Rate Design Exercise, Part 2 Focus Groups Final Report

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Research Objectives

- To determine what customers value in rate design
- To assess awareness of the current two-step rate
- To explore reaction to a three-step rate
- To test whether reaction differs based on customer dwelling type
- To determine how the rate designs might affect different customer groups (low income, average, apartment, large dwelling, etc.)

Methodology



- Six focus groups were held:
 - Two physical groups in Vancouver with residents of the Lower Mainland:
 - Group 1 = apartment dwellers
 - Group 2 = house dwellers
 - Two physical groups in Nanaimo with residents of that city:
 - Group 1 = apartment dwellers
 - Group 2 = house dwellers
 - Two online groups with residents from the Interior and Northern BC (Other BC):
 - Group 1 = apartment dwellers
 - Group 2 = house dwellers
- Participants were all BC Hydro customers, mixed ages and gender, mixed home owners and renters, mixed employment status and occupations, including retirees, and mixed cultural backgrounds.
- Groups were approximately 1.5 hours in length.
- Total number of participants = 50 (apartment dwellers = 24; house dwellers = 26).
- The views expressed by participants may not necessarily represent the views of all residents across British Columbia.



Key Findings

- Participants are unaware of their hydro rates, although most are conscious of their general consumption and can cite their recent bill amounts.
- Participants' main goal is to keep their hydro bills as low as possible and most of their opinions about rates and values are driven by this goal.
- Few participants are aware of the current 2-step rate design, but those in the Lower Mainland were the least aware of it.
- Most participants do not understand the reasons for the 2 rates in the current rate structure. Many assume it is for BC Hydro to increase revenue.
- Most participants say they already conserve energy without knowing about the 2 rates; the rate design does not instigate their conservation.
- After viewing the 2-step rate, about half of participants said they knew which rate step their household usually fell in.
- Most had trouble with the concept that some groups within the customer class might subsidize rates for others; however, most agree that those who "waste" energy should pay higher rates.



Key Findings, cont'd

- Most participants would rather keep the 2-step rate design than introduce 3-steps, as they believe the current design provides them with the lowest rates.
- Nearly all Lower Mainland and Nanaimo participants prefer the current rate design, while opinion was divided amongst the current design and models A and B in the Interior and Northern BC groups.
- Between the two 3-step models, most participants prefer Model B, as they feel staying in just the lowest step of Model A is unattainable for most.
- Some participants perceive the proposed rate changes as rate increases and some do not believe that all three designs are designed to be revenue neutral.
- Most participants believe that a 3-step structure is more confusing for customers to understand than the current 2-step structure.
- Participants initially stated that they value fairness above all other corporate values, and perceived it to mean that all residents are paying equal rates that reflect the true cost of service.



Key Findings, cont'd

- After reviewing the current 2-step structure and the two models of the potential 3-step structure, participants were more inclined to value efficiency over fairness when it comes to rate design.
- A number of participants said they believe they are doing all they can to conserve and still could not attain the lowest rate step in any of the three rate designs.
- Participants were lukewarm about BC Hydro using mass advertising to educate the public about rate design. Likewise, many say including communications with their bills would not be effective, as they tend not to read them.
- Most participants are concerned only with their own hydro account. They want tools to understand their rates and manage conservation in order to keep their bills low, including notification via apps or text messages when they are approaching the next rate step.

Homes, households and energy needs



Participants were asked about the size of their home, household number, and if they heated with electricity or gas. They were subsequently asked for their average monthly Hydro bill.

- The size of participants' homes varied. Apartment dwellers lived in one- or two-bedroom condos, duplexes, or in multi-unit rental buildings or suites in houses. House dwellers lived in detached homes and semi-detached townhouses.
- Apartment dwellers were more likely to live alone or have two residents in their home.
 Most participants in houses had two or three residents living in their home. Few in any group said their home contained four or more occupants.
- Most participants in Other BC Group 2 were more likely to heat their homes using gas and/or wood-burning stoves. Those who said they used gas were divided on which bill was lower, hydro or gas. Only one participant in Nanaimo used gas.
- The Nanaimo house dwellers (Group 2) had the highest average monthly bill, at \$150 (participants cited between \$50 and \$300 per month). Those in Nanaimo apartments (Group 2) had an average monthly bill of \$84 (\$20-\$255).
- The Other BC apartment dwellers (Group 1) had an average monthly bill of \$64 per month (\$40-\$88), while those living in houses (Group 2) paid \$86 on average (\$40-\$120).
- Those in Lower Mainland apartments (Group 1) had the lowest average bill of all at \$28 (\$16-40). Group 2 (houses) was \$60 (\$35-\$160).

Which value should be used for rate design?



Fairness is number one because everyone pays their own way in life. (Lower Mainland Group 1)

Efficiency is number one for me. (Lower Mainland Group 1)

Practicality, because I hate being surprised. (Other BC Group 2)

I put fairness. I want to know how it's measured and why I pay. (Nanaimo Group 2)

Fairness. Break down rates for low income. (Other BC Group 1)

The same order as here: Efficiency, practicality, fairness. (Lower Mainland Group 1)

I chose fairness; you should pay your bill regardless of company class. (Nanaimo Group 1)

Efficiency indicates that if you use energy in high-use times you pay more. (Lower Mainland Group 1)

Practicality. I like to understand rates and why I pay. (Other BC Group 2)

Fairness. I come from a family that believe in you pay for what you use. (Other BC Group 2) Participants were shown a set of three corporate values and definitions that BC Hydro might consider during a rate design exercise. The three sets shown were:

- 1. Efficiency: Rates that promote efficient use of energy can result in conservation, which can be a cost effective way to meet future increases in demand for electricity
- 2. Fairness: The group of customers (e.g., business customers, residential customers, industrial customers) that creates costs pay these costs. In other words, customer groups do not subsidize one another
- Practicality: Customers understand their rates and accept them

Which value used for rate design, cont'd



Fairness, efficiency, practicality. (Other BC Group 2)

Fairness. I don't want to subsidize anyone else. (Nanaimo Group 2)

I chose efficiency. I had an email from BC Hydro that if I reduce my bill, I'd get an incentive. (Lower Mainland Group 1)

I chose fairness. I don't want to pay for a corporation's power. (Nanaimo Group 1)

I put efficiency. I would like to be rewarded for saving electricity. (Nanaimo Group 2)

I like the word fairness. I feel I love my life that way. (Lower Mainland Group 1)

Efficiency wasn't far behind (fairness). Practicality wasn't as appealing to me. (Lower Mainland Group 1)

Efficiency is my number one: I should be rewarded if I conserve energy. (Nanaimo Group 2)

Efficiency—does that mean they're charging more to conserve more? (Lower Mainland Group 2) After reviewing each set of values, participants were asked to rank them in terms of which was most important to them and therefore should be used for rate design. They were then asked which value would most encourage conservation.

- Most participants in all groups ranked fairness as their top value. However, in Nanaimo Group 2, efficiency was ranked slightly above fairness.
- Efficiency was the second-highest ranked value, with most participants ranking it second.
- Most participants ranked practicality as least important of all three values, although it was ranked first by some in Lower Mainland Group 2 and Other BC Group 2.
- Most participants seemed to associate fairness with equal rates and were not interested in subsidization across different customer groups.
- The value that participants associate most with lower Hydro bills and/or personal incentives seemed to be their top value.

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Familiarity with current rates



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I've noticed consumption go up, but don't know rates. (Other BC Group 2)

It's 30 kilowatts in the first step, then it goes to second step. (Nanaimo Group 1)

It's a dual rate system. (Nanaimo Group 2)

There are two limits; cross it you pay more. (Other BC Group 1)

I don't know the rate amount, but it's cost per kilowatt hour used. (Other BC Group 2)

If you read the bill it's hard to know what's going on. (Nanaimo Group 2)

I put peak times more expensive. (Lower Mainland Group 2)

It's very cheap. (Lower Mainland Group 1)

I just pay the bill. (Lower Mainland Group 1)

We get charged a cost per unit of energy, but I have no idea what it is. (Lower Mainland Group 2)

Honestly, I don't understand my Hydro rate. (Other BC Group 2) Participants were asked if they could record and also cite aloud their current BC Hydro rate.

- Nearly all participants were unfamiliar with their current BC Hydro rate and and most could not venture a guess.
- A few participants in each group defined the rate as a "unit of cost per kilowatt" or similar, but none could accurately define the cost per kilowatt.
- A number of participants in the Nanaimo and Other BC groups said they knew there was a current 2-tier rate structure without being prompted, but the 2 tiers were not raised in either the Lower Mainland groups.
- Most participants said they pay close attention to the amount of their hydro bill—and whether it increases or decreases—but not to the actual rates.
- One participant in Lower Mainland Group 2 suggested rates were subject to time-of-use pricing.

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Awareness of current 2-step rate design



I saw the concept on the bill, but it didn't stick. (Lower Mainland Group 2)

I only knew because I tried to figure out why my last bill was so high. (Lower Mainland Group 1)

I think they want to promote lower usage. (Other BC Group 2)

It seems like the bigger houses are subsidizing the smaller ones. (Nanaimo Group 1)

The big users pay more money—pure and simple. (Nanaimo Group 2)

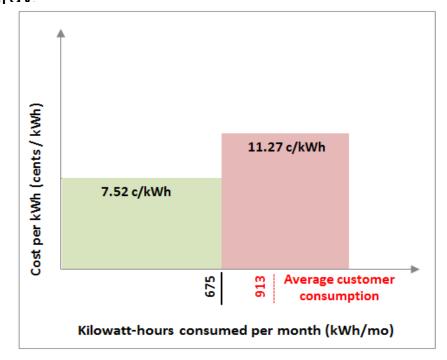
I think it's fair. Energy guzzlers like me pay more. (Nanaimo Group 2)

In the summer I'm in the green. In winter I'm in pink. (Other BC Group 2)

I guess I'm the green, but I don't know. (Lower Mainland Group 1)

It seems an unrealistic goal to be at 675. (Nanaimo Group 1)

I knew there was a tier system, but I thought it was for hours of usage. (Lower Mainland Group 2) Participants were shown the current 2-step rate design (below) and asked if they were already aware of it, what were the reasons for its use, and if the rate structure encourages or would encourage them to conserve energy.



Awareness of current 2-step rate, cont'd



They want people to stop using during peak hours. (Other BC Group 2)

I conserve but never see a change. It's wrong if I can't stay in the green. (Nanaimo Group 2)

My bill is steep and I keep the lights off. (Other BC Group 1)

I'm hoping I'm in the green but I will have to check. (Other BC)

By the fifth of the month I'm already in the red. What more can we do? (Nanaimo Group 2)

I am in both [steps] and it seems like a big jump.(Other BC)

It's not like we get notified, so it's annoying. (Other BC Group 1)

You can set up emails to get notified [when you reach the next step]. (Other BC Group 1)

I think if it was all one rate people wouldn't be conserving. (Nanaimo Group 2)

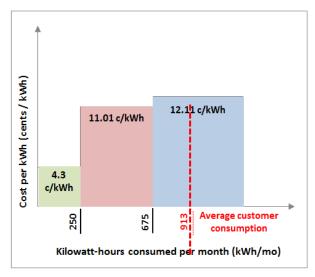
Why can't you pay a set, fair amount? (Nanaimo Group 1)

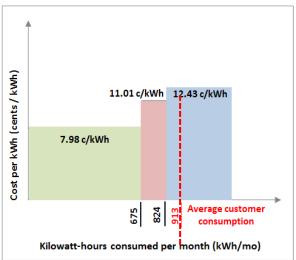
One step would be more confusing. (Other BC Group 1)

- After viewing the 2-step rate structure, about three quarters of all participants said they were aware of it. Participants in Nanaimo and Other BC were more aware than those in the Lower Mainland.
- About half of participants were aware of which step they were currently in, while the other half were not.
- Participants were mixed on whether or not the 2 steps encouraged them to conserve energy. Nearly all participants said they conserve energy without being aware of rates or the 2-step structure. The rate structure itself does not instigate conservation.
- Conservation was raised as a purpose for the 2 steps in all groups except Other BC. In most groups, increased revenue was also suggested as the reason for 2 steps.
- One participant in Lower Mainland Group 2 and one in Other BC Group 2 suggested steps indicated time-of-use rates.

Reaction to the 3-step rate design







Model A	
Expected Impact on Conservation	Expected Impact on Customers
Negligible change.	The majority of customers (60%) see no bill change or see a bill increase.
	Low consumers see bill decreases.
	High consumers see bill increases.
Model B	
Expected Impact on Conservation	Expected Impact on Customers
Negligible change.	The majority of customers (90%) see a bill increase.
	Low consumers see negligible bill changes.
	High consumers see bill increases.

Reaction to the 3-step rate design, cont'd



A would inspire people to stay in green. (Lower Mainland Group 1)

Model A would be perfect for downtown Vancouver, but not us in houses further out. (Other BC Group 2)

When I look at Model A I feel angry that it jumps from 4.3 to 11 cents. (Other BC Group 1)

Model A is unrealistic. (Nanaimo Group 1)

I prefer A. Some aren't doing well financially, so the rest of us can help. (Lower Mainland Group 2)

I'm not willing to subsidize someone else. (Other BC Group 1)

There should be another row in A? That's a huge jump. (Lower Mainland Group 1)

I don't know who would be under 250 kw/hrs. (Other BC Group 2)

For me Model A would be really bad. The current rate is still the best. (Lower Mainland Group 2)

I'd choose B. With A I would pay more. (Lower Mainland Group 1) Participants were presented with two versions of a possible 3-step rate design (Model A and Model B; see page 13) and asked for their first impressions.

- Reactions to Model A:
 - Less than half of participants asked said they would choose Model A as their rate structure.
 - Apartment dwellers were more amenable to Model A, and more in favour of higher electricity users paying higher rates than lower users (i.e., step 1). Other BC Group 1 had the most participants in favour of Model A, followed by Nanaimo Group 1.
 - Those in favour of Model A also suggested that it promoted greater conservation than Model B.
 - Many participants perceived Model A as "unrealistic" and said that the kilowatts in step 1 were too low for most customers to remain in step 1 and that cost increase between step 1 and 2 was too steep.

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Reaction to the 3-step rate design, cont'd



I'd go with B; it's similar to what we have now. (Nanaimo Group 1)

B, because most of my usage is in green. (Lower Mainland Group 2)

In B, 90% will see a bill increase not attractive. (Nanaimo Group 1)

I prefer Model B, where there is not much change from now. (Lower Mainland Group 1)

I like 3 steps. People who don't care to conserve should pay more. (Other BC Group 2)

Model B is designed to be more fair. Model A is tax the rich. (Lower Mainland Group 2)

It doesn't matter whether A or B, you're going to get a rate increase. (Lower Mainland Group 2)

Nobody wants higher rates no matter the model. (Lower Mainland Group 1)

Why don't we pay the same across the board? (Nanaimo Group 2)

I can't decide, but both penalize larger users. (Nanaimo Group 1)

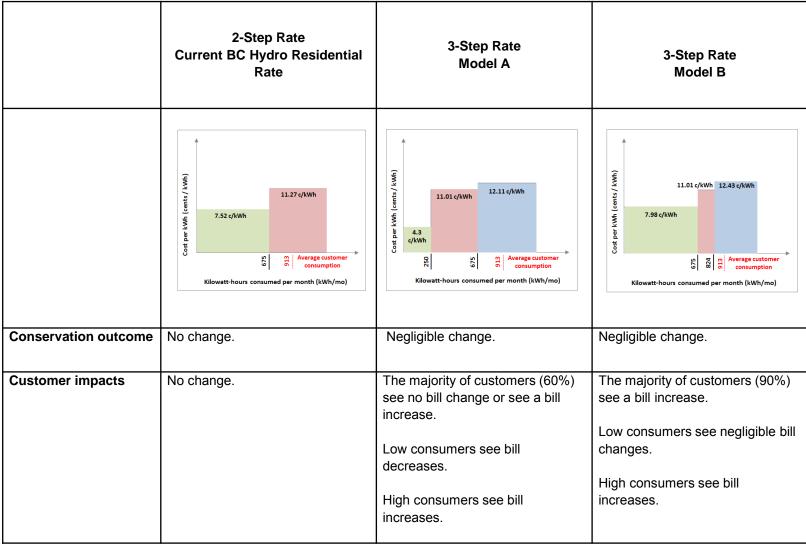
The current model is the best value. (Lower Mainland Group1)

Reactions to Model B:

- More than half of participants were more in favour of Model B than they were Model A. It was deemed to be more "fair" and "attainable" for most customers, and the rate structure that would best promote conservation.
- Those who live in houses were more likely to choose Model B than apartment dwellers.
- Some were dissuaded by Model B because it said that 90% of customers would see a bill increase.
- Some thought step 2 was too small.
- Some said—unaided—that they preferred the current rate above both Model A and Model B.
- Some participants interpreted both models as rate increases rather than rate restructuring.
- Some said that increasing from 2 to 3 rate steps would cause confusion amongst customers. A one-step, flat-rate was raised by some to mixed reaction.



Reaction to all three models



Reaction to all three models, cont'd



B, you'd get the most significant savings, if you could achieve it. (Lower Mainland Group 1)

With A they can make more money because the average person is halfway through the blue. (Lower Mainland Group 2)

A feels like a money grab. (Lower Mainland Group 1)

In Model B I'm at step 3 but might get to step 2. There's no incentive for that in the current. (Nanaimo Group 1)

Model A is too hard. You'll have a lot of unhappy customers. (Lower Mainland Group 1)

I don't understand who they are trying to help. (Other BC Group 1)

I don't know what else I could do to save in Model A. (Lower Mainland Group 1)

I just don't get how they can bring in the same [amount of revenue].(Lower Mainland Group 1)

I do the best I can right now. I don't see how I can do more to conserve. (Other Group 1) Participants were shown all three rate structures (page 16) and asked which would help them to save more money and which would encourage overall conservation. There were also asked which would collect more revenue.

- Most participants said the current model would help them to keep their bills lower, followed by Model B.
- Participants were divided between the current model and Model B, in terms of which would encourage greater conservation amongst customers.
- Most participants said Model B would bring in more money, while some said Model A.
- Some were skeptical when told that all models are revenue neutral; however, most participants were more concerned about their own potential bill increases than whether or not BC Hydro is collecting more money.
- Many said they are already conserving as much as possible and that any one model could not encourage them to conserve more.

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Which rate design do you prefer?

No one knew our rates, so what's the difference between any? (Nanaimo Group 1)

If it ain't broke, don't fix it. (Other BC Group 1)

I can stay within the 675, so I'd pick current. (Other BC Group 2)

I'd say A. I just did a calculation and realized I'd save more. (Other BC Group 2)

Current, but leaning towards B. (Other BC Group 2)

The current, because I'm in an apartment. (Lower Mainland Group 1)

Current. I have a barn with animals to keep warm in the winter and that would put me into the blue. (Other BC Group 2)

I still say the current. (Lower Mainland Group 1)

B, because I think I'd be in the pink. (Lower Mainland Group 2)

It causes friction in your household when you have to cut power to jump tiers. (Nanaimo Group 1) Participants were then asked which of the three rate designs they would ultimately choose for their own household.

- Most participants selected the current model as their preferred rate design.
- Nearly all participants in both Lower Mainland groups chose the current model.
- Most participants in the Nanaimo groups also mostly selected the current model.
- Other BC Group 1 was divided amongst all three rate designs, while Other BC Group 2 chose mostly the current rate structure.
- More participants selected the current rate design than did when initially asked for their preference among the three rate structures.

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Understanding rate design: 2- vs. 3-steps

Less steps, less complications. (Lower Mainland Group 1)

Only two in this room knew about the 2 steps. It makes more sense to educate us about the 2step system. (Lower Mainland Group 2)

3 steps is confusing. Will it end up being 4 or 5? (Nanaimo Group 2)

It would further complicate things. We already don't understand it. (Nanaimo Group 1)

If we didn't know about 2 steps, how will we know about 3? (Other BC Group 1)

The current system is easier to understand. The move to 3 tiers looks like a rate increase. (Lower Mainland Group 2)

I'm all for 3 steps if they adjust them. (Lower Mainland Group 1)

Make my bill more complicated and higher, then I get upset. (Lower Mainland Group 2)

It seems like a cover-up to me. They'll increase rates and all these steps are hiding information. (Other BC Group 1) After some participants expressed confusion in interpreting the rate charts, groups were asked whether adding a step to the current 2-step rate design would be too confusing for customers.

- Nearly all participants asked said that 3 steps would confuse customers more than the current 2 steps.
- Some said that an additional step could be interpreted as a rate increase by customers.
- Some suggested that since many don't seem to understand current rates, further education about the current 2-step structure would be beneficial to them.
- A one-step, flat-rate structure was suggested by some, while others said they would prefer a system in which higher energy users pay higher rates than lower users.

Value associated with chosen rate design



FOR GENERATIONS

I chose current. It's the fairest. (Nanaimo Group 1)

I chose current as it seemed more efficient. (Nanaimo Group 2)

The current fits all three. (Lower Mainland Group 1)

B is more fair. (Lower Mainland Group 2)

With efficiency, Model A has the most incentive to conserve energy. (Nanaimo Group 2)

I think current fits practicality. (Nanaimo Group 1)

I chose the current model; it's based on fairness. (Other BC Group 1)

Efficiency. B would encourage me to conserve. (Other BC Group 1)

Current – efficiency. (Other BC Group 2)

Current. My value is efficiency. Model A speaks to that, but unless you live in a smart car it wouldn't work. (Nanaimo Group 2)

The current is efficient and fair. (Nanaimo Group 1)

Participants were asked to recall the set of three values (efficiency, fairness, practicality) presented to them earlier, and then asked which value would best fit their preferred rate design (current, Model A or Model B).

- Most participants associated the current model with efficiency, followed by the current model with fairness.
- Efficiency and fairness were also linked to Model B by a few participants in the Nanaimo groups and to models A and B in the Other BC groups.
- Practicality was the least mentioned value by participants, although a few associated it with the current model and Model A.
- While fairness was the top value cited by most in the earlier value-ranking exercise, when asked to attach a value to their preferred rate structure, efficiency seemed to be more important to most participants.

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How should BC Hydro communicate rates? BChydro COMMUNICATE RATIONS

FOR GENERATIONS

An app for smart phones to see usage from smart meter. (Lower Mainland Group 2)

Tell us why they are changing the rates. (Other BC Group 2)

On my phone I get a message: you've used this much data. (Nanaimo Group 1)

We'd use less if I knew about the app. (Other BC Group 2)

Have BC Hydro at local community events. (Other BC Group 1)

Maybe a commercial. (Lower Mainland Group 1)

A big campaign won't reach all. (Lower Mainland Group 1)

I want to know a week before, not when damage is done. (Nanaimo Group 1)

When I see my bill I just want to know when it's due. (Lower Mainland Group 2)

People like incentives. (Lower Mainland Group 2)

There's a sense that there's nothing we can do. (Other BC Group 1)

Participants were asked if BC Hydro should communicate rate structure changes, and, if so, which mode would be most effective. They were also asked if they would like to be notified when entering a new rate step.

- Most participants agreed that BC Hydro should communicate rate changes and notify customers when they approach higher rate steps.
- Commercials and TV news were mentioned, but participants were more interested in tools to understand their usage and billing than in advertising.
- Most said they would like advance notification when they are approaching a new step via an app on their smartphone. A few suggested text messages, similar to notifications of cellular data use.
- A few said that information in their bill would not be effective, as they only read the amount due.
- Some said that rate changes would be unwelcomed, regardless of how they are communicated.



The Bottom Line: Revisiting the Objectives

1. What do customers value in rate design?

Before viewing any rate structures, fairness topped the list of values for participants. Customers want to believe they are being charged fair and equal residential rates. After viewing the three rate structures (current 2-step and the 3-step models A and B), efficiency became the more important value for most (with fairness in a close second place). Conserving energy is already very important to customers and keeping their rates—and therefore, their bills—as low as possible is their main priority as BC Hydro customers.

2. Are customers aware of the current 2-step rate design?

Few customers are familiar with the current 2-step rate design (and its purpose) and most are totally ignorant of the cents per kilowatt hour at either step. Again, their bill, and not their rate, is the bottom line for them and nearly all can cite their bill amounts. That being said, most are open to learning more about the current 2-step structure and are interested in striving to conserve in order to stay in (or mostly in) step 1. (Although there is frustration among some that they are conserving all they can yet will not see decreased rates with the current structure.) Most said they would rather be subject to the current 2-step structure than a 3-step rate structure.

The Bottom Line: Revisiting the Objectives



3. How do customers reaction to a three-step rate?

Customers are already unfamiliar with the two-step rates and so adding a third step is too confusing for them. There is also a perception that the purpose of a new rate design is to increase rates and that a more complex design will only obscure these higher rates. Most customers would rather keep the 2-step structure than move to either of the two proposed 3-step designs (Model A and Model B).

4. Does reaction to the rate designs differ between dwelling types (apartment versus house)?

Apartment dwellers are more likely to react favourably to the 3-step Model A, which has the lowest rate step to benefit the lowest hydro users. However, nearly all house dwellers, and many in apartments, said they would not benefit from step 1 of Model A and therefore would prefer Model B or the current rate.

Those customers in the Lower Mainland and Nanaimo, living in both houses and apartments, and the house dwellers in the Interior and Northern BC (Other BC) generally prefer the current 2-step rate to the 3-step, while those apartment dwellers in Other BC preferred the 3-step models A and B. (However, this group was also the smallest at only four participants.)

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The Bottom Line: Revisiting the Objectives

5. How do rate designs affect different customer groups (low income, average, apartment, large dwelling, etc.)?

Most residential BC Hydro customer do not understand why the rates are tiered and some even suggest a one-step, flat-rate structure as the most "fair".

Most customers in all dwellings and all regions are more interested in keeping their rates low than in ensuring all customers can afford hydro. Only one participant in the Lower Mainland house dwellers group and one in the Other BC apartment dwellers group commented that they should pay a higher rate to subsidize lower income customers. However, most customers agree that those who don't conserve or who use electricity frivolously should pay higher rates (and likely can afford to).

As mentioned, a number of customers in all locations and dwelling types believe they are already conserving as much as they possibly can and so do not see themselves benefitting particularly from any one rate design.