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November 16, 2012

Via Email

Original via Courier

Ms. Erica Hamilton
Commission Secretary
BC Utilities Commission
Sixth Floor, 900 Howe Street, Box 250
Vancouver, BC V6Z 2N3

Dear Ms. Hamilton:

Re: *FortisBC Inc. Application for a Certificate of Public Convenience and Necessity for the Advanced Metering Infrastructure Project*

FortisBC Inc. submits the following addendum to its application for a Certificate of Public Convenience and Necessity for the Advanced Metering Infrastructure Project. Twelve hard copies will be couriered to the BC Utilities Commission.

If further information is required, please contact the undersigned at (250) 717- 0890.

Sincerely,

A handwritten signature in black ink, appearing to be "DS", with a horizontal line extending to the right.

Dennis Swanson
Director, Regulatory Affairs

cc: Registered Interveners



FORTISBC INC.

Addendum to

**An Application for a Certificate of Public
Convenience and Necessity**

Advanced Metering Infrastructure (AMI) Project

November 16, 2012

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1 INTRODUCTION

2 On November 13 FortisBC filed an application with the British Columbia Utilities Commission
3 (BCUC or the Commission) to purchase the electric utility assets of the City of Kelowna
4 (CoK). It is expected that if the proposed asset acquisition is approved, the CoK electric
5 utility assets will become part of the FortisBC electric utility prior to implementation of the
6 Company's proposed Advanced Metering Infrastructure (AMI) project. Inclusion of CoK will
7 result in approximately \$3.5 million in additional project costs and increase the net present
8 value of benefits by approximately \$5.8 million to \$23.4 million. The increase in the net
9 present value of benefits reflects savings attributable to the proposed Project as compared
10 to the inclusion of CoK as part of the FortisBC electric utility without the implementation of
11 AMI.

12 Impacts resulting from the CoK acquisition include changes to the Net AMI (AMI less Status
13 Quo) analysis as follows:

- 14 • Additional costs for AMI implementation related to:
 - 15 ○ Increased numbers of meters to replace; and
 - 16 ○ Increased number of network devices.
- 17 • Additional quantifiable benefits in all categories:
 - 18 ○ Meter Reading;
 - 19 ○ Disconnect/Reconnect;
 - 20 ○ Contact Centre;
 - 21 ○ Theft Detection; and
 - 22 ○ Measurement Canada SS-0-6 meter exchange cost avoidance.

23 The net effect of these changes results in an overall increase to the project benefit.

24 FortisBC considers it appropriate at this time, by way of the filing of this addendum, to
25 provide the Commission and interveners participating in the review of the Company's AMI
26 CPCN application with an analysis of the impacts to the AMI Project resulting from the
27 proposed CoK acquisition. The Company anticipates that following receipt of a positive
28 decision on the proposed CoK acquisition, it would formally revise the AMI Application to
29 reflect the impact of the acquisition, including a revision to the sought approval of estimated

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1 capital expenditures from \$47.7 million to an estimated capital cost of \$51.2 million for the
2 Project. As well, the Company would provide updated financial tables to replace those filed
3 in the CPCN.

4 FortisBC believes the provision of the information contained in this addendum will allow the
5 Commission and interveners to continue the regulatory review of the AMI Project
6 uninterrupted and without any unnecessary delay resulting from a potential revision to the
7 application subsequent to a decision on the Company's proposed acquisition of the CoK
8 utility assets. The Company notes that the addition of the CoK electric utility assets will not
9 require a renegotiation of the current FortisBC AMI contract with Itron. As noted in the
10 Application, a decision on the AMI CPCN application is required by mid-July 2013 in order to
11 avoid potentially costly contract and schedule amendments to those proposed within the
12 CPCN.

13 **1.0 PROJECT COSTS AND BENEFITS (AMI WITH COK)**

14 The estimated capital cost of the Project with CoK included is \$51.2 million and will provide
15 customers with \$23.4 million in net benefits over the economic life of the Project, in addition
16 to a number of non-quantified operational and customer service benefits as outlined in the
17 Company's CPCN Application.

18 The "net" AMI analysis nets the gross impact (costs/benefits) of AMI against the Status Quo
19 in order to clearly illustrate the impact of implementing AMI as compared to continuing with
20 the status quo manual meter reading function.

21 The addition of the City of Kelowna electric utility customers results in some additional
22 project costs (largely related to the installation of additional meters and network
23 infrastructure). However, there are also concurrent improvements to the quantifiable AMI
24 benefits.

25 In aggregate (additional benefits minus additional costs), the net AMI project benefit, with
26 CoK included, is improved by approximately \$5.8 million to a total of approximately \$23.4
27 million, as summarized in Table 1.1.a below.¹

28

¹ Net present value, 20 year period, 8% discount rate

1

Table 1.1.a – Summary Costs and Benefits

		Status Quo	Gross AMI	Net AMI
Benefits		2012 NPV (\$000s)		
	Meter Reading	38,062	11,586	(26,476)
	Theft Reduction	(72,824)	(116,009)	(43,185)
	Remote Disconnection/Reconnect	7,990	1,835	(6,155)
	Meter Exchanges	3,271	1,661	(1,610)
	Contact Centre	6,908	6,401	(507)
Costs				
	Operating Costs	-	14,411	14,411
	Depreciation Costs	15,857	33,197	17,340
	Carrying Costs	6,799	24,986	18,187
	Income Tax	(663)	3,884	4,547
Total		7,089	(16,359)	(23,448)
Capital Benefit				
	Measurement Canada Compliance	10,808	-	(10,808)

 2 **2.0 NET AMI COSTS**

 3 **2.1 Project Costs**

 4 With the inclusion of the CoK, the AMI project costs increase by approximately seven
 5 percent, or approximately \$3.5 million, to a total of approximately \$51.2 million.

 6 Certain AMI Project expenditures do not vary with the additional number of customers to be
 7 served by the proposed Project. These include:

- 8
- Third Party Software and Services;
 - 9 ○ MDMS;
 - 10 ○ HES;
 - 11 ○ Meter Deployment Management Software;
 - 12 ○ Vendor Professional Services;
 - 13 ○ Security System;
 - System Integration;
 - 14 ○ FortisBC IT Design;
 - 15

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- 1 • Theft Detection

2 Consequently, there are no incremental costs related to these expenditure categories
 3 resulting from the addition of approximately 15,000 CoK customers. The following table
 4 provides details of the additional costs attributable to the CoK acquisition:

5 **Table 2.1.a – Incremental AMI Costs with CoK**

Cost	(\$000s)	Percentage of Total
Meters (including Deployment)	2,498	71.7%
Network Infrastructure	163	4.7%
System Integration	25	0.7%
Project Management	213	6.1%
Contingency	173	5.0%
CapOH / PST / AFUDC	412	11.8%
Total	3,484	100.0%

6 Of the estimated incremental \$3.5 million in project expenditures related to the addition of
 7 15,000 City of Kelowna customers, expenditures related to meters (and their deployment)
 8 comprise approximately 72 percent of the incremental costs (\$2.5 million). The remaining
 9 incremental costs (28 percent, \$1.0 million) include network, contingency and overhead
 10 costs.

11 Total AMI Project costs, inclusive of the CoK, are set out in the table below:

12 **Table 2.1.b – Total AMI Costs with CoK**

	Item	2013	2014	2015	Total 2013-2015
		(\$000s)			
1	Third Party Software and Services	4,746	723	361	5,830
2	Meters (Including Deployment)	384	11,398	11,159	22,941
3	Network Infrastructure	-	1,777	2,872	4,650
4	System Integration	1,547	511	319	2,377
5	Theft Detection	-	-	1,100	1,100
6	Project Management	1,002	1,353	1,000	3,355
7	CPCN Approval Costs	4,915	-	-	4,915
8	Capitalized OH, AFUDC, PST	1,240	2,739	2,025	6,005
9	Total	13,834	18,501	18,837	51,173

1 **2.2 Sustaining Capital and Ongoing O&M**

2 The inclusion of CoK in the AMI proposal results in additional sustaining capital and ongoing
 3 O&M costs. The amounts are limited to additional sustaining capital of approximately
 4 \$1,000 in 2020 and 2028 for network device batteries and \$5,000 per year for an additional
 5 server for data management, and additional O&M costs of approximately \$9,000 per year for
 6 additional WAN hardware starting in 2014.

7 **3.0 NET AMI BENEFITS**

8 **Table 3.1.a – Incremental AMI Benefits with CoK**

	Net AMI (as per CPCN Application)	Net AMI (with CoK)	Net AMI Difference (with CoK minus CPCN)
Benefits	2012 NPV (\$000s)		
<i>O&M Benefits</i>			
Meter Reading	(23,785)	(26,476)	(2,691)
Remove Disconnect/Reconnect	(5,466)	(6,155)	(689)
Meter Exchanges	(1,478)	(1,610)	(132)
Contact Centre	(441)	(507)	(66)
<i>O&M Benefits Total</i>	(31,170)	(34,749)	(3,579)
Measurement Canada Compliance	(9,785)	(10,808)	(1,050)
Theft Reduction	(38,386)	(43,185)	(4,799)
Total	(79,314)	(88,741)	(9,427)

9 **3.1 O&M**

10 Net AMI, with CoK included, eliminates the additional, CoK related Status Quo O&M costs
 11 for manual meter reading, the disconnect/reconnect process, meter exchanges and the soft
 12 read component of contact center costs. This elimination improves the net AMI benefit by
 13 approximately \$3.6 million.

14 **3.1.1 METER READING**

15 The Company estimates that to extend its current meter reading operation into the CoK
 16 area, reading on a bimonthly basis, will require an additional 2.5 full time meter readers (and
 17 the associated non-labour support, such as vehicles). AMI eliminates this additional CoK

1 related requirement, improving the net AMI benefit, as evaluated on a net present value
 2 basis, by approximately \$2.7 million.

3 Please refer to Table 3.1.b below for further detail on the yearly forecast savings resulting
 4 from the elimination of manual meter reading.

5 **Table 3.1.b – Net Meter Reading Savings**

Forecast Savings (\$000s)							
Meter Reading	2013	2014	2015	2016	2017	2018	2019
	-	-	(1,151)	(2,887)	(2,934)	(3,112)	(3,162)
	2020	2021	2022	2023	2024	2025	2026
	(3,214)	(3,335)	(3,459)	(3,516)	(3,718)	(3,779)	(3,992)
	2027	2028	2029	2030	2031	2032	
	(4,058)	(4,202)	(4,351)	(4,468)	(4,625)	(4,786)	

6 **3.1.2 DISCONNECT/RECONNECT**

7 FortisBC has estimated an increase in operations costs related to the disconnect/reconnect
 8 process based upon the percentage increase in customers represented by CoK. AMI
 9 eliminates this additional CoK related cost, improving the net AMI benefit, as evaluated on a
 10 net present value basis, by approximately \$0.7 million.

11 Please refer to Table 3.1.c below for further detail on the yearly forecast savings resulting
 12 for the disconnect/reconnect process.

13 **Table 3.1.c – Remote Disconnects/Reconnects**

Forecast Savings (\$000s)							
Remote Disconnect/Reconnect	2013	2014	2015	2016	2017	2018	2019
	-	(150)	(466)	(613)	(635)	(658)	(682)
	2020	2021	2022	2023	2024	2025	2026
	(706)	(730)	(755)	(781)	(807)	(834)	(862)
	2027	2028	2029	2030	2031	2032	
	(891)	(920)	(949)	(980)	(1,011)	(1,508)	

14 **3.1.3 CONTACT CENTRE**

15 Consistent with FortisBC's AMI application, the only contact centre costs that will be
 16 impacted by AMI are those costs related to soft reads². The estimate of costs is based upon

² Soft reads are defined in the AMI CPCN.

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1 the percentage increase in customers represented by CoK. AMI eliminates this additional
 2 CoK related cost, improving the net AMI benefit, as evaluated on a net present value basis,
 3 by approximately \$0.07 million.

4 Please refer to Table 3.1.d below for further detail on the yearly forecast savings from the
 5 Contact Centre.

6 **Table 3.1.d – Forecast Savings from Contact Centre**

Forecast Savings (\$000s)							
Contact Centre	2013	2014	2015	2016	2017	2018	2019
	-	18	3	(27)	(63)	(65)	(67)
	2020	2021	2022	2023	2024	2025	2026
	(70)	(72)	(75)	(77)	(80)	(83)	(85)
	2027	2028	2029	2030	2031	2032	
	(88)	(91)	(94)	(97)	(100)	(103)	

7 **3.1.4 METER EXCHANGES**

8 The addition of approximately 15,000 meters as part of the CoK acquisition results in
 9 additional O&M costs incurred for the necessary compliance sampling and retesting of those
 10 meters. The implementation of AMI eliminates this additional CoK related O&M expense
 11 until 2021, improving the net AMI benefit, as evaluated on a net present value basis, by
 12 approximately \$0.13 million.

13 Table 3.1.e below details these forecast savings.

14 **Table 3.1.e – Forecast Meter Exchange Savings**

Forecast Savings (\$000s)							
Meter Exchange	2013	2014	2015	2016	2017	2018	2019
	-	(384)	(363)	(450)	(338)	(589)	(332)
	2020	2021	2022	2023	2024	2025	2026
	(208)	(229)	198	201	267	296	(70)
	2027	2028	2029	2030	2031	2032	
	(80)	(72)	(63)	(111)	(24)	411	

15

1 **3.1.5 MEASUREMENT CANADA COMPLIANCE**

2 In the absence of detailed information, FortisBC has estimated the compliance testing and
 3 failure rates for the additional meters from CoK by assuming that they were extended or
 4 replaced at the exact same rate as that calculated for the FortisBC meter population³. The
 5 net present value of this avoided capital cost (as a result of an AMI implementation) is
 6 approximately \$1.05 million.

7 **3.1.6 THEFT REDUCTION**

8 With the inclusion of the approximately 15,000 customers presently served directly by the
 9 City of Kelowna, the Company's percentage of total provincial customers increases from
 10 approximately six percent to approximately seven percent (6.1% to 6.75%). The Net AMI
 11 analysis presumes that the Company extends its Theft Reduction program, with the
 12 improved capabilities provided by AMI, into the CoK area. FortisBC estimates that Theft
 13 Reduction will improve by approximately \$4.8 million as evaluated on a net present value
 14 basis.

15 **Table 3.1.f – Forecast Savings from Energy Theft Reduction**

Forecast Savings (\$000s)							
Theft Reduction	Phase 1	2013	2014				
		(431)	(1,110)				
	Phase 2	2015	2016	2017	2018	2019	2020
		(1,925)	(3,190)	(4,062)	(4,628)	(5,107)	(5,514)
		2021	2022	2023	2024	2025	2026
		(5,772)	(5,904)	(6,014)	(6,137)	(6,296)	(6,456)
		2027	2028	2029	2030	2031	2032
		(6,620)	(6,802)	(7,030)	(7,245)	(7,509)	(7,667)

16 **4.0 COSTS AND BENEFITS SUMMARY**

17 The financial analysis of the proposed AMI Project (with CoK) includes the impact of the net
 18 sustaining capital and operating costs as shown in the table below. A copy of the financial
 19 NPV analysis of the AMI Project (with CoK) is attached.

³ In practice, it is expected that due to the small lot sizes of the CoK meter fleet, lot failure rates will actually be higher than those extrapolated from the larger FortisBC meter fleet, resulting in an even more accelerated requirement for the replacement of CoK meters.

1 **Table 4.1.a – Summary of All Incremental Non-Project Costs and Benefits**

	Net AMI with CoK	2013	2014	2015	2016	2017-2032	Total
	Sustaining Capital	(\$000s)					
1	Meter Growth and Replacement	-	(111)	(114)	(97)	(4,620)	(4,941)
2	Handheld Replacement	-	(250)	-	-	(899)	(1,149)
3	IT Hardware, Licensing and Support Costs	-	297	573	583	11,411	12,864
4	Measurement Canada Compliance	(146)	(1,005)	(997)	(1,652)	(16,689)	(20,490)
	Total Capital	(146)	(1,069)	(538)	(1,166)	(10,797)	(13,716)
	Operating Expenses	(\$000s)					
5	New Operating Costs	-	884	1,538	1,565	28,412	32,400
6	Meter Reading	-	-	(1,151)	(2,887)	(60,711)	(64,748)
7	Remote Disconnect/Reconnect	-	(150)	(466)	(613)	(13,709)	(14,938)
8	Meter Exchanges	-	(384)	(363)	(450)	(745)	(1,942)
9	Contact Centre	-	18	3	(27)	(1,312)	(1,317)
10	Total Operating Expenses	-	368	(439)	(2,411)	(48,065)	(50,546)
11	Theft Reduction	(431)	(1,110)	(1,925)	(3,190)	(105,418)	(112,073)

- 2 Table 4.1.b below, summarizes Status Quo, Gross AMI (with CoK), and presents AMI (with
 3 CoK) net of Status Quo.

1 **Table 4.1.b – Summary: Status Quo, Gross and Net AMI (with CoK)**

Meter Reading Option	Dec-13	Dec-14	Dec-15	Dec-16	2017-2032	Total
Status Quo	(\$000s)					
Capital	309	1,469	1,205	1,883	20,754	25,620
Operating Costs	4,281	4,500	4,571	4,818	96,877	118,717
Theft Reduction	(5,592)	(6,169)	(6,911)	(7,639)	(111,449)	(143,120)
Gross AMI (with CoK)						
Capital	13,997	19,124	19,732	910	19,197	72,959
Operating Costs	4,281	4,868	4,132	2,407	48,812	68,171
Theft Reduction	(6,022)	(7,280)	(8,836)	(10,829)	(210,211)	(248,538)
Net AMI (with CoK)						
Capital	13,687	17,655	18,527	(973)	(1,558)	47,339
Operating Costs	-	368	(439)	(2,411)	(48,065)	(50,546)
Theft Reduction	(431)	(1,110)	(1,925)	(3,190)	(98,762)	(105,418)

2 **5.0 CONCLUSION**

3 AMI with CoK project costs increase by approximately \$3.5 million, largely related to the
 4 acquisition of additional AMI meters, and the deployment of those meters.

5 However, with the inclusion of CoK, AMI also eliminates the Measurement Canada
 6 Compliance and O&M costs associated with servicing the additional CoK meters while also
 7 increasing the overall Theft Reduction benefit accruing to the Company's ratepayers.

8 The net AMI benefit, including CoK, is improved by approximately \$5.8 million⁴ to a total of
 9 approximately \$23.4 million.

⁴ Net present value, 20 year period, 8% discount rate