

# Discussion Guide



Cost of Service Analysis,  
Rate Rebalancing and Rate Design

# Rate design

## Your views are important to us

FortisBC is seeking public and First Nations input as we complete a review of cost of service and rate design to make sure rates charged to customers are fair and equitable.

All utilities review cost of service and rate design periodically to make sure rates reflect the fair and equitable allocation of costs. A cost of service analysis (COSA) determines the cost of providing electrical service by customer class and rate design evaluates various rate structures. Rate structures direct how customers are billed for their electricity use.

Overall, changes resulting from COSA and rate design do not generate more revenue for a utility. Any changes proposed will be aimed at rebalancing and restructuring rates paid by customers, and making sure rates paid by a given customer reflect the cost of providing service to that customer, and that classes of customers are not unduly subsidizing each other.

FortisBC is committed to open dialogue with customers, stakeholders and First Nations. We believe your feedback is an important part of the process as FortisBC completes a 2009 cost of service analysis (COSA) and rate design review. Please share your thoughts on these topics with us.

Input gathered from our consultation

activities will be compiled and included in FortisBC's final cost of service analysis filing and rate design application to the British Columbia Utilities Commission (BCUC).

## Public consultation and regulatory process

FortisBC is committed to consultation, information sharing and building long-term cooperative relationships.

In the process of developing a 2009 cost of service analysis, FortisBC hosted public open houses and met with First Nations, customers and municipalities within our service territory in May and June of this year. The draft 2009 COSA was filed with the British Columbia Utilities Commission (BCUC) on June 30, 2009. Additional feedback from the public and First Nations on this draft COSA will be accepted until August 28, 2009. This input will be considered as FortisBC prepares the final 2009 COSA report to be filed with the BCUC on September 30, 2009.

FortisBC is also seeking public and First Nations input as we review how existing electricity rates are structured for all customers — residential, commercial, industrial, wholesale, lighting and irrigation — and determine what updates to rate structures are needed.

A series of open houses is being held across FortisBC's service area to invite

public input. For those unable to attend an open house, FortisBC is providing opportunities for input through an online feedback form available on our website at [http://www.fortisbc.com/about\\_fortisbc/rates/other\\_applications.html](http://www.fortisbc.com/about_fortisbc/rates/other_applications.html). Submissions can also be sent to our regulatory affairs department by:

Email: [regulatory@fortisbc.com](mailto:regulatory@fortisbc.com)  
Fax: 250 364-1270  
Mail: Corey Sinclair  
1290 Esplanade, PO Box 130  
Trail, BC  
V1R 4L4

All input must be received by August 28, 2009 in order to be considered for the final 2009 COSA filing and rate design application (RDA).

Feedback received from this consultation will be considered, along with technical and financial information, as FortisBC prepares its rate design application for submission to the BCUC by September 30, 2009. Once the COSA and RDA have been filed, the BCUC manages the regulatory process and will make the final decision regarding cost of service analysis and rate design(s) to be implemented.

The BCUC will set a schedule for a regulatory review process of both the COSA and RDA by the BCUC and interested parties.

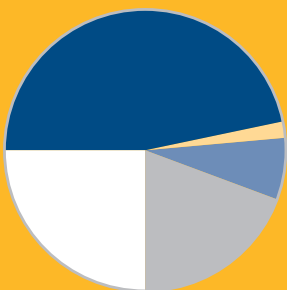
For more information on the BCUC, visit [www.bcuc.com](http://www.bcuc.com).

## Customer classes

Customer classes or customer groups, as they are also known in the utility sector, include residential, general service (commercial), industrial, wholesale, lighting and irrigation. Each group has different characteristics and different requirements from the utility.

For example, a residential customer requires generation, transmission and distribution of electricity. A wholesale customer requires only generation and transmission of bulk electricity, but not distribution. Both customer groups need customer service such as billing and meter reading. Each customer group should pay its “fair share” of the total cost to operate the utility.

### 2008 Customer class revenues (\$1000s)



Residential	102,600
Commercial	53,820
Wholesale	45,614
Industrial	14,470
Lighting & Irrigation	4,405



## Cost of service analysis and rate design

Rate setting involves three steps. The first step is to establish revenue requirements, a review that is done annually to determine the total cost of operating the utility each year.

Steps two and three are the focus of the 2009 COSA and rate design consultation.

- Cost of service analysis – completed periodically to determine the costs each customer class is causing and how much revenue the utility is collecting from each group. COSA is a critical step in setting fair and equitable rates for customer groups, making sure one customer group is not subsidizing another.
- Rate design – reviewed periodically to determine how the utility recovers costs from customers. Rate design evaluates rate structures, including the basic customer charge. Both cost of service analysis and rate

design are revenue neutral to FortisBC, they merely distribute the cost and revenue amongst the customer groups.

## Cost of service analysis (COSA)

COSA is an important component in setting fair and equitable rates. Prior to 2009, the most recent cost of service analysis was completed for FortisBC in 1997. The FortisBC system has changed significantly since then with considerable investment in electrical infrastructure such as new transmission lines, substations and upgrades to generation facilities in order to meet our customers’ electricity needs. The nature of customer electrical loads has also changed. FortisBC now experiences two seasonal peaks, summer and winter, rather than just the traditional winter peak for electricity demand. The utility is becoming capacity constrained, meaning that existing generation resources are becoming insufficient to meet customer demand during peak periods.



## COSA principles

In order to reflect the changes in the electrical system, FortisBC used the principles below in the cost of service analysis study. With the exception of the use of contract demand as an allocation factor, these revisions to the 1997 methodology have a small impact on the study results.

- Contract demand – updated to better reflect the fact that FortisBC is contractually obligated to provide a firm reservation of line capacity for certain wholesale and industrial transmission customers to the limits specified in their demand contracts.
- Two coincident peak method – reflects the trend within the FortisBC system to a dual-peak system demand resulting in the convergence of the summer and winter peaks.
- Minimum system - along with the minimum system results, an offset to account for the peak load carrying capability (PLCC) of a minimum system was incorporated into the analysis. The PLCC adjustment recognizes that the minimum system would allow for some ability to carry additional capacity.
- Demand component of generation - in consideration of the capacity constrained nature of the FortisBC system and the fact that FortisBC's generation provides both energy and capacity, the allocation of generation rate base was changed from an assumption that 100 per cent of the cost amount was energy related, as was done in the 1997 study, to an 80 per cent energy, 20 per cent demand split in the 2009 version.

## Rate design

A rate design application proposes rate structures including the basic monthly customer charge. Rate structures determine how customers are billed for their electricity use. Some examples include conservation-based rates such as inclining block rates, and time of use rates. Overall, changes resulting from rate design will not generate more revenue for FortisBC.

## Rate rebalancing

The COSA is used to make sure that all customer groups are paying their fair share of the cost of electrical service. The draft 2009 COSA determined that there are currently some inequities. The table below shows revenue to cost ratios. Ideally, each customer group would show 100 per cent, meaning that they would be paying \$1 for every \$1 of their cost to the electrical system. Based on this analysis, customer classes over 100 per cent are paying more than their “fair share”, and customers below 100 per cent are not paying their “fair share”.

In order to move customer groups

closer to a 100 percent revenue to cost ratio, rates must be rebalanced.

FortisBC is proposing to achieve equity over time by moving customer classes as close to 100 per cent as possible over a five year period. This could be accomplished by increasing rates for those classes under 100 per cent by a maximum rebalancing increase of five per cent per year. The additional revenues generated would then be applied to those customers whose rates are currently over 100 per cent.

*Please take a moment to provide us with your thoughts on this topic by filling out the rate rebalancing section of the feedback form.*

Customer Class	2009 Revenue to Cost Ratio
Residential	98.5%
Small GS (20)	113.4%
General Service (21)	139.8%
Industrial Primary (30)	123.6%
Industrial Transmission	61.9%
Lighting	84.2%
Irrigation	79.6%
Kelowna Wholesale	87.9%
Penticton Wholesale	77.1%
Summerland Wholesale	95.6%
Grand Forks Wholesale	68.1%
BCH Lardeau Wholesale	101.2%
BCH Yahk Wholesale	103.1%
Nelson Wholesale	80.2%

## Rate design considerations

In the rate design process FortisBC will be taking into consideration that:

- Customer feedback is critical
- Rates should be simple and easy to understand
- Rates should reflect costs to the utility – both fixed and variable
- Rate impact should be managed for the majority of customers
- Rates should consider the 2007 BC Energy Plan which encourages conservation
- Existing meters do not support wide-scale, time-based rates
- Within five years the company expects to implement advanced metering infrastructure (AMI) or “smart meters”
- New rate structures should only be introduced if they meet long-term needs

## Conservation based rates

FortisBC supports the BC Energy Plan objectives. Rate structures that encourage energy efficiency and conservation can play a role in helping to meet these goals.

## Residential rate structure options

The residential customer class includes approximately 96,000 customers who live in communities across FortisBC’s service area in the southern interior of BC.

The current residential customer rate structures have two components:

- Basic charge of \$ 23.74/bi-monthly
- Energy charge of \$0.0764 cents/kilowatt hour (kwh)

In our review, FortisBC investigated many rate structure options.

Some conservation based rate structures offered by other utilities, such as time varying rates, are not feasible on a wide scale basis without automated metering infrastructure or “smart

meters” installed for all residential customers. Pending future regulatory approval, FortisBC expects to introduce AMI technology within the next five years. This would enable the introduction of a wider variety of rates, including time varying rate structures, that encourage conservation and could also help address FortisBC’s capacity deficit.

For FortisBC’s 2009 rate design review, we have evaluated four feasible options in-depth. The impact of each of the rate structure options currently being considered is shown in the table below.

FortisBC bills its residential customers bi-monthly (every second month). The amounts shown in this table are for a two month period. These examples

assume no change in customer consumption.

Recognizing the need to meet BC Energy Plan conservation goals, FortisBC sees option 3 as viable. The inclining block rate achieves conservation goals and the increased basic monthly charge meets the COSA principle of working toward appropriate cost recovery for fixed energy costs.

Option 4 is also viable. By maintaining the existing rate structure, FortisBC can work toward appropriate technology including meters, which will support alternate conservation rates.

*Please take a moment to provide us with your thoughts on rate structures by filling out the residential rate design section of the feedback form.*

Customer	KWh used for two months	Current bill amount for two months	Option 1 Reduce basic charge with an increase energy rate and minimum bill	Option 2 Inclining block rate with lower basic charge and higher energy rates	Option 3 Inclining block rate with higher basic charge and lower energy rates	Option 4 Maintain existing rate structure
Average customer	1900	\$166	\$164	\$156	\$158	\$166
Median customer (50 % of bills are higher, and 50% are lower)	1350	\$125	\$121	\$109	\$113	\$125
High end consumption customer	3850	\$312	\$320	\$327	\$319	\$312
Low end consumption customer	385	\$52	\$43	\$48	\$55	\$52

## General service rate structure options

The general service customer classes (GS20 / GS21) include close to 11,000 diverse customer accounts representing numerous commercial ventures from corner stores to shopping malls, and from construction companies to hair salons. These customer classes are currently billed using a declining block rate structure.

In order to encourage energy conservation as directed by the BC Energy Plan and the Utilities Commission Act, FortisBC proposes a flattened rate structure, moving from three declining blocks to two. In addition, FortisBC proposes an increased monthly basic charge and lower energy rates.

See the table below for sample customers.

## Rate design for other customer classes

FortisBC is not proposing new rate structures for wholesale, industrial, irrigation or lighting customers at this time since these customer groups are already billed under a flat rate structure. In addition, these customer groups will see rate rebalancing over the next several years.

*Please take a moment to provide us with your thoughts on this topic by filling out the general service (commercial) rate design section of the feedback form.*

Customer	KWh	KVA (demand)	Current bill	Preferred Option Flattened blocks, increase basic monthly charge and lower energy rate
GS20 average	3750		\$348	\$340
GS20 low consumption	743		\$92	\$93
GS20 high consumption	13,500		\$1,176	\$1,140
GS21 average	42,000	76	\$3,504	\$3,393
GS21 low consumption	11,700	40	\$1,026	\$995
GS21 high consumption	150,000	243	\$12,800	\$12,500

## Industrial, lighting and irrigation customers

- The industrial primary customer class includes approximately 40 customer accounts.
- The industrial transmission customer class includes four customer accounts.
- The lighting customer class includes approximately 1900 customer accounts.
- The irrigation customer class includes approximately 1100 customer accounts.

## Wholesale customers

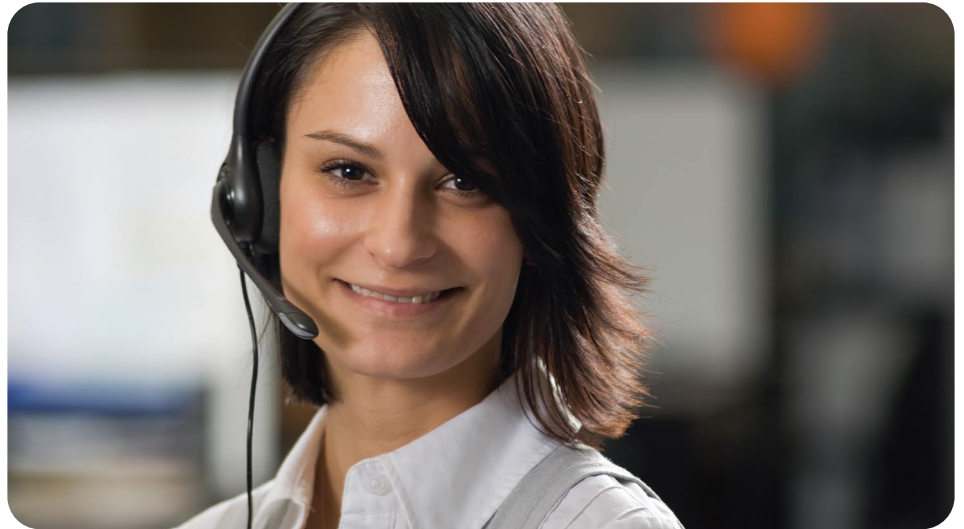
FortisBC's wholesale customers include the municipal electric utilities of Kelowna, Penticton, Summerland, Grand Forks and Nelson Hydro as well as BC Hydro facilities at Yahk and Lardeau.

These customers are listed individually rather than as a customer class, since each has a separate demand contract and uses specific components of FortisBC infrastructure such as transmission lines and substations.

## Next steps

All feedback received will be considered, along with technical and financial information, as FortisBC prepares its rate design application for submission to the BCUC by September 30, 2009. Once the COSA and RDA have been filed, the BCUC manages the regulatory process and will make the final decision regarding cost of service analysis and rate design(s) to be implemented.

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## FortisBC Inc.

FortisBC Inc. is an integrated regulated electric utility based in Kelowna, British Columbia. Focused on the safe delivery of reliable and cost-effective electricity, FortisBC serves more than 158,000 customers directly and indirectly through wholesale utilities in the southern interior of B.C. FortisBC owns and operates four regulated hydroelectric generating plants and approximately 7,000 kilometres of

transmission and distribution power lines. FortisBC employs over 500 people in British Columbia and is an indirect wholly owned subsidiary of Fortis Inc., the largest investor-owned distribution utility in Canada. Fortis Inc. shares are listed on the Toronto Stock Exchange and trade under the symbol FTS. Additional information can be accessed at [www.fortisinc.com](http://www.fortisinc.com) or [www.sedar.com](http://www.sedar.com)

For more information about the cost of service analysis and rate design applications:

Call 1-866-4FORTIS (1-866-436-7847)

Email [regulatory@fortisbc.com](mailto:regulatory@fortisbc.com)

Or visit [www.fortisbc.com](http://www.fortisbc.com)



FortisBC Inc. is a Canadian owned electric utility operating in the southern interior of British Columbia