ICBC Revenue Requirements 2014

14952 - 95A Avenue
Surrey,
British Columbia.
V3R 7T6
$21^{\text {st. }}$ October 2014

## Ms. Erica Hamilton

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

## Dear Ms Hamilton,

Re: Insurance Corporation of British Columbia
2014 Revenue Requirements Application
Project No. 3698796
Further to Commission Order G-155-14 with respect to the above noted Application, please find enclosed my Information Request No. 1.

Kind regards,


Richard T. Landale
Enclosure
cc: Registered Interveners

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## EXHIBITS

| EXHIBIT RTL IR\#1-1 | COMPARING CANADIAN CPI TO ICBC BASIC INSURANCE <br> RATES |
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| EXHIBIT RTL IR\#1-2 | CPP AMOUNTS and the CONSUMER PRICE INDEX |
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## ACRONNYMS

| ALAE | Allocated Loss Adjustment Expense |
| :--- | :--- |
| BC | British Columbia |
| BCUC | British Columbia Utilities Commission |
| B.E.V.P. Yr | Basic Earned Vehicle Premium Year |
| BI | Bodily Injury |
| BIR | Basic Insurance Premium Rate |
| CAGR | Compound Annual Growth Rate |
| CPI | Consumer Price Index |
| CPP | Canada Pension Plan |
| EPP | Insurance Company of British Columbia |
| ICBC | International Finance Reporting Standards |
| IFRS | Informational Presentation Slide 13 (PowerPoint). |
| IP Slide 13 | Kind of Loss |
| KOL | Loss Cost Forecast Variance |
| LCFV | Legal Representation |
| LR | Minimum Capital Test |
| MCT | Matters of Interest |
| MOI | Order in Council |
| OIC | Policy Year |
| PY | Revenue Requirement Working Session |
| RR |  |
| RWS | ULAE |

## ICBC 2014 REVENUE REQUIREMENT APPLICATION IR \# 1 <br> From Intervener C1 - Richard T. Landale

## 2014 RTL IR1-1

## Discussion:

The following spreadsheet and graph have been copied from information provided by ICBC in the 2014 RR BCOAPO.MOI.1.2.2 - Response to Information Request 2013.1 RR BCUC.60.2 Quote: The Basic MCT ratio further decreased in 2011, to $115 \%$, as Basic equity decreased by $\$ 385$ million; etc
60.2

The Basic MCT for each year-end since 2003 in graph format is as follows:


The Basic MCT for each year-end since 2003 in tabular format is as follows:

|  | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| MCT Actual (CGAAP) | $22 \%$ | $42 \%$ | $79 \%$ | $107 \%$ | $136 \%$ | $141 \%$ | $162 \%$ | $165 \%$ |  |
| MCT Actual (IFRS) |  |  |  |  |  |  |  | $153 \%$ | $115 \%$ |

Now's the tricky part of the question.... If according to ICBC \$385 from 2010 MCT@153\% down to 2011 MCT $115 \%$, then it is assumed $38 \%$ is equal to $\$ 385$ million, or $1 \%$ is equal to $\$ 3.85$ million.
Question -1: Will ICBC please confirm the following MCT dollar values extrapolated from the previous assumptions ? (calculation $=\$ 3.85 \mathrm{X} \mathrm{MCT}$ )

| YEAR | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| MCT ACTUAL <br> (CGAAPO) | $22 \%$ | $42 \%$ | $79 \%$ | $107 \%$ | $136 \%$ | $141 \%$ | $162 \%$ | $165 \%$ |  |  |  |  |
| MCT ACTUAL <br> (IFRS) |  |  |  |  |  |  |  | $153 \%$ | $115 \%$ | $137 \%$ | $149 \%$ | $145 \%$ |
| \$ MCT millions | 84.7 | 161.7 | 304.2 | 411.9 | 523.6 | 542.9 | 623.7 | 589.1 | 442.8 | 527.5 | 574 | 558.3 |

Question -2: Referencing Figure 11A.2, Year 2010 and Footnote 6 therein., for the purposes of clarity and relevant calculations, which MCT percentage rate is valid going forward ? I have used IFRS.

## 2014 RTL IR1-2

Discussion: Let us assume the figures in the above table are acceptable to the following three questions. (it is expected ICBC will correct the values).
It is also accepted BI as a leading contributor along with rising Legal Fees to the Loss Cost Variance, combined are the leading contributors to the rising MCT levels.
Assuming a ratio of One claim ( $1-\$ 10$ million) for shall we say total human incapacitation (totally paralyzed from the neck down) as a result of a vehicle accident. With a claim duration of 15 years starting in 2013, with a judgment award of $\$ 10$ million.
ICBC Exhibit A.1.0, General Expenses are detailed in paragraph 12 ( payment schedule increments of: 1/32 - first quarter, $7 / 32$ fourth quarter and so on).
Given the judgment award and these General Expenses schedule, there is presumably an impact on the MCT levels above 100\% MCT to $130 \%$ level, and further impact on the rate smoothing range to $145 \%$.
Question -1: Will ICBC please provide a spreadsheet to explain this scenario, giving year range, payout range and dollar values. The spreadsheet should demonstrate the impact this claim will have over the next 15 year payout on the MCT ?
Question -2: Will ICBC please demonstrate using this scenario in relation to the 3.2 million BC Insurance Policies and the MCT ? Typically how many catastrophic claims does ICBC manage year to year from 2003 to 2013 inclusive ? From this reply I intend to compare ICBC response in a spreadsheet to Figure 11A. 2
Question -3: How will ICBC predict the CPI (Fed. Stats Canada version please) impact on this claim looking forward, and what do they actuarially estimate is the employed capital reserve over the 15 year claim period. Again please demonstrate in a spreadsheet with dollar values ?
Question -4: What will happen after the money runs out in 15 years, in the $16^{\text {th }}$ year and for the remainder of this person's life ? Does ICBC abandon this person?

## 2014 RTL IR1-3

Discussion: Moving to Slide \#13 from the Informal Presentation meeting. ICBC provides an example of the average Loss Cost = Frequency x Severity (\$600=(15/1000)x \$40000). Great ! Since I was expecting ICBC to provide a transcript, I cannot remember the context of the following text copied from slide 13: "> Approximate loss cost of bodily injury coverage" So I am going to make the best guess possible before framing my question.
Using the base numbers from IR questions IR1-1 and IR1-2.
In the year ending for PY2013 the value of the MCT was $\$ 573.7$ million. With the average Severity claim of $\$ 40,000$ (IP Slide 13), this suggests to me ICBC is managing through the MCT provisions some 14,343 average claims. So prior to 2013 it follows ICBC had some 10,530 claims annually under management. (an average of 2003 to 2012 from spreadsheet).

| YEAR | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| MCT ACTUAL <br> (CGAAPO) | $22 \%$ | $42 \%$ | $79 \%$ | $107 \%$ | $136 \%$ | $141 \%$ | $162 \%$ | $165 \%$ |  |  |  |  |
| MCT ACTUAL (IFRS) |  |  |  |  |  |  |  | $153 \%$ | $115 \%$ | $137 \%$ | $149 \%$ | $145 \%$ |
| \$ MCT millions | 84.7 | 161.7 | 304.2 | 411.9 | 523.6 | 542.9 | 623.7 | 589.1 | 442.8 | 527.5 | 573.7 | 558.3 |
| Average \# of Claims | 2118 | 4043 | 7605 | 10298 | 13090 | 13573 | 15593 | 14728 | 11070 | 13188 | 14343 | 13958 |
| Average Cost of <br> Claims | 40000 | 40000 | 40000 | 40000 | 40000 | 40000 | 40000 | 40000 | 40000 | 40000 | 40000 | 40000 |

Question -1: Will ICBC please "CORRECT" this spreadsheet over the given year range, payout range and dollar values. Or provide a more informative spreadsheet that also looks forward with respect to rate indication and MCT impact. So that the number of annual claims can arithmetically make sense, with dollar values, not percentage values ?
Question -2: The above table does not account for Legal Costs, rising medical care costs in all of its forms, physical, medical procedures, mental, rehabilitation. Please also add these comments to the spreadsheet?

Question -3: ICBC's response should illuminate "All" the collective components over the 2003 to 2014 year range effects on the MCT, and how these effects impact the $100 \%, 130 \%$, $145 \%, 150 \%$ and $160 \%$ MCT benchmarks, rather like a time line, but with real dollar numbers. It is impossible to elicit this detail from the actuarial exhibits filed?
Question -4: If the Chair, Commission Panel and/or the BCUC Staff can answer this series of questions on the MCT., I believe that would be highly illuminating ?

## 2014 RTL IR1-4

Discussion: To review the Canadian Federal Consumer Price Index (CPI) and ICBC's Basic Insurance Premium Rate (BIR) over the years 2004 and 2014 inclusive.
In ICBC's reply to 2014 RR RL.MOI.2.1 - ICBC's 2013 Revenue Requirements Application Rebuttal Evidence of ICBC to Mr. Landale, page 194 to 198 incl:
On page 194, I have copied the following as it is "Still" the reasons for these "IR" questions: PREFACE
The prima facie of this evidence is to annunciate the disenfranchisement under law between the inequities of the Canada Pension Plan (CPP), the Canadian Consumer Price Index (CPI), the British Columbian Government Order in Council (OIC) directives, the British Columbian Utilities Commission (BCUC), and the Insurance Company of British Columbia (ICBC), in regard to British Columbian Senior citizens on limited fixed incomes.
Again I understand the legislative framework ICBC must work within. And yes I am a Senior who happily takes benefit from the additional Senior discount of $25 \%$ on Basic Insurance Premium. What about other retired seniors in the age range of 60 to 64 ?
On page 196, ICBC says:
ICBC cannot speak to, or answer for, any perceived "inequities" of the Canada Pension Plan as these are matters for government.
I could not have coined a better "SNUB" if I tried. (underline for effect).
I made a mistake last year by talking about CAGR rates, and I congratulate ICBC for picking up on that. The comparatives ICBC makes in response at the bottom of MOI's page 196 is a real kicker..! to me and every senior in the Province, I'll explain in a moment.
But before I do explain, ICBC continues to miss the monetary point I am making. There is a huge difference between "Percent" increases and real "Dollar" increases in Basic Premium Rates year to year.
So I used part of ICBC's reply on pages 196, 197 and 198 to develop my exhibit RTL IR\#1-1, attached herein.
The top graph provides the ICBC "Figure 1 - Compound Annual Growth Rate in Basic Insurance Rates and CPI". From the graph titled "Basic Insurance Rates and CPI", the CPI (red line) appears relatively consistent over the time span. While ICBC BIRate (blue line) reflects a much wider range of extremes between $-2.4 \%$ and $11.2 \%$ over the same time span. So it is clear the inference ICBC claims in Figure 1, that the CAGR is relative is most misleading, and a distortion of reality in the terms of BC Seniors and dollars in their pocket. To clarify and underscore this point I created the second graph titled "BIRate verses CPI and Span", with the actual dollar values in each category, and added a Span (green line) to clearly express the dollar range difference between the CPI and ICBC BIRates over the time period.
Question 1: Will ICBC please confirm and update or correct the numbers given in exhibit RTL IR\#1-1 for the record.

Question 2: Will ICBC please tabulate in the same context as exhibit RTL IR\# 1-1 ? the following discussion.

Discussion: This text is an extract taken from ICBC MOI responses page 196.
As indicated in the response to the information request 2013.1 RR RL.4.7, claims costs (and specifically bodily injury claims) are the largest contributor to ICBC's Basic insurance rates. As explained in the Application, Chapter 3, page 3-11, prior to the recession the bodily injury frequency was declining at a rate ranging from $3 \%$ to $4 \%$ per annum. This offset the increasing bodily injury severity trend of approximately $6 \%$ so that the net effect for bodily injury claims overall was a $2.5 \%$ increasing trend which, combined with the other coverage's, is comparable to CPI inflation. However, since 2010 the bodily injury frequency trend line has flattened. This has resulted in the requirement for an increase in Basic insurance rates over the last two years causing the compound annual growth rate to be slightly higher than inflation since 2004 (2.3\% vs. 1.8\%).
In its response to 2013.1 RR TREAD.13.1, ICBC explains that factors that drive the cost of bodily injury claims do not have a meaningful relationship with the CPI AllItems index which is based on a market basket of goods and services.
Because there are no dollar numbers in this text, it is impossible to relate to real costs to reach a determination of the facts. This demonstrates ICBC have not answered either TREAD or my original question in a meaningful way. Everything comes down to "Dollars". Question 3: The point of these questions is to determine the differences between ICBC's Basic Premium Rate increases in "Dollars" to CPI in "Dollars", as it is dollars every person in British Columbia pays their Basic Insurance Premium in. Please prepare a spreadsheet with tabulated dollars and graph to represent these values?
Discussion: I think ICBC is mudding the waters. All goods and services bought by consumers are in "Dollars". The "INDEX" is an output from the original dollar input to create the index. Which is used to represent the CPI for each of the categories/items used within the index. For ICBC to distance itself from the CPI index in relation to Bodily Injuries and their escalating costs is ridiculous. ICBC says Bodily Injury claims are a factor, there must be a "Dollar" value to go with that factor. A dollar is a dollar, and so Goods and Services are purchased in dollars, not percentage points. Reporting these goods and services are later converted into statistics, where indexes are produced, and percentage relationship made. So logically actuarial history and forecasting are based on "Dollars", indexes, tables, factors and so on. Then the waters get seriously mudded by the creation of approved actuarial models, which are used to create $\qquad$ ICBC RRA's.
Question 4: Will ICBC please provide a "Dollar" foundation spreadsheet representing Bodily Injury Claims verses the MCT levels discussed above with the corresponding annual CPP dollars. Also providing a graph representing these values?
For ICBC's information they can contact the Federal Stats Canada CPP to obtain the historical maximum pensions payable for the years 2003 to 2014 inclusive.
The CPI index is used to determine the CPP rate increases year to year, set in January of each year. The formula used by the Federal Government, to repeat this information is provided in exhibit RTL IR\#1-2
Discussion: During the Informal Presentation and the RWS many references were made in relation to the "Bucket" of Goods and Services used to determine the CPI. Ms. Minogue made it abundantly clear in both meetings, ICBC's "Bucket" of Goods and Services is different to the Federal CPI "All Items" Table 5 (unadjusted), and Table 6 (seasonally adjusted). ICBC further indicated comparisons between the Federal CPI and the BC CPI in their MOI response: 2014 RR RL.MOI.2.1 - ICBC's 2013 Revenue Requirements Application - Rebuttal Evidence of ICBC to Mr. Landale, as per following extract:
the November 2013 CPI for Canada relative to 2002 (Index of 100) is 161.4. The equivalent number for November 2013 CPI for BC is 138.9 as can be seen in Table $9-10$ on page 38. This information is summarized in Figure 2 and indicates that overall the growth in vehicle insurance premiums ${ }^{1}$ is lower in BC in comparison to the rest of Canada.

Figure 2 - CPI for Passenger Vehicle Insurance Premiums

|  | Canada* | BC* |
| :---: | :---: | :---: |
| $\mathbf{2 0 0 2}$ | 100 | 100 |
| $\mathbf{2 0 1 3}$ | 161.4 | 138.9 |
| $\mathbf{2 0 0 2 - 2 0 1 3}$ CAGR | $4.4 \%$ | $3.0 \%$ |

*Source: Statistics Canada Consumer Price Index November 2013 Tables 4-5 and 9-10
Question 5: Will ICBC please explain the rational in this Figure 2 and preamble why BC CPI and CAGR is relevant ? And why should the BCUC Commission consider this relevant, when Seniors who's CPP is pegged to the Federal CPI a valid point in their deliberations?
Discussion: I think I should thank ICBC for this point, ICBC completely missed my reasons for referring to my Medical Service Plan Premium, ( Postage Stamps and Gasoline, which was not discussed by ICBC).

Furthermore, Mr. Landale refers in paragraph 28 on page 8 of his evidence to an increase of $30.7 \%$ in his Medical Service Plan Premium from $\$ 1,152$ in 2008 to $\$ 1,506$ in 2014 (2007-2014 CAGR of $3.9 \%$ ). In the attachment to 2013.1 RR TREAD.13.1 ICBC explains that "it is not uncommon in the casualty insurance industry to observe health-care related liability costs increasing at a rate above general inflation." The CPI for "Health Care Services" in Table 4-6 on page 22 of the Statistics Canada report is 147.5 (2002-2013 CAGR of $3.6 \%$ ) compared to the overall CPI of 123 (2002-2013 CAGR of $1.9 \%)^{2}$
Question 6: Why is ICBC preoccupied at discrediting my evidence with their rebuttal, when the point was to draw attention to the BCUC Chair and Commission Panel the excessive burdens placed on Senior citizen's limited incomes? Shame, shame, shame.
Question 7: A direct question the BCUC Chair, Commission Panel and Staff, do you care, or have interest, or concern for the Senior citizens of British Columbia during you deliberations and in your final decisions? The Federal CPI is linked to the CPP, see exhibit RTL IR\#1-2. Question 8: Will ICBC please review exhibit RTL IR\#1-MOI. 2 and explain the "impact" of the Red Line titled RTL CPI (data table provided above right on exhibit) ?
I wish to thank Regulatory Affairs for providing me with ICBC native file so that this exhibit could be adjusted by me, following exactly ICBC's calculation process. It should be noted that the column titled "RTL CPI Growth" is calculated from the same table as ICBC namely, Stats Can Table 326-0020 Canada, not British Columbia as in ICBC's column named "BC CPI Inflation. This exhibit also leads into the next IR1-5.
(Upon request I can provide my native file for examination).
It follows that Senior CPP pensions are relatively parallel to the BC-CPI, while also demonstrating the inequity between the Federal, ICBC and BC CPI's. It also demonstrates ICBC has lost it's grip of their "Loss Costs" since 2009, rising unabated and out of control.

## 2014 RTL IR1-5

Discussion: If my understanding from the Informational Presentation and the MOI's, in particular 2014 RR RL.MOI. 2 ICBC response page 24, to quote as follows: (underlining for focus)

Please see the attachment 2014 RR RL.MOI.2.1 which is an excerpt from Exhibit B12 of the 2013 Revenue Requirements Proceeding - Rebuttal of ICBC to Mr. Landale for a discussion of this topic. ICBC's basket of claims is made up of different claims types represented by the different coverage's indicated in Exhibits D.1.1 and D.1.2 which aggregate to the loss costs in attachment 2014 RR RL.MOI.2.2. This is a chart of the growth in ICBC's loss costs in comparison to CPI. The loss cost data is the same as that presented in the Application, Chapter 3, Figure 3.3. The CPI data is from Statistic Canada as indicated and is applied to the 2004 loss cost as a baseline.

Where Bodily Injury (BI) along with rising Legal Representation (LR) costs seems to be a main focal point for ICBC. So first things first, turning to Exhibit D. 0 Description of Claims

Frequency and Severity models and other Exhibits and Figures. (For the sake of brevity I will address Plate Owner Coverage's, where applicable the comments are transferable to Commercial, Basic Manual and Garage coverage's).
Figure D. 1 and Exhibit D.1.1 are great tables, and the topic of this series of questions. I have prepared exhibits RTL IR\#1-D.1.1/1 and D.1.1/2. These four items are the basis for the questions.
Question 1 Will ICBC please explain the thread between Figure 3.3 and the accompanying paragraphs 30 to 33 inclusive, to Figure 3.4 and the number for PY2013 BI of $\$ 38,399$ given therein are not consistent with Exhibit D.1.1 Severity. Why is that?
Surely BI is BI , forecasting based on actual, or Model, or Forecasting should somehow be connected to Exhibit D.1.1.? Further I could not find any numerical data sheet to support Figure 3.3, will ICBC please direct our attention to the source numbers for this graph?

Comment to the Chair and the Commission Panel, ICBC's response to this MOI is the primary reason for the IR question. ICBC provided a short cut answer in the MOI with redirect that I cannot follow. What a waste of time. So far over 4 hours of my time on this one item.

Question 2 Exhibit IR\#1 D.1.1 lists what I understand from ICBC response in the MOI is the ICBC Basket of Goods and Services - CPI. The Pie Chart called - Category Average for PY2008 to 2013. From the table, copied from Exhibit D.1.1., I added the Average \$\$ Severity Column. The Pie Chart represents this Severity Average or Basket or CPI, for the year 2008 to 2013 inclusive. Will ICBC please confirm or correct this representation in a like manner?
Question 3 The remaining 3 graphs in exhibit RTL IR\#1 D.1.1/2 represent the 5 main components of ICBC Basket of Goods and Services. In of themselves there is no question, (they are just graphic representation of ICBC's original data). The questions arise when comparing these three graphs with the 3 graphs of the same name in exhibit RTL IR\# D.1.1/1. Could ICBC please explain why their severity modeling is so drastically different, graph for graph? And why is ICBC's forecast for PY2014 rising inclinations so opposite to historical averages, when in Figure 3.4 the corrected BI costs per policy was declining. ? - Flattening ! Examination of Section E and Exhibits were uninformative to explain my question, especially looking at Exhibit E. 4 - Loading for Bulk, KOL-37 Payments and Capped Large Claims. Is this part of ICBC's Basket of Goods and Services - CPI ?
Question 4 Finally could ICBC please explain my graph titled "\% Difference Between PY2013 and PY2014" copied from ICBC data. Surely there should be some connection to Figure 3.1 and the Rate Indication? The Average (trend) line added represents half of the Rate Indication, and seems quite appropriate and adequate to address ICBC needs for rate increase purposes in PY2014?

Comment: It is my understanding "Information Requests" should seek new information. During the MOI phase of this hearing ICBC choose to respond to many "like" questions with a global response. Given this format many of the following questions were never addressed or answered by ICBC, so as information goes now, ICBC's responses would constitute new information in this IR Phase of the proceedings.

## 2014 RR MOI. 1 (letter - 2014 C1-2.1, 2.2,2.3) starting on page 24

Please refer to my letter of September $17^{\text {th. }} 2014$ for the preamble and context to the question. Question was: : (there are two questions here).
2014 C1-2.2 Does ICBC dispute this representation in any fashion ? If so, please provide background, discussion and future perceived impacts of $1.5 \%$ Rate Smoothing looking forward? Especially in light of PY2015 and the elimination of Prior Rate Exclusion (+6.6) (Slide \#10 for example) ? Question was:: (there are two questions here).
2014 C1-2.3 Does ICBC dispute the representation of the Equivalent Premium Rate Change Low band rising \$835 a 73\% increase over 7 years ? and the Hi Band rising \$1,252 a 109.7\% increase over

7 years. In either case these increases far exceed normalized CPI forecasts ?
Question was: : (there are three questions here).
2014 C1-3.1 Does ICBC dispute this representation in any fashion ? If so, please provide background, discussion and future perceived impacts of $\pm 1.5 \%$ Rate Change Band Smoothing looking forward? Especially in light of PY2015 and the elimination of Prior Rate Exclusion (+6.6) (Slide \#10 for example) ? Question was:
2014 C1-3.2 What inhibits ICBC from following the Federal CPP/CPI index? What inhibits ICBC from adding the CPP/CPI index (actuarially if ICBC wishes) to the Figure 3.2 and sundry text within the PY2014 RRA. ? For discussion purposes please provide graphic examples for the upcoming Workshop September 26 ?
Question was:
2014 C1-3.3 Will ICBC please affirm or decry the need for an order by the BCUC to utilize the Federal CPP/CPI in this current and future applications.
2014 C1-5.4 Why is there a gap in the MCT levels between $145 \%$ and $150 \%$ ? To me ICBC has
"squeaked in another 5\% margin of capital". How many margins did IOC 153 and 560 approve ? What is the Capital value of this $5 \%$ ?
Question was:
2014 C1-5.5 Will ICBC please explain why they are contravening this directive in 2014PY, see Figure 3.2 line 6, and in regard to this 5\% differential referred to above.?

Question was: : (there are two questions here).
2014 C1-5.6 Does ICBC dispute this representation in any fashion ? If so, please provide background, discussion and future perceived impacts of the MCT levels for Rate Smoothing looking forward ? Question was:
2014 C1-7.1 Looking at Figure 3.1 - PY 2014 Basic Insurance Deficiency (\$000's), can it reasonably be said $\$ 130,003,000$ is equal to $\$ 25,000,576.92$ or $1 \%$ ? Can it be said 3.2 million BC Basic Policy holders premiums will on average increase by $\$ 40.63$ ? ICBC answer was: The average rate increase for all policyholders including those owning trailers is $\$ 37.30$. Does ICBC dispute this representation in any fashion? If so, please provide background, and discussion, and even a table to represent exactly how many policy will be affected and by exactly how much on average. ICBC did not respond to this portion of the question ? Question was:
2014 C1-7.2 Does ICBC think it appropriate to continue to outpace the abilities of Seniors in the Province of British Columbia ability to pay, when their CPP increased in January 2014 by 0.9\% ? ICBC's Basic premium increase of $5.2 \%$ is 5.777 times their CPP increase !
Question was: (there are two questions here).

## 2014 RTL IR1-6

Discussion: I have to ask, in my review of Section E, I came across Exhibit E. 4 Under the 5 main categories, which I understand is ICBC's CPI basket of goods and services Exhibit C.9.0 provides this reference, which basically I do not understand, quote:
"6. Exhibits C.9.3.8 to C.9.3.10 - Kind of Loss (KOL) Development method - The method separates the case incurred loss and ALAE by KOL then multiplies those amounts by each coverage's Commercial Autoplan implied development factors". (underlining added for focus).

Question 1: What is "Loading for Bulk, "KOL-37" Payments and Capped Large Claims" ? And how does this connect with the Basic Premium Rate increase of $5.2 \%$ ?

This leads to IR1-7 as follows:

## 2014 RTL IR1-7

Discussion: I have to ask for some leighway on this question. The premise for asking these questions is understanding the relationship between the Basic Premium Rate increase application for $5.2 \%$, and the "Optional Insurance Coverage's" given in the following ICBC exhibits.
After reading Exhibit C.9.0 para 1, I started following Exhibit C.9.3.8, 9.3.9, 9.3.10. In reading the 9.3.10 footnotes, I noticed this reference to "Optional Coverage's", quote: "(5) to (7) LDFs from ICBC Optional insurance coverage's"
Columns (5) to (7) are Collisions, Specified Perils and Windshield respectively.
Exhibit C9.3.8, is used as input data to Exhibit C.9.1.1 columns.
Question 1: Why is Optional Insurance coverage's (Collision, Specified Perils and Windshield) in this Basic Premium Rate increase application?
Question 2: Can columns (5),(6) and (7) be removed from all columns in Exhibits C.9, ? If not, why not?
Question 3: Exhibit C.9.1.1 column (8) is the sum of columns (1) to (7). For PY 2013 this value is $\$ 40,179,000$. That value is carried forward to Exhibit C. 10.5 to contribute to the value for ULAE Percentage of $9.4 \%$. By removing columns (5),(6) and (7) in question 2 above, does this have an impact on reducing the Basic Premium Rate increase application for $5.2 \%$ ? Question 4: In Exhibit C.9.1.2 column (6) \& (7) the value $\$ 40,179,000$ appears, by reducing this value subject to question 2 above, what impact does this have on reducing the Basic Premium Rate increase application for $5.2 \%$ ?
Question 5: Are these columns (5),(6) and (7) correctly accounted (split or assigned) for in the Allocation Tables between Basic and Optional ?

## 2014 RTL IR1-8

Discussion: On September $18^{\text {th }}$ ICBC submitted their Errata, almost immediately I recognized some key areas of concern. Further research into ICBC's zip file disclosed key operator errors. These errors suggest to me that ICBC Actuaries and support staff have made serious errors on at least 105 spreadsheet/worksheets. This begs the question, where else ? Without the native files, Chapter 3 exhibits will remain a clouded mystery .....?? Although I do not need an answer from ICBC, I would like to know the appropriate understanding the public should have from D. 12 Filing Actuary's Opinion, and D. 13 Reviewing Actuary's Opinion.

The following are a few more examples from Letter September $29^{\text {th }}$. 2014 Intervener exhibit C1-5

Question 1: The attached RTL Exhibit B.3.1 is yet another example of ICBC's questionable totalizing in exhibit spreadsheets. See hi-lighted numbers. It should also be noted these number errors are in the millions. I am not qualified to properly investigate ICBC exhibits, (in fact I do not have access to the native files) but I do think the BCUC should be paying more detailed attention. (the devil is in the detai).
Question 2: In Chapter 3 Exhibits B.0.2 page 1 Description of the Average Premium Model, then referencing Figure B. 4 695.02 Personal TPB and UMP Forecast Average Premium. I could not verify the source of $\$ 695.02$ average premium, beyond a nonlinear trend line in Figure B. 5 which aligns with PY 2015, not PY 2014 See comments hi-lighted in Figure B.5. Question 3: In addition by following the Exhibits B.1.1 and B.2.1 and various notes, to my surprise ICBC did not select the Stats Can CPI for the midpoint PY 2014 of April. In fact I believe Ms. Minogue told us during the Informal Presentation following a direct question from me, ICBC has it's "Own" CPI bucket, and does not use the Stats Can CPI bucket, as reported in Exhibit B.2.1 What is going on here ? It happens to be important as in the Notes; (a) specifically refers to, quote "the midpoint of policy year 2014", see "Exhibit B.2.1 and B2.2 for compositions of the selected models".

Question 4: What is the "Correct" information acceptable to the BCUC and the Commissioners ? Furthermore, this begs the questions, What CPI bucket did the BCUC approve and when for use in ICBC models? And has ICBC used this approved CPI bucket properly. ? In previous years and in this PY 2014 ?

## 2014 RTL IR1-9

Discussion: To avoid a huge essay to outline my concerns with the Customer Renewal Credit (CRC), I have prepared my limited understanding of the CRC program, and Draft Tariff Appendix 4A, around my exhibit : RTL IR\#1-4
I am generally unable to reconcile the discussion by ICBC in chapter 4 with the exact wording given in the Draft Tariff Appendix 4A. So my questions try to focus on specifics and by way of exhibit RTL IR\#1 4.1, plus referral to the ICBC Basic Insurance Tariff.
Question 1: Using exhibit RTL IR\#1-4 will ICBC please add their MCT / CRC eligibility criterion as approved by the BCUC last year? (for the life of me I cannot formulate a spreadsheet based on any scenario discussed in this chapter). It would be helpful in my understanding for ICBC to demonstrate the $130 \%, 145 \%, 150 \%, 155 \%, 160 \%$ and $165 \%$ MCT bench marks ?
Question 2: In Figure 4.2 why is the eligibility period ahead of the CRC order effective date May1 $1^{\text {st. }} \mathrm{Yr} 2$ 2) by some 16 months ? I could not find a reason, or specified / approved timeline by the BCUC in reading Chapter 4 Section A - Introduction, or Section B - Framework for CRC Application and Approval, or in the Appendix 4A. In Section C.2.2 para 22 cannot be tabulated to demonstrate a response, hence the question?
Question 3: In Section C.2.1 para 20, ICBC discusses their option for the eligibility period on an annual fiscal bases (January to December). This does not make real sense since every BC Customer has a Policy Year that spans " $X$ " period in duration, to a maximum time of 12 months. So once the BCUC makes its final decision on Appendix 4A, the eligibility period could be retroactive by up to 12 months. Where ICBC has the Basic Earned Vehicle Premium Year (B.E.V.P. Yr) on file. So will ICBC please discuss their objections to this alternative, or options for the BCUC and Commission Panel to decide on?
Discussion: Referring to Figure 4.2, the "Redeemable Period" should not be defined in this manner, again since the Basic Policy holder renews their insurance at the "Next" anniversary date, which is when the CRC should be applied to reduce the customer's insurance premium payable at that time.
Question 4: Will ICBC please discuss all the issues to the BCUC ordering the "Redeemable Period" at the next insurance policy renewal anniversary date, or the termination date of the insurance policy, or the transfer of the insurance policy to another vehicle within the existing insured period?
Question 5: Referring to Figure 4.3 ICBC left out the interconnect to the MCT (trigger range), which would have given meaning to the $\$ 110$ million, the MCT $4.8 \%$ calculation and "Rate Smoothing". Will ICBC please demonstrate the 130\%, 145\%, 150\%, 155\%, 160\% and 165\% MCT bench marks to this illustrative value ?
Question 6: Following along from question 5, will ICBC please demonstrate the "Rate Smoothing" impact conditions and calculations / formula that will assist the BCUC in their determination for their approval of the CRC tariff - Appendix 4A ?
Question 7: Referring to Figure 4.4, and exhibit RTL IR\#1-4, if a BC Customer has say, Two Cars, One Truck, One Motor home, and a Utility Trailer, is it correct to say this customer would have " $\$$ Earned Premium Policies" (EPP) to sum for their CRC Data or ( $\$ 3,420 \mathrm{x}$ CRC\% = \$164.16 renewal credit) ?
I realize questions $8,9,10,11 \& 12$ presume the BCUC will approve the CRC Schedule as drafted. It is hoped ICBC will respond based on their best expectations of the draft proposal. Question 8: Referring exhibit RTL IR\#1-4 will ICBC please correct or develop their version of this CRC Calculator for illustrative purposes, taking into account Appendix 4A Schedule $X$ (Draft), and all preceding 7 questions ?

Question 9: Just to be clear, the CRC once approved by the BCUC will be added to the ICBC "Basic Insurance Tariff dated June 1, 2007" and amendments. In particular Section "2.O" page 41 ? Can ICBC please confirm whether there are any other ACTs, Regulations, Tariffs or Schedules requiring amendments to accommodate this CRC ?
Question 10: Section 2.H. 1 (d) and (e) Refunds of the "ICBC Basic Insurance Tariff", will ICBC hold back the $\$ 30.00$ from the CRC at renewal time? How will this be harmonized in the new CRC Schedule? My concern is Section 5.1 of the CRC Draft Schedule.
Question 11: With reference to exhibit RTL IR\#1-4, and the two vehicles renewal dates given therein, how will Section 5.2 of the CRC Draft Schedule work ? Please be specific. Or put another way:
Question 12: Section 5.2 of the CRC Draft Schedule suggests there is a pre-existing condition for an insurance policy being ineligible for a CRC amount within the eligible period. Will ICBC please describe the scenario in which this clause exists, and demonstrate that period using Figure 4.4?
Question 13: I am concerned with the wording (possible conflict) in the CRC Draft Schedule with authority or priority, or leading interpretation between the CRC Draft Schedule text and the ICBC "Basic Insurance Tariff dated June 1, 2007" document, in particular "Table B2 Numeric Equivalents for Year 2" ? Even though Section 5.1 would seem to be the controlling authority? Again my wife and I have two anniversary dates.
Question 14: Section 4.1 of the CRC Draft Schedule says, quote: "ICBC will calculate each Eligible Customer's CRC Amount and will apply the CRC Amount to reduce the Basic insurance premium payable by the Eligible Customer for a Renewal as set out in this Schedule". What schedule ? there is no table, calculation or formula given in the CRC Draft schedule.?
Question 15: During the MOI phase of these proceedings ICBC responded, quote:


## MATTERS OF INTEREST

Review Working Session, September 26, 2014

| Matter of Interest \# | Question/Request | Response |
| :---: | :--- | :--- |
| 2014 RR RL.MOI.6 | Please explain any errors in Mr. Landale's present value <br> (Letter - 2014 C1-7.3) <br>  | Please see the attachment 2014 RR RL.MOI.6. |
| A.1.1. |  |  |

In my MOI I presented several discussion points and two questions, 2014 C1-6.1 and 6.2. as demonstrated ICBC did not answer these questions. So I am restating them now ? And I do not understand their MOI response given above?
Question 16: For the sake of clarity and after reading (or attempting to) the BCUC Decision for PY2013 RRA, will ICBC please update the following table to the current PY2014 RRA ?

|  |  | ICBC Proposal | Commission Terminology | Consideration Criteria |
| :---: | :---: | :---: | :---: | :---: |
| 1 |  | \% MCT, <br> ulatory Minimum | Statutory Minimum | Required by Special Direction IC2 |
| 2 |  | \% Margin, acy Target. | Margin for adverse events | Subject to Commission determination |
|  |  | Auditional Nivargin Smoothing Margin | Any additional margin consistent with relatively stable and predictable rates |  |
| 4. $145 \%$ MCT <br> 5. $15 \%$ CRC <br> 6. $160 \%$ MCT Ceiling ? <br> 7. $7-8 \%$ CRC Administration |  |  | Capital Management Target |  |
|  |  |  | "well in excess" of capital management target | CRC Administration should not cause MCT to fall below $150 \%$ MCT for rate |
|  |  |  | CRC Administration |  |

I could not figure out the BCUC decision for the \$25.00 7-8\% CRC Administration, in terms of this table and the $\$ 30.00$ referred to in Question 10 above.

I know this is futile, but this CRC is an undemocratic, unrepresented institutional tax grab.!!, propagated by ICBC potentially worth 3.2 million BC policy holders times $\$ 25.00=\$ 80$ million.

Question 17: Referring to Section B. 1 paragraph 14 and footnote 2, and Section 11A 2013/1 RR BCUC.82.4. What is the new calculation for PY2014 ? Essentially I do not understand the arithmetic to be used in establishing the "Outlook Capital Required" (\$1.1 billion)
Question 18: Referring back to "Figure 4.1 - Calculation of the CRC amount using Illustrative Outlook MCT Information" and Section B. 1 paragraphs 10,11,12 and 13. Will ICBC please revise this illustration using the MCT values as at the end of the PY2014 second quarter ?

## 2014 RTL IR1-10

Discussion: The following table has been copied from the BCUC Information Request 1 page 24.
The reference to CPI seems contrary to the Federal Stats Canada Tables 5 or 6 in Statistics Canada - Catalogue no. 62-001-X
Question 1: Will ICBC please discuss the differences of their CPI and Stats Canada's for the purposes of the BCUC question, and the following table?
Question 2: In completing the BCUC question, will ICBC please also add the CPI from Stats Canada Table 5, and demonstrate the various differences in the table below?
Question 3: with this table updated, how will the annual Cash Return impact the PY2014 Figure 3.2 Indicated Rate Increase ?
46.3 Please complete the following table for the last 5 years.

| Date <br> (Dec. 31, 20XX) | CPI | Risk Premium | Forecast Yield = <br> CPI + Risk Premium | Annual Cash on <br> Cash Return |
| :--- | :--- | :--- | :--- | :--- |
| 2009 |  |  |  |  |
| $\ldots$ |  |  |  |  |
| 2011 |  |  |  | $7.76 \%^{1}$ |
| 2012 | $1.74 \%^{1}$ | $4.25 \%$ | $5.99 \%$ | $7.76 \%$ |
| 2013 | $1.95 \%$ | $4.25 \%$ | $6.20 \%$ | $7.31 \%$ |

## 2014 RTL IR1-11

Discussion: The following table was copied from the ICBC website.
From an arithmetical point of view the "Combined" data does not match the "Basic Insurance" summed with the "ICBC Optional Insurance". So it is not clear what the "Combined" data actually represents. The following questions are derived from exhibit RTL IR\#1-5

Average B.C. insurance rate changes for all vehicles (2004 to 2013)
We're committed to providing customers with the best insurance coverage at the lowest possible price.

| Basic Insurance |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2013 | 2012 | 2011 | 2010 | 2009 | 2008 | 2007 | 2006 | 2005 | 2004 |
| $5.2 \%$ | $11.2 \%$ | $0.0 \%$ | $-2.4 \%$ | $0.0 \%$ | $0.0 \%$ | $3.3 \%$ | $6.5 \%$ | $0.0 \%$ | $0.4 \%$ |
| ICBC Optional Insurance |  |  |  |  |  |  |  |  |  |
| 2013 | 2012 | 2011 | 2010 | 2009 | 2008 | 2007 | 2006 | 2005 | 2004 |
| $-4.0 \%$ | $-6.0 \%$ | $0.0 \%$ | $-3.0 \%$ | $-3.3 \%$ | $-3.0 \%$ | $-3.8 \%$ | $0.0 \%$ | $-7.6 \%$ | $0.4 \%$ |
| Combined |  |  |  |  |  |  |  |  |  |
| 2013 | 2012 | 2011 | 2010 | 2009 | 2008 | 2007 | 2006 | 2005 | 2004 |
| $1.4 \%$ | $3.6 \%$ | $0.0 \%$ | $-2.7 \%$ | $-1.4 \%$ | $-1.2 \%$ | $0.2 \%$ | $3.7 \%$ | $-3.4 \%$ | $0.4 \%$ |

Question 1: Will ICBC please explain the definition of the "Combined" data, and why the arithmetic is not the sum of the Basic and Optional Insurance ? It would be helpful of ICBC to explain and provide the source data for the "Combined" data, and the reasons for the +/- data for each year, considering the next three questions.
Question 2: Referring to exhibit RTL IR\#1-5, the convergence between the years 2010 and 2011 of the Basic, Optional and Combined insurance rates needs explanation, in as much as a period of "Stable and Predictable" rates, even the preceding years 2008, 2009 would suggest "Stable and Predictable" rates ? It would be helpful for ICBC to explain and characterize this summation? Please make reference to the MCT levels in this response.
Question 3: Starting at year 2004 the Basic, Optional and Combined insurance rates track in parallel to year 2008, and implode by 2010. Then explode apart from 2011 to 2012, and implode again by 2013. ICBC has offered various explanations in this current RRA for the Basic Insurance business, it would be helpful for ICBC to explain and characterize this summation?
Question 4: The period between 2004 and 2010, for each year when summed almost equal the Basic Insurance Rates for that year, is this a coincidence ?, if so please explain, and in not, please explain?
Question 5: In the exhibit I have added the Federal Canada CPI for those years from Stats Canada from Table 5. Does ICBC agree the CPI shown is a fare representation and comparison to ICBC Insurance Rate increases? If not, why not?
Question 6: There is no obligation for ICBC to respond to this question, but again it would be helpful to understand why ICBC choose not to share this type of information within the 2014 RRA, say in Chapter 11A Section D Historical Information (say figure 11a.3) along with other corporate information given in Figure 11A.2, but relegate this table to ICBC's website?

## 2014 RTL IR1-12

Discussion: If it were not for the claiming words of a financial advisor friend I discussed the next exhibit with, my level of trust and confidence would be sky high, I will settle for hi alert.! ICBC is not "Building Trust, Driving Confidence"
For me anyway, when I compare exhibit RTL IR\#1-6, which are various figures and text from PY2011, PY2013 and PY2014 RRA's for various investment assets new money rates of return and yields. Perhaps the BCUC can find a synergistic investment stream over these years ?? The following table basically captures my nervousness, and concern the Investment Income has a - 3.0ppts in Figure 3.2 for this current application, it should be much more, like -5.5 ppts. The gloom and doom, or ultra conservative investment yields and incomes purported by ICBC are ...shameful ? New Money Rate formula Section D Conclusion para 33, my foot...!

Actually, I am going to settle for the responses to the BCUC Information Request 1 questions 39 to 46 inclusive on this Investment chapter. And reserve further IR's for round two.

| ICBC INVESTMENT POLICY verses YIELD |  |  |  |
| :---: | :---: | :---: | :---: |
|  | $\longrightarrow$ |  |  |
|  |  |  |  |
|  |  |  |  |
|  | PY 2012 | PY 2013 | PY 2014 |
| NEW MONEY RATE | 3.76\% | 3.75\% | 4.51\% |
| -YEILD ON EQUITY | 4.60\% | 4.25\% | 3.73\% |

Also refer to EXHIBIT RTL IR\#1-6 sheets 1 to 6

## 2014 RTL IR1-13

Discussion: In my letter of September $17^{\text {th }} 2014$ regarding MOI, I provided an exhibit tilted appendix $A$. I have since corrected and updated (now that I have the time) this exhibit, and now call it Exhibit RTL IR\#1-7.
During the MOI round I used these two graphs to discuss the CPI basket of goods. In this IR round I am concerned with the aspects of "Progressive Rate Increases". The footnotes in this exhibit provide the main interpretative remarks.
But for some clarity on my part, I have added a new data series titled "Neg Low". The purpose of this data set is to demonstrate the decline premium rates and the equivalent corresponding dollar value of the declining rate. It is beyond comprehension why Special direction IC2 built into ICBC Basic Premium Rate structure a permanent increasing component. The damage is done, and ICBC will not be our friend on this point, no matter how urgently the BC Customer objects. About the only way forward for the BC Customer is to partition the BCUC and Governments, to get the BCUC to revoke their ill guided decisions on this matter. I believe the exhibit is self explanatory following this discussion.
Question 1: Does ICBC dispute this representation of progressive rates based on the $+/-1.5$ Rate Change Band / Rate Smoothing (RWS Slides 14,15,16) component approved and ordered by the BC Government and the BCUC, with the numerical values represented? If so, please explain with comparable graphic representation, so as to keep context on an equal graphic of footing.

## 2014 RTL IR1-14

Discussion: In recognizing BCUC IR 1 questions as they relate to Loss Cost Forecast Variance, I simply created exhibit RTL IR\#1-8 "Rate Change to Cover Costs and Loss Cost Forecast Variance" from PY2013 Figure 4.1 and PY2014 Figure 3.11, as I understand it. Question 1: Does ICBC dispute this representation of this, and the values given therein? If so, please provide explanation and details. Taking into consideration Section A para A.1.2 "Rate Change to Cover Costs", para 13 "PY2013 Loss Cost Forecast Variance", para 14/15/16 "Loss Trend to PY 2014", Section B para 26 "Factors Influencing the Required Rate Change", para B.2.30 PY2013 Loss Cost Forecast Variance", Figure 3.3 "Basic Loss Cost", through to para 37 inclusive, and Figure 3.11 "Forecast Variance Compared to Prior Applications". I have reread these references so many times, I can honestly say I am lost when trying to comprehend Figure 3.3 in context, and to my exhibit RTL IR\#1-8. Further ICBC's Exhibit D. 0 para's 14 and 15 really are poor reasoning / explanations.
Discussion: For once I am not trying to be negative, I really do not understand the RRA submissions on LCFV for PY2013 and PY2014, I truly believe ICBC is demonstrating a complex item with mumbo jumbo, almost no facts, and very little logic to justify either positive or negative impact of Rate Indication Figure 3.2
Question 2: Referencing exhibit RTL IR\#1-8, will ICBC please give context to the two lines "Rate Change and LCFV" for the almost parallelism downward trend from 2005./2006 through to 2010, at low convergence point, and sharply rising from 2010 through to 2014 ?
Question 3: It is extremely concerning ICBC has brought the weather into the equation (if you will). The sharp inclinations from 2010 to 2013 plateau are not that remarkable weather wise for British Columbia (Sun, Frost, Snow, Rain, Wind) are not unusual in of themselves or taking into account the geographic and environmental locals in British Columbia (ICBC has 14 regions I think). We are North of the $49^{\text {th }}$ Parallel. So will ICBC please provide more historical data going back to 2005/2006 regarding weather patterns, their influences on Accident rates, Property Damage, BI, Soft Tissue, Death etc; and their respective direct influence on Rate Indication? Figure 3.10 "Precipitation by Quarter - 30 years" is highly uninformative, in so much so, I needed to ask these questions in concert with the BCUC.
Question 4: Referring to exhibit RTL IR\#1-8, can ICBC please explain why they changed the data series and input data, as hi-lighted in this exhibit? Is there an informative reason ?

Figure 1 - Compound Annual Growth Rate (CAGR) in Basic Insurance Rates and CPI

| Year | Basic insurance rate | Inflation/Canadian CPI* ** |
| :---: | :---: | :---: |
| 2004 | $0.4 \%$ | $1.9 \%$ |
| 2005 | $0.0 \%$ | $2.2 \%$ |
| 2006 | $6.5 \%$ | $2.0 \%$ |
| 2007 | $3.3 \%$ | $2.1 \%$ |
| 2008 | $0.0 \%$ | $2.4 \%$ |
| 2009 | $0.0 \%$ | $0.3 \%$ |
| 2010 | $-2.4 \%$ | $1.8 \%$ |
| 2011 | $0.0 \%$ | $2.9 \%$ |
| 2012 | $11.2 \%$ | $1.5 \%$ |
| 2013 | $4.9 \%$ | $0.9 \%$ |
| $2004-2011$ CAGR |  | $0.9 \%$ |
| 2004-2013 CAGR | $2.3 \%$ | $1.9 \%$ |

*CPP rate increases are calculated once a year using the CPI All-Items index as per the Canada Pension Plan Act.



## Canada Pension Plan Amounts and the Consumer Price Index

Canada Pension Plan (CPP) rate increases are calculated once a year using the Consumer Price Index (CPI) All-Items Index. They come into effect each January. These increases are legislated under the Canada Pension Plan Act that benefits keep up with the cost of living.

## Consumer Price Index

Developed by Statistics Canada, the CPI is a measure of the rate of price change for goods and services bought by Canadian consumers. It is the most widely used indicator of price changes in Canada.

The CPI is obtained by comparing, through time, the cost of a fixed basket of commodities purchased by Canadian consumers. Since the basket contains commodities of unchanging or equivalent quantity and quality, the index reflects only pure price movements. This "basket" of goods consists of food, shelter, clothing, transportation, health care and other average household expenditures.

Statistics Canada is currently using 2002 as the base year. In 2002, the CPI was equal to 100. This means that the basket of goods in 2002 cost Canadians $\$ 100.00$. The CPI in January 2012 was measured at 120.7, meaning that the same basket of goods that cost $\$ 100.00$ in 2002 cost $\$ 120.70$ in January 2012.

## CPP Amounts

CPP amounts are adjusted once a year in January. The rate increase is the percentage change from one 12 -month period to the previous 12 -month period.

For example, these equations show how the CPI was used to calculate the CPP amounts for January 1, 2014:

## 2014 CPP Rate Increase



Line 1: To calculate the 2014 CPP rates increase, the average CPI for November 2012 to October 2013 is divided by the average CPI for November 2011 to October 2012.

CONTINUED:

Line 2: The average of $121.9,121.2,121.3,122.7,122.9,122.7,123.0,123.0,123.1,123.1$, 123.3, and 123.0 is divided by the average of $120.9,120.2,120.7,121.2,121.7,122.2$, $122.1,121.6,121.5,121.8,122.0$, and 122.2.

Line 3: In numeric terms, the average CPI for November 2012 to October 2013 is 122.6. This amount is then divided by the average CPI for November 2011to October 2012, which equals 121.5.

Line 4: 122.6 divided by 121.5 equals 1.009 minus 1 equals 0.009 . Multiplying by 100 to obtain the percentage increase gives 0.9 percent.

If the cost of living decreased over the 12-month period, the calculation of the rate increase would produce a negative amount. However, as prescribed under the Canada Pension Plan Act benefit amounts do not decrease, they stay at the same level when there is a decrease in the cost of living.

Prepare by: Richard T. Landale


CPP Annual Income Increase

CPP verses ICBC Basic Rate Increases


ICBC Basic Rate Annual Increases



| Year Ending | $\begin{array}{\|c} \text { CPP \% Index } \\ 1 \end{array}$ | CPP Max Rate ${ }^{1}$ | CPP Increase | ICBC B.P. ${ }^{3}$ |  | ICBC \% Increase | ICBC B.P. Increase | MCT Increase ${ }^{2}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2003 | 0 | \$801.25 | \$0.00 | \$ | 566.69 | 2.10\% | \$0.00 | 22 |
| 2004 | 1.587 | \$814.17 | \$12.92 | \$ | 578.85 | 0.40\% | \$12.16 | 42 |
| 2005 | 1.759 | \$828.75 | \$14.58 | \$ | 581.17 | 0.00\% | \$2.32 | 79 |
| 2006 | 1.874 | \$844.58 | \$15.83 | \$ | 581.17 | 6.50\% | \$0.00 | 107 |
| 2007 | 2.219 | \$863.75 | \$19.17 | \$ | 599.69 | 3.30\% | \$18.51 | 136 |
| 2008 | 2.355 | \$884.58 | \$20.83 | \$ | 620.15 | 0.00\% | \$20.46 | 141 |
| 2009 | 2.660 | \$908.75 | \$24.17 | \$ | 620.15 | 0.00\% | \$0.00 | 162 |
| 2010 | 2.721 | \$934.17 | \$25.42 | \$ | 605.62 | -2.40\% | (\$14.53) | 153 |
| 2011 | 2.691 | \$960.00 | \$25.83 | \$ | 605.62 | 0.00\% | \$0.00 | 115 |
| 2012 | 2.703 | \$986.67 | \$26.67 | \$ | 673.45 | 11.20\% | \$67.83 | 137 |
| 2013 | 0.900 | \$1,012.50 | \$25.83 | \$ | 708.47 | 5.20\% | \$35.02 | 149 |
| 2014 | 2.400 | \$1,038.33 | \$25.83 | \$ | 745.31 | 5.20\% | \$36.84 | 164 |

NOTES:

1. Source: Stats Canada Tables $320-0020$
2. ICBC response to MOI's pg's $73 \& 74$ 2013.1 RR. BCUC. 60.2
3. Intervener C1 Basic Insurance Premium as of year 2010 before seniors discount

## CRC CALCULATOR

The following figures have been copied from the 2014 ICBC Revenue Requirement Application Chapter 4

Figure 4.2 - Illustrative CRC Timeline


Figure 4.3 - Calculation of the CRC Percentage


#### Abstract

Illustrative values:


- CRC approved by the Commission $=\$ 110$ million
- Basic earned vehicle premium for Year $1=\$ 2.3$ billion

CRC percentage $=\$ 110$ million $/ \$ 2.3$ billion $=4.8 \%$

Figure 4.4 - Illustrative Calculation of the CRC per Customer


Will ICBC please complete this area for the MCT calculations that determine CRC eligiblity criterion for the two vehicle scenarios offered on the right.
Please refer to variuos questions in 2014 RTL IR-9

I offer the following as an example of the CRC for me as a Senior owning jointly with my wife both vehicles.
Mazda renewal date March 112015
Ford renewal date June 302015
CRC approved by BCUC May 1ST. 2015
Mazda does not qualify until 2016 (second year) ??? Ford qualifies for CRC during first year 2015

Calculation example from Figure 4.3
$\begin{array}{lr}\text { CRC }= & \$ 110,000,000.00 \\ \text { B. E. V. P. Yr. }= & \$ 2,300,000,000.00 \\ \text { CRC } \%= & \text { CRC/B. E. V. P. Yr }=\end{array}$
4.8\%

Calculation example from Figure 4.3 (use PY2013 for E.P.P.)

| Mazda E.P.P.1= | $\$$ | 684.00 |
| :--- | ---: | ---: |
| Ford E.P.P.2 $=$ | $\$$ | 684.00 |
| Sum of P1 \& P2 = | $\$$ | $1,368.00$ |
| $\$$ CRC $=4.8 \%$ | $\$$ | 65.43 |
| in |  |  |
| or for just the Ford |  |  |
| Ford E.P.P.2 $=$ | $\$$ | 684.00 |
| Sum of P2 $=$ | $\$$ | 684.00 |
| $\$ C R C=4.8 \%$ | $\$$ | 32.71 |

Note:
B. E. V. P. Yr. Basic Earned Vehicle Premium Year

CRC Customer Renewal Credit
E.P.P.

Earned Premium Policy
2013 E.P.P. from Figure 11A. 2 - Historical Information

Prepared by:
R.T.Landale

ICBC 2014 REVENUE REQUIREMENT APPLICATION
From Intervener C1 - Richard T. Landale

ICBC's December 1, 2011 Filing with the BC Utilities Commission
Figure 5.7 - Annual Forecasts for Canadian CPI from Financial Forecasts in Appendix 5 B

| Contributor | Q4/2012 |
| :--- | :--- |
| Scotiabank | 2.30 |
| Bank of Montreal | 2.20 |
| National Bank | 1.70 |
| TD Bank | 1.90 |
| Royal Bank | 2.10 |
| Bank of America/Merrill Lynch | n/a |
| Average | 2.04 |

22. Using the overall 3-year bond yield of $1.91 \%$ from Figure 5.5, the overall 30-year bond yield of $3.48 \%$ from Figure 5.6, the market equity risk premium of $5.5 \%$ discussed in paragraph 20, and the average forecast CPI of 2.04\% from Figure 5.7, the New Money Rate is calculated in Figure 5.8 for the 2012 policy year.

Figure 5.8 - Calculation of the New Money Rate for the 2012 Policy Year

|  | Weighting |  | Formula for Yield | Yields |
| :---: | :---: | :---: | :--- | :---: |
|  | $72 \%$ | $\times$ | $\begin{array}{l}\text { Forecast 3-year Government of Canada } \\ \text { bond yield calculated from multi-dealer } \\ \text { survey }\end{array}$ | $1.91 \%$ |$]$| $3.48 \%$ |
| :--- |
| + |

23. In the second half of September, Bank of America/Merrill Lynch published an updated forecast which contained the required information for the third and fourth quarter of 2012 necessary to calculate the New Money Rate according to the methodology approved by the Commission. This dealer had downgraded their forecast first and second quarter bond yields for 2012 from the first half of September. ICBC shows the calculation of the New Money Rate in Appendix 5 C as of the end of September 2011 using the Bank of

America/Merrill Lynch forecast dated September 22, 2011 included in Appendix 5 D. This recalculated New Money Rate was $3.70 \%$, lower than that shown in Figure 5.7, which would have increased the actuarial rate indication by 0.2 percentage points.

## C. 2 CALCULATION OF YIELD ON BASIC EQUITY

24. The Yield on Basic Equity for the 2012 policy year is calculated based on the investment portfolio profile as at June 30, 2011. The calculation is shown in Figure 5.9.

Figure 5.9 - Calculation of the Yield on Basic Equity ${ }^{9}$ for the 2012 Policy Year as of June 30, 2011

|  | Current <br> Weightings |  | Formula for Yield | Actual Yields | Weighted <br> Yield |
| :--- | :---: | :---: | :--- | :--- | :--- |
|  | $0.9 \%$ | $\times$ | Current Money Market Yield <br> at Cost | $0.97 \%$ | $0.01 \%$ |
| + | $58.8 \%$ | $\times$ | Current Canadian Bond <br> Yield at Market | $2.91 \%$ | $1.71 \%$ |
| + | $4.6 \%$ | $\times$ | Current US Bond Yield at <br> Market | $2.17 \%$ | $0.10 \%$ |
| + | $8.7 \%$ | $\times$ | Current Mortgage Yield at <br> Cost | $5.47 \%$ | $0.47 \%$ |
| + | $23.5 \%$ | $\times$ | 30-Year Canadian Bond <br> Yield + 5.5\% | $3.56 \%+5.5 \%$ | $2.13 \%$ |
| + | $3.5 \%$ | $\times$Current Real Estate Yield at <br> Cost | $8.30 \%$ | $0.29 \%$ |  |
| - |  | Fees for Managing <br> Investment Portfolio | $0.11 \%$ |  |  |
| Yield on Basic Equity as at June 30, 2011 ${ }^{10}$ | $4.60 \%$ |  |  |  |  |

## D IMPACT OF CHANGES IN THE ICBC STATEMENT OF INVESTMENT POLICY AND PROCEDURES

25. The most recent Statement of Investment Policy and Procedures dated July 28, 2011 is included in Appendix 5 A. Changes to the Statement of Investment Policy and Procedures relative to that filed in the 2010 Streamlined Revenue Requirements Application ${ }^{11}$ are summarized below.
[^0]ICBC's August 30, 2013 Filing with the BC Utilities Commission
Figure 5.6 - Calculation of the New Money Rate for the 2013 Policy Year

|  | Weighting |  | Formula for Yield | Yields |
| :---: | :---: | :---: | :---: | :---: |
|  | 72\% | x | Forecast 3-year Government of Canada bond yield calculated from multi-dealer survey | 1.60\% |
| + | 22\% | x | Risk-free rate of 3.8\% + 6.4\% | $\begin{array}{r} 3.8 \% \\ +\quad 6.4 \% \\ =10.2 \% \end{array}$ |
| + | 6\% | x | Forecast Canadian inflation from multidealer survey $+4.25 \%$ | $\begin{aligned} & 1.74 \% \\ + & 4.25 \% \\ = & 5.99 \% \end{aligned}$ |
| New Money Rate for the $\mathbf{2 0 1 3}$ Policy Year |  |  |  | 3.75\% |

## B. 2 CALCULATION OF YIELD ON BASIC EQUITY

19. The Yield on Basic Equity for the 2013 policy year is calculated based on the investment portfolio profile as at June 30, 2013. The calculation is shown in Figure 5.7.

Figure 5.7 - Calculation of the Yield on Basic Equity for the 2013 Policy Year as at June 30, 2013

|  | Current <br> Weightings | Formula for Yield | Actual Yields | Weighted <br> Yields |  |
| :---: | :---: | :---: | :--- | :---: | :---: |
|  | $1.3 \%$ | $\times$ | Current Money Market Yield <br> at Cost | $1.02 \%$ | $0.01 \%$ |
| + | $62.4 \%$ | $\times$ | Current Canadian Bond <br> Yield at Market | $1.97 \%$ | $1.23 \%$ |
| + | $8.8 \%$ | $\times$ | Current Mortgage Yield at <br> Cost | $4.52 \%$ | $0.40 \%$ |
| + | $23.5 \%$ | $\times$ | Risk-free rate $+6.4 \%$ | $3.8 \%+6.4 \%$ | $2.40 \%$ |
| + | $4.1 \%$ | $\times$ | Current Real Estate Yield at <br> Cost | $7.51 \%$ | $0.31 \%$ |
| - | Fees for Managing <br> Investment Portfolio | $\mathbf{4 . 2 5 \%}$ |  |  |  |
| Yield on Basic Equity for the 2013 Policy Year ${ }^{5}$ |  | $\mathbf{4 . 2 5 \%}$ |  |  |  |

[^1]25. Return: The real estate portfolio is expected to generate a return premium of $4.25 \%$ over the rate of inflation. The premium reflects ICBC's targeted long-term underwriting return for real estate assets and the return is consistent with that utilized in the previously approved New Money Rate formula.

## B. 2 BENEFITS OF THE FORMULA

26. The proposed changes to the New Money Rate formula retain the benefit of an objective formula for determining the investment income used in the rate indication analysis, while ensuring that the formula better reflects the asset mix of ICBC's investment portfolio and the returns associated with that mix.

## C CALCULATION OF THE INVESTMENT RETURNS

27. The New Money Rate for the 2014 policy year calculated using the proposed revised formula, strategic asset mix weightings, and forecast data as of June 2014 is $4.51 \%$. A summary of the calculation is provided in Figure 5.3 in Section C. 1 using the weightings in the SIPP in Appendix 5 A and average bond yields and CPI from the multi-dealer survey as calculated in Appendix 5 B.
28. The New Money Rate for the 2014 policy year is higher than the New Money Rate for the 2013 policy year of $3.60 \%$ approved by the Commission in the Decision on 2013 Revenue Requirements with a corresponding favourable impact on the rate indication to cover costs. This is due in part to somewhat higher forecast bond yields and rate of inflation compared to 2013, but it is also due to the introduction of the risk premium for the credit assets component which is applied to a large portion of the investment portfolio and more than offsets the opposing impact of applying the equity risk premium to a smaller percentage of assets.
29. The Yield on Basic Equity for the 2014 policy year uses the existing Commissionapproved formula and actual weighting and market returns as of June 2014 for most of the assets. As in previous revenue requirement applications, the return on equity assets is calculated using the equity risk premium accepted by the Commission, and the actual 30year Government of Canada bond yield as of June 2014. The Yield on Basic Equity for the 2014 policy year is $3.73 \%$, which is lower than the Yield on Basic Equity for the 2013 policy year of $4.09 \%$ approved by the Commission in the Decision on 2013 Revenue Requirements with a corresponding unfavourable impact on the rate indication to cover costs. The lower

Yield on Basic Equity reflects ICBC's reduced allocation to equity assets. A summary of the calculation is provided in Figure 5.4 in Section C.2.

## C. 1 CALCULATION OF THE NEW MONEY RATE

30. Figure 5.3 provides the elements of the calculation of the New Money Rate. The weighted yield for each asset type is the product of the weighting and the forecast yield. The forecast yield for each asset type is the sum of the forecast element and the risk premium. The New Money Rate is the sum of the weighted yields for each asset type.

Figure 5.3 - Calculation of the New Money Rate for the 2014 Policy Year as of June 2014

| Asset <br> Type | Weighting | Forecast <br> Element | Risk <br> Premium | Forecast <br> Yield | Weighted <br> Yield |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Risk-Free | $16 \%$ | $2.02 \%$ | $0.00 \%$ | $2.02 \%$ | $0.32 \%$ |
| Credit | $61 \%$ | $2.02 \%$ | $1.46 \%$ | $3.48 \%$ | $2.12 \%$ |
| Equity | $17 \%$ | $3.55 \%$ | $6.40 \%$ | $9.95 \%$ | $1.69 \%$ |
| Real Estate | $6 \%$ | $1.95 \%$ | $4.25 \%$ | $6.20 \%$ | $0.37 \%$ |
| New Money Rate for the $\mathbf{2 0 1 4}$ Policy Year |  |  |  |  |  |

31. The weightings and risk premium information are discussed in more detail in Section B for each asset type. The values of the forecast elements are derived in Appendix 5 B from data in the multi-dealer survey.

## C. 2 CALCULATION OF THE YIELD ON BASIC EQUITY

32. Figure 5.4 provides the elements of the calculation of the Yield on Basic Equity. The weighted yield for each asset is the product of the current weighting and the current yield. The current yield and weightings for each asset are determined based on the existing portfolio as of the end of June 2014. The equities yield formula uses the same equity risk premium as that used in the New Money Rate formula. The Yield on Basic Equity is the sum of the weighted yields for each asset less the fees for managing the investment portfolio. Note that, since actual weightings and yields are used in the formula, Figure 5.4 includes all the various assets comprising the asset type groupings previously discussed in Section B.
[^2]ICBC's August 29, 2014 Filing with the BC Utilities Commission
Figure 5.4 - Calculation of the Yield on Basic Equity for the 2014 Policy Year as at June 30, 2014

| Asset | Current <br> weightings | Formula for Yield | Current <br> Yields | Weighted <br> Yields |
| :--- | :---: | :--- | :---: | :---: |
| Money Market | $1.5 \%$ | Current Money Market Yield at <br> Cost | $0.94 \%$ | $0.01 \%$ |
| Bonds | $61.3 \%$ | Current Bond Portfolio Yield at <br> Market | $1.90 \%$ | $1.17 \%$ |
| Mortgages | $10.3 \%$ | Current Mortgage Yield at Cost | $4.21 \%$ | $0.43 \%$ |
| High-Yield <br> Bonds | $4.8 \%$ | Current High Yield Bond Yield <br> at Market | $5.82 \%$ | $0.28 \%$ |
| Equities | $17.7 \%$ | Current 30-year Government <br> of Canada bond yield + equity <br> risk premium | $9.18 \%$ | $1.63 \%$ |
| Real Estate | $4.4 \%$ | Current Real Estate Yield at <br> Cost | $6.64 \%$ | $0.29 \%$ |
| Minus the Fees for Managing the Investment Portfolio | $\mathbf{3 . 7 3 \%}$ |  |  |  |
| Yield on Basic Equity for the 2014 Policy Year ${ }^{9}$ |  | $\mathbf{0 . 0 8 \%}$ |  |  |

## D CONCLUSION

33. The proposed revision to the New Money Rate formula includes a credit risk premium over the return for 3-year Government of Canada bonds for the largest portion of the fixed income component of the investment portfolio. This change, together with higher forecast bond yields and inflation compared to 2013, results in a New Money Rate for the 2014 policy year which is larger than that approved by the Commission in the Decision on 2013 Revenue Requirements and an associated favourable impact on the rate indication. The Yield on Basic Equity for the 2014 policy year is lower than the Yield on Basic Equity of $4.09 \%$ approved by the Commission in the Decision on 2013 Revenue Requirements. The Yield on Basic Equity value has been impacted by the lower allocation to equities. However, combined with the higher Basic equity for the 2014 policy year compared to the 2013 policy year, there is a net favourable impact on the rate indication.

[^3]$\qquad$
PROGRESSIVE RATE CHANGE APPROVED SPECIAL DIRECTION IC2


| 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |


|  | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| HIGH | 5.2 | 5.2 | 6.7 | 8.2 | 9.7 | 11.2 | 12.7 | 14.2 |
| LOW | 5.2 | 3.7 | 5.2 | 6.7 | 8.2 | 9.7 | 11.2 | 12.7 |
| Neg LOW | 5.2 | 3.7 | 2.2 | 0.7 | -0.8 | -2.3 | -3.8 | -5.3 |



|  | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Neg LOW | 1141 | 1099 | 1042 | 972 | 892 | 806 | 715 | 625 |
| LOW | 1141 | 1183 | 1245 | 1328 | 1437 | 1576 | 1753 | 1976 |
| HIGH | 1141 | 1200 | 1281 | 1386 | 1520 | 1690 | 1905 | 2176 |
| SPAN | 0 | 17 | 36 | 58 | 83 | 114 | 152 | 200 |

The first graph shows the $\mathrm{Hi} /$ Lo rate increases in a rising linear fashion, whereas the second graph shows the $\mathrm{Hi} /$ Lo premium increases in a rising arc, this is due to the dollar compounding effect from the preceding year over year.
The SPAN represents the year over year differential between Hi/Lo premium increases.
The Neg Low shows a constant negative declining rate contrary to Special Direction IC 2
had never said Rates can not decline below previous years rate by less than -1.5ppt


|  | $2005 / 2006$ | 2007 | 2008 | 2009 | 2010 | $2011 / 2012$ | 2013 | 2014 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Rate Change | 6.5 | 3.3 | 0.0 | 0.0 | -2.4 | 11.2 | 11.8 | 5.2 |
| LCFV | 4 | 1.2 | -0.7 | -3 | -5.2 | 5.5 | 6.6 | -1.5 |

## Footnotes:

- Table is based on Figure 4.1 from PY2013 RRA and Table 3.11 for PY2014 RRA.
- Please refer to 2014 RTL IR1-14, Question 4 for question on hi-lighted data.
- It is "disconcerting" for ICBC to change data ranges and input data without explanation. Footnotes 11 and 13 do not cover my concern.
- Footnote 12: Positive numbers are unfavourable and negative numbers are favourable.

| AY | Loss Costs | BC CPI Inflation | ICBC CPI-adjusted Loss Costs | RTL CPI Growth | RTL CPI-adjusted Loss Costs |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2004 | 584 |  | 584 |  | 584 |
| 2005 | 603 | 2.0\% | 595 | 2.2\% | 597 |
| 2006 | 598 | 1.7\% | 606 | 2.0\% | 609 |
| 2007 | 608 | 1.7\% | 616 | 2.1\% | 622 |
| 2008 | 608 | 2.1\% | 629 | 2.4\% | 637 |
| 2009 | 604 | 0.0\% | 629 | 0.3\% | 639 |
| 2010 | 641 | 1.4\% | 638 | 1.8\% | 650 |
| 2011 | 654 | 2.3\% | 653 | 2.9\% | 669 |
| 2012 | 699 | 1.1\% | 660 | 1.5\% | 679 |
| 2013 | 709 | -0.1\% | 660 | 0.9\% | 685 |



## Personal Loss Trend Models and Data

PLATE OWNER BASIC

| Frequency |  | Actual |  |  |  |  |  | Modeled |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Coverage | Short-Term Model Long-Term Model | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | PY 2014 | PY 201 |
| Bodily Injury | Half of the long-term pre-recession trend | 1.50\% | 1.43\% | 1.46\% | 1.47\% | 1.49\% | 1.42\% | 1.42\% | 1.39\% | 1.37\% | $1.39 \%$ | 1.41\% |
| Property Damage | 10 year econometric 10 year econometric | 7.74\% | 7.62\% | 7.13\% | 7.08\% | 7.05\% | 6.98\% | 6.85\% | 6.79\% | 6.74\% | 6.77\% | 6.84\% |
| Medical Rehabilitation | Half of the long-term pre-recession trend | 2.09\% | 2.02\% | 2.07\% | 2.10\% | 2.17\% | 2.16\% | 2.17\% | 2.14\% | 2.10\% | 2.12\% | 2.16\% |
| Weekly Benefits | Half of the long-term pre-recession trend | 0.27\% | 0.23\% | 0.23\% | 0.24\% | 0.24\% | 0.21\% | 0.21\% | 0.21\% | 0.20\% | 0.20\% | 0.21\% |
| Death Benefits | 10 year exponential 15 year exponential | 0.012\% | 0.012\% | 0.011\% | 0.009\% | 0.008\% | 0.008\% | 0.007\% | 0.007\% | 0.007\% | 0.007\% | 0.007\% |

Year over Year Change in Frequency

| Coverage |  | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Bodily Injury |  |  | -4.6\% | 2.2\% | 1.0\% | 1.4\% | -5.1\% | 0.1\% | -1.8\% | -1.8\% |
| Property Damage |  |  | -1.6\% | -6.4\% | -0.7\% | -0.4\% | -1.0\% | -1.9\% | -0.8\% | -0.8\% |
| Medical Rehabilitation |  |  | -3.4\% | 2.3\% | 1.4\% | 3.4\% | -0.4\% | 0.4\% | -1.5\% | -1.5\% |
| Weekly Benefits |  |  | -14.3\% | 2.8\% | 2.6\% | -2.2\% | -12.6\% | 2.2\% | -2.2\% | -2.2\% |
| Death Benefits |  |  | 2.3\% | -9.1\% | -18.2\% | -14.2\% | 6.7\% | -11.7\% | -6.6\% | -5.5\% |

Severity (\$)

| Coverage | Short-Term Model | Long-Term Model | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 201 | 2015 | 2016 | PY 201 | PY 2013 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Bodily Injury | 8 year exponential | 8 year exponential | 26,806 | 28,741 | 29,984 | 30,704 | 32,756 | 35,342 | 37,108 | 39,240 | 41,494 | 39,959 | 37,559 |
| Property Damage | 10 year exponential | 10 year exponential | 1,562 | 1,555 | 1,647 | 1,638 | 1,696 | 1,658 | 1,730 | 1,761 | 1,793 | 1,771 | 1,736 |
| Medical Rehabilitation | 6 year exponential | 9 year, offset 6 exponential | 1,536 | 1,570 | 1,682 | 1,682 | 1,746 | 1,855 | 1,911 | 1,950 | 1,955 | 1,951 | 1,919 |
| Weekly Benefits | 6 year exponential | 6 year exponential | 5,270 | 5,103 | 5,729 | 5,395 | 5,682 | 6,559 | 6,394 | 6,646 | 6,909 | 6,731 | 6,454 |
| Death Benefits |  | No trend | 10,558 | 11,606 | 10,892 | 10,485 | 9,868 | 8,271 | 10,656 | 10,656 | 10,656 | 10,656 | 10,611 |

Year over Year Change in Severity

| Coverage | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Bodily Injury |  | 7.2\% | 4.3\% | 2.4\% | 6.7\% | 7.9\% | 5.0\% | 5.7\% | 5.7\% |
| Property Damage |  | -0.4\% | 5.9\% | -0.6\% | 3.5\% | -2.2\% | 4.3\% | 1.8\% | 1.8\% |
| Medical Rehabilitation |  | 2.2\% | 7.2\% | 0.0\% | 3.8\% | 6.2\% | 3.0\% | 2.0\% | 0.3\% |
| Weekly Benefits |  | -3.2\% | 12.3\% | -5.8\% | 5.3\% | 15.4\% | -2.5\% | 3.9\% | 3.9\% |
| Death Benefits |  | 9.9\% | -6.2\% | -3.7\% | -5.9\% | -16.2\% | 28.8\% | 0.0\% | 0.0\% |

Notes:
Modeled values are prior to adjustments for exogenous factors, such as the judicial decision on changes to the Legislated Discount Rates.
Large claims have been capped at the following thresholds:
$\$ 2,500,000$
$\$ 500,000$
Medical Rehabilitation $\quad \$ 500,000$
$\$ 750,000$

2014 modeled values are from the selected shor--ef the 2015 modeled values from the selected short-term and long-term models.
2016 modeled values are from the selected long-term model.

## DESCRIPTION OF THE CLAIMS FREQUENCY AND SEVERITY MODELS

1. This analysis estimates the average cost level of claims associated with policies written in the 12 month period from November 1, 2014 to October 31, 2015 (PY 2014). Future claims associated with policies written in this 12 month period can occur from November 1, 2014 to October 30, 2016. This policy period is longer because a 12 month policy written on October 31, 2015 is in force until October 30, 2016.
2. To estimate the cost level of PY 2014 claims, frequency and severity (known as loss statistics) for the policy period are forecasted. This is done by first forecasting the loss statistics for the accident quarters that fall within the policy period. Then, a weighted average of the policy period accident quarters is calculated.

## Plate Owner Coverages

3. For each Plate Owner coverage, a short-term trend model and a long-term trend model are developed. Loss statistics for the accident quarters in 2014 are based on the short-term model; the 2015 loss statistics are based on $50 \%$ of the short-term model and $50 \%$ of the long-term model; and the 2016 loss statistics are based on the long-term model. The paragraphs to follow highlight the criteria used to select the appropriate model for each coverage. In some cases judgmental forecasts are selected where there is no clear trend in the data. Figure D. 1 below provides a summary of the forecast PY 2014 loss statistics.

Figure D. 1 - PY 2014 Forecast Loss Statistics (Plate Owner)

| Coverage | Personal <br> (Exhibit D.1.1) |  | Commercial <br> (Exhibit D.1.2) |  |
| :--- | :---: | :---: | :---: | :---: |
|  | Frequency | Severity <br> (\$) | Frequency | Severity <br> (\$) |
| Bodily Injury | $1.39 \%$ | 39,959 | $1.88 \%$ | 48,036 |
| Property Damage | $6.77 \%$ | 1,771 | $9.24 \%$ | 2,879 |
| Medical Rehabilitation | $2.12 \%$ | 1,951 | $1.44 \%$ | 1,405 |
| Weekly Benefits | $0.20 \%$ | 6,731 | $0.10 \%$ | 5,780 |
| Death Benefits | $0.007 \%$ | 10,656 | $0.008 \%$ | 8,936 |

ICBC 2014 REVENUE REQUIREMENT APPLICATION
From Intervener C1 - Richard T. Landale FROM EXHIBIT D.1.1

MODELED

| COVERAGE | PY2013 | PY2014 | DIFF | \% DIFF |
| :--- | :---: | :---: | :---: | :---: |
| BODILY INJURY | 37559 | 39959 | 2400 | $6.006 \%$ |
| PROPERTY DAMAGE | 1736 | 1771 | 35 | $1.976 \%$ |
| MED REHAB | 1919 | 1951 | 32 | $1.640 \%$ |
| WEEKLY BENEFITS | 6454 | 6731 | 277 | $4.115 \%$ |
| DEATH BENEFITS | 10611 | 10656 | 45 | $0.422 \%$ |
| AVERAGE CPI |  |  |  | $\mathbf{2 . 8 3 2 \%}$ |



ICBC 2014 REVENUE REQUIREMENT APPLICATION
Richard T. Landale
From Intervener C1 - Richard T. Landale
FROM EXHIBIT D.1.1

|  | ACTUAL |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | :---: |
| COVERAGE | PY2008 | PY2009 | PY2010 | PY2011 | PY2012 | PY2013 | AVG |
| BODILY INJURY | 26806 | 28741 | 29984 | 30704 | 32756 | 37559 | 31092 |
| PROPERTY DAMAGE | 1562 | 1555 | 1647 | 1638 | 1696 | 1736 | 1639 |
| MED REHAB | 1536 | 1570 | 1682 | 1682 | 1746 | 1919 | 1689 |
| WEEKLY BENEFITS | 5270 | 5103 | 5729 | 5395 | 5682 | 6454 | 5606 |
| DEATH BENEFITS | 10558 | 11606 | 10892 | 10485 | 9868 | 10611 | 10670 |

## AVERAGE CPI



Loading for Bulk, KOL-37 Payments and Capped Large Claims
Plate Owner Basic
(\$000's)

| (1) | Accident Year |  |  |  |  |  | 2013 | Weighted |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Weights |  | 20\% | 20\% | 20\% | 20\% | 20\% |  |
|  | Bodily Injury |  |  |  |  |  |  |  |
| (2) | Incurred Loss and ALAE | Exhibit C.0.1 | 1,182,397 | 1,295,317 | 1,349,836 | 1,485,651 | 1,542,922 |  |
| (3) | Bulk Claims | ICBC internal database | 2,633 | 3,569 | 3,174 | 3,024 | 1,683 |  |
| (4) | Incurred Loss and ALAE with Bulk | (2) + (3) | 1,185,030 | 1,298,886 | 1,353,010 | 1,488,675 | 1,544,605 |  |
| (5) | Capped Incurred Loss and ALAE without Bulk | ICBC internal database | 1,182,397 | 1,295,317 | 1,349,836 | 1,485,651 | 1,542,922 |  |
| (6) | Loading Factor for Bulk and Large Claims | (4) / (5) | 1.0022 | 1.0028 | 1.0024 | 1.0020 | 1.0011 | 1.0021 |
|  | Property Damage |  |  |  |  |  |  |  |
| (7) | Incurred Loss and ALAE | Exhibit C.0.1 | 357,136 | 359,580 | 366,643 | 377,467 | 373,350 |  |
| (8) | Bulk and KOL-37 Claims | ICBC internal database | 1,782 | 2,295 | 1,528 | 968 | 1,658 |  |
| (9) | Incurred Loss and ALAE with Bulk and KOL-37 | (7) + (8) | 358,918 | 361,874 | 368,171 | 378,435 | 375,008 |  |
| (10) | Capped Incurred Loss and ALAE without Bulk and KOL-37 | ICBC internal database | 356,601 | 359,090 | 364,982 | 376,954 | 372,327 |  |
| (11) | Loading Factor for Bulk, KOL-37, and Large Claims | (9) / (10) | 1.0065 | 1.0078 | 1.0087 | 1.0039 | 1.0072 | 1.0068 |
|  | Accident Benefits - Medical Rehabilitation |  |  |  |  |  |  |  |
| (12) | Incurred Loss and ALAE | Exhibit C.0.1 | 85,348 | 94,831 | 97,183 | 107,220 | 115,045 |  |
| (13) | Bulk Claims | ICBC internal database | 79 | 59 | 0 | 0 | 116 |  |
| (14) | Incurred Loss and ALAE with Bulk | (12) + (13) | 85,427 | 94,890 | 97,183 | 107,220 | 115,161 |  |
| (15) | Capped Incurred Loss and ALAE without Bulk | ICBC internal database | 85,268 | 94,831 | 97,183 | 105,780 | 113,314 |  |
| (16) | Loading Factor for Bulk and Large Claims | (14) / (15) | 1.0019 | 1.0006 | 1.0000 | 1.0136 | 1.0163 | 1.0065 |
|  | Accident Benefits - Weekly Benefits |  |  |  |  |  |  |  |
| (17) | Incurred Loss and ALAE | Exhibit C.0.1 | 31,626 | 36,431 | 35,832 | 37,614 | 39,343 |  |
| (18) | Bulk Claims | ICBC internal database | 0 | 0 | 0 | 0 | 0 |  |
| (19) | Incurred Loss and ALAE with Bulk | (17) + (18) | 31,626 | 36,431 | 35,832 | 37,614 | 39,343 |  |
| (20) | Capped Incurred Loss and ALAE without Bulk | ICBC internal database | 31,626 | 36,431 | 35,832 | 37,614 | 37,967 |  |
| (21) | Loading Factor for Bulk and Large Claims | (19) / (20) | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0362 | 1.0072 |
|  | Death Benefits |  |  |  |  |  |  |  |
| (22) | Incurred Loss and ALAE | Exhibit C.0.1 | 3,963 | 3,305 | 2,762 | 2,285 | 2,240 |  |
| (23) | Bulk Claims | ICBC internal database | 0 | 0 | 0 | 0 | 0 |  |
| (24) | Incurred Loss and ALAE with Bulk | (22) $+(23)$ | 3,963 | 3,305 | 2,762 | 2,285 | 2,240 |  |
| (25) | Capped Incurred Loss and ALAE without Bulk | ICBC internal database | 3,956 | 3,305 | 2,762 | 2,253 | 2,178 |  |
| (26) | Loading Factor for Bulk and Large Claims | (24) / (25) | 1.0018 | 1.0000 | 1.0000 | 1.0142 | 1.0284 | 1.0089 |

## Calendar Year Written Premium and Exposure

 MANUAL BASIC COVERAGES - TOTAL
## A. Written Exposure Growth to PY 2014

|  | 2009 | 2010 | 2011 | 2012 | 2013 |  | RTL Revised Average |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Third Party Liability / Part 7 | 8.6\% | 7.2\% | 5.3\% | 4.0\% | 2.8\% |  | 5.6\% |
| Collision / Specified Perils | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% |  | 0.0\% |
| B. Written Exposure |  |  |  |  |  |  |  |
| Coverage | 2009 | 2010 | 2011 | 2012 | 2013 | $\begin{gathered} \text { Projected PY } \\ 2014 \end{gathered}$ |  |
| Third Party Liability / Part 7 | 44,799 | 44,484 | 46,319 | 46,254 | 47,179 | 48,351 | 45,807 |
| Collision / Specified Perils | 6,249 | 6,261 | 6,283 | 6,217 | 6,222 | 6,247 | 6,246 |
| C. Written Premium (\$000's) |  |  |  |  |  |  |  |
| Coverage | 2009 | 2010 | 2011 | 2012 | 2013 | $\begin{aligned} & \text { Projected PY } \\ & 2014 \\ & \hline \end{aligned}$ |  |
| Third Party Liability / Part 7 | 47599 | 43963 | 45602 | 50458 | 53283 |  | 48,181 |
| Collision / Specified Perils | 2,767 | 2,635 | 2,450 | 2,453 | 2,658 |  | 2,593 |
| Total | 50,366 | 46,598 | 48,052 | 52,911 | 55,941 |  | 50,774 |

D. Written Premium Adjusted to Current Rate Level (\$000's)

| Coverage | 2009 | 2010 | 2011 | 2012 | 2013 | $\begin{gathered} \text { Projected PY } \\ 2014 \end{gathered}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Third Party Liability / Part 7 | 53407 | 49012 | 51633 | 51795 | 53817 |  | 51,933 |
| Collision / Specified Perils | 2,835 | 2,867 | 2,866 | 2,603 | 2,773 |  | 2,789 |
| Total | 56,242 | 51,879 | 54,499 | 54,398 | 56,590 |  | 54,722 |

## E. Projected PY 2014 Written Premium (\$000's)

| Coverage | 2009 | 2010 | 2011 | 2012 | 2013 | Projected PY $2014$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Cover | [1] | [2] | [3] | [4] | [5] | [6] $=\operatorname{Avg}([1] \ldots[5])$ |
| Third Party Liability / Part 7 | 58,004 | 52,559 | 54,344 | 53,889 | 55,346 | 54,828 |
| Collision / Specified Perils | 2,835 | 2,867 | 2,866 | 2,603 | 2,773 | 2,789 |
| Total | 60,839 | 55,426 | 57,210 | 56,492 | 58,119 | 57,617 |
|  | 61,079 | 55,614 | 57,387 | 56,574 | 58,175 | 57,766 |

Notes:
(A) TPL/Part 7 calculated from the Commercial plate owner exposure growth in Exhibit B.1.2

Collision/Specified Perils is forecasted to have no growth
(B) Sum of Garage (Exhibit B.3.2 Section A), Fleet Reporting (Exhibit B.3.3 Section A), and other Special Coverages exposure (Exhibit B.3.4 Section A). Projected PY 2014 Exposure $=(B) *[1+(A)]$, average of 5 years.
(C) Sum of Garage (Exhibit B.3.2 Section B), Fleet Reporting (Exhibit B.3.3 Section B), and other Special Coverages premium (Exhibit B.3.4 Section B).
(D) Sum of Garage (Exhibit B.3.2 Section F), Fleet Reporting (Exhibit B.3.3 Section F), and other Special Coverages premium (Exhibit B.3.4 Section F).
(E) $=(\mathrm{D}) \times[1+(\mathrm{A})]$

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[^0]:    ${ }^{9}$ As discussed in Chapter 4 the Yield on Basic Equity has replaced the Yield on Retained Earnings.
    ${ }^{10}$ Differences between Current Weighting multiplied by Actual Yields and Weighted Yield are due to rounding.
    ${ }^{11}$ The Statement of Investment Policy and Procedures filed in the 2010 Streamlined Revenue Requirements Application was dated April 29, 2010.

[^1]:    ${ }^{5}$ Differences between current weightings multiplied by actual yields and weighted yields are due to rounding.
    $\begin{array}{ll}\text { Insurance Corporation of British Columbia } & \text { 5-6 }\end{array}$ August 30, 2013

[^2]:    ${ }^{7}$ The weighted yields do not add to $4.51 \%$ due to rounding.

[^3]:    ${ }^{8}$ The current yield for high-yield bonds was determined as of July 15, 2014 because ICBC was still transitioning to the new asset mix at June 30, 2014.
    ${ }^{9}$ Differences between current weightings multiplied by actual yields and weighted yields are due to rounding.

