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October 18, 2013

Via Email
Original via Mail

Commercial Energy Consumers Association of British Columbia
c/o Owen Bird Law Corporation
P.O Box 49130, Three Bentall Center
2900 – 595 Burrard Street
Vancouver, BC V7X 1J5

Attention: Mr. Christopher P. Weafer

Dear Mr. Andrews:

Re: FortisBC Inc. (FBC)
FBC Radio-Off AMI Meter Option Application
Response to the Commercial Energy Consumers Association of British
Columbia (CEC) Information Request (IR) No. 1

On August 30, 2013, FBC filed the Application as referenced above. In accordance with Commission Order G-160-13 setting out the Amended Regulatory Timetable for the review of the Application, FBC respectfully submits the attached response to CEC IR No. 1.

If further information is required, please contact the undersigned.

Sincerely,

FORTISBC INC.

Original signed:

Dennis Swanson

Attachments

cc: Commission Secretary
Registered Parties (email only)

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|---|--------------------------------------|
| FortisBC Inc. (FortisBC, FBC or the Company) Application for Advanced Metering Infrastructure (AMI) Radio-Off Meter Option (the Application) | Submission Date: October 18, 2013 |
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1 **1.0 Reference: Exhibit B-1, page 1**

- 8 1. Customers may choose to opt-out of accepting a wireless transmitting meter.
- 9 2. Customers who choose to opt-out will be provided with an AMI meter that has the
- 10 wireless transmit functions disabled. Transmit functions on these meters will remain
- 11 disabled until the individual chooses to opt back in to the AMI program; in the event that
- 12 the customer moves to a new property, the opt-out choice will move with the customer.
- 13 3. The incremental cost of opting-out of the AMI program will be borne by the individual
- 14 choosing to opt-out.
- 15 (collectively, the Commission Radio-Off Principles)

2

3 1.1 Please confirm that a calculation of the incremental cost of providing Opt Out

4 functionality could include the following analysis:

5 Estimated Cost of providing service for all customers including those with

6 regular AMI and those with Opt Out

7 Less: Cost of Providing Service for all customers with regular AMI only

8 Equals: Cost of Providing Opt Out Service

9 Cost of Providing Opt Out/# of Customers Opting Out = Incremental Cost of

10 Providing Opt Out Service per Customer

11

12 **Response:**

13 Confirmed.

14

15

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17 1.1.1 If not, please explain why not.

18

19 **Response:**

20 Please refer to the response to CEC IR 1.1.1.

21

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1.2 Would FortisBC agree that such a calculation would include the incremental overhead and indirect costs that may be associated with providing a Radio Off service?

Response:

Yes.

1.2.1 If not, please explain why not.

Response:

Please refer to the response to CEC IR 1.1.2.

1.3 Please provide FortisBC's estimate of the Cost of Providing Opt Out service based on this calculation.

Response:

The Company did not calculate the cost of providing Opt-Out service according to the referenced calculation. The incremental cost of providing Opt-Out service including the Setup Fee of \$110.00 and the Cost per Read Fee of \$22.00 were based on Setup costs of approximately \$76,000 and annual cost of reading the meters of approximately \$92,000. All of which is based on 695 Opt-Out customers and 6 readings per year.

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1 **2.0 Reference: Exhibit B-1, page 2 and page 5**

13 The implementation of AMI will mark a significant change in how the Company serves its
14 customers, providing numerous immediate and future benefits as recognized in the Commission
15 Decision of July 23, 2013. The opportunity for improved control over the cost of electricity, both
16 by customers and by the Company, is a fundamental driver behind the AMI Project.

25 **1.5 How Does the Radio-Off Option Affect Service to Radio-Off Customers?**

26 For Radio-Off Customers, the radio-off AMI meters that the Company will install will provide
27 interval consumption and event data.

28 While the deployment of radio-off AMI meters will protect the availability of some benefits that
29 would not be available through the use of non-AMI meters, the decision of a customer to choose
30 a radio-off AMI meter will still result in certain benefits being unavailable to the individual Radio-
31 Off Customer:

2

3 2.1 Please confirm that having a number of Radio Off customers will not negatively
4 affect the benefits available to Radio On customers regardless of the proportion
5 of Radio Off customers.

6

7 **Response:**

8 Confirmed. Under any reasonable assumption of the number of Radio-Off customers, the
9 benefits to Radio-On customers are not negatively affected. As shown in the response to
10 BCUC IR 2.84.4 in the AMI CPCN application (which is reproduced in the response to BCPSO
11 IR 1.2.2 in this proceeding), shows how AMI benefits are affected if non-communicating “radio-
12 off” AMI meters are installed and “opt-out” fees are **not** collected.

13 Measurement Canada and meter exchange benefits as described in the AMI CPCN Application
14 are entirely preserved. Theft detection benefits are also unaffected because the downloaded
15 AMI hourly usage data will still allow the energy balancing method of detecting power theft to be
16 employed. There is a slight erosion of remote/disconnect benefits at high radio-off participation
17 rates.

18 That response shows increased erosion of meter reading and contact centre benefits at
19 increased radio-off percentages. However, those reduced benefits will be offset by the
20 collection of radio-off fees. Therefore, even at “opt-out” participation rates much higher than
21 those experienced by any utility (10%), the AMI benefits are substantially preserved through the
22 collection of radio-off fees.

23

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1 2.1.1 If not confirmed, does FortisBC have a threshold estimate of the
2 proportion of Radio Off customers that would negatively influence the
3 benefits available for Radio On customers?
4

5 **Response:**

6 Please refer to the response to CEC IR 1.2.1.
7
8

9
10 2.1.1.1 Please provide any analysis FortisBC has conducted with
11 respect to the limitations of the benefits of AMI based on the
12 number of Radio Off customers.
13

14 **Response:**

15 Please refer to the response to CEC IR 1.2.1 for an analysis of benefits erosion at “opt-out”
16 percentages higher than have been experienced in similar North American programs.
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1 3.0 Reference: Exhibit B-1, page 3 and Appendix B and FortisBC Electric Tariff

- 1 A customer who wishes to participate in the Radio-Off Option and accept a radio-off AMI meter
2 must communicate that choice to the Company by one of the following means:
- 3 1. By completing and signing an application form, in the form set out as Appendix "B" to
4 this Application (the FBC Radio-Off Option Form) and delivering it to the Company by
5 one of the following means:

I, _____ (Account Holder) am selecting a radio-off AMI meter to be installed
at _____ (Service Location). I understand the following to be conditions of this choice:

1. I will be provided with an AMI meter that has the wireless transmit functions disabled and that transmit functions on that meter will remain disabled until I request to have the transmit function enabled or move to another location.
In the event that I move to another location I will also have the choice of a radio-off AMI meter at the new address. However, a new Radio-Off Form is required for the new location.
2. There are fees associated with this radio-off choice that have been approved by the BC Utilities Commission which will be billed on my electric bill. The fees that have been approved by the BC Utilities Commission are set out in paragraph 3 below. Failure to pay these charges will be subject to normal collections procedures and may result in service disconnection.
3. I agree to pay the following fees on my electric bill. I understand that these charges are subject to review and adjustment by the BC Utilities Commission.

Radio-Off Rates

| | |
|-----------------------|----------|
| Per-Premise Setup Fee | \$110.00 |
| Per-Read Fee | \$22.00 |

4. Access to the meter(s) must be provided as prescribed in the FortisBC Electric Tariff. This access is necessary to download meter readings and operational data that is used to support billing and preserve the financial benefits of the AMI Project for other customers. I understand that my refusal to allow meter access is a violation of the Terms of Service and may result in service disconnection.

6.1 Meter Reading

Meters shall be read at the end of each billing period in accordance with the applicable rate schedule. The interval between consecutive meter readings shall be determined by the Company. An accurate record of all meter readings shall be kept by the Company and shall be the basis for determination of all bills rendered for Service.

- 3.1 Please provide the billing periods (ie. Monthly) for all the rate schedules that would be applicable to Radio Off customers.

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1 **Response:**

2 Please refer to the below table.

| Rate Class | Billing Period |
|------------------|---|
| Residential | Bimonthly (Monthly billing for customers enrolled in the Equal Payment Plan) |
| Small Commercial | Monthly and Bimonthly |
| Commercial | Monthly and Bimonthly |
| Large Commercial | Monthly |
| Irrigation | Monthly and Bimonthly |

3

4

5

6 3.2 Please confirm that the meter reading frequency provided for 'at the end of each
7 billing period' is sufficient to preserve the financial benefits of the AMI project for
8 other customers.

9

10 **Response:**

11 Confirmed.

12

13

14

15 3.3 Please explain if increases in meter reading frequency for Radio Off customers
16 could result in greater financial benefits attributable to the AMI program.

17

18 **Response:**

19 Increases in meter reading frequency (for both radio-off and non-WAN connected meters) would
20 allow the revenue protection team to react more quickly to issues, but the benefits improvement
21 is not expected to be material.

22 However, if meter reading frequency decreased as explored, for example, in the response to
23 BCUC IR 1.9.4, the lag in obtaining meter data could result in missed opportunities to deter
24 theft.

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1
2 3.4 Please describe all functions and their cost for capturing, handling and
3 processing Radio Off meter data, until it is equivalent in the FortisBC system to
4 the wireless captured data.

5
6 **Response:**

7 Please refer to the response to BCUC IR 1.3.1.

8 Note that data capture under the radio-off option could not be “equivalent” in frequency of
9 collection since it would be prohibitively expensive to collect hourly interval usage data without
10 having a meter reader reading every radio-off premise two or three times a day. In other
11 respects, the data collected from radio-off meters is expected to be the same as with standard
12 AMI meters.

13

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1 **4.0 Reference: Exhibit B-1, page3**

30 The initial fee described below will be included in the first bill that the Radio-Off Customer
31 receives after installation of the radio-off AMI meter. Ongoing charges for manually reading the
32 radio-off AMI meter will be included in each subsequent bill.

2

3 4.1 Please confirm that the initial fee will incorporate the charges related to turning
4 the radio signal back on at the premises after a customer moves.

5

6 **Response:**

7 Yes, the initial per-premise fee incorporates all costs related to disabling the AMI meter radio
8 and any subsequent conversations regarding the radio-off option, as applicable for that premise.
9 This includes all of the necessary contact center discussions with the customer specific to
10 arranging to revert to the default radio-on configuration at a radio-off premise.

11 It is the expectation that other than the physical “at the meter” process required for enabling the
12 radio (which costs are captured during the final manual meter read), the automatic recognition
13 of standard radio-enabled AMI meters by the AMI system will preclude any material additional
14 administrative costs.

15

16

17

18 4.1.1 If not, please describe how the Radio back on cost would be charged to
19 the customers opting out.

20

21 **Response:**

22 Please refer to the response to CEC IR 1.4.1.

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1 **5.0 Reference: Exhibit B-1, page 4**

1 **1.3 How Will Customers Be Notified of the Radio-off Option?**

2 Customer communications from FortisBC will include a notice that concerned customers can go
3 to the FortisBC website or call the electric Contact Centre for more information or to discuss
4 their concerns. Customers will be made aware of the options available if their concerns cannot
5 be addressed, including the Radio-Off Option if an AMI meter is scheduled by FortisBC to be
6 installed at the premises associated with their account.

3 5.1 Please identify all the means such as bill inserts, newspaper advertising or other
4 by which customers will receive notification as to whom to contact if they have
5 concerns regarding the AMI meters.

7 **Response:**

8 FortisBC has already delivered an AMI newsletter to all electric customers, which, on the front
9 page asked “if you have any questions or concerns about advanced meters, call our customer
10 contact centre at 1-866-436-7847 or visit www.fortisbc.com/ami.” AMI information was also
11 included in the September/October 2013 bill insert and FortisBC is continuously updating its
12 website with AMI information.

13 The Company plans to continue with updates to its website as appropriate through-out the AMI
14 project.

15 Communications planning for post-Radio-off decision, and both network and meter deployment
16 is currently underway.

19 5.2 Please provide a copy of the notice FortisBC intends to send out if available.

22 **Response:**

23 Please refer to the response to CEC IR 1.5.1. The specific form of notice to customers to
24 which the question refers – specific to the Radio-off Option – must await a decision from the
25 Commission, and it will be completed shortly after that time.

26 In the meantime, some notice to customers has already been provided, along with instructions
27 as to how to gain further information about the Advanced Meter project. Currently, when
28 customers phone the Company's contact centre and express concerns they are advised of this
29 Radio-off Application, the terms and fees proposed herein, and the fact that the regulatory
30 process is open to the public for review. These customers are added to the Company's

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1 database so that they can be contacted prior to meter deployment in order to further discuss
2 their concerns and provide them with details of the approved Radio-off Option.

3
4
5
6 5.3 Is there any means by which a concerned customer can speak face-to-face with
7 a FortisBC representative, or must all communication be conducted by way of
8 telephone or online?
9

10 **Response:**

11 Yes, there is a means by which a concerned customer can speak face-to-face with a FortisBC
12 representative. A concerned customer can indicate to the Company's contact centre staff that
13 they would like a face-to-face discussion with a FortisBC representative who will then ensure
14 that the discussion is scheduled with the appropriate project team representative.

15
16
17
18 5.3.1 If so, what is the process by which a concerned customer can arrange
19 to speak face-to-face with a FortisBC representative?
20

21 **Response:**

22 Please refer to the response to CEC IR 1.5.3.
23
24

25
26 5.4 What training regarding Radio On vs. Radio Off will the staff responsible for
27 addressing customer concerns receive, and when will this be undertaken?
28

29 **Response:**

30 AMI related training for appropriate staff started shortly after project approval, and will continue
31 as needed throughout the AMI project. Training has and will include the provision of information
32 to staff about the available options, so that staff are in a position to communicate with customers
33 regarding their options. Specific to the Radio-off Option, currently staff are instructed to advise
34 customers that the Company's Radio-off Application is in the regulatory process and to discuss
35 the proposals and fees included in the Application, noting however that the final form of the

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Radio-off Option is subject to Commission approval. Subsequent to a final and approved Radio-off Option staff will be trained on the details therein and will be able to provide those details to customers.

5.4.1 What costs does FortisBC expect to be associated with this training?

Response:

Training costs related to all aspects of the AMI project have been embedded within the AMI project. Training specific to the radio-off option will have no material additional impact upon training requirements and as such is not broken out separately.

5.5 Will FortisBC track the number of customers who contact FortisBC with concerns but whose concerns are alleviated?

Response:

Yes, as customers' concerns are alleviated they will be noted in the data base referenced in the response to BCUC IR 1.1.1.

5.5.1 If so, please explain how this information might be available to interested parties such as through particular BCUC processes?

Response:

FortisBC will make AMI-related public communication materials available to interested parties on request.

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1 **6.0 Reference: Exhibit B-1, page 4**

7 Thirty days prior to scheduled deployment of AMI meters to a particular region, the Company
8 will mail a notice of pending AMI meter installation to all customers of the region. Included in
9 that notice will be a general information kit regarding AMI, as well as a reminder that if they have
10 any concerns regarding the installation they need to contact FortisBC. The notice will clearly
11 indicate that customers can select the Radio-Off Option, set out the means by which that choice
12 must be communicated to FortisBC, and provide the fee schedule associated with that option.

2

3 6.1 What, if any, deadlines are associated with selecting the radio-off option prior to
4 installation?

5

6 **Response:**

7 It is the Company's intent that customers can elect to participate in the radio-off option at any
8 time: pre, during, or post implementation. Therefore there is no deadline associated with the
9 selection.

10

11

12

13 6.2 What is the planning and installation timetable within which notice for opt out
14 would disrupt installation scheduling?

15

16 **Response:**

17 FortisBC expects only minor disruptions to AMI meter installation as a result of radio-off
18 requests. This is because the radio-off field process is expected to occur outside the regular
19 deployment process using FortisBC personnel, so a radio-off premise is simply not part of
20 regular deployment.

21

22

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24 6.3 Does FortisBC intend to maintain this option indefinitely?

25

26 **Response:**

27 FortisBC intends to offer this option while there is participation in the program.

28

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7.0 Reference: Exhibit B-1, page 5 and FortisBC website

<http://www.fortisbc.com/About/ProjectsPlanning/ElecUtility/Projects/nYourCommunity/AdvancedMeteringInfrastructure/Documents/13-267.2 AMI newsletter WEB.pdf>

- Radio-Off Customers will not have support for a Home Area Network (HAN) and associated in-home displays (IHDs), given that this requires wireless transmission from the AMI meter.

FortisBC will endeavor to clearly communicate these limitations to customers in its notification to customers (referenced above) prior to deployment of AMI meters in their region.



- You will have access to tools that will help you better understand your bill and better manage your electricity use.
- You can find out how much electricity you've used at any point in the billing period—so you don't have to wait for your bill to find out if your consumption is higher or lower, and you won't see estimates on your bills.

7.1 The CEC has reviewed the FortisBC website and did not find specific information as to the tools that will be available for customers to determine how much electricity they are using at a given time such as when their air conditioner or laundry is running and how to access these tools. Will the FortisBC website provide this information to customers in the future, and if so when?

Response:

To this point the tools referenced by the Company include the Customer Information Portal, to be available to all customers with a standard AMI meter (with radio-on) by the end of 2014. Concurrently, for those customers who have elected to set up their own HAN, and have asked

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FortisBC to enable the HAN radio in the AMI meter, a customer-owned IHD will provide the consumption information.

The FortisBC website will provide information as to the availability of these tools as soon as the requisite AMI system functionality has been achieved.

7.2 Would FortisBC agree that having information as to the specific tools available and how to access them to receive the benefits of AMI would be useful in communicating the disadvantages of having Radio Off?

Response:

FortisBC agrees.

7.3 Please provide any information that FortisBC has compiled with respect to advising customers of the specific tools that will be available and how to access them.

Response:

FortisBC has been notifying customers that they will have tools available to manage their energy use since initial consultations with customers and stakeholders began on the AMI project. FortisBC has communicated tools for energy use in customer information, including our website at www.fortisbc.com/ami, bill insert and public presentations. Providing customers with information regarding tools available for energy use management is important to this project, and FortisBC will continue to ensure that information is provided through a variety of channels including telephone, website, PowerSense promotions and bill inserts. Samples of the materials are provided in Attachment 7.3.

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1 **8.0 Reference: Exhibit B-1, page 5 and page 5**

19 Since a radio-off AMI meter will have its transmitting functions disabled, consumption and
20 operational data must be retrieved by FortisBC directly from the meter. The data will be
21 securely retrieved by FortisBC personnel using a handheld device that will download the
22 information through the optical port on the AMI meter.

21 • Approximately two hours per meter in administrative work required for manual meter
22 configuration within the AMI system; and

23 • Additional RF range extenders required to maintain the overall meter-to-range
24 extender ratio in order to fill in network "gaps" created by the radio-off meters and
25 preserve the integrity of the RF mesh.

26 The following table summarizes the inputs to the per-premise setup fee:

| Per-premise setup fee: | | | |
|---------------------------------|-------|----------|--------------------|
| | units | rate | total per customer |
| Contact Centre | 1 | \$51.41 | \$51.41 |
| Metering Analyst | 1 | \$57.14 | \$57.14 |
| Capital related (add'l RE's) | 2 | \$707.00 | \$2.12 |
| Total | | | \$ 110.67 |
| Proposed Per-premise setup fee: | | | \$110.00 |

2

3 8.1 Does the 1 Unit for Contact Centre plus 1 Unit for Metering Analyst refer to one
4 hour each, as referenced in the 'approximately two hours per meter in
5 administrative work'? Please explain if no.

6

7 **Response:**

8 Yes. Please also refer to the response to BCUC IR 1.3.1.

9

10

11

12 8.2 Does the Per Unit rate for each position reflect the full 'burden of labour' such as
13 payroll taxes, workers' compensation, health insurance, retirement benefits,
14 telephone and internet access, uniforms, small tools and equipment, estimated
15 bonuses, employer paid snacks, meals and entertainment, training fees,
16 seminars and others?

17

18 **Response:**

19 The per unit rate includes both incremental labour and capital related costs. Labour related
20 costs includes benefit loading to account for vacation, statutory holidays, and other time away;
21 pension, medical, dental and other health benefits; WCB and other labour related costs. Capital
22 related costs include the full direct cost of additional Range Extenders including a Capitalized

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Overhead loading to account for other indirect costs. None of the rates include telephone and internet access, uniforms, small tools and equipment, employer paid snacks, meals and entertainment, training fees or seminars as those costs would not be incremental to the meter reading costs required for those customers that were excluded from the initial AMI project implementation.

8.2.1 If not, please explain why not and provide a list of expenses with costs that could also be included in an analysis of the full burden of labour.

Response:

Please refer to the response to CEC IR 1.8.2.

8.3 Does the Capital Related include the cost of handheld meter reading devices or just the additional range extenders?

Response:

The Capital related cost is only the provision for additional range extenders.

8.3.1 Please identify all the items included in the \$707 related Capital and their costs.

Response:

| | |
|---|-----------------|
| Range Extender cost per unit | \$187.00 |
| Range Extender Installation cost per unit | <u>\$520.00</u> |
| | <u>\$707.00</u> |

Please also refer to the electronic spreadsheet attachment provided with Exhibit B-2.

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8.4 Do the capital related costs include depreciation?

Response:

No.

8.4.1 If no, please provide the estimated depreciation expense.

Response:

Depreciation expense would be approximately \$100 per year.

8.4.2 Is there any other equipment that is used in providing manual meter reading?

Response:

No , there is no incremental equipment required for manual download meter reading. The handheld devices that will be used are already required to read non-WAN connected AMI meters.

8.4.3 If so, please identify and provide the costs of all equipment including handheld meter reading devices and any other equipment that is used to provide manual meter reading.

Response:

Please refer to the response to CEC IR 1.8.4.2.

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1 Providing manual meter reading requires the following equipment:

- 2 • A laptop or tablet suitable for meter technicians to use. The costs for these are
- 3 approximately \$3,000 per unit.
- 4 • Itron OpenWay Tools (Field Pro) software. The cost of this software is embedded within
- 5 the Itron contract.
- 6 • A handheld Optical Probe necessary to connect the laptop to the AMI meter. The cost of
- 7 these probes is approximately \$500 per unit.

8
9 As the AMI project contemplated that there would be a need for some manual meter reading
10 related to uneconomic or unavailable WAN at certain premises, the costs noted above have
11 been embedded within the AMI project. They do not represent incremental costs to be
12 associated with the Radio-off Option, and therefore have not been included.

13
14

15
16 8.5 Does the number of Units incorporate time for sick time, holidays, safety and
17 training, administration, management accountability and infrastructure, time and
18 reports and others?

19
20 **Response:**

21 The number of units does not incorporate time for safety and training, administration,
22 management accountability and infrastructure, time and reports and others as those costs
23 would not be incremental to the meter reading costs required for those customers that were
24 excluded from the initial AMI project implementation. Please also refer to the response to CEC
25 IR 1.8.2.

26
27

28
29 8.5.1 If not, please explain why not and provide a complete list of factors that
30 influence the number of Units and provide estimated costs.

31
32 **Response:**

33 Please refer to the response to CEC IR 1.8.5.

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8.6 Would FortisBC agree that there may be overhead costs associated with maintaining an additional service that may not be captured in the Contact Centre or Metering Analyst costs?

Response:

By their very nature, overhead costs are indirect costs that are difficult to measure, and therefore there may be overhead costs associated with maintaining an additional service. However, the Company does not believe that the amounts will be significant.

8.6.1 If so, please specify any overhead costs that may not have been captured in the Contact Centre or Metering Analyst time.

Response:

Please refer to the response to CEC IR 1.8.6.

8.7 Does FortisBC consider that there is any additional regulatory burden and associated costs required to provide a Radio Off option?

Response:

FortisBC considers that there is only the additional regulatory cost and effort of seeking Commission approval of FBC's proposed Radio-Off AMI Option. Following a decision on this Application, there may be additional regulatory obligations as a result of the Commission's decision. However, at this time, FortisBC considers that any regulatory requirements to provide the Radio-off Option following this Application will be minimal and likely not burdensome, given that the Radio-off AMI Option will minimize any potential delays in implementation schedule of the AMI Project as a result of customer opposition.

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8.7.1 If so, please explain if the regulatory cost is captured in the proposed fees.

Response:

Please refer to the response to CEC IR 1.8.7.1. The only identified regulatory obligation at this time is the current Application for a Radio-Off Meter Option. FBC forecasts that the regulatory costs of this Application to be less than most tariff or rate type Applications. These costs are being captured in a deferred Regulatory Application account and will eventually be amortized into Revenue Requirements.

8.7.2 If the regulatory cost has not been captured in the proposed fees, please explain why not.

Response:

Please refer to the responses to CEC IRs 1.8.7 and 1.8.7.1.

8.7.3 Please provide an estimated cost of any incremental regulatory burden faced by FortisBC as a result of providing a Radio Off option.

Response:

Please refer to the responses to CEC IRs 1.8.7 and 1.8.7.1.

8.8 Does FortisBC consider that there has been an incremental cost associated with costing out and determining an appropriate fee schedule for Opt Out customers?

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1 **Response:**

2 Yes. However, regulatory costs of this nature have always been borne by all customers.

3
4

5
6 8.8.1 If so, please explain if such costs have been captured in the proposed
7 fees.

8

9 **Response:**

10 Regulatory costs related to the radio-off application have not been captured in the proposed
11 fees. Please also refer to the response to CEC IR 1.8.1.

12
13

14
15 8.8.2 If there are costs that have not been captured, please identify the items
16 and provide the costs.

17

18 **Response:**

19 Please refer to the responses to CEC IRs 1.8.1 and 1.8.8.1.

20
21

22
23 8.9 Please confirm that the per premise set up fee includes the cost of returning the
24 premise from Radio Off to Radio On once the customer and/or premise reverts to
25 Radio On.

26

27 **Response:**

28 Please refer to the response to CEC IR 1.4.1.

29
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31

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|---|--------------------------------------|
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8.9.1 If not, please identify any additional costs that would be incurred as a result of moving from Radio Off to Radio on service.

Response:

Please refer to the response to CEC IR 1.4.1.

8.10 Why did FortisBC select a \$110 per premise set up fee when the actual estimated cost is closer to \$111.00?

Response:

FortisBC thought it appropriate to select \$110 since it is a round number and is less than 1% different than the FortisBC estimate.

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1 **9.0 Reference: Exhibit B-1, page 6**

5 Radio-Off Option Participation Rate

6 FortisBC bases the per-read fee on a Radio-Off Option participation rate of 0.5%, based

7 on the experience of similar programs in the U.S. (there are very few similar programs in

8 Canada, and those that exist are nascent). From the November 2012 issue of Power

9 Grid International:

10 *In practice, the number of customers who opt out of smart meters – fewer than 1 percent*

11 *– confirms that most customers support having a smart meter or at least do not oppose*

12 *it.*

13 *Customers in Maine, the state with the highest level of press coverage regarding the*

14 *issue, are most active, with some 1.4 percent of customers opting out (about 8,000*

15 *customers of the 600,000 total). Here are some others reported recently:*

16 • *Avista Corp: zero percent*

17 • *Florida Power & Light Co.: 0.3 percent*

18 • *Lafayette Utilities System: 0.4 percent*

19 • *Pacific Gas & Electric Co.: 0.5 percent*

20 • *Portland Gas & Electric Co.: 0.0005 percent*

21 • *San Diego Gas & Electric Co.: 0.05 percent*

22 *The average of these, including Maine, is 0.4 percent – about 1 in 250 customers.*

2

3 9.1 Please identify the programs in Canada to which FortisBC is referring as

4 nascent.

5

6 **Response:**

7 FortisBC is referring to the Hydro Quebec opt-out program.

8

9

10

11 9.2 Why did FortisBC select 0.5% to use as an expected participation rate when the

12 average is about 0.4%?

13

14 **Response:**

15 FortisBC chose 0.5% in order to conservatively estimate radio-off fees. FortisBC believes that

16 the impact of inaccuracy is more significant (on fees) for radio-off customers than it is for the

17 rest of the customers (on rates).

| | |
|---|--------------------------------------|
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FortisBC balanced the need for conservatism in estimating fees against the need to provide an accurate price signal for radio-off customers and believes that the number of 0.5% strikes that balance.

9.3 Would FortisBC agree that Maine could be considered as an 'outlier' with respect to the opt out rate in that it is almost triple that of the next highest utility's?

Response:

Yes, FortisBC agrees.

9.3.1 If so, would FortisBC consider it reasonable to exclude the Maine statistic and adopt an estimate of 0.265% as a possible opt out rate?

Response:

No. If 1.4 percent were excluded, than arguably the Portland Gas and Electric Co. rate of 0.0005 percent should also be excluded. Please also refer to the response to CEC IR 1.9.2.

9.4 Would FortisBC agree that the opt-out rate might be influenced by the cost of opt out service?

Response:

FortisBC agrees. Please also refer to the response to BCUC IR 1.1.4.

9.5 Please provide FortisBC's estimated confidence level with respect to the 0.5% expected opt out rate.

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1

2 **Response:**

3 FortisBC believes that the radio-off participation rate is unlikely to be significantly higher than
4 0.5%, and is more likely to be lower.

5

6

7

8 9.6 Would FortisBC expect to incur any additional costs if the opt out rate were either
9 higher or lower than anticipated? Please explain with examples.

10

11 **Response:**

12 Meter reading costs increase with lower participation rates and decrease with higher
13 participation rates. This is due to the additional (or reduced) distance that must be driven to
14 obtain the reading at lower (or higher) radio-off participation rates.

15 FortisBC does not expect any other additional costs over the participation rate range
16 experienced by other utilities.

17

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|---|--------------------------------------|
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1 **10.0 Reference: Exhibit B-1, page 6**

2 Travel Time:

3 This input captures the travel time between reads and the travel time to the meter
4 reading location. It is assumed that the reads are equally distributed over the Company's
5 service territory which provides an estimate of the average distance between reads.
6 Given an average travel speed between reads, this produces an average travel time for
7 each read.

2

3 10.1 Please provide the estimated travel time required if the Radio off option rate was
4 0.4% or 0.265%.

5

6 Response:

7 At a Radio-off participation rate of 0.4%, the average travel time is 15 minutes.

8 At a Radio-off participation rate of 0.265%, the average travel time is 18 minutes.

9

10

11

12 10.2 What is the average travel speed between reads used to determine the average
13 travel time?

14

15 Response:

16 30 kmh. Please also refer to the electronic spreadsheet attachment provided with Exhibit B-2.

17

18

19

20 10.2.1 Please explain how the average travel speed was determined.

21

22 Response:

23 FortisBC has not collected data regarding average travel time between existing rural meter
24 reads for its current meter reading process. In the absence of existing data a sensitivity
25 analysis using reasonably possible average travel speeds was performed. In determining
26 “reasonably possible average travel speeds” it was assumed that balancing highway speeds
27 utilized between rural locations of radio-off meters with “near walking speeds” utilized in urban
28 areas would result in an average speed somewhere below legal urban speed limits.

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1 The sensitivity analysis resulted in the following (where “Travel time” includes both “Between
2 read time” and “Mobilization time”):

| Sensitivity to Travel Time | |
|----------------------------|--------|
| at 20kmh : | 20 min |
| at 30kmh : | 13 min |
| at 40kmh= | 10 min |

3
4 FortisBC selected 30 km per hour as a reasonable average travel speed resulting in the
5 average travel time of 13 minutes used as a component of the per read fee proposed.

6
7

8
9 10.3 How did FortisBC calculate the average travel speed? Please explain if the
10 estimate was based on FortisBC experience in the field or otherwise.

11
12 **Response:**

13 Please refer to the response to CEC IR 1.10.2.1.

14
15

16
17 10.4 Did FortisBC conduct any sensitivity analysis with respect to average travel time
18 and the anticipated opt out rate? If so, please provide the analysis.

19
20 **Response:**

21 Please refer to the response for CEC IR 1.10.2.1 for the sensitivity analysis relative to average
22 travel time.

23 Please refer to the response for BCSEA IR 1.15.1 for the sensitivity analysis relative to the fee
24 impact associated with varying participation rates in the Radio-off Option.

25

| | |
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1 **11.0 Reference: Exhibit B-1, page 6**

2 Read Time:

3 The average time read required to download interval data manually from the AMI meter
4 is estimated to be approximately 3 minutes.

5 11.1 How did FortisBC determine the estimated average read time required to
6 download interval data manually? Please explain if the estimate was based on
7 FortisBC experience derived from the field, other specific utility experience, or
8 supplier estimates.

9 **Response:**

10 The estimate is based upon supplier estimates.

11 The work involved includes:

- 12 • Exiting the vehicle and obtaining access to the meter
- 13 • Opening and logging on to the laptop
- 14 • Connecting the laptop to the meter via the optical probe
- 15 • Logging on to the meter
- 16 • Initiation of download
- 17 • Meter clock sync (as the radio-off meter is not connected to the AMI system, its clock
18 needs to be synchronized at each manual download)
- 19 • Disconnecting
- 20 • Returning to the vehicle

21 The supplier has advised that this can take from 3 to 5 minutes with the meaningful variables
22 being access to the meter, and the time elapsed since the last download. More difficult access,
23 and longer download intervals would tend to push the average meter read time to 5+ minutes.

24 In keeping with the Company's conservative approach to estimating fees applicable to the
25 proposed Radio-off option, FortisBC has elected to use 3 minutes for average meter read time.

26
27

| | |
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1
2 11.2 Does the estimated average read time include the time required for the meter
3 reader to access the meter from the roadway and return to his vehicle?
4

5 **Response:**

6 Yes.
7
8

9
10 11.2.1 If not, please explain where such time was captured in determining the
11 incremental cost of meter reading.
12

13 **Response:**

14 Please refer to the response to CEC IR 1.11.2.
15
16

17
18 11.3 Please provide FortisBC's estimated confidence level with respect to the average
19 read time.
20

21 **Response:**

22 While FortisBC recognizes that its estimate of average read time is subject to at least two key
23 variables, as noted in the response to CEC IR 1.11.1, it is confident that the average read time
24 underlying its proposed per read fee for the Radio-off option is reasonable.
25
26

27
28 11.4 Please describe in detail potential problems or obstructions that meter readers
29 may encounter including situations where they may have to return and problems
30 with dogs.
31

32 **Response:**

33 The potential problems and obstructions meter readers may encounter while down loading the
34 interval data manually are the following:

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- 1 • Unsecured angry dogs will cause an immediate threat;
- 2 • Farm animals where meters are in barns or corrals;
- 3 • Accessing meters in sites where meter readers will have to be cautious around heights,
- 4 inside premises, unstable ground, debris in and around yards;
- 5 • Seasonal weather such as rain and snow; and
- 6 • Upset customers.
- 7
- 8

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12.0 Reference: Exhibit B-1, page 7

The following table summarizes the inputs to the per-read fee:

| | | |
|-------------------------------------|-----------------|--|
| <u>Ongoing Costs (per read):</u> | | |
| Number of customers (2016) | 138,900 | |
| Radio-off option rate | 0.50% | |
| forecast Radio-off customers | 695 | |
| Read time | 3 min | |
| Travel time | 13 min | |
| Total time per read | 16 min | |
| <u>Cost per minute calculation:</u> | | |
| Labour | \$ 0.99 | |
| Vehicle | \$ 0.40 | |
| Total | \$ 1.39 | |
| Cost per read | \$ 22.81 | |
| Proposed Cost per read | \$22.00 | |

12.1 Please confirm that the customer would be responsible for additional meter-reading charges, at the per read rate, in the event that a meter reader was unable to read the meter because of obstructions or dogs, and a re-read was required.

Response:

Per current FortisBC procedures, a customer will not normally be assessed additional charges if the meter reader is unable to read the meter. If a customer is causing an access issue, FortisBC will contact them in an attempt to find a solution to the problem. However, as per current FortisBC procedures, if the customer is deliberately obstructing access or is unwilling to remedy an access issue they have caused, FortisBC may disconnect their service as a last resort and not reconnect them until all applicable tariff fees and any expenses incurred by FortisBC have been paid.

12.1.1 If not, please explain why not and under which circumstances additional charges would be applied or not applied.

Response:

Please refer to the response to CEC IR 1.12.1.

| | |
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12.2 Please identify and provide all costs that are included in the Labour portion of the cost per minute calculation.

Response:

The labour portion of the cost is the estimated 2016 hourly salary plus a fringe benefit load to recover costs including vacation, statutory holidays, other time away, medical, dental and pension costs, WCB and other labour related costs, all of which is divided by 60 minutes to arrive at the cost per minute.

| | |
|-------------------------------|--------------------------|
| Estimated Hourly Rate | \$33.46 per Hour |
| Estimated Fringe Benefit Load | <u>\$26.11</u> per Hour |
| Estimated Loaded Hourly Rate | <u>\$59.57</u> per Hour |
| Divided by 60 Minutes | <u>\$0.99</u> per Minute |

12.3 Please confirm that the Proposed Cost per Read provides for sufficient metering information to be collected at the Radio Off premises to preserve the benefits for the radio on customers, regardless of the opt out rate.

Response:

Confirmed. Please refer to the response to CEC IR 1.2.1.

12.3.1 If not, at what opt out rate would the financial benefits due the radio on customers be threatened?

| | |
|---|--------------------------------------|
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1 **Response:**

2 Please refer to the response to CEC IR 1.2.1.

3
4

5
6 12.3.2 If not, would FortisBC be able to preserve these benefits by increasing
7 the frequency of meter reads?
8

9 **Response:**

10 Please refer to the response to CEC IR 1.3.3.

11
12

13
14 12.4 Please identify and provide all costs that are included in the Vehicle cost per
15 minute calculation.
16

17 **Response:**

18 The 2016 estimated vehicle per minute rate is derived from the 2013 vehicle rate and then
19 escalated to the 2016 rate.

20 The breakdown of the calculation is as follows:

| Components | Cost | Hourly Rate (2013) | Hourly Rate (2016) | Minute Rate |
|---------------------|------------|--------------------|--------------------|-------------|
| Insurance | \$ 12,069 | \$ 1.73 | \$ 1.82 | \$ 0.03 |
| Maintenance | \$ 44,462 | \$ 6.36 | \$ 6.71 | \$ 0.11 |
| Lease costs | \$ 44,691 | \$ 6.39 | \$ 6.74 | \$ 0.11 |
| Fuel | \$ 51,160 | \$ 7.31 | \$ 7.72 | \$ 0.13 |
| Other | \$ 6,416 | \$ 0.92 | \$ 0.97 | \$ 0.02 |
| Vehicle Rate (2016) | \$ 158,798 | \$ 22.70 | \$ 23.95 | \$ 0.40 |

21
22
23

24
25 12.5 Why did FortisBC select a Proposed Cost per read of \$22.00 when the actual
26 estimated expected cost per read is \$0.81 higher?
27

| | |
|---|--------------------------------------|
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1 **Response:**

2 FortisBC selected \$22 since it is a round number which approximates the FortisBC estimate.

3
4

5

6 12.6 Would FortisBC agree that non Radio Off customers will be subsidizing Radio Off
7 customers to the extent that the actual cost per read is higher than the proposed
8 fee?

9

10 **Response:**

11 Yes, if the actual costs were higher than the radio-off fees, then “radio-on” customers would be
12 subsidizing radio-off customers. However, a correction mechanism for this circumstance has
13 been proposed in Exhibit B-1, Section 1.7, pp 7-8:

14 *The revenue received from radio-off fees would be forecast and recorded as “Other*
15 *Income” similar to other tariff fees. These revenues would be offset by increased O&M*
16 *costs. The net result would be a forecast zero rate impact.*

17 *FortisBC will monitor both actual numbers of Radio-Off Customers and actual manual*
18 *meter reading costs. The Company will recommend fee revisions during the next Cost*
19 *of Service/Rate Design Application if appropriate.*

20
21

22

23 12.7 Please provide the estimated Cost per Read assuming 0.4% participation rate
24 and a 0.265% increase in the Total Time per Read.

25

26 **Response:**

27 Given the parameters noted in the question, the estimated cost per read equals \$31.54.

28
29

30

31 12.8 Please provide the cost per minute for Labour and Vehicle at a 10% increase in
32 variable components.

33

| | |
|---|--------------------------------------|
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1 **Response:**

2 In response, the Company has varied the following upward by 10%:

- 3 • Average speed of travel
- 4 • Hourly CSP rate
- 5 • Hourly vehicle rate

6

7 This results in a cost per minute for labour of: \$1.09

8 This results in a cost per minute for vehicles of: \$0.44

9 This results in a per read cost of: \$23.29

10

| | |
|---|--------------------------------------|
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1 **13.0 Reference: Exhibit B-1, page 7**

18 **1.7 FINANCIAL TREATMENT AND ADJUSTMENT MECHANISM**

19 The revenue received from radio-off fees would be forecast and recorded as "Other Income"
20 similar to other tariff fees. These revenues would be offset by increased O&M costs. The net
21 result would be a forecast zero rate impact.

22 FortisBC will monitor both actual numbers of Radio-Off Customers and actual manual meter
23 reading costs. The Company will recommend fee revisions during the next Cost of Service/Rate
24 Design Application if appropriate.

2

3 13.1 What practices will FortisBC employ to ensure it captures all the actual costs
4 associated with the Radio Off option?

5

6 **Response:**

7 Please refer to the responses to BCUC IRs 1.10.2 and 1.10.2.1.

8

9

10

11 13.2 When does FortisBC anticipate its next Cost of Service/Rate design application?

12

13 **Response:**

14 Please refer to the response to BCUC IR 1.10.1.

15

16

17

18 13.3 At what threshold of cost increase would FortisBC apply for an increase
19 independently of a Cost of Service/Rate Design application?

20

21 **Response:**

22 Please refer to the response to BCPSO IR 1.5.2.

23

24

25

26 13.4 How will FortisBC handle a change in these costs under Performance Based
27 Ratemaking?

| | |
|---|--------------------------------------|
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1
2 **Response:**
3 As noted in section 1.7 of the Application, if any changes are required to the Radio-Off fees,
4 those revisions would be addressed during the next Cost of Service/Rate Design Application.
5 The Radio-off fees are set to recover only the incremental O&M costs as a result of providing
6 the Radio-Off Meter Option and therefore those fees are set independently from and not
7 impacted by FBC's proposed PBR Mechanism.

8
9

10
11 13.4.1 Would FortisBC absorb cost increases for 5 years?

12
13 **Response:**

14 Please refer to the response to BCPSO IR 1.5.2.

15

| | |
|---|--------------------------------------|
| FortisBC Inc. (FortisBC, FBC or the Company) Application for Advanced Metering Infrastructure (AMI) Radio-Off Meter Option (the Application) | Submission Date: October 18, 2013 |
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1 **14.0 Reference: Exhibit B-1, page 9**

25 **1.11 OTHER**

26 For those customers that still wish to have a standard radio-on AMI meter, but have concerns
27 related to the wireless communication capabilities of the meter, for completeness FortisBC
28 notes that there remains the option¹ of relocating the meter base to a location mutually
29 acceptable to the customer and the Company, with the customer responsible for all costs
30 related to the relocation.

2

3 14.1 Please confirm that FortisBC will assume responsibility for arranging and/or
4 physically relocating the meter base.

5

6 **Response:**

7 Not confirmed. FortisBC is responsible for disconnecting and reconnecting service as
8 requested by the customer, in order to facilitate the meter base relocation which is performed by
9 the customer at their expense.

10

11

12

13 14.2 What rates will FortisBC charge for relocation services?

14

15 **Response:**

16 FortisBC will charge standard tariff fees for service disconnection and reconnection as required
17 by the customer. The fees for service disconnection and reconnection are set out in
18 Schedule 80 of FortisBC's Electric Tariff found at the following link:

19 <http://www.fortisbc.com/About/RegulatoryAffairs/ElecUtility/Documents/FortisBCElectricTariff.pdf>

20 The customer will be responsible for any non-FortisBC costs related to the relocation as
21 described in the referenced section of the Application.

22

23

24

25 14.3 Please confirm that 'all costs related to the relocation' would include the cost of
26 any site visits related to identifying a mutually satisfactory location.

27

28 **Response:**

29 Not confirmed. As with any other service relocation, FortisBC would incur reasonable expenses
30 to attend a customer property to discuss relocation alternatives without any fee. As with any

| | |
|---|--------------------------------------|
| FortisBC Inc. (FortisBC, FBC or the Company) Application for Advanced Metering Infrastructure (AMI) Radio-Off Meter Option (the Application) | Submission Date: October 18, 2013 |
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1 service relocation, this benefits all customers by ensuring that the chosen location meets the
2 utility's needs.

3
4
5
6 14.4 Will FortisBC charge customers for a site visit who initially request relocation of
7 the meter base but then decide otherwise?

8
9 **Response:**

10 No. The situation set out in Section 1.11 is provided for under the existing Tariff, and it has not
11 been FortisBC's practice to charge customers in the circumstance described in the question.

| | |
|---|--------------------------------------|
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1 **15.0 Reference: Exhibit B-1, page 9**

14 Because the radio-off choice moves with the customer, it no longer applies to that customer's
15 former premises. FortisBC will turn the wireless transmission "on" at that premises unless the
16 new, incoming customer at the premise also elects to choose a radio-off AMI meter, and
17 completes, signs, and submits the FBC Radio-Off Option Form in the manner outlined above.

2

3 15.1 Please confirm that a customer moving into premises that already has the Radio
4 Off option would still be required to pay the set-up fee of \$110.

5

6 **Response:**

7 Please refer to the response to BCPSO IR 1.6.4.

8

Attachment 7.3



The evolution of energy

An exciting new project that will benefit FortisBC customers is ready to begin.

FortisBC's Advanced Metering Infrastructure project has been approved by the BC Utilities Commission, and your old meter will be replaced with an advanced meter in 2014 or 2015. You will be notified by mail before your meter is exchanged.

If you have any questions or concerns about the AMI project, call our customer contact centre at **1-866-436-7847** or visit **fortisbc.com/ami**.



Rates will be lower with advanced meters than without them

New meters will pay for themselves by nearly eliminating the expense of manual meter reading and preventing millions of dollars lost to electricity theft.

Advanced meters provide more informative billing

There will be fewer bill estimates, since readings are available for any date.

You will have tools that will help you better understand your bill and better manage your electricity use.

You will know how much electricity you have used at any point during the billing period, so you don't have to wait for your bill to find out if your consumption is higher or lower.

Advanced meters provide additional benefits

When the power goes out at your home or business, your advanced meter will notify us, allowing our crews to respond more effectively.

Advanced meters reduce the environmental footprint of our operation. Nearly eliminating manual meter readings will mean a major reduction in the 500,000 kilometers meter readers drive each year.

For up-to-date information about the AMI project and the radio-off option, call our customer contact centre at **1-866-436-7847** or visit **fortisbc.com/ami**.

Connect with us



FORTIS BC™

FortisBC Energy Inc., FortisBC Energy (Vancouver Island) Inc., FortisBC Energy (Whistler) Inc., and FortisBC Inc. do business as FortisBC. The companies are indirect, wholly owned subsidiaries of Fortis Inc. FortisBC uses the FortisBC name and logo under license from Fortis Inc.

The evolution of energy

Your link to FortisBC's Advanced Metering Infrastructure (AMI) project



In this issue:

- How an advanced meter is installed
- Timeline of the project
- Benefits of advanced meters
- Advanced meters won't affect rates
- Health and security facts

A closer connection to your electricity use

More tools for you to better manage and understand your electricity bill, millions of dollars in cost savings to help keep electricity rates low, and a significant cut in electricity theft to keep you safer are just a few benefits of advanced meters.

FortisBC customers will enjoy these benefits once the Advanced Meter Infrastructure (AMI) project is complete. The BC Utilities Commission approved the project in July after a lengthy public consultation.

Work is scheduled to start this year. It will begin with upgrades to the electrical grid. In 2014, FortisBC will start the process of replacing about 130,000 existing electricity meters with advanced meters. This project is expected to be completed by 2015.

The new meters, sometimes referred to as smart meters, look similar to existing digital electricity meters, but are able to safely and securely send your total energy use wirelessly to FortisBC. Gas meters will not be replaced with advanced meters.

The following pages provide more details about the many benefits advanced meters will give to you.



If you have any questions or concerns about advanced meters, call our customer contact centre at 1-866-436-7847 or visit fortisbc.com/ami.

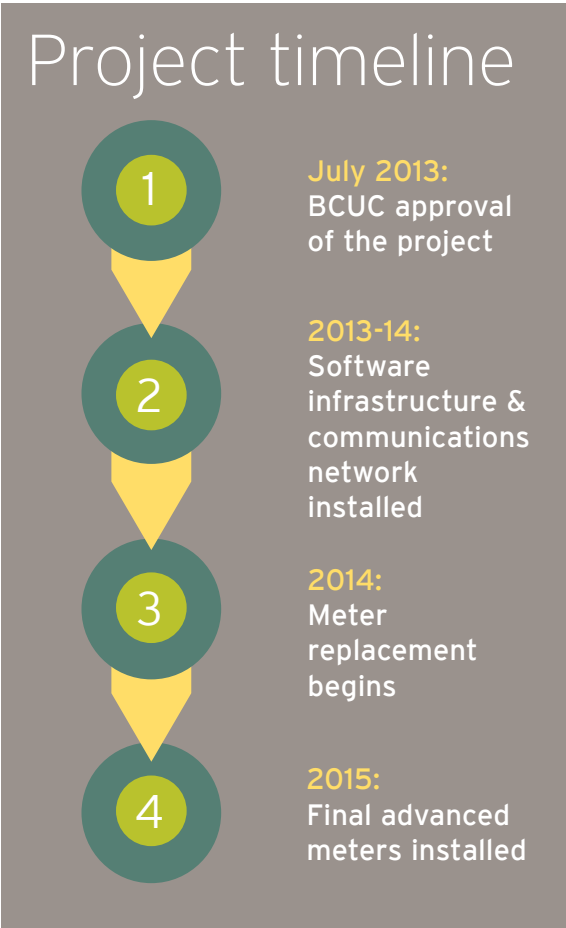
How is an advanced meter installed?



- You'll be notified by mail about a month before your meter is expected to be exchanged
- The FortisBC representative doing the meter exchange will knock on the door and be easily identifiable.
- You don't need to be present during the meter exchange.
- Please make sure the meter is easily accessible and free of obstructions, like locked gates and bushes.
- There will be a brief power outage, lasting a few minutes.
- FortisBC will leave a brochure explaining the benefits of advanced meters.

See the difference: **Old** vs. **new** meter

| | |
|--|---|
| | |
| Must be read manually by someone on your property | Can communicate wirelessly with FortisBC |
| Needs a tech to visit your home to connect or disconnect electricity | Power can be connected or disconnected remotely |
| Can't detect a power outage | Alerts FortisBC of power outages right away |





Have you wondered how much electricity you're using when your air conditioner is running during the hottest hours of the day?

Or how much electricity you're using even when everything is turned off?

FortisBC's advanced meters will help you discover the amount of electricity you're using on a daily basis, giving you online tools to better manage and understand your electricity use.

The benefits of advanced meters

Electricity rates will be lower with advanced meters than without them

- The new meters will pay for themselves by nearly eliminating the expense of manual meter reading and preventing millions of dollars lost to electricity theft.
- Savings from advanced meters will pay for the \$51 million cost of the project. And customers can expect a minimum of \$13 million in additional savings over the life of the meters.
- According to Measurement Canada guidelines, most of FortisBC's electricity meters are nearing the end of their lifespan and require replacing. Advanced meters solve this problem while providing you with better service and reducing the cost of operating the utility.

More informative billing

- There will be fewer bill estimates, since readings are available for any date.
- You will have access to tools that will help you better understand your bill and better manage your electricity use.
- You can find out how much electricity you've used at any point in the billing period—so you don't have to wait for your bill to find out if your consumption is higher or lower, and you won't see estimates on your bills.

Advanced meters provide additional customer benefits

- When the power goes out at your home or business, your advanced meter will notify us, allowing our crews to respond more effectively.
- Advanced meters reduce the environmental footprint of our operation. Nearly eliminating manual meter reading will mean a major reduction in the 500,000 kilometers meter readers drive each year.

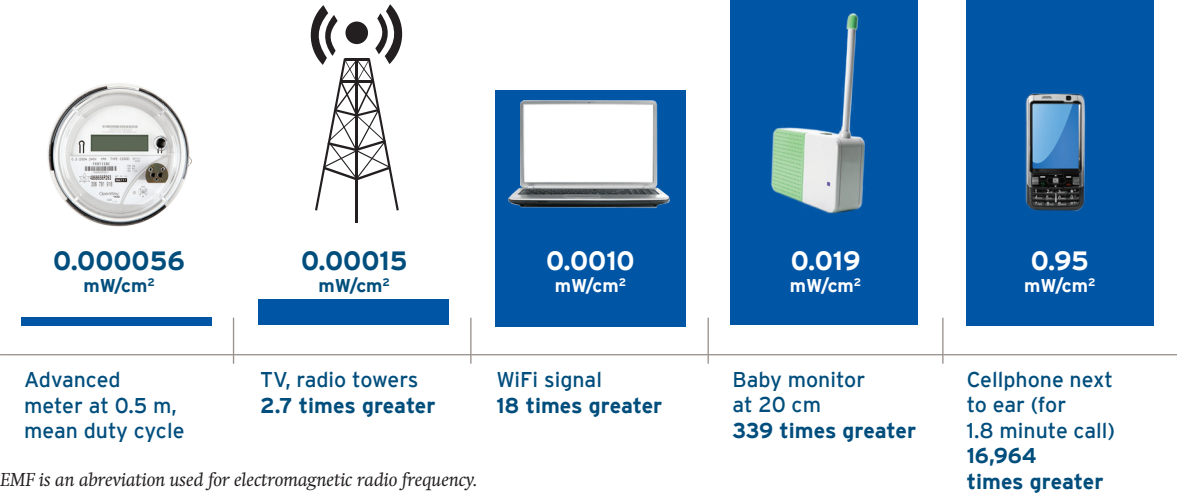
The installation of advanced meters does not mean the introduction of Time of Use rates. FortisBC has not applied to the BC Utilities Commission for this type of rate.

What about advanced meters for natural gas?

If you are a natural gas customer, your gas meter will not be affected.

FortisBC has not applied to the BC Utilities Commission to use advanced meters for our natural gas customers.

Radio frequency emissions compared**



*EMF is an abbreviation used for electromagnetic radio frequency.

**Measured in milliwatts per square centimeter (mW/cm²).

Source: Exponent Report: Status of Research on Radiofrequency Exposure and Health in Relation to Advanced Metering Infrastructure.

Health checked

Top health authorities, including Health Canada, the World Health Organization, and B.C.'s provincial health officer, say advanced meters are not harmful.

Advanced meters will operate well below the standards set by Health Canada in Safety Code 6—the electromagnetic frequency guidelines. They operate around 900 MHz, which is similar to a household cordless phone and emit far less EMF than many of the common electronic devices we use every day in our homes, like microwaves or laptop computers.

Advanced meters transmit for a total of about one minute a day.

Connect with us



Security facts

Advanced meters keep customers' information secure and private.

The project adheres to strict encryption for handling customers' data—similar to that used by financial institutions in online banking.

The information being sent to FortisBC from advanced meters is no different than the current meter readings being taken, only these readings happen more frequently. Personal account information, including name, address or account balance, is not transmitted.

Information sent to FortisBC is the total electricity used in a household, not how someone uses electricity or which appliances are being used.

Like all customer information, this information is protected under the British Columbia Personal Information Protection Act.



Advanced meter project

FortisBC has been approved to begin work on the Advanced Metering Infrastructure (AMI) project.

About 130,000 electricity meters in B.C.'s Southern Interior will be upgraded with advanced meters by 2015.

New advanced meters look similar to current digital meters and measure electricity use in the same way, but they can wirelessly send information about electricity consumption to FortisBC. That creates a more efficient electrical system and cost savings that will be passed on to customers. Rates will be lower with advanced meters than without them.

The BC Utilities Commission approved FortisBC's application for its AMI project in July after a lengthy public process.



Benefits of advanced meters

More tools for you to better manage and understand your electricity bill, millions of dollars in cost savings to help keep electricity rates low, and a dramatic cut in electricity theft.



Advanced meters explained

View the project timeline, see the difference between old and new, understand radio frequency emissions and health and security facts. And download our AMI newsletter.



Common questions

If you have questions about advanced meters, you'll find answers to many common questions in this section.



Getting your meter replaced

Here's how your meter will be replaced and what you need to do beforehand.

Radio-off option

FortisBC has filed its application to the BC Utilities Commission for an option for customers to receive an advanced meter with the wireless radio transmissions turned off. The application is posted on the [BCUC website](#).

Questions?

Want to ask a question or provide a comment? [Contact us directly using our form](#). Be sure to check out our [FAQ](#) for answers to many commonly asked questions. Learn more about the AMI project, [including its benefits](#) (PDF).



Benefits of advanced meters

Electricity rates will be lower with advanced meters than without them

By nearly eliminating the expense of manual meter reading and cutting millions of dollars in electricity theft each year, advanced meters will help keep electricity rates low.

Savings from advanced meters will pay for the \$51-million cost of the project. And customers can expect a minimum of \$13 million in additional savings over the next 20 years.

Due to new Measurement Canada guidelines, most of FortisBC's electricity meters are nearing the end of their lifespan and require replacing. Advanced meters solve this problem while providing you with more information and reducing the cost of operating the utility.

More informative billing

There will be fewer bill estimates, since readings are available for any date. You will have tools that will help you better understand your bill and better manage your electricity use.

You will know how much electricity you have used at any point during the billing period – you don't have to wait for your bill to find out if your consumption is higher or lower.

Advanced meters provide additional customer benefits

When the power goes out at your home or business, your advanced meter will notify us, allowing our crews to respond more effectively.

Advanced meters reduce the environmental footprint of our operation. Nearly eliminating manual meter readings will mean a major reduction in the 500,000 kilometers meter readers drive each year.

Advanced meters are safe

Health agencies – including Health Canada, the World Health Organization, and B.C.'s provincial health officer – say advanced meters are not harmful. Canada's top health authority, Health Canada, says ["exposure to RF energy from smart meters does not pose a public health risk."](#)

Advanced meters emit far less EMF than many common devices, like cellphones and baby monitors, and only transmit for a total of about one minute a day.

They comply with all safety requirements from respected professional and safety organizations, and were approved after a public regulatory process with the BC Utilities Commission.

FortisBC's AMI project adds only a tiny amount to the total amount of RF exposure of an individual. The RF exposure from many devices all functioning at the same time falls well below Health Canada's guidelines in Safety Code 6.

More detailed information on total RF exposure was published by the British Columbia Utilities Commission, in the Certificate of Public Convenience and Necessity for the Advanced Metering Infrastructure Project Decision. The calculations were made by Dr. Yakov Shkolnikov who specializes in the development and analysis of high performance electronic devices, software, and communication systems.

» [View RF exposure comparison table](#)

Advanced meters will keep your information secure and private

The AMI project uses strong encryption to protect your data – similar to encryption used by financial institutions in online banking

transactions.

Like all customer information, this information is protected under the British Columbia Personal Information Protection Act. Your information, such as account balance, name and address, is not transmitted.

Questions?

Want to ask a question or provide a comment? [Contact us directly using our form](#). Be sure to check out our [FAQ](#) for answers to many commonly asked questions.

Advanced meters explained

Understand the project timeline and the many aspects of advanced meters.

[➤ Learn more](#)

AMI newsletter

For easy reference, important information about our AMI project in one PDF.

[➤ Download newsletter](#)

FAQs

Common questions about advanced meters.

[➤ Learn more](#)