ICBC’s 2018 Basic Insurance Rate Design Application

Streamlined Review Process Presentation
September 4, 2018

Today’s speakers

- Nicolas Jimenez, President and CEO
- Kelly Aimers, FCIA, ACAS, Director of Pricing and Regulatory Affairs
- William T. (Bill) Weiland, FCIA, FCAS, Eckler (External actuary)
Agenda

- Opening Remarks – Key points
- Background & Current Rate Design
- Explaining the New Rate Design
- Customer Impacts – Examples
- External Actuaries’ Assessment
- Change Management and Looking Forward
- Closing Remarks
- Questions

OPENING REMARKS
Opening Remarks – Key points

• ICBC is applying for BCUC approval of a new Basic insurance rate design, as set out in a government direction on August 3, 2018
• Rate design, simply put, is about allocating Basic insurance costs among customers in a revenue neutral way

Opening Remarks – Key points

• Current rating framework has been in place for many years
• This application proposes a major re-design to improve fairness in BC’s insurance system
Opening Remarks – Key points

- The new Basic insurance rate design improves fairness by...
  - being data driven
  - aligning premiums more closely with risks associated with driving record and experience
  - incorporating some directed policy overlays addressing affordability

Opening Remarks – Key points

- Highlights of new rate design:
  - 2/3 better off vs. current design
  - lower risk drivers pay less (experienced with no at-fault crashes)
  - higher risk drivers pay more (inexperienced, those with at-fault crashes)
  - seniors better off overall
  - transition plan to manage impacts
  - little impact on fleet, garage and taxis
Opening Remarks – Key points

- ICBC is undertaking major change management effort
  - focuses on customers, brokers, employees and others
  - uses full range of traditional and digital communication channels
  - includes monitoring

BACKGROUND & CURRENT RATE DESIGN
Background – Government announcement and direction

• Rate design is part of broader government plan to address challenges in BC’s auto insurance system

• August 9 announcement directed ICBC to seek BCUC approval of Tariff to achieve listed objectives
  - Special Direction IC2 requires BCUC to recognize and accept directed actions

• Application seeks BCUC approval for the same Tariff pages, subject to errata

Background – What is rate design?

• Rate design = who pays what portion of ICBC’s costs of providing universal compulsory vehicle insurance
  - How the cost “pie” is allocated, not determining the size of the “pie” (revenue requirements)
Background – What is rate design?

• Application, therefore, does not address:
  o whether general rate increases/decreases are warranted
  o cost of processing and paying out claims
  o initiatives underway to control costs
  o Optional insurance (an unregulated, competitive product)

Background – What is rate design?

• At a high level, ICBC approaches rate design by considering...
  o risks presented by various policies, as assessed by actuaries
  o policy overlays directed by government
Background – Current Rate Design

- Current rating framework has been in place for many years
- Some design challenges...
  - impact of crashes
  - few rating variables
  - crashes follow vehicle, not driver
  - distinguishing risk

EXPLAINING THE NEW RATE DESIGN
Driver Penalty Point Premium (DPP) and Driver Risk Premium (DRP)

- Stand-alone programs billed even if person does not insure a vehicle
- Payable by driver not RO

**Government Directive:**
- 20% Nov. 1, 2018
- 20% Nov. 1, 2019
- Follows general rate change order after PY 2020
- Tariff, Schedule E

New Rate Design

- Basic premium will be determined by three categories of rating factors
  - Vehicle Factors
  - Driver Factors
  - Discounts / Add-ons
- Application shows the more complex rating algorithm for transparency, but most people are only impacted by portions of it
Base Rate:

- Starting point for algorithm
- Expressed as a dollar amount
- Initially set at $1,000
- Will change with the general rate change order approved by the Commission beginning with 2019 PY

**Government Directive:**
Basic Insurance Tariff (Tariff), Section 1; Base Rate means $1,000

**VEHICLE FACTORS**
Rate Class and Territory Factor:

- Same structure as today (no changes to territory boundaries)
- Actuarial based / data driven
- Impact transitioned over 10 years

Government Directive:
- Reflect loss data
- Accepted actuarial practice
- 10 years
- Taxis excluded
- Tariff; Schedule C

<table>
<thead>
<tr>
<th>Rate Territories</th>
<th>Annual Territory Adjustment Only</th>
<th>Total Impact over 10 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower Mainland</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maple Ridge/Pitt Meadows</td>
<td>+1.0%</td>
<td>+10.9%</td>
</tr>
<tr>
<td>Squamish/Whistler</td>
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<td>-6.6%</td>
</tr>
<tr>
<td>Pemberton/Niagara</td>
<td>-0.7%</td>
<td>-6.6%</td>
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<td>Fraser Valley</td>
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<td>-6.6%</td>
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<td>Thompson/Okanagan</td>
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<td>-13.0%</td>
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<td>Kootenays</td>
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<td>Cariboo</td>
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<td>Prince George</td>
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<td>Northern Coast</td>
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<td>+7.6%</td>
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<td>Middle Vancouver Island/Sunshine Coast</td>
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</tr>
<tr>
<td>Northern Vancouver Island</td>
<td>-3.1%</td>
<td>-26.8%</td>
</tr>
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Rate Classes

<table>
<thead>
<tr>
<th>Rate Class</th>
<th>Annual Rate Class Adjustment Only (%)</th>
<th>Total Impact over 10 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pleasure Use Only</td>
<td>0.4%</td>
<td>3.9%</td>
</tr>
<tr>
<td>Short Commute</td>
<td>-0.1%</td>
<td>-1.1%</td>
</tr>
<tr>
<td>Long Commute</td>
<td>0.7%</td>
<td>6.7%</td>
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<tr>
<td>Motorhome</td>
<td>-5.7%</td>
<td>-44.2%</td>
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<tr>
<td>Motorcycle</td>
<td>-4.0%</td>
<td>-33.2%</td>
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<tr>
<td>Collectors</td>
<td>-1.5%</td>
<td>-13.7%</td>
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<tr>
<td>Business Use</td>
<td>0.4%</td>
<td>4.2%</td>
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<tr>
<td>Light Commercial</td>
<td>-0.6%</td>
<td>-6.0%</td>
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<tr>
<td>Heavy Commercial</td>
<td>-1.7%</td>
<td>-16.0%</td>
</tr>
<tr>
<td>Taxis</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Long Haul Delivery</td>
<td>-3.7%</td>
<td>-31.2%</td>
</tr>
<tr>
<td>Buses</td>
<td>-1.7%</td>
<td>-15.6%</td>
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Combined Driver Factor (CDF):

- Replaces CRS
- Registered owners asked to list drivers
- Each listed driver is assigned an Individual Driver Factor (IDF)
- The combination of IDF’s is used in determining premium: 75% PD; 25% highest risk

Government Directive:
- Consider all drivers
- If >1 driver, PD=75%, next highest risk=25%
- Tariff; Section 2, Schedule D

Individual Driver Factor (IDF):

- The IDF account for:
  - Years of experience
  - Crash history
  - Senior status
  - New resident status

Government Directive:
- ≤ 40 yrs licensed
- 10 yr crash history
- 65+ yrs discount
- New resident rules
- Adjust to Exp table
- Tariff; Schedule D
Experience Factor: Years Licensed

- Total years licensed; max of 40 years
- Data driven analysis – AAP
  
  - Comparison between CRS (blue line) and EF (orange line) is before any policy overlays

Government Directive:
- ≤ 40 yrs licensed
- Accepted actuarial practice
- Tariff; Section 2, Schedule D

Experience Factor: Years since last At-Fault Crash

- Scan period: 10 year scan period
  - Transition starting at March 1, 2017, increasing annually to 2027

- Forgiveness
  - 20 yrs experience and 10 yrs crash free

- Claim repayment ≤ $2,000

Government Directive:
- 10 yr crash history
- Most commercial not affect personal
- Forgiveness & repayment rules
- Tariff; Section 2, Schedule D (Tb 1)
Experience Adjustment Factor:

- Adjustment to actuarially indicated rates
- Address affordability for new drivers
- Favourable adjustment for drivers < 15 years, however reduces if at-fault crashes:
  - 50% if one at-fault crash in 5 yrs
  - 100% if two in 5 yrs

Government Directive:
- Affordability
- Apply a factor based on Table A in Attachment 1
- Tariff; Section 2, Schedule D (Tb 5)

CRS (blue line) vs IDF: EF and EAF (purple line) for Crash Free Drivers

- Does not account for other rating factors (e.g., senior driver factor)
Multiple Chargeable Claim Payment Factor:

- At-fault crashes other than the most recent (most recent in Experience Factor)
- Replaces exiting Multiple Crash Premium
- Based on:
  - Total at-fault crashes
  - Age of crashes (more recent crashes weighted more heavily)

Senior Driver Factor:

- Drivers who are/will be at least 65 years old
- Registered owner is also at least 65 years
- Pleasure use only
- 15%; reduces if at-fault crashes

<table>
<thead>
<tr>
<th>Number of At-Fault Crashes</th>
<th>Senior Driver Factor</th>
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<tbody>
<tr>
<td>0</td>
<td>0.850</td>
</tr>
<tr>
<td>1</td>
<td>0.925</td>
</tr>
<tr>
<td>2+</td>
<td>1.000</td>
</tr>
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Government Directive:
- 10 yr crash history
- Accepted actuarial practice
- Tariff; Section 2, Schedule D (Tb 2)
New Resident Driver Factor:
- Transfer ≤ 15 yrs OOP driving experience
- OOP crash and insurance history not required
- New to BC drivers represent higher level of risk

<table>
<thead>
<tr>
<th>Years Since BC Experience Start Date</th>
<th>New Resident Driver Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1.150</td>
</tr>
<tr>
<td>1</td>
<td>1.100</td>
</tr>
<tr>
<td>2</td>
<td>1.050</td>
</tr>
<tr>
<td>3+</td>
<td>1.000</td>
</tr>
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</table>

**Government Directive:**
- Transfer ≤ 15 yrs DL, not crashes
- Charged for 3 yrs
- 15% & decreases
- Tariff; Section 2, Schedule D

**CRS to CDF: Impact of Listing Drivers**
- Jennifer (x.25) [Higher risk]
  - 17% surcharge (IDF = 0.83)
- Erica (x.10) [Principal operator]
  - CRS 43% discount
- Steven (x.0) [Experienced driver]
  - 48% discount (IDF = 0.52)

Total Premium: $1309
- 42% discount (CDF = 0.58)

Current
- CRS 43% discount

Proposed
- September 2019 (Proposed)

YEARS OF EXPERIENCE (assumes no claims)
DISCOUNTS AND ADD-ONS

Factors Unchanged

Disability Discount Factor:

- 25% reduction (certain rate classes) for qualified persons

High-Value Vehicle Charge Factor:

- 2x Basic insurance premium

Government Directive:

- Tariff; Section 2, Schedule G
- Tariff; Section 2, Section 3
Advanced Safety Technology Factor:

• 10% Discount
• Vehicles with manufacturer installed autonomous emergency braking systems
• Technology proven to prevent crashes from occurring

Government Directive:
• 10% discount for specific autonomous emergency braking
• Tariff; Section 2, Schedule X

Distance Factor:

• 10% if < 5,000 kilometres driven in prior year
• Collecting odometer readings as of August 23, 2018 for certificates effective September 1, 2018
• Customers eligible for discount when they renew on or after September 1, 2019

Government Directive:
• 10% discount for vehicles driven < 5,000 km/year
• Tariff; Section 2, Schedule Y
Learner Premium:

- Separate charge if insurance certificate lists learners and non-learners
- Premium = $117 adjusted for territory using pleasure use rate class
- Only applies once, even if more than one listed learner driver

**Government Directive:**
- Years licensed and at-fault crashes do not affect premium
- Varies by territory
- Tariff; Section 2, Schedule D

Unlisted Driver Accident Premium:

- RO can choose to list drivers; however consequences if their unlisted driver cause a crash
- Coverage not breached
- One-time charge of 15x premium differential if unlisted driver with a valid BC DL; $250 if OOP
- Exception for medical emergency

**Government Directive:**
- 15x difference in premium ($5,000 max) if unlisted driver causes crash
- Tariff; Section 2, Schedule AA
Unlisted Driver Protection Premium:

- Protects from Unlisted Driver Accident Premium if unlisted driver has at-fault crash
- Exceptions to coverage (incidental driver, household, employee, etc.)
- Increases with at-fault crashes

<table>
<thead>
<tr>
<th>Number of At-Fault Crashes</th>
<th>Premium</th>
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<tr>
<td>0</td>
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</tr>
<tr>
<td>1</td>
<td>$100</td>
</tr>
<tr>
<td>2</td>
<td>$250</td>
</tr>
<tr>
<td>3</td>
<td>$500</td>
</tr>
<tr>
<td>4</td>
<td>$1,000</td>
</tr>
<tr>
<td>5 or more</td>
<td>$1,500</td>
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Government Directive:
- Coverage to be provided to protect customers from UDAP charge
- Tariff; Section 2, Schedule AA

TRANSITION AND REVENUE NEUTRALITY
Transition Factor:

- Compared to prior policy year premium, increase will be ≤ 20% increase for renewals
- Excludes impacts of changes in rate class, territory and learner premium
- Not applicable if PD changes or drivers used in premium have at-fault crash after Sept. 1, 2019

Government Directive:
- Renewals ≤20% increase over prior year, with exceptions
  - Tariff; Section 2, Schedule Z

Transition Factor (continued):

- Affects approximately 7% of customers
- Most customers exit transition within 3 years
- Minimum CDFs:
  - Maintain revenue neutrality by capping decreases
  - Cap decreases over 3 years

<table>
<thead>
<tr>
<th>Certificate Effective Dates</th>
<th>Minimum CDF</th>
<th>Senior Minimum CDF</th>
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<tbody>
<tr>
<td>Sept. 1, 2019 – Aug. 31, 2020</td>
<td>0.540</td>
<td>0.415</td>
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<tr>
<td>Sept. 1, 2020 – Aug. 31, 2021</td>
<td>0.510</td>
<td>0.410</td>
</tr>
<tr>
<td>Sept. 1, 2021 – Aug. 31, 2022</td>
<td>0.480</td>
<td>0.405</td>
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Government Directive:
- Renewals ≤20% increase over prior year, with exceptions
  - Tariff; Section 2, Schedule Z
Revenue Neutrality:

- Changes must be revenue neutral for 12 months except for DPP and DRP changes

- Compares premium before and after rate design changes
  - overall changes lead to less premium collected
  - therefore need off balance factors

Revenue Neutrality (continued):

- Off Balance Factors:
  - 1.005 applied to RC/T (ASTF, DF, Learner)
  - 1.151 applied to EF (SDF, Forgiveness, Transition Crash Scan, Repayment)
  - Minimum CDF

- Forecasting exercise; any variance will be reflected through RRA
CUSTOMER IMPACTS – EXAMPLES

New Rate Design: Overall Impact

Year One Financial impact (based on today’s rates)
For personal and business (non-fleet) customers if implemented today

67% of customers will be better off  
33% of customers will pay more of their fair share
New Rate Design: Overall Impact

Impacts of proposed changes (Yr 1) including transition cap and impact of minimum CDF

Government Directive:
• <35% experience premium increase (excluding general rate change order or changes to DPP and DRP)

New Rate Design: Overall Impact

Impacts of proposed changes for British Columbians

- Drivers who don’t cause crashes
  Greatest decrease
- Seniors
  Some would see a decrease
- Territory
  Could see increase or decrease
- Rate class
  Could see increase or decrease
- Inexperienced drivers
  Would see increase
- Drivers who do cause crashes
  Greatest increase
EXAMPLES

Inexperienced Driver
No At-Fault Crashes: Current vs New Rate Design

William – 3 years experience

No at-fault crashes
Lives in Richmond
Drives for pleasure
No eligible discount or add-ons

Basic insurance based on today’s rates
Currently pays $1,608
Under the new rate design would pay $1,706
Inexperienced Driver: Current Rate Design

William – 3 years experience today
No at-fault crashes
Lives in Richmond (Territory D)
Drives for pleasure (Rate Class 001)
No eligible discount or add-ons

Basic insurance based on today’s rates
Currently pays $1,608
Under the new rate design would pay $1,706

Certificate Premium $1,608
Base Rate Premium (RC&T) = $1,892
Claims Rated Scale = 0.85

Inexperienced Driver: New Rate Design

William – 4 years experience today
No at-fault crashes
Lives in Richmond (Territory D)
Drives for pleasure (Rate Class 001)
No eligible discount or add-ons

Basic insurance based on today’s rates
Currently pays $1,608
Under the new rate design would pay $1,706

Certificate Premium $1,706
Base Rate Premium (RC&T) = $1,000
Rate Class Terr Factor = 1.925
CDF = 0.886 (11%)
IDF = 0.886 (11%)
EF = 1.174
EAF = 0.765
Senior Driver One Forgiven At-Fault Crash: Current vs New Rate Design

Bob – 50 years experience
- Crash-free
- Lives in Campbell River
- Drives for pleasure
- Senior discounts applied

- Basic insurance based on today’s rates
  - Currently pays $617
  - Under the proposed changes will pay $601

Example based on today’s rates

Other listed driver

Mary – 50 years experience
- 2 at-fault crashes (1 and 3 years ago)
- Senior discount applied

Senior Driver: Current Rate Design

Bob – 50 years experience
- Crash-free
- Lives in Campbell River (Territory Y)
- Drives for pleasure (Rate Class 005)
- Senior discounts applied

- Basic insurance based on today’s rates
  - Currently pays $617
  - Under the proposed changes will pay $601

Other listed driver

Mary – 50 years experience
- 2 at-fault crashes (0 and 2 years ago)
- Senior discount applied

\[ \text{Certificate Premium} = \text{Base Rate Premium (RC&T)} \times \frac{\text{Claims Rated Scale}}{43\%} \]

Includes 25% senior discount
**Senior Driver: New Rate Design**

**Bob - 51 years experience today**
- Crash-free
- Lives in Campbell River (Territory Y)
- Drives for pleasure (Rate Class 001)
- Senior discounts applied
- Basic insurance based on today’s rates
  - Currently pays $617
  - Under the proposed changes will pay $601

**Other listed driver**

**Mary - 51 years experience today**
- 2 at-fault crashes (1 and 3 years ago)
- Senior discount applied

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**Experienced Driver No At-Fault Crashes**

**Joanne**
- No at-fault crashes
- Lives in Surrey
- Drives to and from work over 15 km
- No eligible discounts or add-ons

**Basic insurance based on today’s rates**
- Currently pays $1,171
- Under the proposed changes would pay $1,132

**Key factors affecting premium:**
- Crash - free
- Territory
- Use
- Experience

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*Example based on today’s rates*
Experienced Driver
One At-Fault Crash

**Jasmine**

- Two at-fault crashes – one waived with one-crash forgiveness
- Lives in Fort St. John
- Drives for pleasure use

- **30 YEARS EXP**
- Basic insurance based on today’s rates
  - Currently pays: $704
  - Premium on renewal with crashes: $811
- Under the proposed changes with crashes: $811

Example based on today’s rates

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Inexperienced Driver
Two At-Fault Crashes

**Mike**

- Two at-fault crashes
- Lives in Kelowna
- Drives to and from work less than 15km

- **15 YEARS EXP**
- Basic insurance based on today’s rates
  - Currently pays: $799
  - Premium on renewal with crashes: $841
  - Under the proposed changes with crashes: $947

Example based on today’s rates
Family or Small Business (non-fleet)

Emma
- No at-fault crashes
- Lives in Surrey
- Drives to and from work less than 15 km
- No eligible discount or add-ons

75%

Basic insurance based on today’s rates
- Currently pays $1,094
- Under the proposed changes will pay $1,294

Other drivers listed

Zack
- 5 years experience
- One at-fault crash
- 25%

Mick
- 20 years experience
- No at-fault crashes

Key factors affecting premium:
- Listing Drivers (with at fault crash)
- Territory
- Use
- Experience

Example based on today’s rates

EXTERNAL ACTUARIES’ ASSESSMENT
Description of engagement

- Eckler is engaged to provide actuarial services to ICBC, including predictive analytics

- In relation to the 2018 Rate Design application, Eckler was tasked with reviewing the actuarial models developed by ICBC actuaries to ensure they are according to accepted actuarial practice in Canada (AAP)

- Our work was performed in accordance with AAP. Section 1530 of the Standards of Practice deals with Review or Repeat of Another Actuary’s Work
Summary of work performed

• Validation of data used in the Generalized Linear Models (GLMs)
• Validation of model assumptions and structure
• Validation of model results
• Resolution of any differences between results of models replicated by Eckler and those of ICBC’s models
• Review of implementation, transition and revenue neutrality

Conclusions

• As a result of our work there were no unresolved differences between the results of ICBC’s models and the results of models Eckler replicated using its own software.
• The base rate, combined discount factor, RCT factor, learner premium, and other discounts and factors are applied properly in the model.
• The actuarial models built by ICBC as part of the 2018 Rate Design are according to AAP.
CHANGE MANAGEMENT AND LOOKING FORWARD

Change Management

• ICBC has a change management strategy for key stakeholders:
  - Customers
  - Brokers
  - ICBC staff

• Tailored materials and implementation

• Also addresses IT impacts

• Details in Chapter 4 and responses to BCUC questions
Change Management Approach

Our approach to change management for the RAAP program is comprised of 5 key elements.

1. Identify the Impacts
2. Develop the Detailed Plans
3. Establish the Communication Channels
4. Communicate the Change
5. Measure the Change

Looking forward (post-2019)

• Government Directive contemplates September 1, 2019 effective date for most of the new rate design
• Certain aspects are directed to take effect in subsequent years (DRP/DPP increase; rate class territory phasing-in)
• ICBC will be monitoring the results
Closing Remarks

• ICBC’s respectfully asks that the Commission approve the proposed rate design, as it reflects the Government Directive

• New Basic rate design improves fairness by more closely aligning what customers pay and the risk they pose, while also considering affordability as directed
QUESTIONS