consists of Business Stewards (leadership level) and Change Champions (employee level) that provide support to their peers within their functional areas, and facilitate two-way conversation with the project.</p> <p>Employee Engagement ICBC will leverage existing forums (i.e., team meetings/huddles, information boards, employee portal etc.) to build awareness of the change amongst employees. The specific forums and vehicles used will be tailored depending on the target audience. In advance of training, ICBC will provide change guides to impacted employees, outlining the key areas of change anticipated for their role, and the training they will provided. The format and contents of these guides will be determined as the project progresses.</p>



**ICBC's 2018 Basic Insurance Rate Design Application
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Question Number	Question	Response											
		<p>Training System, product and rating knowledge learning will be made available to employees in advance of renewal reminders being issued. Internal ICBC audiences will receive eLearning and webcasts with highly-impacted groups receiving classroom training. Learning will be supplemented with on-the-job support tools in the form of procedures and job aids, as well as informal learning interventions.</p> <p>Please refer to ICBC's responses to BCUC.11.1 and BCUC.11.4 for details on start and completion dates.</p>											
BCUC.14.2	<p>CHANGE MANAGEMENT Exhibit B-1, p. 4-6 ICBC employees</p> <p>On page 4-6, ICBC states:</p> <p>The new rate design involves many facets of ICBC's business operations. These include the BEU, Customer Contact, Insurance Sales and Distribution, Customer Relations, Risk Underwriting, Autoplan Data Processing, Claims, and others. Change impacts likely experienced by these areas include increased volume of support requests from customers and brokers, business process changes, and/or changes to day-to-day role responsibilities.</p> <p>14.2 Please indicate how ICBC plans to handle the increased volume of support requests from customers and brokers.</p> <p>14.2.1 Has ICBC developed any service quality metrics and targets associated with the new rate design? Please explain.</p>	<p>ICBC plans to increase support capacity to brokers and customers after an impact assessment has been completed to determine need.</p> <p>ICBC plans to use its existing service quality metrics and targets.</p>											
BCUC.15.1	<p>CHANGE MANAGEMENT Exhibit B-1, p. 4-7 Technology change</p>	<table border="1"> <thead> <tr> <th data-bbox="1354 1179 1849 1230">Phase</th> <th data-bbox="1849 1179 2005 1230">Start</th> <th data-bbox="2005 1179 2171 1230">End</th> <th data-bbox="2171 1179 2591 1230"></th> </tr> </thead> <tbody> <tr> <td data-bbox="1354 1230 1849 1424"> Inception <ul style="list-style-type: none"> • Scope definition • Implementation approach • High-level planning • Team assignment • Vendor engagement </td> <td data-bbox="1849 1230 2005 1424">Jan 2018</td> <td data-bbox="2005 1230 2171 1424">Feb 2018</td> <td data-bbox="2171 1230 2591 1424"></td> </tr> </tbody> </table>	Phase	Start	End		Inception <ul style="list-style-type: none"> • Scope definition • Implementation approach • High-level planning • Team assignment • Vendor engagement 	Jan 2018	Feb 2018				
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**ICBC's 2018 Basic Insurance Rate Design Application
ICBC's Responses to BC Utilities Commission's Questions**

Question Number	Question	Response			
	<p>On page 4-7, ICBC states:</p> <p>Implementation of the new rate design will not, however, necessitate significant change to ICBC's overarching technology landscape, which has recently seen significant modernization, nor is it expected to impact ICBC's current IT strategy. It is currently anticipated that the majority of the system changes required by the new rate design will take place within the existing Guidewire PolicyCenter system and the Guidewire Rating Engine, with other affected systems requiring more limited changes.</p> <p>Please provide an overview of the project plan related to the IT changes associated with the new rate design.</p>	Construction <ul style="list-style-type: none"> • Design • Build • Testing 	Mar 2018	Mar 2019	
		Transition <ul style="list-style-type: none"> • Stabilization • Final regression testing • Promotion of changes to production environment • Go-live 	Apr 2019	Jul 2019	
		Support <ul style="list-style-type: none"> • Break/fix • Minor enhancements 	Jul 2019	Nov 2019	
BCUC.15.2	<p>CHANGE MANAGEMENT Exhibit B-1, p. 4-7 Technology change</p> <p>On page 4-7, ICBC states:</p> <p>Implementation of the new rate design will not, however, necessitate significant change to ICBC's overarching technology landscape, which has recently seen significant modernization, nor is it expected to impact ICBC's current IT strategy. It is currently anticipated that the majority of the system changes required by the new rate design will take place within the existing Guidewire PolicyCenter system and the Guidewire Rating Engine, with other affected systems requiring more limited changes.</p> <p>Please describe the total cost of IT changes associated with the new rate design.</p>	<p>The majority of costs for IT changes associated with the new rate design are fully funded by Optional insurance in accordance with the Order in Council 084, March 5, 2018 (OIC 84/18). Costs incurred prior to March 5, 2018 amounted to approximately \$3.1 million and were allocated between Basic insurance and Optional insurance in accordance with the Commission-approved methodology. These costs were primarily associated with the Guidewire Rating Engine, for which ICBC filed an IT capital project report with the Commission on April 16, 2018.</p>			
BCUC.15.3	<p>CHANGE MANAGEMENT Exhibit B-1, p. 4-7 Technology change</p>	<p>No, in accordance with ICBC's IT compliance reporting requirements, ICBC is not required to file IT capital project reports for projects that are 100% funded by Optional insurance. With the exception of the Guidewire Rating Engine software, all other capital costs for IT changes associated with the new rate design are fully funded by Optional insurance in accordance with OIC 84/18.</p>			



**ICBC's 2018 Basic Insurance Rate Design Application
ICBC's Responses to BC Utilities Commission's Questions**

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BCUC.15.4	<p>CHANGE MANAGEMENT Exhibit B-1, p. 4-7 Technology change</p> <p>On page 4-7, ICBC states:</p> <p>Implementation of the new rate design will not, however, necessitate significant change to ICBC's overarching technology landscape, which has recently seen significant modernization, nor is it expected to impact ICBC's current IT strategy. It is currently anticipated that the majority of the system changes required by the new rate design will take place within the existing Guidewire PolicyCenter system and the Guidewire Rating Engine, with other affected systems requiring more limited changes.</p> <p>Please provide the estimated timeline of the changes required under the current Guidewire PolicyCenter system. Would these changes be done in-house or externally?</p>	<p>Changes are currently in development and scheduled to go live in July 2019. Changes are being done in-house. As discussed in the Application, ICBC has engaged the services of Ernst & Young for systems integration support for the technology changes. Their role will support ICBC resources in end-to-end design, development, and testing across all aspects of the implementation.</p>
BCUC.15.5	<p>CHANGE MANAGEMENT Exhibit B-1, p. 4-7 Technology change</p>	<p>The following systems, outside of Guidewire PolicyCenter and the Guidewire Rating Engine, will be affected:</p> <p>Autoplan Data Capture Contraventions</p>



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	<p>On page 4-7, ICBC states:</p> <p>Implementation of the new rate design will not, however, necessitate significant change to ICBC's overarching technology landscape, which has recently seen significant modernization, nor is it expected to impact ICBC's current IT strategy. It is currently anticipated that the majority of the system changes required by the new rate design will take place within the existing Guidewire PolicyCenter system and the Guidewire Rating Engine, with other affected systems requiring more limited changes.</p> <p>Please indicate what other systems, outside of Guidewire PolicyCenter system and the Guidewire Rating Engine, will be affected.</p>	<p>D1 Vehicle Driver Extracts Driver Licensing System Driver Penalty Points Driver Risk Premium EngageOne Enterprise Data Warehouse Enterprise Service Bus Guidewire ClaimCenter SAP</p>
BCUC.15.6	<p>CHANGE MANAGEMENT Exhibit B-1, p. 4-7 Technology change</p> <p>On page 4-7, ICBC states:</p> <p>Implementation of the new rate design will not, however, necessitate significant change to ICBC's overarching technology landscape, which has recently seen significant modernization, nor is it expected to impact ICBC's current IT strategy. It is currently anticipated that the majority of the system changes required by the new rate design will take place within the existing Guidewire PolicyCenter system and the Guidewire Rating Engine, with other affected systems requiring more limited changes.</p> <p>Please outline what, if any, additional systems will be required to accommodate the proposed changes associated with the new rate design.</p>	<p>No additional systems will be required to accommodate the proposed changes associated with the new rate design.</p>
BCUC.15.7	<p>CHANGE MANAGEMENT Exhibit B-1, p. 4-7 Technology change</p>	<p>Please see ICBC's responses to questions BCUC.11.4, 13.5 and 14.1.</p>



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ICBC's Responses to BC Utilities Commission's Questions**

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	<p>On page 4-7, ICBC states:</p> <p>Implementation of the new rate design will not, however, necessitate significant change to ICBC's overarching technology landscape, which has recently seen significant modernization, nor is it expected to impact ICBC's current IT strategy. It is currently anticipated that the majority of the system changes required by the new rate design will take place within the existing Guidewire PolicyCenter system and the Guidewire Rating Engine, with other affected systems requiring more limited changes.</p> <p>15.7 Please describe what training will be provided to staff and brokers to handle system and IT changes.</p> <p>15.7.1 Please include an estimated start and completion date and approximate cost for each training initiatives.</p>	
BCUC.16.1	<p>CHANGE MANAGEMENT Exhibit B-1, p. 4-7 Technology change management</p> <p>On page 4-7, ICBC states:</p> <p>The implementation of the new rate design will require analyzing the impact to each affected system, making the necessary changes to each system (including the creation of new business rules, system logic, and rating tables), and testing each system under different scenarios to ensure it functions as designed.</p> <p>16.1 Please confirm if a preliminary assessment of each affected system and the changes needed have already occurred.</p> <p>16.1.1 If confirmed, please provide the results of the assessment.</p> <p>16.1.2 If not confirmed, when will this assessment occur?</p>	<p>Confirmed. A preliminary high-level assessment was undertaken to determine the systems affected by the new rate design and the estimated complexity of the changes required. The results of the assessment identified the affected systems and changes required to support the new rate design. As discussed in the Application, Chapter 4, Section D.1, the implementation of system changes associated with the new rate design will be guided by Agile Methodology (Agile). ICBC is currently in the middle of the construction phase which will be further defining and making the necessary changes to each system, and testing each system under different scenarios to ensure it functions as designed.</p>

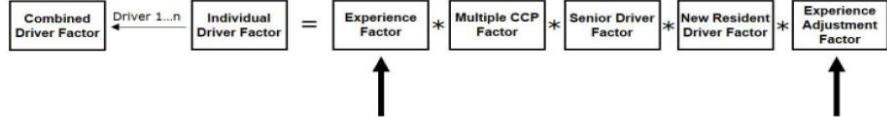


**ICBC's 2018 Basic Insurance Rate Design Application
ICBC's Responses to Richard Landale's Questions**

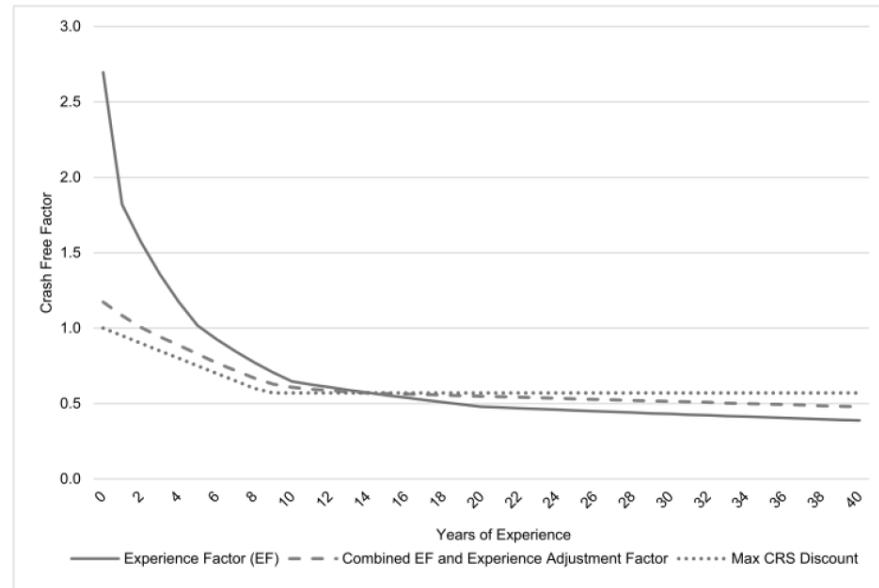
Question Number	Question	Response
Landale.1.1-3	<p>1.1 On August 3rd 2018 the Attorney General – The Hon. David Eby, QC., issued a Letter of Direction to ICBC regarding "Rate Design Tariff Amendments". That was followed by OIC 458/18 August 9th 2018, and OIC 459/18 August 9th 2018 orders specified amendments to Special Direction IC2</p> <p>1.2 The BCUC received from ICBC their 2018 Basic Insurance Rate Design Application dated August 15th 2018, exhibit B-1. On August 16th 2018 the BCUC published the Regulatory Hearing Timetable, exhibit A-2. Therein the timetable provided interested parties and registered interveners only 4 days to read/review and digest ICBC's 412 page application. That is ridiculous and a totally impossible time period to muster intelligent and responsible information request questions to ICBC, ahead of the Streamlined Process that commences on September 4th at the unusual hour of 8:30am. Then just two days later on September 6th Oral arguments begin. Another unreasonable and extremely limiting preparation time for such an important hearing.</p> <p>1.3 While this intervener condemns this regulatory timetable, it is recognized from the OIC's in this matter before the BCUC, the Rate Design Hearing is a "fait accompli". Nevertheless we should be heard for the record of our interests, concerns and possible alternatives.</p>	There is no question.
Landale.2.1-10	<p>2.1 Will ICBC please chart in a table the existing Seniors Dscount of 43% based on the Rate Class 005 in the Territory "D" (Lower Mainland/Surrey), Pleasure Use Only, using the current Basic Premium rates to August 31st 2018 Verses the New Rate Design for the same criteria, based upon all rates and senior discounts that include safe driver, no penalty points or convictions. As in attempting to read 412 pages (which I did not could not), I cannot over night figure out how this new rate design will impact me at the age of 71 (next year). Incidentally I have not had an accident in 53 plus years, or more.</p> <p>For clarity my renewal date was June 29 2018 and the Basic Premium was \$1,418.00, with a Seniors discount (43%) of \$610, and I paid \$808.</p> <p>2.2 Will ICBC please explain in simple language, has a senior 65 and older lost their 43% discount ?. As trying to follow paragraph 5 page 3-1 and Figure 3.2 page 3-2 the premium calculation for the CRS level is now confusing. Can I assume a 43% discount plus a 15% discount for a total of 58%, so long as there are no other</p>	ICBC respectfully declines to respond to these questions as they deal with personal circumstances. In order to deal with these questions, a disclosure of detailed personal information would be required and the regulatory process is not an appropriate forum for that. ICBC has provided generic and illustrative customer examples in its presentation materials for the Streamlined Review Process. In addition, ICBC will have materials available for customers in due course as part of its change management. Please see the responses to BCUC 12.1 – 12.8 for more information on how information will be rolled out to customers.



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ICBC's Responses to Richard Landale's Questions

Question Number	Question	Response
	<p>penalties whatsoever ? Figure 3.2 –Claim-rated Scale example does not add clarity to my question.</p> <p>2.3 The problem of understanding this new rate design is compounded by this algorithm, which also implies there are others: - “sub-section of new rating algorithm”, what others, please provide them using the same format as shown in figure 3.10:</p> <p>Figure 3.10 – Sub-section of New Rating Algorithm: CDF</p>  <p>I would like to suggest to ICBC that they might add more clarity by using this algorithm to answer the above IRs, I cannot fill in the squares.</p> <p>This information is a focal point that will come up during the Oral hearing portion of this rate design proceedings. So for efficiency it would greatly help the streamlining process to have my questions answered in simple clarity terms, sooner rather than later if you please. All I want to know is “How Much”</p>	

2.4 Then on the next page a lot more confusion:
Figure 3.11 – Comparison by Years of Experience



Please place an "X" where my next renewal Basic Premium will be ? And then tell me "How Much" again.

2.5 In the foreseeable future I can predict either my wife or I will be a registered disabled person with the Province. Therefore, does this new rate design "ADD" the C.4 DISABILITY AND HIGH VALUE VEHICLE CHARGE FACTORS 38. The Disability Factor applies a 25% reduction of the Basic insurance premium for qualifying disabled persons, to 43% + 15% + 25%, all else being equal as described above.

2.6 Then does the C.5 ADVANCED SAFETY TECHNOLOGY FACTOR 39. Based on the 2018 Government Directive regarding Rate Design, a 10% discount for vehicles with manufacturer installed autonomous emergency braking systems is applied to reflect the lower risk associated with vehicles with this technology add onto the 43% + 15% + 25% + 10%



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Question Number	Question	Response
	<p>2.7 Then does the C.6 DISTANCE FACTOR 40. Based on the 2018 Government Directive regarding Rate Design, "Rates are to incorporate a 10% discount for vehicles that are driven less than 5,000 kilometers in a year", add onto the 43% + 15% + 25% + 10% + 10%</p> <p>2.8 As a follow up question, exactly how will this be monitored / enforceable under what terms in the basic policy, will this be described in the policy hand out booklet I could get from BCAA when I renew next June ?</p> <p>2.9 I'm sorry I gave up trying to read this:</p> <p>C.7 TRANSITION</p> <p>42. As a result of greater recognition of at-fault crashes compared to today's rate design, moving from the current CRS to the new CDF has the potential for customers to see substantial changes in their premium in the first year of the proposed rate design. Transitioning refers to the method used to manage the magnitude of premium movement to customers and involves two distinct components; i) one to manage upward premium movement, by applying a Transition Factor, and ii) another to manage downward movement by applying a minimum CDF.</p> <p>This entire section is way too difficult to understand in the time frame provided by the hearing regulatory timetable. May I suggest ICBC go back to the algorithm diagram using the Senior criteria I have provided to explain this Transition process.</p> <p>2.10 I am greatly concerned in regard to the impact this:</p> <p>C.8.3 UNLISTED DRIVER PROTECTION PREMIUM (UDPP)</p> <p>57. Unlisted Driver Protection Premium (UDPP) is an additional premium that a customer can pay to protect against the UDAP in the case that an unlisted driver crashes the vehicle.</p> <p>For instance my wife and I each have a car with separate policies, but we both are equal owners of each car. Due to a clerical oversight / error at the time of registering the cars, the BCAA representative thought it appropriate to name my wife first on each policy, and my name second.</p>	



**ICBC's 2018 Basic Insurance Rate Design Application
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Question Number	Question	Response
	<p>Due to a past claim I was required to pay the \$500 deductible on my car, because my wife was driving her car which had a \$300 deductible when she hit my car in our driveway. Now under these rules what is our position. Do we need to register ourselves respectively on each other's cars as "Listed Drivers" ?</p>	
Landale.2.11	<p>As a follow up question, suppose I lend my car to a visiting relative for a 10 day vacation, or for that matter a friend. What am I required to do to ensure compliance with ICBC policy rules. ICBCs answer should also address the question in respect to relatives or friends from "Out of Province or from another Country". ICBCs answer can assume everyone to be 25 years and older. What would the 10 day rate be ? or is it pro-rated on a one year premium of \$50.00 ?</p>	<p>Unlisted Driver Protection Premium (UDPP) is an additional premium that a customer can pay to protect against the UDAP in the case that an unlisted driver crashes the vehicle. UDPP would provide protection for friends (non-household or non- employees) or relatives visiting the country and operating the vehicle 12 days or less in the year. The UDPP begins at \$50 a year and will be pro-rated for short-term policies or if a customer purchases UDPP mid-term but subject to a minimum retained premium of \$50. A customer with an annual policy cannot purchase a 10 day UDPP, however a customer can add UDPP mid-term (the price would be pro-rated to a minimum of \$50) and the coverage would apply for the remainder of the certificate's term.</p>
Landale.2.12	<p>This is also hard to figure out:</p> <p><i>D.1 REVENUE NEUTRALITY</i> <i>61. As per the 2018 Government Directive regarding Rate Design, the implementation of rate design must be revenue neutral for Basic insurance for the 12 months following the implementation date of September 1, 2019 (excluding the impact of changes to DPP and DRP). 17 Revenue neutrality means that the collected premiums from the new rate design must not materially differ from the aggregate amount if the current rate design were to be maintained. With the introduction of the new rate design, the expected decreases in premium for some customer segments must be offset by the premium increases of other customers.</i> <i>62. Actuarial analysis computes off-balance factors that ensure the indicated changes to the rating factors that are part of the rate design rating algorithm are revenue neutral. Each off-balance factor was developed by comparing the premium that was collected during the period of January 1, 2016 through October 31, 2017 (i.e., prior to the rate design changes) and the estimate of premium that would be collected had the new rate design changes been in place for that same period. Any difference in these amounts was accounted for by implementing an off-balance factor to ensure the collected premiums were the same, in aggregate.</i></p> <p>Well now I'm lost, "what rating algorithm" Will ICBC please demonstrate in a table please, how this neutrality works.</p>	<p>In the Application, Chapter 1, Figure 1.1, and Chapter 3, Figure 3.3 provide a graphical depiction of the new rating algorithm.</p> <p>The Application, Chapter 1, page 1-2 includes a short paragraph on rate design and revenue neutrality. Simply put, revenue neutral means that the new rate design is not to have a material effect on the overall Basic insurance premium collected by ICBC in the year the new rate design is implemented.</p>
Landale.2.13	<p>Will ICBC please provide a new table using my Senior details presented above to compare the impacts of this new "Senior Minimum CDF" on my basic insurance premium, How much money" :</p>	<p>ICBC respectfully declines to respond to questions pertaining to personal circumstances (please see the response to Landale.2.1-2.10). However, generally speaking, the minimum CDF described in Figure 3.12 limits the amount of discount available during the first two years of the new rate design.</p>

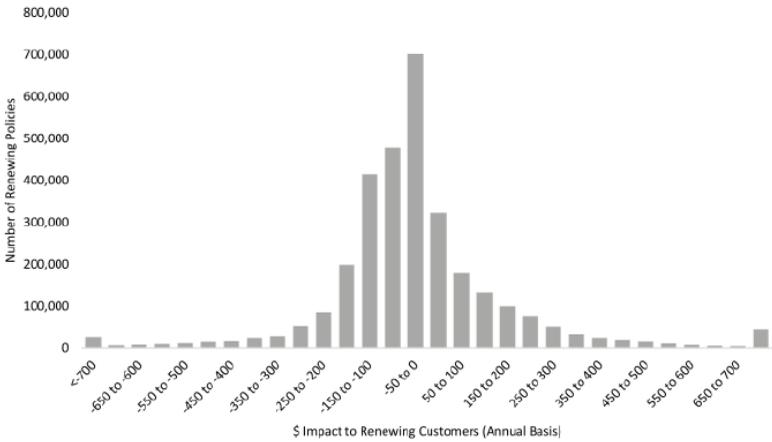
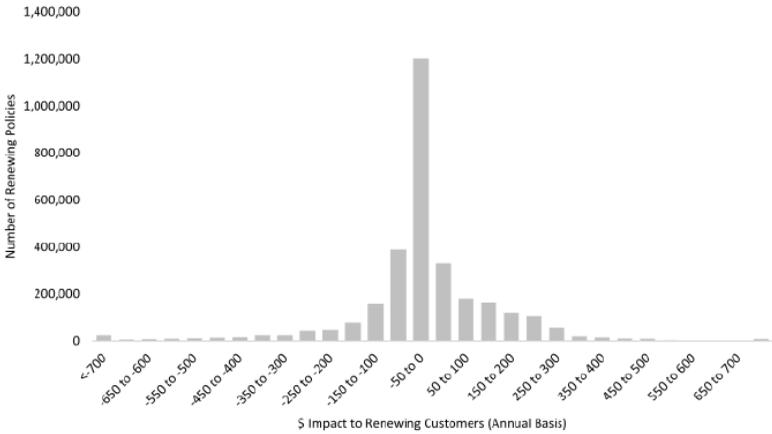
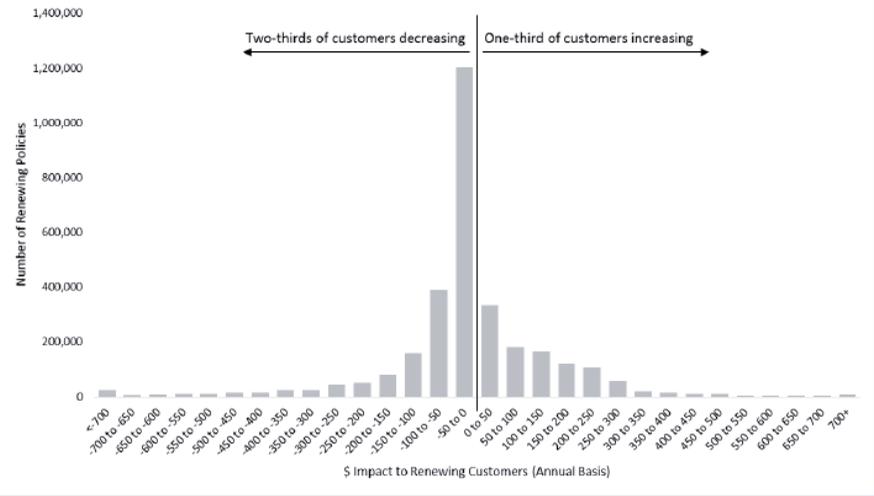


**ICBC's 2018 Basic Insurance Rate Design Application
ICBC's Responses to Richard Landale's Questions**

Question Number	Question	Response												
	<p>Figure 3.12 – Minimum CDF</p> <table border="1" data-bbox="411 305 1341 477"> <thead> <tr> <th>Certificate with Effective Date Between</th> <th>Minimum CDF</th> <th>Senior Minimum CDF</th> </tr> </thead> <tbody> <tr> <td>September 1, 2019 – August 31, 2020</td> <td align="center">0.540</td> <td align="center">0.415</td> </tr> <tr> <td>September 1, 2020 – August 31, 2021</td> <td align="center">0.510</td> <td align="center">0.410</td> </tr> <tr> <td>September 1, 2021 – August 31, 2022</td> <td align="center">0.480</td> <td align="center">0.405</td> </tr> </tbody> </table>	Certificate with Effective Date Between	Minimum CDF	Senior Minimum CDF	September 1, 2019 – August 31, 2020	0.540	0.415	September 1, 2020 – August 31, 2021	0.510	0.410	September 1, 2021 – August 31, 2022	0.480	0.405	<p>The 2018 Government Directive regarding Rate Design states that a customer renewing his or her Basic insurance policy after September 1, 2019, is to see no more than a 20% increase compared to his or her prior policy year's premium excluding the impacts from rate class, territory, and learners premium. In order to apply this maximum increase and remain revenue neutral, maximum decreases in premiums must be implemented concurrently. Managing both the increases and decreases in premium helps to ensure the changes related to rate design are revenue neutral for Basic insurance.</p> <p>The Senior Minimum CDF described in the Application, Chapter 3, Figure 3.12 is a minimum CDF that applies only to policies that meet a certain set of conditions. Specifically, the Senior Minimum CDF applies when all of the following are true: one of the registered owners is a senior; the principal driver is a senior; and the vehicle is rated in a particular rate class (pleasure use, motor home, motorcycle or collector). This allows seniors who qualify to realize greater maximum discounts than those available to other, non-senior customers.</p>
Certificate with Effective Date Between	Minimum CDF	Senior Minimum CDF												
September 1, 2019 – August 31, 2020	0.540	0.415												
September 1, 2020 – August 31, 2021	0.510	0.410												
September 1, 2021 – August 31, 2022	0.480	0.405												
Landale.2.14	<p>Will ICBC please place an "X" where my new Basic Premium will be on these two charts. Also where is the 35% Ceiling directed by the Attorney General Section C.D.2 Customer Impacts, also reference from Figure 2.1 – Tariff Amendments "Road Map" herein, please indicate this point on the two charts below.</p>	<p>ICBC respectfully declines to respond to questions pertaining to personal circumstances (please see the response to Landale.2.1-10). With regards to the 35% ceiling, Figure 1.2 of the Application is a similar figure to the one included in the question but includes arrows at the top of the chart indicating the 2/3 – 1/3 split. It is provided below for ease of reference:</p>												



**ICBC's 2018 Basic Insurance Rate Design Application
ICBC's Responses to Richard Landale's Questions**

Question Number	Question	Response
	<p>ICBC's August 15, 2018 Filing with the BC Utilities Commission</p> <p>Figure 3.14 – Customer Impact before Transition Factor and Minimum CDF Applied</p>  <p>Figure 3.15 – Customer Impact after Transition Factor and Minimum CDF Applied</p> 	 <p>Two-thirds of customers decreasing One-third of customers increasing</p>



**ICBC's 2018 Basic Insurance Rate Design Application
ICBC's Responses to Todd Litman's Questions**

Question Number	Question	Response
Litman.1	<p>ICBC's 2018-19 Mandate Letter (https://bit.ly/2ojguG6) specifies that ICBC shall implement rate changes that help increase fairness (assumedly meaning that the premiums charged for each vehicle most accurately reflect the claim costs imposed by that vehicle), consumer affordability and traffic safety, and as much as possible, changes recommended by the PwC report.</p> <p>Since the PwC report, ICBC Affordable and Effective Auto Insurance – A New Road Forward for British Columbia (http://bit.ly/2vX8aRf), as well as the Provincial Health Officer's Annual Report, Where the Rubber Meets the Road: Reducing the Impact of Motor Vehicle Crashes on Health and Well-being in BC (http://bit.ly/2gqxjuO) both recommend that ICBC investigate "usage-based insurance pricing" as a way to increase fairness and reduce traffic accidents and claim costs, what research has ICBC performed concerning the fairness impacts, consumer demands, consumer savings, crash and claim reductions, and other possible benefits (e.g., reduced traffic congestion, fuel consumption and pollution emissions) from this rate structure?</p>	<p>The Application is delivering on the 2018 Government Directive regarding Rate Design to provide a 10% discount for vehicles driven less than 5,000 kilometres in a year. This factor recognizes distance driven as a risk variable and offers a premium discount for vehicles that are used less frequently. While other possible rating variables exist, they are not part of the rate design for which ICBC has been directed to seek Commission approval. Following the approval and implementation of the directed rate design, ICBC will continue to actively watch what others are doing with user-based insurance and are interested in the views of British Columbians on the topic.</p>
Litman.2	<p>Does ICBC recognize fully-marginalized "basic" PAYD vehicle insurance pricing, in which vehicle-kilometer premiums are calculated for each vehicle by dividing its existing vehicle-year premiums by average annual mileage for its rate class, as described in the Pacific Institute for Climate Solution's Pay-As-You-Drive Vehicle Insurance in British Columbia (http://bit.ly/2yDw2KY)? What research has ICBC performed concerning fairness impacts, consumer demands, travel impacts, savings and benefits (including consumer savings, crash and claim cost reductions, reduced traffic congestion, energy conservation and emission reductions) that could be provided by basic PAYD pricing?</p>	<p>This Application addresses a government directed rate design. However, please see ICBC's response to Litman.1.</p>
Litman.3	<p>Is ICBC aware that Canadian Automobile Association now sells MyPace policies (www.caamypace.com), which offer substantial (20-50%) savings for vehicles driven less than 10,000 annual kilometers in Ontario. This suggests that there is significant consumer demand for such pricing, and that such policies can be profitable to private insurance companies in competitive markets. Has ICBC evaluated this price option and considered its implementation?</p>	<p>This Application addresses a government directed rate design. At this point, ICBC has not done any in-depth analysis on this pricing option beyond including a question on the use of distance as a rating variable in the online public engagement held earlier this year. The question yielded mixed results: 46.5% of respondents disagreed or strongly disagreed that distance driven should have a greater impact on insurance rates. This factor is not about using distance to determine premiums. This factor is about recognizing that if your vehicle is used rarely, it is less likely to be involved in an at-fault crash.</p>



**ICBC's 2018 Basic Insurance Rate Design Application
ICBC's Responses to Todd Litman's Questions**

Question Number	Question	Response
Litman.4	<p>What data does ICBC have concerning the annual kilometers travelled (i.e., risk exposure) by its clients, and geographic, demographic and economic factors that affect annual kilometers driven? What data sources does ICBC use to collect such information? If these data are imperfect, what plans does ICBC have to improve these data?</p>	<p>ICBC does not collect kilometre travelled data for all of its policyholders on an ongoing basis. However, ICBC is commencing collecting customer-declared odometer readings as part of the Distance Factor proposed in the Application. As provided in the response to BCUC.8.1, ICBC used historical kilometre data to estimate the premium impact from the Distance Factor. These sources did provide additional detail, specifically:</p> <ul style="list-style-type: none"> • The publicly available 2012 report from the BC Ministry of Environment provided kilometre data by city. • The 2017 ICBC VKT survey captured data on consumer driving habits in BC. These results were then weighted to provincial statistics in terms of population distribution (age, gender, and region) to provide a view that reflected BC at a high level, however the results did not reflect economic factors. • The odometer information recorded at body shops for repairs was aggregated at a provincial level for the purposes of the analysis and was not segmented by policyholder or economic factors.
Litman.5	<p>What research, if any, does ICBC have concerning the relationships between annual vehicle-kilometers and insurance claim costs? An extensive body of research (see documents listed below) indicates that, all else being equal (i.e., for vehicles in a particular rate class), claim costs increase almost linearly with annual vehicle travel, and since most casualty crashes involve multiple vehicles, and crash rates increase with traffic density, marginal changes in total vehicle travel in an area tend to provide proportionately larger crash casualty reductions (each 1% reduction in kilometers provides more than a 1% reduction in traffic deaths and injuries).</p> <p>Jason E. Bordoff and Pascal Noel (2008), Pay-As-You-Drive Auto Insurance: A Simple Way to Reduce Driving-Related Harms and Increase Equity, Brookings Inst. (www.brookings.edu); at https://brook.gs/2E6FDgI.</p> <p>G. Chi, et al. (2013), "Gasoline Price Effects on Traffic Safety in Urban and Rural Areas: Evidence from Minnesota, 1998–2007," Safety Science, Vol. 59, pp. 154-162; at http://bit.ly/2nkESVx.</p>	<p>This Application addresses a government directed rate design. However, telematics technology is quickly evolving and holds a lot of potential for the insurance industry. ICBC will continue to actively watch what others are doing with user-based insurance and are interested in the views of British Columbians on the topic.</p>



**ICBC's 2018 Basic Insurance Rate Design Application
ICBC's Responses to Todd Litman's Questions**

Question Number	Question	Response
	<p>Aaron S. Edlin and Pinar Karaca Mandic (2006), "The Accident Externality from Driving," Journal of Political Economy, Vol. 114, No. 5, pp. 931-955; at http://works.bepress.com/aaron_edlin/21.</p> <p>Joseph Ferreira Jr. and Eric Minikel (2012), "Measuring Per Mile Risk for Pay-As-You-Drive Automobile Insurance," Transportation Research Record 2297, TRB (www.trb.org), pp. 97-103; at http://bit.ly/2DLFr2V.</p> <p>David C. Grabowski and Michael A. Morrissey (2006), "Do Higher Gasoline Taxes Save Lives?" Economics Letters, Vol. 90, pp. 51-55; abstract at www.sciencedirect.com/science/article/pii/S0165176505002533.</p> <p>Allen Greenberg (2013), "Pay-As-You-Drive-And-You-Save Insurance: Potential Benefits and Issues," CIRP Newsletter, Center for Insurance Policy and Research (www.naic.org), pp. 18-22; at http://bit.ly/2uNggrE.</p> <p>If, all else being equal, crash rates increase with annual vehicle travel, the current rate structure overcharges motorists who drive less than average and undercharges motorists who drive more than average in each rate class, and PAYD pricing would increase pricing fairness. What analysis has ICBC done concerning these impacts?</p>	
Litman.6	<p>What data does ICBC have concerning the distribution of annual kilometers travelled by vehicle-owners' income class, driver's age and territory? A Brookings Institution study, Pay-As-You-Drive Auto Insurance: A Simple Way to Reduce Driving-Related Harms and Increase Equity (https://brook.gs/2E6FDgI) indicates that annual vehicle-kilometers tend to increase with household income, and lower-income motorists tend to be more price sensitive, so PAYD pricing is progressive with respect to income (savings are greatest for lower-income households), as illustrated in the following figure. Since PAYD pricing incorporates territory, it would reduce premium costs for approximately half of all rural motorists if they do not reduce their vehicle travel, and would provide savings to most rural motorists, particularly lower-income rural motorists, if they do reduce vehicle travel as predicted. Has ICBC analyzed these effects in BC?</p>	<p>ICBC does not analyze kilometres travelled data beyond that specified in BCUC.8.1 and Litman.4. As outlined in Litman.1, while other alternative models were not considered at this time, ICBC will continue to actively watch what others are doing with pay-as-you-drive insurance and are interested in the views of British Columbians on the topic.</p>



**ICBC's 2018 Basic Insurance Rate Design Application
ICBC's Responses to Todd Litman's Questions**

Question Number	Question	Response
	<p align="center">Estimated PAYD Savings by Household Income (Bordoff and Noel 2008)</p> <p><i>Because lower-income motorists tend to drive less and are particularly responsive to money saving opportunities, PAYD insurance tends to be progressive with respect to income: lower-income motorists save more than higher incomes motorists.</i></p>	
Litman.7	<p>7. Application Section F (p. 3-29) states that substantial economic analysis was performed and reviewed by actuaries to justify these rate design changes. Please describe this process and the resulting documents, particularly with regard to the 10% discount for vehicles driven less than 5,000 annual kilometers, described on page 1-8.</p> <p>a. What actuarial analysis was performed concerning this discount. For example, why is the discount 10% not 12%, and why does it apply to vehicles driven less than 5,000 annual kms, not 6,000 or 7,000?</p> <p>b. What research, if any, does ICBC have concerning the impacts that this discount will have on vehicle travel (that is, how many fewer kilometers are motorists expected to drive in response to this incentive)?</p> <p>c. What portion of ICBC policies are expected to qualify for this discount, and what demographic and geographic information is available about them (e.g., are under 5,000 kilometer vehicles more common among poor, young, urban, rural, motorists)?</p>	<p>7. and 7.a. Section F describes actuarial and not economic analysis. As stated by Section F, the actuarial analysis was undertaken to support specific components of the rate design structure; specifically Experience Factor, Multiple CCP Factor, Rate Class and Territory Factors, and revenue neutrality during the first year of implementation. The discount of 10% and the 5,000 kilometre threshold were not based on actuarial analysis. Rather, these were directed elements through the 2018 Government Directive regarding Rate Design.</p> <p>7.b. ICBC has no research concerning impacts but is not expecting a significant change in the number of customers who will be eligible for this discount over time.</p> <p>7.c. It is assumed that 5% of certificates will qualify for the discount. ICBC does not have demographic or geographic breakdowns of these customers.</p>
Litman.8	<p>How is ICBC using its business intelligence to support their corporate Carbon Neutral Action goals (https://bit.ly/2oeVrVc), including both in-house and</p>	<p>This Application addresses a government directed rate design. Please also see Litman.6.</p>



**ICBC's 2018 Basic Insurance Rate Design Application
ICBC's Responses to Todd Litman's Questions**

Question Number	Question	Response
	<p>community-wide reductions to GHG inventories? The current report only mentions in-house actions, it includes no analysis of ways that ICBC could help its clients reduce their emissions. Credible studies indicate that basic PAYD insurance pricing could achieve very large emission reductions, probably averaging 10-12% reductions by affected vehicles (see below), ranking it among the most effective and cost-effective transportation emission reduction strategies available. What analysis has ICBC performed concerning this way of achieving Carbon Neutral Action goals?</p> <p>Cambridge Systematics (2009), Moving Cooler: Transportation Strategies to Reduce Greenhouse Gas Emissions (http://amzn.to/2vWLFfH), U.S. Environmental Protection Agency; http://bit.ly/2vX5HGq.</p> <p>Allen Greenberg and Jay Evans (2017), Comparing Greenhouse Gas Reductions and Legal Implementation Possibilities for Pay-to-Save Transportation Price-shifting Strategies and EPA's Clean Power Plan, Victoria Transport Policy Institute (www.vtpi.org); at www.vtpi.org/G&E_GHG.pdf; slideshow at http://bit.ly/2GwKI03.</p> <p>Todd Litman (2011), Pay-As-You-Drive Vehicle Insurance in British Columbia, Pacific Institute for Climate Solutions (www.pics.uvic.ca); at http://bit.ly/2yDw2KY. Slide show at http://vtpi.org/PAYD%20in%20BC.</p>	
Litman.9	What data sharing agreements, if any, does ICBC have with governments/agencies to provide data inputs for modelling vehicle usage geographically? Who uses it, and what metrics are used for VKT?	This Application addresses a government directed rate design. However, ICBC can confirm that it provides select vehicle data to various ministries, government organizations, and some municipalities. These entities use the provided data for their own purposes and do not provide any vehicle usage modelling to ICBC.

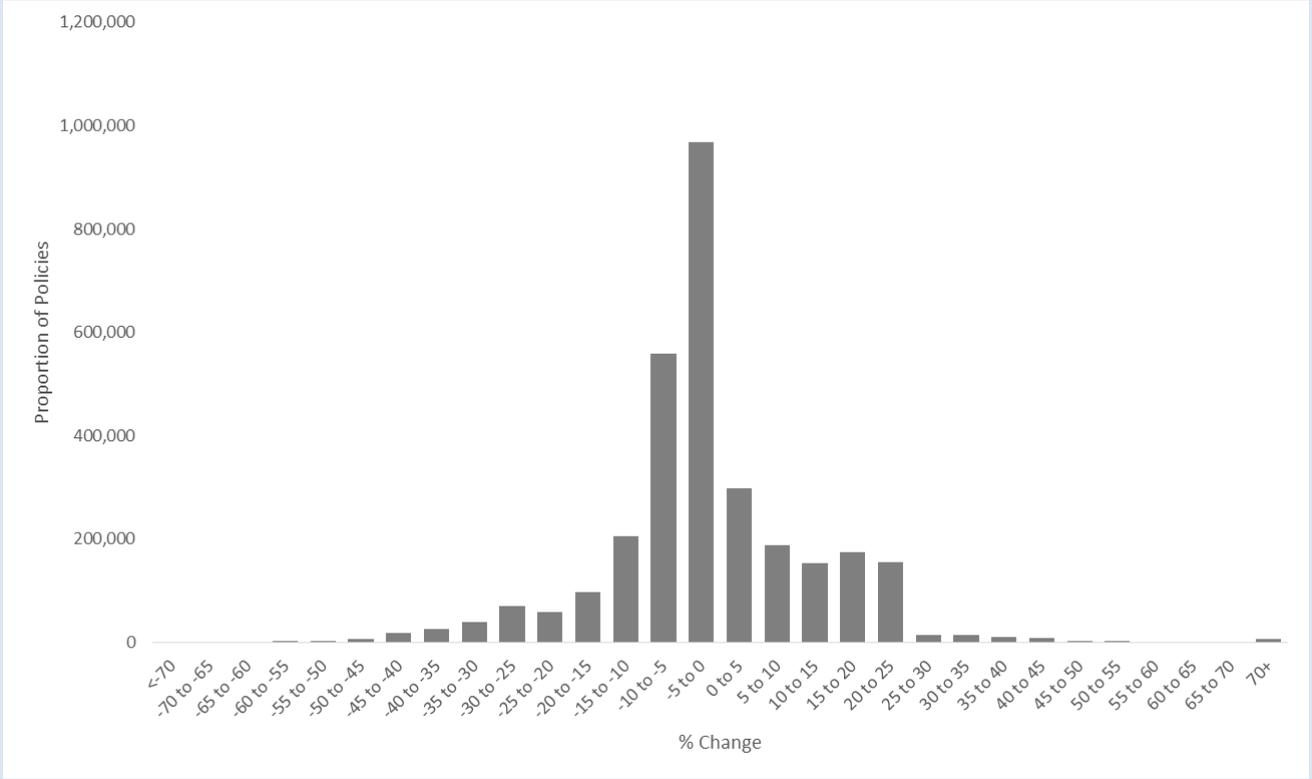


**ICBC's 2018 Basic Insurance Rate Design Application
ICBC's Responses to Henry Liu's Questions**

Question Number	Question	Response																																																														
Liu.1	<p>1. The 2018 Government Directive describes "a customer renewing his or her Basic policy after September 1, 2019, is to see no more than a 20% increase compared to his or her prior policy year's premium".</p> <p>a. Figures 1.2, 3.14, and 3.15 all illustrate the dollar impact of this application. Please provide equivalent figures that describe the % impact.</p> <p>b. When the new Basic Rate Design becomes effective on September 1, 2019, only at-fault claims after March 1, 2017 are within the scan period. Please describe how this aspect of the change management was considered in the construction of these figures.</p>	<p>Customer Impact before Transition Factor and Minimum CDF Applied (by % impact)</p> <table border="1"> <caption>Approximate data from the bar chart</caption> <thead> <tr> <th>% Change</th> <th>Proportion of Policies</th> </tr> </thead> <tbody> <tr><td><70</td><td>0</td></tr> <tr><td>-70 to -65</td><td>0</td></tr> <tr><td>-65 to -60</td><td>0</td></tr> <tr><td>-60 to -55</td><td>0</td></tr> <tr><td>-55 to -50</td><td>0</td></tr> <tr><td>-50 to -45</td><td>500</td></tr> <tr><td>-45 to -40</td><td>1000</td></tr> <tr><td>-40 to -35</td><td>2000</td></tr> <tr><td>-35 to -30</td><td>4000</td></tr> <tr><td>-30 to -25</td><td>8000</td></tr> <tr><td>-25 to -20</td><td>15000</td></tr> <tr><td>-20 to -15</td><td>30000</td></tr> <tr><td>-15 to -10</td><td>60000</td></tr> <tr><td>-10 to -5</td><td>120000</td></tr> <tr><td>-5 to 0</td><td>240000</td></tr> <tr><td>0 to 5</td><td>560000</td></tr> <tr><td>5 to 10</td><td>280000</td></tr> <tr><td>10 to 15</td><td>190000</td></tr> <tr><td>15 to 20</td><td>140000</td></tr> <tr><td>20 to 25</td><td>110000</td></tr> <tr><td>25 to 30</td><td>70000</td></tr> <tr><td>30 to 35</td><td>40000</td></tr> <tr><td>35 to 40</td><td>25000</td></tr> <tr><td>40 to 45</td><td>15000</td></tr> <tr><td>45 to 50</td><td>10000</td></tr> <tr><td>50 to 55</td><td>5000</td></tr> <tr><td>55 to 60</td><td>3000</td></tr> <tr><td>60 to 65</td><td>2000</td></tr> <tr><td>65 to 70</td><td>1000</td></tr> <tr><td>70+</td><td>40000</td></tr> </tbody> </table>	% Change	Proportion of Policies	<70	0	-70 to -65	0	-65 to -60	0	-60 to -55	0	-55 to -50	0	-50 to -45	500	-45 to -40	1000	-40 to -35	2000	-35 to -30	4000	-30 to -25	8000	-25 to -20	15000	-20 to -15	30000	-15 to -10	60000	-10 to -5	120000	-5 to 0	240000	0 to 5	560000	5 to 10	280000	10 to 15	190000	15 to 20	140000	20 to 25	110000	25 to 30	70000	30 to 35	40000	35 to 40	25000	40 to 45	15000	45 to 50	10000	50 to 55	5000	55 to 60	3000	60 to 65	2000	65 to 70	1000	70+	40000
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**ICBC's 2018 Basic Insurance Rate Design Application
ICBC's Responses to Henry Liu's Questions**

Question Number	Question	Response
		<p>Customer Impact after Transition Factor and Minimum CDF Applied (by %)</p>  <p>The analysis used a 3-year scan for all certificates written in the first 12 months after implementation regardless of the policy effective date. This is a reasonable approximation of the actual implementation where the Tariff, in the 2018 Government Directive regarding Rate Design provided in Appendix B of this Application, states a fixed date of March 1, 2017 should be applied, creating scan periods of 2.5 to 3.5 years during the first year of implementation.</p>
Liu.2	2. The 2018 Government Directive describes "a 15% discount for those customers who are aged 65 or older which will be reduced upon at-fault crashes.". ICBC proposes halving the discount after the first at-fault crash.	The Senior Driver Factor, and the extent to which it is reduced after an at-fault crash, is directed by the 2018 Government Directive regarding Rate Design (it is specified in Schedule D of the Tariff in the 2018 Government Directive regarding Rate Design, provided in Appendix B of this Application). ICBC does not have an actuarial analysis on this factor.



**ICBC's 2018 Basic Insurance Rate Design Application
ICBC's Responses to Henry Liu's Questions**

Question Number	Question	Response																								
	a. Please provide the actuarially indicated discount reduction after the first at-fault crash. b. If the proposed reduction is materially different from the actuarially indicated factor, please provide justification.																									
Liu.3	3. The 2018 Government Directive describes "[t]he risk charge [for new residents] is to be no more than 15% and will decrease as the driver gains more experience in BC". ICBC proposes 15% charge for the first year, 10% for the second, and 5% for the third. a. Please provide the actuarially indicated charges. b. If the proposed charges are materially different from the actuarially indicated charges, please provide justification.	<p>The New Resident Driver Factor is directed by the 2018 Government Directive regarding Rate Design, which is the justification for ICBC's proposal. It was not in the scope of the actuarial analysis described in the Application, Chapter 3, Section F. ICBC has, however, performed a separate analysis on this topic.</p> <p>With the data available at the time, statistical models were used to create a benchmark expectation for new resident drivers. That benchmark is the claim experience that would be expected from similar, but regular, BC drivers. The risk of new residents is assessed by comparing their claim experience to this benchmark.</p> <p>This approach suggests that new resident drivers have a claim experience 20% worse than would be expected if they were regular BC drivers. The effect is stronger in the first year and decreases over time (year 1: 30%, year 2: 18%, year 3: 9%).</p>																								
Liu.4.a	<p>The 2018 Government Directive describes "drivers are to be able to repay their at-fault claims that are under \$2,000 with these claims having no impact on their risk profile".</p> <p>Please provide the # and % (out of all TPL claims) of Physical-Damage-Only claims incurred in the last 10 policy year</p>	<p>The threshold is directed by the 2018 Government Directive regarding Rate Design, making this information unnecessary for the determination of the Application.</p> <p>ICBC does not specifically track the count or proportion of PD-only claims, but a reasonable approximation can be obtained from subtracting the number of Basic Bodily Injury claims from the total number of PD claims. PD claims is used as a proxy for Basic Third Party Liability claims. The table below provides these numbers for the last 10 fiscal loss years (policy year numbers would not be materially different for this purpose).</p> <table border="1" data-bbox="1298 1101 2206 1390"> <thead> <tr> <th>Fiscal Loss Year</th> <th>PD Basic Claims</th> <th>BI Basic Claims</th> <th>Approximate % of PD-only claims</th> </tr> </thead> <tbody> <tr> <td>2008</td> <td>145,322</td> <td>33,617</td> <td>77%</td> </tr> <tr> <td>2009</td> <td>144,219</td> <td>31,834</td> <td>78%</td> </tr> <tr> <td>2010</td> <td>136,383</td> <td>31,903</td> <td>77%</td> </tr> <tr> <td>2011</td> <td>137,015</td> <td>34,633</td> <td>75%</td> </tr> <tr> <td>2012</td> <td>134,761</td> <td>34,760</td> <td>74%</td> </tr> </tbody> </table>	Fiscal Loss Year	PD Basic Claims	BI Basic Claims	Approximate % of PD-only claims	2008	145,322	33,617	77%	2009	144,219	31,834	78%	2010	136,383	31,903	77%	2011	137,015	34,633	75%	2012	134,761	34,760	74%
Fiscal Loss Year	PD Basic Claims	BI Basic Claims	Approximate % of PD-only claims																							
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**ICBC's 2018 Basic Insurance Rate Design Application
ICBC's Responses to Henry Liu's Questions**

Question Number	Question	Response			
		2013	136,059	35,885	74%
		2014	136,165	36,885	73%
		2015	136,906	40,508	70%
		2016	146,477	44,846	69%
		2017	150,785	46,822	69%
	<p>Liu.4.b</p> <p>The 2018 Government Directive describes “drivers are to be able to repay their at-fault claims that are under \$2,000 with these claims having no impact on their risk profile”.</p> <p>Please justify why the \$2000 threshold is indexed to BC all-items CPI rather than indices specifically related to labour for mechanics and cost for auto parts.</p>	<p>As noted in the response to question BCUC.5.2, the \$2,000 claim repayment threshold is not only applicable to material damage; it includes the total amount of chargeable claim payments made.</p> <p>This aspect of the rate design is directed by the 2018 Government Directive regarding Rate Design, which is the justification for ICBC’s proposal. That said, the adjustment to the \$2,000 threshold for historical years reflects the impact from inflation. Using BC all-items CPI facilitates ease of understanding.</p>			
	<p>Liu.5</p> <p>5. The application describes the use of driver address information to estimate listed drivers of a certificate (Chapter 3, F.2).</p> <p>a. Please provide assumptions and methods used in the estimation.</p> <p>b. Please provide # and % (out of all drivers) of drivers currently unlisted who was estimated to be listed on some certificates in the data set used by the GLM.</p> <p>c. Please provide # and % (out of all drivers) of drivers currently unlisted who was estimated to be listed on some certificates AND to have a higher IDF than the principal driver on those certificates in the data set used by the GLM.</p>	<p>In the current rate design, only the principal driver of a vehicle is listed at the point of sale. To expand to a listed driver basis, the addresses associated with certificates and driver licences were matched so that all drivers having the same address as a certificate are considered listed under that certificate.</p> <p>The actuarial statistical models (GLMs) only used the experience of principal drivers. However, the data used to assess revenue neutrality and customer dislocation made use of all drivers matched to a certificate. Here are some statistics:</p> <ul style="list-style-type: none"> • After matching certificates and driver licences addresses, 3.6 million unique active drivers were considered for calendar policy year 2016. • 70% of these (2.5 million) were principal driver on at least one certificate. • The remaining 30% (1.1 million) drivers were only included as other listed drivers. • Of these other listed drivers, 38% had a higher IDF than the principal driver on at least one certificate where they were considered listed. 			
	<p>Liu.6</p> <p>6. Autonomous or semi-autonomous driving technology vary widely across manufacturers in its efficacy at crash prevention.</p>	<p>6.a. The Application, Appendix B, Schedule X defines an autonomous emergency brake system that qualifies for the discount as one which:</p>			



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Question Number	Question	Response
	a. Will any autonomous emergency brake system qualify for the discount? b. If not, how will ICBC qualify these cars?	“(a) has the capability to apply a vehicle’s brakes, independent of any action or inaction by the driver, when a collision with the front end of the vehicle is imminent, (b) was installed in a vehicle by the vehicle’s manufacturer at the time the vehicle was manufactured, and (c) was installed in a vehicle that has a model year assigned by the vehicle’s manufacturer of 2006 or later.” 6.b. Customers will qualify for the discount by declaration.



**ICBC's 2018 Basic Insurance Rate Design Application
ICBC's Responses to Richard McCandless' Questions**

Question Number	Question	Response
McCandless.1.1	<p>JUSTIFICATION</p> <p>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).</p> <p>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).</p> <p>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.</p> <p>What are the main reasons why the rate design model approved in 2007 is now no longer fair?</p>	<p>The justification for ICBC's application is that it delivers on the Tariff included in the 2018 Government Directive regarding Rate Design. The merits of government policy goes beyond the scope of this proceeding.</p> <p>However, to address the substance of the question, there were no significant changes made to ICBC's rate design model in 2007. The Commission approved rate class and territory table changes at that time. ICBC notes that it was subject to a binding Government Directive dated January 31, 2007 that directed ICBC to retain the key elements of the current rate design including the Claim-rated Scale, rate territories and their boundaries and the existing rate classes "until at least the 2011 rate year".</p> <p>Regardless, the fact that the current rate design has met the legal standard for approval by the Commission does not mean it is flawless and cannot be improved. Government has directed ICBC to apply for a new rate design that will promote greater fairness, and ICBC supports that move. Please see question 1.2 for additional information regarding the challenges with the current rate design.</p>
McCandless.1.2	<p>JUSTIFICATION</p> <p>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).</p> <p>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</p>	<p>The justification for ICBC's application is that it delivers on the Tariff included in the 2018 Government Directive regarding Rate Design. The merits of government policy goes beyond the scope of this proceeding. However, to address the substance of the question, ICBC supports the changes to the rate design that government has directed because it will improve fairness.</p> <p>The rating model in place now was designed over 30 years ago. It worked well initially, but, over time, it has become less effective at distinguishing among customers with different levels of risk. As a result, 80% of British Columbians receive the top Basic insurance discount of 43%. This suggests 8 out of 10 drivers have the same risk profile. The current system offers little differentiation, which means some people are paying too much and others too little.</p>



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Question Number	Question	Response
	<p>http://www.bcpolicyperspectives.com/media/attachments/view/doc/occasional_paper_no_59_16august_2018/pdf/occasional_paper_no_59_16august_2018.pdf).</p> <p>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.</p> <p>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?</p>	<p>Currently, a driver at the top discount could have three at-fault crashes in a year and not see an impact to their Basic premium. Over 40% of claims are forgiven each year, which means the cost of those claims (in the hundreds of millions of dollars) is borne by everyone.</p>
McCandless.1.3	<p>JUSTIFICATION</p> <p>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).</p> <p>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).</p> <p>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.</p> <p>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?</p>	<p>Approximately 80% of customers qualified for the full Basic discount of 43% in 2006 (79.6%) and 2007 (80.4%). ICBC notes that it was subject to a binding Government Directive dated January 31, 2007 that directed ICBC to retain the key elements of the current rate design including the Claim-rated Scale, rate territories and their boundaries and the existing rate classes "until at least the 2011 rate year". "Private vehicle policyholders" has been taken to mean policyholders rated with rate classes 001-007 and 021-027.</p>



**ICBC's 2018 Basic Insurance Rate Design Application
ICBC's Responses to Richard McCandless' Questions**

Question Number	Question	Response												
McCandless.1.4	<p>JUSTIFICATION</p> <p>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).</p> <p>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).</p> <p>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.</p> <p>The public auto insurers in Saskatchewan and Manitoba use a bonus-malus system. What is the maximum discount percentage used in each system?</p>	<p>The maximum vehicle plate insurance discount on the Saskatchewan Government Insurance (SGI) Safety Rating Scale (SRS) is 23%. SGI are phasing in additional levels of SRS discounts. From January 1, 2019 the maximum SRS discount will be 24%. From January 1, 2020 the maximum SRS discount will be 25%.</p> <p>For Manitoba Public Insurance (MPI), the maximum vehicle premium discount on the MPI Driver Safety Rating system is 33%.</p>												
McCandless.1.5.1	<p>JUSTIFICATION</p> <p>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).</p> <p>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</p>	<p>"Private vehicle policyholders" has been taken to mean policyholders rated with rate classes 001-007 and 021-027.</p> <p>The table below gives the Net Written Exposures with transaction dates between April 1, 2017 to March 31, 2018 for private vehicle policyholders.</p> <table border="1" data-bbox="1561 1166 2080 1390"> <thead> <tr> <th>CRS Level</th> <th>Exposures</th> </tr> </thead> <tbody> <tr> <td>10+</td> <td>344</td> </tr> <tr> <td>9</td> <td>266</td> </tr> <tr> <td>8</td> <td>225</td> </tr> <tr> <td>7</td> <td>285</td> </tr> <tr> <td>6</td> <td>1,189</td> </tr> </tbody> </table>	CRS Level	Exposures	10+	344	9	266	8	225	7	285	6	1,189
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	<p>http://www.bcpolicyperspectives.com/media/attachments/view/doc/occasional_paper_no_59_16august_2018/pdf/occasional_paper_no_59_16august_2018.pdf).</p> <p>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.</p> <p>Using the most recent year, what were the numbers of private policies in each of the 30 CRS (10 surcharge and 20 discount) levels?</p>	<table border="1"> <tr><td>5</td><td>2,505</td></tr> <tr><td>4</td><td>3,824</td></tr> <tr><td>3</td><td>4,487</td></tr> <tr><td>2</td><td>2,791</td></tr> <tr><td>1</td><td>3,432</td></tr> <tr><td>0</td><td>39,081</td></tr> <tr><td>-1</td><td>45,031</td></tr> <tr><td>-2</td><td>48,077</td></tr> <tr><td>-3</td><td>52,476</td></tr> <tr><td>-4</td><td>52,889</td></tr> <tr><td>-5</td><td>58,584</td></tr> <tr><td>-6</td><td>63,223</td></tr> <tr><td>-7</td><td>68,361</td></tr> <tr><td>-8</td><td>80,133</td></tr> <tr><td>-9</td><td>82,283</td></tr> <tr><td>-10</td><td>85,590</td></tr> <tr><td>-11</td><td>78,150</td></tr> <tr><td>-12</td><td>72,796</td></tr> <tr><td>-13</td><td>68,817</td></tr> <tr><td>-14</td><td>80,612</td></tr> <tr><td>-15</td><td>84,285</td></tr> <tr><td>-16</td><td>79,354</td></tr> <tr><td>-17</td><td>124,559</td></tr> <tr><td>-18</td><td>105,722</td></tr> <tr><td>-19</td><td>106,119</td></tr> <tr><td>-20</td><td>1,358,679</td></tr> <tr><td>Total</td><td>2,854,168</td></tr> </table>	5	2,505	4	3,824	3	4,487	2	2,791	1	3,432	0	39,081	-1	45,031	-2	48,077	-3	52,476	-4	52,889	-5	58,584	-6	63,223	-7	68,361	-8	80,133	-9	82,283	-10	85,590	-11	78,150	-12	72,796	-13	68,817	-14	80,612	-15	84,285	-16	79,354	-17	124,559	-18	105,722	-19	106,119	-20	1,358,679	Total	2,854,168	
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McCandless.1.5.2	<p>JUSTIFICATION</p> <p>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.</p>	<p>The justification for ICBC's application is that it delivers on the Tariff included in the 2018 Government Directive regarding Rate Design. The merits of government policy goes beyond the scope of this proceeding.</p> <p>However, to address the substance of the question, the current model is vehicle-based. That means a person (neighbour) who causes a crash using a vehicle that is not insured by them, can then insure their own</p>																																																							



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Question Number	Question	Response
	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?	vehicle and be treated as if they have never had an at-fault crash. Currently, it is the vehicle owner whose policy could be impacted by that crash and result in that policyholder potentially paying more.
McCandless.1.6	<p>JUSTIFICATION</p> <p>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.</p> <p>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?</p>	<p>ICBC is assuming that "loss in premium" refers to premium increases not charged to at-fault drivers under the current model compared to the new model. Under the current vehicle-based model, at-fault crashes are assigned to the vehicle owners and those premiums are adjusted accordingly. As a result, ICBC does not consider there to be a "loss in premium". Rate design is revenue neutral where premiums are redistributed based on a customer's individual risk characteristics.</p> <p>However, ICBC believes there is a fairness consideration under the current model as an at-fault driver using someone else's vehicle is not held accountable; their risk is not represented in the premiums they pay. The new rate design addresses this issue by moving to a driver based model.</p>
McCandless.1.7	<p>JUSTIFICATION</p> <p>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.</p> <p>The 2007 rate design application provided a useful summary of principles; other than assuaging public opinion what principles underly the current proposal?</p>	<p>The justification for ICBC's application is that it delivers on the Tariff included in the 2018 Government Directive regarding Rate Design. The merits of government policy goes beyond the scope of this proceeding. However, to address the substance of the question, ICBC's Application does reflect standard rate design principles.</p> <p>In Chapter 15 of the 2007 Rate Design Application filed with the Commission, ICBC defined four sets of criteria that insurance companies generally apply to determine which rating variables are used to group customers for the purpose of rate setting. Applying those four criteria involves consideration of trade-offs when selecting rating variables as some criteria conflict and other take precedence (particularly legal requirements).</p> <p>The four criteria for selecting rating variables and the considerations which comprise them are:</p> <ul style="list-style-type: none"> • Statistical (accuracy, homogeneity, credibility and predictive stability), • Operational (objectivity, administrative expense, verifiability, intuitively related to cost and avoidance of large rate differences between customer groups),



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		<ul style="list-style-type: none"> • Social (privacy, causality, controllability, affordability, loss control incentive and social policy of government), and • Legal (regulations, statutes, government directions and orders). <p>The first criterion drives rate design towards having premiums be more reflective of risk, which is the fundamental objective of the proposed rate design. The application of the legal consideration (the last bulleted criterion) would, of course, include adherence to government policy as directed in the 2018 Government Directive regarding Rate Design.</p>																																		
McCandless.2.1	<p>IMPACT ANALYSIS</p> <p>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.</p> <p>Using the same data that was used to develop the impact analysis please provide:</p> <ul style="list-style-type: none"> • 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 	<p>All the tables in this answer use the same data as used in the impact analysis. The CRS Level and years of experience values are based on calendar policy year 2016.</p> <p>Here is the distribution of policies by CRS level noting that fleet policies (which don't have a CRS) were excluded.</p> <table border="1" data-bbox="1561 781 2142 1390"> <thead> <tr> <th>CRS Level</th> <th>Number of Policies</th> </tr> </thead> <tbody> <tr><td>10</td><td>332</td></tr> <tr><td>9</td><td>243</td></tr> <tr><td>8</td><td>259</td></tr> <tr><td>7</td><td>288</td></tr> <tr><td>6</td><td>1,041</td></tr> <tr><td>5</td><td>2,205</td></tr> <tr><td>4</td><td>3,504</td></tr> <tr><td>3</td><td>4,405</td></tr> <tr><td>2</td><td>2,766</td></tr> <tr><td>1</td><td>3,602</td></tr> <tr><td>0</td><td>36,100</td></tr> <tr><td>-1</td><td>29,190</td></tr> <tr><td>-2</td><td>38,422</td></tr> <tr><td>-3</td><td>43,073</td></tr> <tr><td>-4</td><td>44,764</td></tr> <tr><td>-5</td><td>51,143</td></tr> </tbody> </table>	CRS Level	Number of Policies	10	332	9	243	8	259	7	288	6	1,041	5	2,205	4	3,504	3	4,405	2	2,766	1	3,602	0	36,100	-1	29,190	-2	38,422	-3	43,073	-4	44,764	-5	51,143
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Question Number	Question	Response			
		-6	57,014		
		-7	62,140		
		-8	68,811		
		-9	82,462		
		-10	81,929		
		-11	73,611		
		-12	72,972		
		-13	79,773		
		-14	87,645		
		-15	82,965		
		-16	84,829		
		-17	135,145		
		-18	126,042		
		-19	110,226		
		-20	1,449,853		
		<p>On the request for the number of drivers at each experience level the following assumptions were used:</p> <ul style="list-style-type: none"> • The driver used for the distribution are the listed principal drivers of each policy • Policies without a listed principal drivers were excluded (including fleet policies) • The number of at-fault crashes used to count drivers for the last two columns is based on a three year crash scan (as used for the impact analysis) 			
		Years of Experience	Total Drivers	With One Crash	With Two Crashes
		0	8,204	416	15
		1	18,130	1,679	104
		2	19,816	2,511	179
		3	21,753	2,753	217



**ICBC's 2018 Basic Insurance Rate Design Application
ICBC's Responses to Richard McCandless' Questions**

Question Number	Question	Response			
		4	24,814	2,869	235
		5	27,807	3,087	218
		6	29,739	2,954	205
		7	29,953	2,788	188
		8	32,436	2,893	199
		9	33,459	2,896	227
		10	33,819	2,848	191
		11	28,199	2,254	181
		12	36,210	2,862	198
		13	41,167	2,998	212
		14	41,710	3,011	239
		15	39,995	2,722	188
		16	40,612	2,707	202
		17	43,175	3,002	267
		18	60,950	4,045	313
		19	52,367	3,545	279
		20	52,724	3,193	249
		21	52,925	2,878	245
		22	54,514	2,575	276
		23	54,870	2,285	210
		24	59,464	2,552	245
		25	58,153	2,496	248
		26	59,632	2,506	253
		27	59,193	2,539	259
		28	61,393	2,640	258
		29	60,913	2,560	274
		30	61,878	2,646	284
		31	63,177	2,497	311
		32	63,982	2,429	273
		33	64,898	2,552	323
		34	73,449	2,706	314



**ICBC's 2018 Basic Insurance Rate Design Application
ICBC's Responses to Richard McCandless' Questions**

Question Number	Question	Response			
		35	80,314	2,832	321
		36	73,804	2,412	261
		37	62,158	2,034	215
		38	38,542	1,345	137
		39	102,934	3,302	423
		40+	944,148	28,189	2,990
McCandless.2.2	<p>IMPACT ANALYSIS</p> <p>The Experience Adjustment Factor is designed to shelter inexperienced drivers from the higher rates suggested by actuarial analysis.</p> <p>Is the actuarially determined level for inexperienced drivers reflected in the Experience Factor?</p>	Yes, it is reflected in the Experience Factor table.			
McCandless.2.2.1	<p>IMPACT ANALYSIS</p> <p>The Experience Adjustment Factor is designed to shelter inexperienced drivers from the higher rates suggested by actuarial analysis.</p> <p>Why are two experience factors being proposed; is not a combined factor simpler?</p>	The Tariff amendments in the 2018 Government Directive regarding Rate Design, provided in Appendix B, of this Application, provide these as two distinct factors. Providing two tables for experience factors improves transparency. It allows a customer to distinguish the rating element that is actuarially derived (Experience Factor table) and the rating element that addresses affordability for certain customer segments (Experience Adjustment Factor table).			
McCandless.2.3	<p>IMPACT ANALYSIS</p> <p>The Experience Adjustment Factor is designed to shelter inexperienced drivers from the higher rates suggested by actuarial analysis.</p> <p>What would the actuarial analysis suggest as the premium for a claims-free driver with 2 years of experience? For 5 years?</p>	<p>The Experience Factor table accounts for the actuarial analysis.</p> <p>The premium, in year 1 under the new rate design, for customers with 2 years and 5 years of crash-free experience, assuming, for simplicity, that the customer is the sole listed driver and that the vehicle is for pleasure use only (rate class 001) in territory D, would be:</p> <p>Premium: 1000 * RCTF * EF * EAF 2 Years: 1000 * 1.925 * 1.571 * 0.640 = 1935 5 Years: 1000 * 1.925 * 1.017 * 0.815 = 1596</p> <p>This assumes that no other rating factors apply to these examples.</p>			
McCandless.2.4	IMPACT ANALYSIS	There is no universally accepted definition of "rate shock". The term is shorthand for the rate design principle favouring more moderate rate changes, which must always be balanced against a variety of other rate			



**ICBC's 2018 Basic Insurance Rate Design Application
ICBC's Responses to Richard McCandless' Questions**

Question Number	Question	Response																						
	<p>The Experience Adjustment Factor is designed to shelter inexperienced drivers from the higher rates suggested by actuarial analysis.</p> <p>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?"</p>	<p>design principles. A foundational principle of rate design is cost causation, which in the context of setting insurance rates means setting premiums to reflect the actuarial assessment of the risk a policyholder represents to the insurance system. Developing a rate design inherently involves trade-offs between these and other principles.</p> <p>The Tariff pages in the 2018 Government Directive regarding Rate Design, provided in Appendix B of this Application, reflect government's policy decision as to how to balance competing rate design objectives. The 20% cap used in the directed Tariff pages moderates the most significant increases, while still giving significant weight to the feedback received during the public engagement that low-risk drivers should see the benefits of the changes as soon as possible. Other things being equal, the lower the cap on increases for higher-risk drivers, the longer it will take lower-risk drivers to see those benefits.</p>																						
McCandless.2.5	<p>IMPACT ANALYSIS</p> <p>Figure 3.14 in the application shows the Year 1 impact before transition factors.</p> <p>Please provide the numbers of policies in each dollar grouping.</p>	<p>The table below provides the requested numbers before transition factors are applied. Note that the number of policies are based on a forecast to the first policy year (starting September 1, 2019) onto the new Tariff. Please refer to the answer to BCUC.1.2-3 for more information on the policies that are captured.</p> <table border="1" data-bbox="1561 971 2077 1399"> <thead> <tr> <th data-bbox="1561 971 1795 1057">\$ Change</th> <th data-bbox="1795 971 2077 1057">Number of Policies</th> </tr> </thead> <tbody> <tr> <td data-bbox="1561 1057 1795 1092"><-700</td> <td data-bbox="1795 1057 2077 1092">24,517</td> </tr> <tr> <td data-bbox="1561 1092 1795 1128">-700 to -650</td> <td data-bbox="1795 1092 2077 1128">6,338</td> </tr> <tr> <td data-bbox="1561 1128 1795 1164">-650 to -600</td> <td data-bbox="1795 1128 2077 1164">7,884</td> </tr> <tr> <td data-bbox="1561 1164 1795 1200">-600 to -550</td> <td data-bbox="1795 1164 2077 1200">9,275</td> </tr> <tr> <td data-bbox="1561 1200 1795 1235">-550 to -500</td> <td data-bbox="1795 1200 2077 1235">11,470</td> </tr> <tr> <td data-bbox="1561 1235 1795 1271">-500 to -450</td> <td data-bbox="1795 1235 2077 1271">14,407</td> </tr> <tr> <td data-bbox="1561 1271 1795 1307">-450 to -400</td> <td data-bbox="1795 1271 2077 1307">15,829</td> </tr> <tr> <td data-bbox="1561 1307 1795 1343">-400 to -350</td> <td data-bbox="1795 1307 2077 1343">22,847</td> </tr> <tr> <td data-bbox="1561 1343 1795 1378">-350 to -300</td> <td data-bbox="1795 1343 2077 1378">26,526</td> </tr> <tr> <td data-bbox="1561 1378 1795 1399">-300 to -250</td> <td data-bbox="1795 1378 2077 1399">52,249</td> </tr> </tbody> </table>	\$ Change	Number of Policies	<-700	24,517	-700 to -650	6,338	-650 to -600	7,884	-600 to -550	9,275	-550 to -500	11,470	-500 to -450	14,407	-450 to -400	15,829	-400 to -350	22,847	-350 to -300	26,526	-300 to -250	52,249
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**ICBC's 2018 Basic Insurance Rate Design Application
ICBC's Responses to Richard McCandless' Questions**

Question Number	Question	Response	
		-250 to -200	86,071
		-200 to -150	198,978
		-150 to -100	415,301
		-100 to -50	478,123
		-50 to 0	701,804
		0 to 50	322,582
		50 to 100	178,202
		100 to 150	131,457
		150 to 200	100,169
		200 to 250	74,725
		250 to 300	50,888
		300 to 350	33,761
		350 to 400	22,600
		400 to 450	18,117
		450 to 500	14,593
		500 to 550	10,635
		550 to 600	7,296
		600 to 650	5,410
		650 to 700	4,545
		700+	45,107
McCandless.2.5.1	<p>IMPACT ANALYSIS</p> <p>Figure 3.14 in the application shows the Year 1 impact before transition factors.</p> <p>Before transition factors, what is the net increase or decrease in overall premium revenue for Year 1 and for each year to Year 6?</p>	<p>The impact on revenue for the first three years if the capping (Transition Factor) and minimum CDF are excluded is as follows:</p> <ul style="list-style-type: none"> • Year 1: 0.0% • Year 2: +0.4% • Year 3: +0.7% <p>ICBC did not project premium or revenue past year 3. As the projections move further out into the future, there is increasing uncertainty due to customer profiles (such as how customers choose to list drivers), environment (how many crashes will occur) and demographics (where people live, and for what purpose they use their vehicle for). Any further impact from the new rate design on subsequent years will form part of the actuarial rate indication in subsequent revenue requirements applications.</p>	



**ICBC's 2018 Basic Insurance Rate Design Application
ICBC's Responses to Richard McCandless' Questions**

Question Number	Question	Response																																		
McCandless.2.6	<p>IMPACT ANALYSIS</p> <p>Figure 3.14 in the application shows the Year 1 impact before transition factors.</p> <p>Do the policies used to construct Figure 3.14 include utility trailers and off-road vehicles?</p>	<p>The data used to construct Figure 3.14 does not include utility trailers but includes off-road vehicles.</p>																																		
McCandless.2.6.1	<p>IMPACT ANALYSIS</p> <p>Figure 3.14 in the application shows the Year 1 impact before transition factors.</p> <p>If the simulation did include these two classes of low-cost policies what would the array show if they were excluded?</p>	<p>The table below reproduces the numbers provide in the response to question 2.5 but after excluding ORVs. Removing the off-road vehicles has very little impact (< 1%) to the overall percentage of customers who will see increases versus customers who will see decreases.</p> <p>Note that the number of policies are based on a forecast to the first policy year (starting September 1, 2019) onto the new Tariff. Please refer to the answer to BCUC 1.2-3 for more information on the policies that are captured.</p> <table border="1" data-bbox="1561 781 2088 1416"> <thead> <tr> <th data-bbox="1569 786 1806 862">\$ Change</th> <th data-bbox="1814 786 2080 862">Number of Policies</th> </tr> </thead> <tbody> <tr><td data-bbox="1569 867 1806 899"><-700</td><td data-bbox="1814 867 2080 899">24,347</td></tr> <tr><td data-bbox="1569 904 1806 937">-700 to -650</td><td data-bbox="1814 904 2080 937">6,301</td></tr> <tr><td data-bbox="1569 941 1806 974">-650 to -600</td><td data-bbox="1814 941 2080 974">7,861</td></tr> <tr><td data-bbox="1569 979 1806 1011">-600 to -550</td><td data-bbox="1814 979 2080 1011">9,237</td></tr> <tr><td data-bbox="1569 1016 1806 1049">-550 to -500</td><td data-bbox="1814 1016 2080 1049">11,409</td></tr> <tr><td data-bbox="1569 1053 1806 1086">-500 to -450</td><td data-bbox="1814 1053 2080 1086">14,345</td></tr> <tr><td data-bbox="1569 1091 1806 1123">-450 to -400</td><td data-bbox="1814 1091 2080 1123">15,752</td></tr> <tr><td data-bbox="1569 1128 1806 1161">-400 to -350</td><td data-bbox="1814 1128 2080 1161">22,604</td></tr> <tr><td data-bbox="1569 1166 1806 1198">-350 to -300</td><td data-bbox="1814 1166 2080 1198">26,427</td></tr> <tr><td data-bbox="1569 1203 1806 1235">-300 to -250</td><td data-bbox="1814 1203 2080 1235">51,906</td></tr> <tr><td data-bbox="1569 1240 1806 1273">-250 to -200</td><td data-bbox="1814 1240 2080 1273">85,583</td></tr> <tr><td data-bbox="1569 1278 1806 1310">-200 to -150</td><td data-bbox="1814 1278 2080 1310">197,837</td></tr> <tr><td data-bbox="1569 1315 1806 1347">-150 to -100</td><td data-bbox="1814 1315 2080 1347">412,650</td></tr> <tr><td data-bbox="1569 1352 1806 1385">-100 to -50</td><td data-bbox="1814 1352 2080 1385">475,170</td></tr> <tr><td data-bbox="1569 1390 1806 1422">-50 to 0</td><td data-bbox="1814 1390 2080 1422">697,538</td></tr> <tr><td data-bbox="1569 1427 1806 1459">0 to 50</td><td data-bbox="1814 1427 2080 1459">306,635</td></tr> </tbody> </table>	\$ Change	Number of Policies	<-700	24,347	-700 to -650	6,301	-650 to -600	7,861	-600 to -550	9,237	-550 to -500	11,409	-500 to -450	14,345	-450 to -400	15,752	-400 to -350	22,604	-350 to -300	26,427	-300 to -250	51,906	-250 to -200	85,583	-200 to -150	197,837	-150 to -100	412,650	-100 to -50	475,170	-50 to 0	697,538	0 to 50	306,635
\$ Change	Number of Policies																																			
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Question Number	Question	Response	
		50 to 100	177,221
		100 to 150	130,760
		150 to 200	99,500
		200 to 250	74,174
		250 to 300	50,469
		300 to 350	33,493
		350 to 400	22,390
		400 to 450	18,016
		450 to 500	14,437
		500 to 550	10,614
		550 to 600	7,249
		600 to 650	5,322
		650 to 700	4,466
		700+	44,932
McCandless.3.1	<p>REVENUE NEUTRALITY</p> <p>The new model is designed to be revenue neutral in the first year.</p> <p>3.1 Is the proposed model revenue neutral before or after the 20% cap on the annual increase?</p> <p>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?</p>	<p>The revenue neutrality requirement is after the 20% cap on the annual increase.</p> <p>The 20% cap is directed as part of the 2018 Government Directive regarding Rate Design. Nevertheless, excluding the 20% cap and applying all other elements of the new rate design, year 1 premium revenues would increase by 1.5%. However, if the 20% cap was ignored there would be no need for introducing a minimum CDF in year 1. If the minimum CDF is also excluded, year 1 would be revenue neutral.</p>	
McCandless.3.2	<p>REVENUE NEUTRALITY</p> <p>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.</p> <p>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</p>	<p>The new rate design must be considered as a whole and was modeled as such. It was developed by evaluating complex interactions between many rating variables/factors. In order to isolate and remove just one variable/factor, ICBC would need to change the entire rate design, meaning all models, would have to be re-evaluated in light of the variable that was removed. If that was not done and ICBC instead assigned a 1.000 to that particular rating factor, the premium impact that would result would not consider how the aggregate premium might change as a result of having a different rate design because ICBC removed that variable.</p>	



**ICBC's 2018 Basic Insurance Rate Design Application
ICBC's Responses to Richard McCandless' Questions**

Question Number	Question	Response
	revenue (AEBE). Please explain the methodology and key assumptions for the calculation of each factor.	The responses to BCUC 8.1 and BCUC.8.2 also include more information about the underlying assumptions.
McCandless.3.3	<p>REVENUE NEUTRALITY</p> <p>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.</p> <p>What would be the net increase or decrease in each of years 2 to 5 for each factor?</p>	<p>ICBC does not have an explicit projection per factor for any year. However, overall, based on high level assumptions, ICBC expects that the new rate design will maintain its revenue neutrality in years 2 and 3. Any differences from expected revenues will form part of the actuarial rate indication in subsequent revenue requirements applications.</p>
McCandless.3.4	<p>REVENUE NEUTRALITY</p> <p>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.</p> <p>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?</p>	<p>It is correct that everything else being the same, the expanding crash scan will mean that more revenues will be generated from at-fault crashes over time until the 10-year steady state is achieved. However, it is expected to be offset by allowing for a larger discount in years 2 and 3 (See the Application, Chapter 3, Section C.7.2 on the minimum allowable CDF). Specifically in Year 1 the maximum discount given is 46%, year 2 it is 49% and year 3 it is 52%. The model assumes that the additional revenue from increasing the crash scan period will be offset by the maximum allowable discount in years 2 and 3.</p> <p>In general, for years 2 and beyond, there is more uncertainty about customer profiles and the environment (e.g., how customers will choose to list drivers, how many crashes will occur, where people will live, etc.). However, any further differences from expected revenues will form part of the actuarial rate indication in subsequent revenue requirements applications.</p>
McCandless.3.5	<p>REVENUE NEUTRALITY</p> <p>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.</p>	<p>ICBC does not consider increases in premium for at-fault crashes a penalty but a premium adjustment to reflect the risk of a driver.</p> <p>Please see the response to 3.4 how the minimum CDF is used to offset the additional revenue from the increasing crash scan in years 2 and 3.</p> <p>It is correct that handling potential extra revenues through revenue requirement application means that all drivers will be impacted equally.</p>



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Question Number	Question	Response
	<p>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?</p> <p>3.5.1 Instead, would not an adjustment to (say) the experience factor only benefit low-risk drivers?</p> <p>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?</p>	<p>An adjustment to the Experience Factor for only lower-risk drivers would not be in accordance with accepted actuarial practice and therefore would not adhere to the 2018 Government Directive since this factor is to be data driven and based on accepted actuarial practice. A future adjustment to the Experience Adjustment Factor (EAF) could be made to the lower-risk drivers offsetting any impact from the increasing crash scan after year 3, however modifying the EAF in the future would also require Commission approval.</p>
McCandless.3.6	<p>REVENUE NEUTRALITY</p> <p>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.</p> <p>Would ICBC agree that because of the 10-year crash scan phase-in the model is only revenue neutral in the first year?</p>	<p>Please refer to the response to 3.4.</p>
McCandless.3.7	<p>REVENUE NEUTRALITY</p> <p>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.</p> <p>Is this correct?</p>	<p>Yes, in the current CRS a policyholder with no at-fault claims can receive a 43% discount after nine years. However under the new rate design, the maximum discount (for a non-senior) of 52% will not be in effect on day 1 of this rate design. Please see the Application, Chapter 3, Figure 3.12 for the table of minimum CDF and their effective dates. As described in the Application, Chapter 3, Section C.7.2 the maximum allowable discount will be transitioned in over a three year period. Not until the third year of that transition period, will customers with 40 years of experience and no at-fault crashes receive up to a 52% discount related to their CDF and customers that have a Senior Driver Factor less than 1.0 will receive up to a 59% discount.</p>



**ICBC's 2018 Basic Insurance Rate Design Application
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Question Number	Question	Response
McCandless.3.7.1	<p>REVENUE NEUTRALITY</p> <p>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.</p> <p>Why was 40 years chosen rather than say 30, or 25 years?</p>	<p>The maximum value of 40 years is part of the 2018 Government Directive regarding Rate Design. However, as observed in Figure 3.11 of the Application, the Experience Factor, which is based on an actuarial analysis, shows that risk decreases past 25 years of experience.</p>
McCandless.3.7.2	<p>REVENUE NEUTRALITY</p> <p>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.</p> <p>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?</p>	<p>Customers will still receive a discount however that discount will continue to increase up until 40 years of experience.</p> <p>The current CRS allowed for 80% of ICBC's customers to receive the same maximum discount of 43% which did not appropriately differentiate risk between its customers. As per the 2018 Government Directive regarding Rate Design, the new rate design must be based on a data driven approach and accepted actuarial practice with respect to a customer's years licensed and at fault crashes. The changes to the discount with respect to these rating factors reflect the 2018 Government Directive regarding Rate Design.</p>
McCandless.3.8	<p>REVENUE NEUTRALITY</p> <p>Does ICBC anticipate that the changes required to its information systems required by the new model can be made within the existing budget?</p>	<p>Yes. ICBC anticipates that it will be able to complete the changes to its information systems within the existing budget. Please see the response to BCUC.11.1 for more information.</p>
McCandless.3.9	<p>REVENUE NEUTRALITY</p> <p>What is the estimated additional cost for brokers/appointed agents that will be required by the new model?</p>	<p>The review/analysis of broker remuneration will be completed at the end of this calendar year. ICBC recognizes that the new rate design model will impact brokers. And ICBC is also conscious that supplier rates have a direct impact on insurance rates and compensation paid to business partners must be fair and affordable for ratepayers.</p>
McCandless.4.1	<p>THE COST of an AT-FAULT CLAIM</p> <p>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.</p>	<p>Taking only one component of the algorithm (in this case, experience) will not yield an accurate estimate of the impact of an at-fault crash. The algorithm proposed for the new model must be taking in its entirety when determining a customer's Basic insurance premium. All factors have to be considered – every customer will have at least a territory and rate class assigned to them – and all factors will have an impact on the at-fault claim. Schedule D of the Tariff in the 2018 Government Directive regarding Rate Design, provided in Appendix B of this Application, details</p>



**ICBC's 2018 Basic Insurance Rate Design Application
ICBC's Responses to Richard McCandless' Questions**

Question Number	Question	Response
	<p>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?</p>	<p>only the Experience Factor and the Experience Adjustment Factor, and the difference in premium for this component (between a driver with a single at-fault crash and a crash free driver over a ten-year period assuming both begin with nine years of driving experience and excluding all other factors) is \$1,385, and the impact of the at-fault claim will be less or more when combined with the other factors of the algorithm.</p> <p>As stated in the response to McCandless.3.5, ICBC does not consider increases in premium for at-fault crashes a penalty but a premium adjustment to reflect the risk of a driver.</p>
McCandless.4.2	<p>THE COST of an AT-FAULT CLAIM</p> <p>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.</p> <p>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?</p>	<p>In general, yes, those with at-fault claims will tend to pay more in the new model than they would in the current model.</p>
McCandless.4.3	<p>THE COST of an AT-FAULT CLAIM</p> <p>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.</p> <p>Does ICBC agree that the new model is much less generous than the current model in awarding discounts for claim free driving experience?</p>	<p>It depends on the period of experience being examined. Drivers with less than 15 years of experience will see smaller discounts in the new model than they would have seen in the current model whereas drivers with more than 15 years of experience will see larger discounts in the new model than they would have seen in the current model.</p>
McCandless.4.4	<p>THE COST of an AT-FAULT CLAIM</p> <p>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.</p> <p>4.4 Is this intentional?</p>	<p>Yes, a customer with more experience could have a higher crash impact over the 10-year period compared to an inexperienced driver. The reason is that an inexperienced customer's premium is higher to start with, since it already reflects their higher risk of incurring a future crash. In other words, since the fact that an inexperienced driver is more likely to have a crash is already built into their starting premium, the actual crash impact for an inexperienced driver could be smaller compared to the impact for an experienced driver.</p>



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Question Number	Question	Response
	4.4.1 What public policy objective or rate design principle does this outcome achieve?	<p>The impact on an individual's premium to reflect their risk (expected future cost to Basic insurance) related to the number of year's licensed and at-fault crashes in the most recent 10 years is based on a data driven approach and accepted actuarial practice as directed in the 2018 Government Directive regarding Rate Design (see fourth bullet).</p> <p>As stated in the response to question 3.5, ICBC does not consider increases in premium for at-fault crashes a penalty but rather a premium adjustment to reflect the risk of a driver.</p>
McCandless.5.1	<p>DISCOUNTS</p> <p>The 25% discount for handicapped individuals remains unchanged, but the seniors' discount for those 65 and older driving for pleasure is cut to 15%.</p> <p>What is the reason that the seniors' discount has been reduced?</p>	<p>The Senior Driver Factor specified in the Tariff in the 2018 Government Directive regarding Rate Design, provided in Appendix B of this Application, has been directed.</p> <p>Most seniors will be benefitting under the new rate design because of the greater recognition of years of driving experience. For example, the maximum discount for a customer with 40 years of experience and no at-fault crashes in the new rate design has increased to 52% (by year 3). Compared to the current maximum discount of 43%, that represents a 15% increase in the discount available to all customers.</p>
McCandless.5.2	<p>DISCOUNTS</p> <p>The 25% discount for handicapped individuals remains unchanged, but the seniors' discount for those 65 and older driving for pleasure is cut to 15%.</p> <p>How many policies are affected, and what is the expected premium revenue increase of the 10% reduction in Year 1?</p>	<p>As discussed in the response to McCandless.5.1, the impact on seniors within the new Tariff must also consider the greater recognition of years of driving experience. When the new Tariff becomes effective, all policies in a senior rate class will be transitioned to the equivalent pleasure only rate class (see the Application, Chapter 3, Section C.2) and drivers will be rated based on their driving experience and eligibility to the new Senior Driver Factor. ICBC expects a majority of seniors (approximately three-quarters) will benefit from the new Tariff. In 2018, the senior rate classes represent approximately 17% of personal policies or 500,000 policies, all of which are expected to be impacted by these changes.</p>
McCandless.5.3	<p>DISCOUNTS</p> <p>How many policies are affected, and what is the revenue loss in Year 1 due to the new braking discount?</p>	<p>ICBC expects that 5% of certificates (excluding trailers) will be eligible. ICBC does not have an explicit assumption for the impact on revenues, but since the discount is 10% the approximate impact is 0.5 percentage points of Basic insurance rate which is equivalent to \$16 million (5% of certificates * 10% discount).</p>
McCandless.5.3.1	DISCOUNTS	<p>For year 2 ICBC has assumed that the percent of certificates that are eligible for the ASTF discount increases to 7.5% and by year 3 is 11%.</p>



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	What is the additional loss in each of years 2 to 6 as more vehicles equipped with this technology are insured?	This is based on the projected number of new vehicle sales and assuming an increasing proportion of these will have the AEB technology. Using these estimates, the additional impact on revenue increases to \$24M and \$35M for years 2 and 3 respectively. ICBC has not developed any further forecasts beyond year 3.
McCandless.5.4	DISCOUNTS How many policies are affected, and what is the revenue loss in Year 1 due to the new kilometer discount?	ICBC expects that 5% of certificates (excluding trailers) will be eligible. ICBC does not have an explicit assumption for the impact on revenues, but since the Distance Factor is 10% the approximate impact is 0.5 percentage points of Basic rate or \$16M (5% of certificates * 10% discount).
McCandless.5.4.1	DISCOUNTS Does ICBC have an estimate of the additional loss in years 2 to 6?	ICBC does not assume any increase in the number of eligible certificates for the low kilometer discount for future years. Therefore the impact on revenue is expected to remain similar to year 1. Please see the answer to McCandless.5.4.
McCandless.6.1	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. How will the B.C. Utilities Commission and the public know if the new model is a success?	Commission approval and effective implementation of the new rate design will itself represent a success for ICBC. The implementation of the new rate design will achieve the government's objective of having Basic insurance premiums more closely reflect the risk associated with each policy, while also considering affordability. The rate design also reflects customer and broker input. Another measure of success is how well the transition to the new rate design is managed from a customer and stakeholder perspective. ICBC has described its work and plans regarding change management in the Application, Chapter 4, and in other responses to questions.
McCandless.6.2	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. Will ICBC be establishing a mechanism to monitor the incidence in driving without insurance due to the new model?	ICBC has an established mechanism and controls for monitoring incidence of driving without insurance. The new model is not expected to have an impact on the incidence of driving without insurance.
McCandless.6.3	MEASURING SUCCESS	ICBC is able to compare the number of policyholders relative to the British Columbia population or the prior year. However, it would be very difficult



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	<p>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.</p> <p>Will ICBC be determining the loss of potential younger policyholders due to the higher cost of insurance?</p>	<p>to isolate the extent to which one factor (in this case, the new rate design) would be contributing to any trend.</p>
McCandless.6.4	<p>MEASURING SUCCESS</p> <p>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.</p> <p>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?</p>	<p>ICBC's Optional business is not regulated by the Commission. As such, ICBC respectfully declines to respond to this question.</p>



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TREAD.1.1-4	<p>APPLICATION Exhibit B-1, , p. 1-1 (PDF 9), para. 5</p> <p>ICBC states:</p> <p>"While the current rate design worked well for many years, it has, over time, become less effective at distinguishing among customers with different levels of risk."</p> <p>1.1 In ICBC's opinion for what period of years did the current rate design work well?</p> <p>1.2 In ICBC's opinion in what year did the current rate design first fail to work well? Please explain.</p> <p>1.3 In ICBC's opinion in what year did the current rate design begin to become less effective at distinguishing among customers with different levels of risk? Please provide specific examples of how it became less effective at distinguishing among customers with different levels of risk beginning in that year (Year 20XX).</p> <p>1.4 For each year since Year 20XX, please provide specific examples of how in ICBC's opinion the current rate design became less effective at distinguishing among customers with different levels of risk.</p>	<p>The overall pricing model ICBC uses for determining individual Basic insurance premiums for British Columbians has not seen significant updates in more than 30 years. It worked well initially, but, over time, it has become less effective at distinguishing among customers with different levels of risk. For instance, a large portion of the customer base is now receiving the maximum level of discount in the Claim-rated Scale despite representing diverse risks. The current model became less effective over time – an evolution; rather than a single turning point.</p>
TREAD.2.1-2	<p>APPLICATION Exhibit B-1, , p. 1-1 to 1-2 (PDF 9 - 10), para. 6</p> <p>ICBC states:</p> <p>"The new rate design represents a significant change in the way Basic insurance premiums are determined. It introduces new rating variables and makes changes to existing rating variables used in calculating Basic insurance premiums, and enhances rate fairness by making the premiums that customers pay for Basic insurance more reflective of risk while also considering affordability."</p> <p>2.1 Please confirm that ICBC expressly acknowledged the need to enhance rate fairness by making the premiums that customers pay for Basic insurance more</p>	<p>In 2012, ICBC did a public engagement with British Columbians on rate design. The work did not proceed beyond engagement due to competing priorities. Shortly after the public engagement, ICBC went through a Government review which resulted in the restructuring of the company. ICBC was also focused on implementing its multi-year Transformation Program to renew and replace most of its major business systems. ICBC used some of the learnings from the 2012 engagement to help inform the current rate design changes.</p>



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	<p>reflective of risk at least as early as June 2012 by undertaking its Customer Consultation and Engagement process related to a new rate design.</p> <p>2.2 Please confirm that since 2012, despite urging from TREAD and other interveners to address much needed changes to its rate design, ICBC allowed its Customer Consultation and Engagement process initiative to wither and die and has actively resisted all attempts by TREAD to seek development and an application for BCUC approval of a new rate design. If not, please explain.</p>	
TREAD.2.3	<p>APPLICATION Exhibit B-1, , p. 1-1 to 1-2 (PDF 9 - 10), para. 6</p> <p>Does ICBC believe that the new rate design considers affordability? Please explain in more detail.</p>	<p>The new rate design reflected in the Tariff in the 2018 Government Directive regarding Rate Design considers affordability by delivering on the Senior Driver Factor, Experience Adjustment Factor and Transition Factor (See the Application, Chapter 2, Figure 2.1 for cross-references):</p> <ul style="list-style-type: none"> • Senior Driver Factor and Experience Adjustment Factor: "To address affordability for certain customer segments: non-fleet rated policies are to apply a factor based on Table A in Attachment 1; and a 15% discount for those customers who are aged 65 or older which will be reduced upon at-fault crashes." • Transition Factor: "Excluding the impacts from changes in rate class, territory and learners premium, a customer renewing his or her Basic policy after September 1, 2019, is to see no more than a 20% increase compared to his or her prior policy year's premium provided that any listed driver whose risk profile affects the premium payable has not had a crash after September 1, 2019 and the principal operator has not changed."
TREAD.2.4	<p>APPLICATION Exhibit B-1, , p. 1-1 to 1-2 (PDF 9 - 10), para. 6</p> <p>What specifically will the new rate design achieve to improve affordability for Basic insurance? Please quantify the affordability gains it will achieve, including the percentage increase expected to be avoided by 2/3 of BC drivers for F2019 Basic rates, compared to the cumulative rate increase percentage that has faced all BC drivers for the period F2012 through F2018.</p>	<p>Figure 1.2 in the Application shows how a renewing customer's premium is affected (in dollars) by the new rate design, and indicates the 2/3 of BC drivers being referenced in the question.</p> <p>In asking for ICBC to compare the expected premium changes for a renewing customer associated with the rate design to past general rate increases, the question is misconstruing ICBC's reference to affordability (which comes from the 2018 Government Directive regarding Rate Design).</p>



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		<p>ICBC understands that Basic insurance rates have increased materially over the past several years and that this would represent an affordability challenge for some British Columbians. Those rate increases have been driven by increases in the overall costs for ICBC to provide Basic insurance (the revenue requirements), primarily associated with an increase in the cost of processing and settling claims. ICBC's revenue requirements applications have described the cost drivers behind those cost increases, and the steps that ICBC is taking to manage those increases. That work continues.</p> <p>Rate design is, by its nature, revenue neutral and cannot be expected to unwind or offset past general rate increases driven by increasing claims costs. 2/3 of customers are expected to pay less than they otherwise would under the current rate design, with 1/3 paying more than they otherwise would pay. Favourable impacts experienced by the 2/3 of customers are unlikely to offset the full impact of past general rate increases on their individual premiums and this was not the intent of changing the rate design. The rate design changes are intended to improve fairness as among Basic customers. The new rate design is considering affordability through particular elements where the full impact of an actuarially indicated rate increase based on driving record and experience is being mitigated. The 2018 Government Directive regarding Rate Design explicitly references affordability in the context of seniors and non-fleet rated policies, where a discount has been maintained (see second bullet, top of page 2).</p>
TREAD.3.1-3	<p>APPLICATION Exhibit B-1, p. 1-3 (PDF 11), para. 13</p> <p>ICBC states:</p> <p>"This fundamental change gives rise to new factors through which drivers are more accountable for their driving than in the current system, more fairly allocating the costs of providing Basic insurance among Basic insurance policyholders while considering affordability."</p>	<p>ICBC's responses to TREAD.2.3 and 2.4 address how the new rate design considers affordability. Affordability is a policy objective that overlays the actuarial analysis and serves to reduce the premiums that would otherwise be indicated for some policyholders based on their experience and driving record. As rate design is a "zero-sum game", ICBC agrees that provisions intended to address affordability will advantage some policyholders while disadvantaging others. (This is true under the current rate design as well.)</p> <p>ICBC does not agree with the proposition as stated in question TREAD.3.3. ICBC's Application seeks approval of the same Tariff amendments that are</p>



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	<p>3.1 Please explain what ICBC means by “while considering affordability” in this context. Is the consideration to make Basic insurance more affordable for better drivers, or is it to ensure that drivers required to pay more to reflect greater accountability for their driving (e.g. at-fault crashes) don't have to pay an amount that may be perceived as unaffordable for them?</p> <p>3.2 Recognizing that rate design is necessarily a zero-sum game, in which lower rates for some ratepayers must be offset by higher rates for other ratepayers, does ICBC agree that affordability considerations in the context of rate design must necessarily advantage some but disadvantage others? Please explain.</p> <p>3.3 If greater affordability can't be granted to all ratepayers (e.g. because to do so would reduce the total premium collected in a given year), does ICBC agree that it should seek to provide greater affordability to better drivers (e.g. those with the fewest at-fault crashes) and acknowledge that affordability can't be a consideration for drivers whose history includes at-fault crashes? Please explain.</p>	<p>included in the 2018 Government Directive regarding Rate Design, thus reflecting government policy.</p>
TREAD.4.1	<p>APPLICATION Exhibit B-1, , p. 1-3 (PDF 11), para. 14 Higher-Risk Drivers Pay More Lower-Risk Drivers Pay Less</p> <p>ICBC states:</p> <p>“Data analyzed by ICBC’s actuaries shows that a driver with a history of at-fault claims presents an increased risk for future claims. In the new rate design, drivers who have at-fault crashes are more accountable for their actions and their Basic insurance premiums better reflect the greater risk they represent of having additional at-fault crashes.”</p> <p>Please specify the period of years included in the referenced data analyzed by ICBC’s actuaries.</p>	<p>Per the Application, Chapter 3, Section F.2, the data used in the actuarial analysis contains:</p> <ul style="list-style-type: none"> • All policy transactions for calendar policy years 2012 through 2016. • Basic insurance claims information for calendar accident years 1997 through 2016. <p>The data is as of October 31, 2017. Specifically, the actuarial statistical models used calendar policy year 2012 to 2015.</p>
TREAD.4.2	<p>APPLICATION Exhibit B-1, , p. 1-3 (PDF 11), para. 14 Higher-Risk Drivers Pay More Lower-Risk Drivers Pay Less</p>	<p>It was known by actuaries operating in the general insurance industry prior to the establishment of ICBC as a Crown corporation in 1973 that a driver with a history of at-fault claims presents an increased risk for future claims. So, ICBC actuaries would have had access to data that showed this as soon as ICBC had operated for a long enough period of time to</p>



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	<p>ICBC states:</p> <p>"Data analyzed by ICBC's actuaries shows that a driver with a history of at-fault claims presents an increased risk for future claims. In the new rate design, drivers who have at-fault crashes are more accountable for their actions and their Basic insurance premiums better reflect the greater risk they represent of having additional at-fault crashes."</p> <p>By what year did ICBC's actuaries have access to data that showed that a driver with a history of at-fault claims presents an increased risk for future claims?</p>	<p>collect an adequate volume of data, which would be about 3 years of policy year data.</p>
TREAD.4.3	<p>APPLICATION Exhibit B-1, , p. 1-3 (PDF 11), para. 14 Higher-Risk Drivers Pay More Lower-Risk Drivers Pay Less</p> <p>ICBC states:</p> <p>"Data analyzed by ICBC's actuaries shows that a driver with a history of at-fault claims presents an increased risk for future claims. In the new rate design, drivers who have at-fault crashes are more accountable for their actions and their Basic insurance premiums better reflect the greater risk they represent of having additional at-fault crashes."</p> <p>With knowledge of that data-driven conclusion by its own actuaries, why has ICBC consistently and actively opposed TREAD's pursuit of a new rate design?</p>	<p>ICBC respectfully disagrees with TREAD's characterization of ICBC's past position vis a vis rate design. Please see ICBC's responses to TREAD.4.4-4.5.</p>
TREAD.4.4-5	<p>APPLICATION Exhibit B-1, , p. 1-3 (PDF 11), para. 14 Higher-Risk Drivers Pay More Lower-Risk Drivers Pay Less</p> <p>ICBC states:</p> <p>"Data analyzed by ICBC's actuaries shows that a driver with a history of at-fault claims presents an increased risk for future claims. In the new rate design, drivers who have at-fault crashes are more accountable for their actions and their Basic</p>	<p>ICBC respectfully disagrees with TREAD's characterization of ICBC's past position vis a vis rate design. ICBC notes that TREAD has generally advocated rate design in the context of revenue requirements proceedings, where ICBC's position (backed by determinations of the Commission) has been that rate design was out of scope. ICBC has recognized the challenges with the current rating framework for some time and has worked with government to update the Basic insurance rate design. The outcome of that work is this Application. In any event, debate about past events does not advance the Commission's disposition of this Application.</p>



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	<p>insurance premiums better reflect the greater risk they represent of having additional at-fault crashes.”</p> <p>4.4 Please confirm that for every year that ICBC has actively opposed TREAD's pursuit of a new rate design, the corollary effect has been that approximately 2/3 of BC drivers have been required to pay more for Basic insurance than they would have under this new rate design and approximately 1/3 of BC drivers have paid less than they would have. Please explain.</p> <p>4.5 Please confirm that such overpayment (relative to what would have been paid under the new rate design) for Basic insurance by approximately 2/3 of BC drivers likely won't ever be recovered by them due to ICBC's active resistance to a new rate design until directed by government to apply for it. Please explain.</p>	<p>Rate design, being concerned with the allocation of costs among customers, is a “zero-sum game”. Thus, to the extent that the current rate design has departed from actuarially indicated rates that match premiums to the risk associated with a policy, some policyholders pay less than their actuarially indicated rate and some pay more. Under the current rate design, BC drivers have not been paying their actuarially indicated rate. This is a key reason why ICBC favours moving to the new rate design. It improves rate fairness by more closely aligning premiums with the risks a policyholder represents for the insurance system. Generally speaking, the drivers who will pay more under the new rate design are those whose actuarial analysis indicates a relatively higher risk of being involved in a future at-fault crash.</p> <p>In specific response to TREAD.4.5, ICBC is not proposing any retroactive adjustment to past rates. Retroactive ratemaking is inconsistent with well-established principles of regulatory law.</p>
TREAD.5.1	<p>APPLICATION Exhibit B-1, p. 1-4 (PDF 12), para. 17 More Accurate Assessment of Risk</p> <p>ICBC states:</p> <p>“Some features of the new rate design are designed specifically to create a more complete picture of the risk associated with a Basic insurance certificate. The new feature of listing drivers of a given vehicle allows for a more accurate assessment of risk by considering the individual risk associated with each driver.”</p> <p>Will the accuracy of the list of drivers for a given vehicle rely exclusively on self-reporting, or will ICBC implement some measures and/or penalties beyond the Unlisted Driver Accident Premium and Unlisted Driver Protection Premium to discourage cheating in the lists of drivers?</p>	<p>The drivers listed for a given vehicle will be those declared by the registered owner of the vehicle. As described in the Application, Chapter 3, paragraph 54, registered owners of a vehicle will have the choice to list drivers of the vehicle, and payment on a claim will not be denied if a registered owner chooses not to list all drivers.</p>
TREAD.5.2	<p>APPLICATION Exhibit B-1, p. 1-4 (PDF 12), para. 17 More Accurate Assessment of Risk</p> <p>ICBC states:</p>	<p>The Unlisted Driver Accident Premium in Schedule AB of the Tariff in the 2018 Government Directive regarding Rate Design, provided in Appendix B of the Application, is charged if an unlisted driver is found to be at-fault for a crash. The premium differs based on the risk associated with that unlisted driver. As an example, for unlisted drivers licensed with a British Columbia driver's licence, the premium is 15 times the premium</p>



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	<p>"Some features of the new rate design are designed specifically to create a more complete picture of the risk associated with a Basic insurance certificate. The new feature of listing drivers of a given vehicle allows for a more accurate assessment of risk by considering the individual risk associated with each driver."</p> <p>Will such penalties exceed the avoided Basic insurance costs for vehicle owners who cheat by omitting some drivers from the list of drivers for a given vehicle? If not, please explain the rationale in providing a financial incentive to cheat the Basic insurance scheme. If so, by how much will potential penalties exceed the maximum avoided costs for a vehicle owner?</p>	<p>differential, to a maximum of \$5,000, where the premium differential represents the difference between what a customer should have paid had he/she listed the at-fault driver versus the actual premium paid without listing the driver.</p> <p>The 15 times penalty in most situations represents a higher penalty than not listing your high risk driver over a 10 year period. As such, there is a financial incentive to declare drivers. The difference between the 15 times penalty and avoiding the higher insurance costs will differ for each circumstance.</p>
TREAD.6.1	<p>APPLICATION Exhibit B-1, p. 1-4 (PDF 12), para. 18 More Accurate Assessment of Risk</p> <p>ICBC states:</p> <p>"The new rate design updates the current risk conditions associated with a vehicle's rate class (type of vehicle and how it is used) and territory (generally, based on the location of the vehicle when not in use). This is an essential step since, over time, the risks associated with rate classes and territories change relative to one another, and the rate classes and territories were last updated in 2010 based on an analysis which used 2007 data."</p> <p>Please specify what year(s) is the source of the data used for the analysis that underlies the new rate design.</p>	<p>Per the Application, Chapter 3, Section F.2, the data used in the actuarial analysis contains:</p> <ul style="list-style-type: none"> • All policy transactions for calendar policy years 2012 through 2016. • Basic insurance claims information for calendar accident years 1997 through 2016. <p>The data is as of October 31, 2017. Specifically, the actuarial statistical models used calendar policy year 2012 to 2015.</p>
TREAD.6.2-5	<p>APPLICATION Exhibit B-1, p. 1-4 (PDF 12), para. 18 More Accurate Assessment of Risk</p> <p>ICBC states:</p> <p>"The new rate design updates the current risk conditions associated with a vehicle's rate class (type of vehicle and how it is used) and territory (generally, based on the location of the vehicle when not in use). This is an essential step since, over time, the risks associated with rate classes and territories change relative to one another,</p>	<p>The assessment of risk levels between drivers is an ongoing process, at ICBC and the industry in general. It always has been. That is because many factors change over time - the circumstances of drivers change, the geographic location where the vehicle is driven, the vehicles they drive change as well as the road and climate conditions under which they operate vehicles change. There is no "tipping point event(s)" that made assessment of risk for rate class and territory an essential step.</p> <p>As stated in ICBC's response to TREAD.4.4-5, ICBC respectfully disagrees with TREAD's characterization of ICBC's past position vis a vis rate design. TREAD has generally advocated rate design in the context of revenue</p>

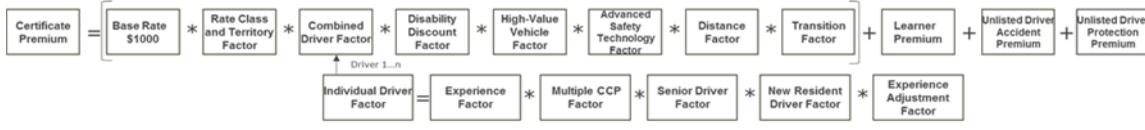
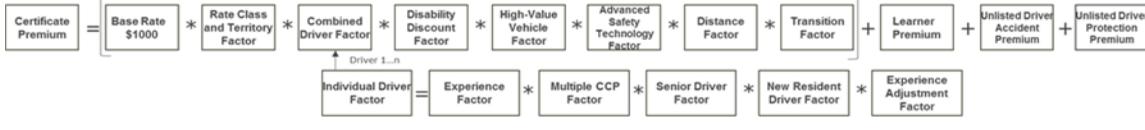
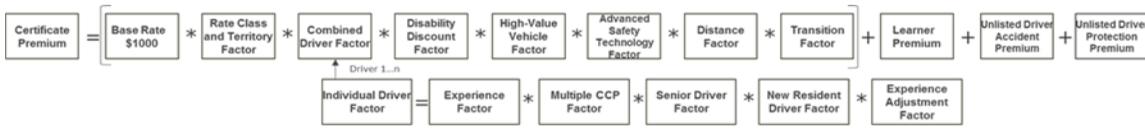


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Question Number	Question	Response
	<p>and the rate classes and territories were last updated in 2010 based on an analysis which used 2007 data.”</p> <p>6.2. Please specify the date when a new rate design updating then current risk conditions associated with a vehicle's rate class and territory first became an “essential step” and identify and discuss the tipping point event(s) that made it an essential step.</p> <p>6.3 If a new rate design updating then current risk conditions associated with a vehicle's rate class and territory only became an “essential step” in 2018, please explain what specific changes took place in 2018 other than the express direction from government that resulted in ICBC recognizing a new rate design as an essential step.</p> <p>6.4 Please explain why ICBC's internal and external actuaries apparently considered the many changes in risk conditions since 2007 (i.e. the year of the data reflected in the 2010 changes) did not make updating an “essential step” at any time prior to 2018. Is a ten year gap in analyzing changes in risk conditions consistent with Accepted Actuarial Practice?</p> <p>6.5 Given ICBC's current view that the new rate design updating the current risk conditions associated with a vehicle's rate class and territory is an essential step, it is apparent that ICBC considered a new rate design nonessential at any time prior to 2018. Was the conclusion that it was nonessential expressly supported by ICBC's internal and external actuaries? If so, please provide the actuarial rationale for a ten year gap in analyzing acknowledged changes in risk conditions. If not, why did ICBC disregard the opinions of its own actuaries by actively resisting TREAD's requests for a new rate design?</p>	<p>requirements proceedings, where ICBC's position (backed by determinations of the Commission) has been that rate design was out of scope. ICBC has recognized the challenges with the current rating framework for some time and has worked with government to update the Basic insurance rate design. The outcome of that work is this Application.</p>
TREAD.7.1	<p>APPLICATION Exhibit B-1, p. 1-4 (PDF 12), para. 19 The New Rate Design</p>	<p>Examples of channels which may be used to communicate to customers include:</p> <ul style="list-style-type: none"> • Renewal reminders • icbc.com • Communication tools to help customers understand what information they need to provide at renewal, and the factors included in calculating their Basic insurance premium



ICBC's 2018 Basic Insurance Rate Design Application
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Question Number	Question	Response
	<p>Figure 1.1 – New Rating Algorithm</p>  <p>Please describe ICBC's plans for the type of press materials, marketing and advertising that will enable BC drivers to to readily determine and understand how their own driving behavior will impact their Basic insurance premiums. In other words, how much extra will I have to pay for my Basic insurance if I cause one or more at-fault crashes?</p>	<ul style="list-style-type: none"> • Earned media • Social media: Facebook, Twitter and YouTube • Information posted at Drivers Licensing Offices • Information shared with Brokers and posted at Broker Offices • Information posted in trade publications • Community events <p>ICBC will gauge customer response to messaging and marketing in the lead up to the change, and adjust as required. For additional information please refer to ICBC's responses to BCUC.12 series.</p>
TREAD.7.2	<p>APPLICATION Exhibit B-1, p. 1-4 (PDF 12), para. 19 The New Rate Design</p> <p>Figure 1.1 – New Rating Algorithm</p>  <p>Does ICBC agree that it is essential that BC drivers easily understand the direct connection between their own driving behavior and the amount of the Basic insurance premium they must pay?</p>	<p>Yes, ICBC will provide customers with tools and information outlining the factors used to calculate their Basic insurance premium under the new Rate Design. The focus will be on helping customers understand the importance of driving safe and thinking about who they allow to use their vehicle. For additional information please refer to ICBC's responses to BCUC.12 series.</p>
TREAD.7.3	<p>APPLICATION Exhibit B-1, p. 1-4 (PDF 12), para. 19 The New Rate Design</p> <p>Figure 1.1 – New Rating Algorithm</p> 	<p>Communications to customers will break down the factors in simple to understand terms to help customers better understand the information taken into account when calculating their Basic insurance premium. The fact that customers can affect their premiums through their driving behaviour, and who they allow to drive their vehicle will be a part of the communications.</p>



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Question Number	Question	Response
	<p>Is there a danger that an unduly complex algorithm may make it too difficult for BC drivers to understand the connection between their driving behaviors and the Basic insurance premium they must pay? Does ICBC agree that to the extent that the connection is not well understood, the financial benefit (i.e. incentive of lower premiums) of a good driving record or the financial cost (i.e deterrent of higher premiums) of a bad driving record may have a reduced impact on driving behaviours?</p>	
TREAD.8.1	<p>APPLICATION Exhibit B-1, p. 1-5 (PDF 13), para. 22 THE INDIVIDUAL DRIVER FACTOR (IDF)</p> <p>Why has ICBC chosen at implementation to look at a scan period that extends back to only to March 1, 2017, and not take into account any at-fault crashes prior to March 1? What is the rationale for the choice of March 1, 2017?</p>	<p>The chargeable claim payment scan period is in Schedule D of the Tariff in the 2018 Government Directive regarding Rate Design, provided in Appendix B of the Application. The effect of the scan period at implementation is to ease transition into the new rate design.</p> <p>The transition to a 10-year scan period does result in increasing premiums for all policyholders in year 1 to offset this impact. This is necessary to achieve revenue neutrality. Please see the response to BCUC 8.2 for more information.</p>
TREAD.8.2	<p>APPLICATION Exhibit B-1, p. 1-5 (PDF 13), para. 22 THE INDIVIDUAL DRIVER FACTOR (IDF)</p> <p>ICBC's approach appears to give current drivers with a bad driving record (i.e at-fault crashes) a "free pass" rather than looking at a scan period of the last ten years? Why is that approach necessary? Doesn't effectively erasing all at-fault crashes from IDF consequences unfairly shift costs to better drivers?</p>	Please see the response to TREAD.8.1.
TREAD.8.3	<p>APPLICATION Exhibit B-1, p. 1-5 (PDF 13), para. 22 THE INDIVIDUAL DRIVER FACTOR (IDF)</p> <p>What is ICBC's rationale for not requiring New Resident Drivers to transfer provide their out of province crash and insurance coverage history?</p>	The provision referenced is directed by the 2018 Government Directive regarding Rate Design. ICBC recognizes it can be challenging to obtain previous insurance documentation, so under the proposed model new residents would no longer have to provide this.
TREAD.9.1-2	<p>APPLICATION Exhibit B-1, p. 1-8 (PDF 16), para. 33 THE HIGH-VALUE VEHICLE FACTOR</p> <p>9.1 Please provide an example of the calculation of the premium for:</p>	9.1 The High-value Vehicle Charge Factor remains unchanged in the new rate design and applies to vehicles with a manufacturer's suggested retail price of more than \$150,000. The High-value Vehicle Charge Factor as applied to each of the vehicle examples would be identical.



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Question Number	Question	Response
	<p>a. A vehicle valued at \$200,000; b. A vehicle valued at \$1,000,000; and c. A vehicle valued at \$3,000,000.</p> <p>9.2 For clarity please explain whether the charge for high-value vehicles at two times the Basic insurance premium rises proportionately with the value of the vehicle or reaches a cap or limit at some point.</p>	<p>9.2 The charge does not increase proportionately with the value of the vehicle. The high-value vehicle definition is in the Tariff, provided in the Application, Appendix B, 1. Definitions, page 2. It applies to vehicles with a manufacturer's suggested retail price of more than \$150,000. However, the charge does apply for longer depending on the value of the vehicle. The charge applies for the first seven years for vehicles valued greater than \$150,000 and applies for the first 14 years for vehicles valued greater than \$400,000.</p>
TREAD.10.1	<p>APPLICATION Exhibit B-1, p. 1-9 (PDF 17), para. 34 UPDATED RATE CLASS AND TERRITORY FACTOR</p> <p>ICBC states:</p> <p>"The values for ICBC's rate classes and territories were last updated in 2010, and these updates were based on data from 2007. The new rate design updates these values and expresses them as factors consistent with the new rating algorithm. The updates to Rate Class and Territory Factors occur over a 10-year period in order to moderate the impact on Basic insurance premiums."</p> <p>Isn't it conceivable that updates to rate classes and territories may result in decreased premiums (e.g. resulting from changes in traffic flow, safety improvements, etc.) as well as increased premiums?</p>	<p>Yes, please refer to the Application, Chapter 3, Figures 3.6 and 3.7.</p>
TREAD.10.2	<p>APPLICATION Exhibit B-1, p. 1-9 (PDF 17), para. 34 UPDATED RATE CLASS AND TERRITORY FACTOR</p> <p>ICBC states:</p> <p>"The values for ICBC's rate classes and territories were last updated in 2010, and these updates were based on data from 2007. The new rate design updates these values and expresses them as factors consistent with the new rating algorithm. The updates to Rate Class and Territory Factors occur over a 10-year period in order to moderate the impact on Basic insurance premiums."</p>	<p>As is the case with the current proposal, any future updates to rate classes and territories could result in a decrease or increase for that factor. ICBC recognizes the impact of waiting a long period for an update. However, it is important to remember that rate classes and territories are only two factors that are part of the Basic insurance premium calculation.</p>



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Question Number	Question	Response
TREAD.10.3	<p>To the extent that any updates to rate classes and territories may result in decreased premiums, won't updating only every 10 years tend to increase the impact on Basic insurance premiums rather than moderate them?</p> <p>APPLICATION Exhibit B-1, p. 1-9 (PDF 17), para. 34 UPDATED RATE CLASS AND TERRITORY FACTOR</p> <p>ICBC states:</p> <p>"The values for ICBC's rate classes and territories were last updated in 2010, and these updates were based on data from 2007. The new rate design updates these values and expresses them as factors consistent with the new rating algorithm. The updates to Rate Class and Territory Factors occur over a 10-year period in order to moderate the impact on Basic insurance premiums."</p> <p>Given the zero-sum nature of rate design, won't "moderating the impact on Basic insurance premiums" of drivers in higher-risk rate classes and territories necessarily shift an additional premium burden to drivers in lower-risk rate classes and territories? In other words, won't keeping some premiums lower than justified in some rate classes and territories result in some premiums in other rate classes and territories being higher than justified?</p>	<p>The 10 year transition period of the Rate Class and Territory Factor is part of the 2018 Government Directive regarding Rate Design. As rate design is a zero sum game, transitioning impacts of the new rate design does have the corresponding effect of slowing the benefits to customers that would otherwise benefit immediately.</p>
TREAD.11.1	<p>APPLICATION Exhibit B-1, p. 1-9 (PDF 17), paras. 36 - 38 TRANSITIONING TO THE NEW RATE DESIGN</p> <p>ICBC states:</p> <p>"The Transition Factor shown in Figure 1.1 applies to customers whose Basic insurance premiums would be significantly higher as a result of the implementation of the new rate design. It moderates single year Basic insurance premium increases attributable to the new rate design by limiting such increases to 20% per year."</p> <p>Absent the Transition Factor, what would be:</p> <p>a. the highest single year Basic insurance premium percentage increase attributable to the new rate design;</p>	<p>As part of the customer impact analysis (See the Application, Chapter 3, Section D.2), historical customer data was used to simulate the impact of moving from the current rate design to the new rate design on September 1, 2019, therefore the responses provided below are based on this data set. Historical data was used in order to capture typical movements not related to rate design (e.g., change in rate class, territory, crash, gain of experience, etc.) which would also impact a customer's premium on renewal. As such, some of the impacts in the dislocations are not solely caused by rate design changes, but can also be influenced by a customer decision to make a change to their policy upon renewing, however the example provided in TREAD.11.1a only represents the changes due to new rate design.</p>



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Question Number	Question	Response
	<p>b. the average single year Basic insurance premium percentage increase attributable to the new rate design; and</p> <p>c. the lowest single year Basic insurance premium percentage increase attributable to the new rate design.</p>	<p>11.1a The largest change attributable to the new rate design for a renewing policy is +564% (excluding the Transition Factor). The prior term premium under the current rate design is \$808 whereas the renewal premium under the new rate design would be \$5,367. This policy has a very high CDF due to the only listed driver having 5 unforgiven at fault crashes over the past three years preceding the renewal. Also, this certificate was insured under a senior rate class and with the driver's multiple crashes the senior discount is reduced to 0%. This policy would have a premium of \$988 if capping is considered.</p> <p>11.1b Excluding the Transition Factor, the expected average premium increase for the one-third of policies that are receiving increases is approximately 19%.</p> <p>11.1c The lowest premium percentage increase is 0.01%.</p>
TREAD.11.2	<p>APPLICATION Exhibit B-1, p. 1-9 (PDF 17), paras. 36 - 38 TRANSITIONING TO THE NEW RATE DESIGN</p> <p>ICBC states:</p> <p>"The Transition Factor shown in Figure 1.1 applies to customers whose Basic insurance premiums would be significantly higher as a result of the implementation of the new rate design. It moderates single year Basic insurance premium increases attributable to the new rate design by limiting such increases to 20% per year."</p> <p>Given the zero-sum nature of rate design, why does ICBC consider it fair, appropriate or necessary to moderate Basic insurance premiums that are currently below the level justified by the data?</p>	<p>The Tariff provisions reflect a balance between actuarially indicated rates (how much a customer's premium would change based on their driving record and crash history) and some overlying policy objectives specified by government. TREAD's question is focussing on the impact of one of those policy overlays.</p> <p>During the public engagement, ICBC heard from British Columbians that low-risk drivers should see the benefits of the changes as soon as possible. In the Tariff pages in the 2018 Government Directive regarding Rate Design, this objective has been balanced against the consideration of easing the transition for some customers who would otherwise experience the most significant increases based on their driving record and crash history. Not all drivers will be impacted by a transition cap, as the annual cap has been set at 20%.</p> <p>The 2018 Government Directive regarding Rate Design, provided in Appendix B of this Application, directed ICBC to apply for approval of Tariff pages included in the Directive. ICBC has done so.</p>



**ICBC's 2018 Basic Insurance Rate Design Application
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Question Number	Question	Response
TREAD.12.1	<p>APPLICATION Exhibit B-1, p. 3-9 (PDF 40), para. 22 YEARS SINCE LAST CRASH</p> <p>ICBC states:</p> <p>"Upon implementation, the scan period will extend back to March 1, 2017 and will increase by one year every year until the full 10 years is achieved on or after March 1, 2027. This is to phase customers into the new rate design and ensures that older at-fault crashes do not unexpectedly have impact on future premiums." Please confirm that while the 10-year scan period in the new rate design is required by the 2018 Government Directive regarding Rate Design, the choice to phase in the 10-year scan period and look back only as far as March 1, 2017 is within ICBC's discretion.</p>	<p>Not confirmed. March 1, 2017 was specified in Schedule D, Combined Driver Factor, page 4 of the Tariff in the 2018 Government Directive regarding Rate Design, provided in Appendix B of this Application.</p>
TREAD.12.2	<p>APPLICATION Exhibit B-1, p. 3-9 (PDF 40), para. 22 YEARS SINCE LAST CRASH</p> <p>ICBC states:</p> <p>"Upon implementation, the scan period will extend back to March 1, 2017 and will increase by one year every year until the full 10 years is achieved on or after March 1, 2027. This is to phase customers into the new rate design and ensures that older at-fault crashes do not unexpectedly have impact on future premiums." Has ICBC had the discretion to file a Rate Design Application with the BCUC at any time since 2012 if it chose to do so? If not, please specify any limitations on ICBC's discretion to file any RDA on its own initiative.</p>	<p>Please see the response to TREAD.2.1-2.</p>
TREAD.12.3	<p>APPLICATION Exhibit B-1, p. 3-9 (PDF 40), para. 22 YEARS SINCE LAST CRASH</p> <p>ICBC states:</p> <p>"Upon implementation, the scan period will extend back to March 1, 2017 and will increase by one year every year until the full 10 years is achieved on or after March</p>	<p>The reference to "unexpectedly" in the quoted paragraph was not implying that the customer would be unaware of the at-fault crash or that it might have an effect on premiums under the old rate design. Rather, it was referring to the fact that at-fault crashes will affect premiums differently under the new rate design (they follow the driver) from how they currently affect rates (they follow the vehicle). ICBC was suggesting that, but for the phase-in being proposed, a member of the general public might not know what effect older at-fault crashes that occurred under the current</p>



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Question Number	Question	Response
	<p>1, 2027. This is to phase customers into the new rate design and ensures that older at-fault crashes do not unexpectedly have impact on future premiums.”</p> <p>If it was within ICBC’s discretion to have filed an RDA any time within the last six years, isn’t it conceivable that prior at-fault crashes might have adversely affected some drivers’ premiums? Didn’t ICBC’s 2012 Customer Consultation and Engagement clearly indicate that premiums for approximately 2/3 of BC drivers could go up to reflect their driving records? If so, how is it reasonable to assume that such impacts in 2019 could be unexpected?</p>	<p>rate design (which follow the vehicle) would have on premiums under the new rate design (which follow the driver).</p>
TREAD.13.1	<p>BCUC ORDER G-156-17 Appendix A, pp. 1-2 RATE DESIGN</p> <p>“ICBC rate design refers to how ICBC structures its insurance premiums according to risk characteristics, including rating variables such as the Claim-Rated Scale, rate territories and rate classes. ICBC’s Basic insurance rate structure exists within the public policy and legal framework set out by the provincial government. In its 2013 Revenue Requirements Application Decision, the Commission requested ICBC provide an update of its plans around a Rate Design application by no later than December 31, 2015. In its December 2015 and June 2016 letters to the Commission, ICBC submitted that resources, systems and other considerations affect the timing of rate design plans. ICBC was continuing to work with government and was exploring the potential for filing aspects of rate design in late 2016 and/or 2017.”</p> <p>Please provide copies of ICBC’s letters to the BCUC sent in December 2015 and June 2016 regarding its plans for rate design, both of which were relied upon and referenced in BCUC Order G-156-17.</p>	<p>Please see Attachment A – <u>ICBC’s Letter to the BC Utilities Commission: Update on ICBC's Rate Design Plans dated December 24, 2015</u> Please see Attachment B – <u>ICBC’s Letter to the BC Utilities Commission: Update on ICBC's Rate Design Plans dated June 30, 2016</u></p>



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December 24, 2015

British Columbia Utilities Commission
Sixth Floor
900 Howe Street
Vancouver, BC V6Z 2N3

Attention: Ms. Erica Hamilton, Commission Secretary and Director

Re: Update on ICBC's Rate Design Plans

Dear Ms. Hamilton:

This letter responds to the Commission's May 14, 2014 Decision on ICBC's 2013 Revenue Requirements Application, which requested ICBC to provide, "... an update of its plans around a Rate Design Application as part of its 2015 Revenue Requirements Application or by way of a separate filing no later than December 31, 2015."¹

ICBC explained during the Oral Hearing on 2013 Revenue Requirements that, given resourcing and other considerations, it made sense to move ahead with its new Policy Administration System (PAS), and that it would not be in a position to move ahead on rate design until after the new PAS was implemented and stabilized. ICBC advised that, "Our best estimate at this time is it'll be end of 2015" but, "that is just a best estimate at this point in time. Things can happen."²

The development phase for the new PAS was completed earlier this year. At that time, given the importance of building a PAS that accurately reflects the unique and, at times, complex nature of ICBC's business, ICBC extended the schedule to accommodate more time to test and stabilize the system, moving implementation of the new PAS from late 2015 to 2016. This change has been communicated to ICBC staff, brokers, and other stakeholders, as well as the Commission.

While still facing systems and other constraints, ICBC is working with government and is currently exploring the potential for filing aspects of rate design in 2016. Resources, systems, and other considerations will affect timing, and ICBC will update the Commission regarding its plans as soon as practicable, but no later than the end of Q2 2016.

Yours truly,

June Elder
Manager, Regulatory Affairs

Cc: Steve Yendall, Vice President, Insurance and Driver Licensing, ICBC

¹ Decision on 2013 Revenue Requirements, pages 51 and 55.

² 2013 Revenue Requirements Proceeding, Oral Hearing Transcripts, (Vol. 7, p.1104).



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June 30, 2016

British Columbia Utilities Commission
Sixth Floor
900 Howe Street
Vancouver, BC V6Z 2N3

Attention: Ms. Laurel Ross, Acting Commission Secretary and Director

Re: Update on ICBC's Rate Design Plans

Dear Ms. Ross:

This letter is further to ICBC's December 24, 2015 letter to the Commission regarding rate design, in which ICBC advised that it would provide an update to the Commission regarding its rate design plans by no later than the end of Q2 2016.

In its December 2015 letter, ICBC reiterated its explanation from the Oral Hearing on 2013 Revenue Requirements that it is working to implement its new Policy Administration System (PAS), and will not be in a position to move ahead on rate design until after the new PAS is implemented and stabilized. ICBC has adopted a multi-release implementation plan for the new PAS, with initial launch dates targeted for August 2016 and subsequent releases and stabilization thereafter.

While resources, systems, and other considerations will affect timing of rate design plans, ICBC is continuing to work with government and is exploring the potential for filing aspects of rate design later in 2016 and/or 2017.

ICBC will continue to keep the Commission apprised of its rate design plans by providing further information and updates.

Yours truly,


June Elder
Manager, Corporate Regulatory Affairs

Cc: Nicolas Jimenez, Vice President, Insurance and Driver Licensing, ICBC