



Dennis Swanson  
Director, Regulatory Affairs

**FortisBC Inc.**  
Suite 100 - 1975 Springfield Road  
Kelowna, BC V1Y 7V7  
Ph: (250) 717-0890  
Fax: 1-866-335-6295  
regulatory@fortisbc.com  
www.fortisbc.com

October 8, 2010

**Via Email**  
**Original via mail**

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

Dear Ms. Hamilton:

**Re: *FortisBC Inc. ("FortisBC") Application for Approval of the 2011 Capital Expenditure Plan Project No. 3698603***

Please find enclosed FortisBC Final Submission with regard to the above noted project. Twelve copies will be couriered to the Commission.

Sincerely,

A handwritten signature in black ink, appearing to be "Dennis Swanson", written over a horizontal line.

Dennis Swanson  
Director, Regulatory Affairs

cc: Registered Intervenors

## **FINAL SUBMISSION OF FORTISBC INC.**

### **A. INTRODUCTION**

1. On June 18, 2010, FortisBC Inc. (“FortisBC” or the “Company”) filed its 2011 Capital Expenditure Plan (the “2011 Capital Plan” or the “Application”), (Exhibit B-1) with the British Columbia Utilities Commission (“Commission” or “BCUC”), pursuant to sections 44.2(1)(a) and (b) and 45(2) of the Utilities Commission Act, R.S.B.C. c.473 (the “Act”).
2. FortisBC seeks an Order of the Commission confirming that the 2011 Capital Plan satisfies the requirements of section 45(6) of the Act, and that the Commission accepts the 2011 Capital Plan and finds that the capital projects contained in the listed tables are in the public interest pursuant to section 44.2(3)(a) of the Act.
3. The Commission, by Order No. G-112-10 dated June 28, 2010 as amended by Letters L-64-10 and L-66-10, established a written public hearing process for review of the Application, which included a Workshop by FortisBC on August 4, 2010, in Kelowna, British Columbia.
4. On August 26, 2010, FortisBC filed its response to Commission Information Request No. 1 (Exhibit B-4), and on October 1, 2010 the Company filed responses to Commission Information Request No. 2 and Intervener Information Requests No. 1 (Exhibit B-6).

### **B. 2011 CAPITAL EXPENDITURE PLAN OVERVIEW**

5. FortisBC’s 2011 Capital Plan consists of expenditures of \$103.3 million in 2011 and a further \$5.3 million in 2012. These expenditures are necessary to continue to provide reliable service, ensure public and employee safety, and to deliver Demand Side Management programs to the Company’s growing customer base.
6. Of the 2011 Capital Plan expenditures, \$37.1 million in 2011 and \$3.8 million in 2012 have previously been approved by the Commission. FortisBC seeks approval of capital projects in the amount of \$67.6 million, consisting of \$66.2 million in 2011 and a further \$1.5 million in 2012 for the completion of projects that will begin in 2011.
7. Table 1.1 of the Application summarizes FortisBC’s 2011 Capital Expenditure Plan (Exhibit B-1, page 3):

**Table 1.1  
2011 Capital Expenditure Plan**

1		2011	2012	2011	2012	2011	2012
2		(\$000s)					
3		Requested		Previously Approved		Total	
4	Generation	2,513	1,439	16,156	3,842	18,669	5,281
5	Transmission and Stations	12,291	-	16,056	-	28,347	-
6	Distribution	23,604	-	-	-	23,604	-
7	Telecommunications, SCADA, and Protection and Control	5,600	-	1,540	-	7,140	-
8	General Plant	12,968	-	595	-	13,563	-
9	<b>Subtotal - Plant and Equipment</b>	<b>56,976</b>	<b>1,439</b>	<b>34,347</b>	<b>3,842</b>	<b>91,323</b>	<b>5,281</b>
10	Demand Side Management	5,764	-	-	-	5,764	-
11	<b>Subtotal - Additions</b>	<b>62,740</b>	<b>1,439</b>	<b>34,347</b>	<b>3,842</b>	<b>97,087</b>	<b>5,281</b>
12	Cost of Removal (net)	3,411	36	2,781	6	6,192	42
13	<b>Total</b>	<b>66,151</b>	<b>1,475</b>	<b>37,128</b>	<b>3,848</b>	<b>103,279</b>	<b>5,323</b>
14							
15	Annual Operating Savings					<b>128</b>	<b>283</b>

8. The projects contained in the 2011 Capital Plan support British Columbia’s energy objectives as defined in section 2 of the Clean Energy Act S.B.C. 2010, c.22 (the “Clean Energy Act”), are consistent with the November 2008 Demand-Side Measures Regulation (B.C. Reg 326/288, the “DSM Regulation”) and applicable policy actions as outlined in the 2007 BC Energy Plan (the “Energy Plan”), and are in the public interest (Exhibit B-1, page 2).
9. With the completion of the 2011 Capital Plan, FortisBC will have substantially executed the projects outlined for the medium term in its long-term 2005-2024 System Development Plan. In 2011 the Company intends to file a long-term Integrated System Plan (Exhibit B-1, page 2), which will form the basis for, among other requirements, future capital expenditure plans.

**(a) Generation**

10. The Application identified five Major Generation projects with estimated expenditures totaling \$16.8 million and \$4.9 million in 2011 and 2012, respectively (Exhibit B-1, Table 2.1, page 13). Four of these projects, including three units in the Company’s Upgrade and Life Extension program, and the upgrade of the generating plants’ Station Service Supply, have been previously approved (Orders G-52-05, G-147-06, C-5-09, G-147-06 as identified in Table 2.1, Exhibit B-1, page 13).

11. FortisBC requests approval for the Upper Bonnington Spill Gate Rebuild at an estimated cost of \$1.6 million in 2011 and 2012. The spill gates at Upper Bonnington, due to their age, are at risk of failure, which could result in water over topping the dam, causing damage to the powerhouse. FortisBC has not operated or exercised the spill gates at Upper Bonnington since the late 1980s due to the concerns associated with them (Exhibit B-6, response to BCOAPO Information Request No. 1 Q5.1). As there is presently no means of isolating these gates in the event of failure, expenditures of 0.6 million in 2011 are required to cut stop log slots to provide isolation with expenditures of 1.0 million in 2012 required to undertake refurbishment of the two spill gates (Exhibit B-1, page 15). The risk of delaying this project includes continuing non-compliance with Canadian Dam Safety Guidelines with regard to the spill gates (Exhibit B-4, response to BCUC Information Request No. 1 Q3.3).
12. The South Slokan Plant Automation project (\$0.2 million) involves the installation of “smart” motor overloads and additional process monitoring sensors at this plant, to be used as the basis for the development of a condition-based maintenance program (Exhibit B-1, page 16). A condition-based maintenance program will permit the Company to allocate maintenance expenditures on a condition basis rather than at predetermined time-based intervals, and could potentially reduce some long term maintenance costs (Exhibit B-4, page 15).
13. The South Slokan Fire Panel project (\$0.3 million in 2011) and the replacement of the Lower Bonnington Powerhouse Windows (\$0.4 million and \$0.3 million in 2011 and 2012 respectively) are required primarily for reasons of employee safety (Exhibit B-1, pages 16 and 17; Exhibit B-4, response to BCUC Information Request No. 1 Q5.1).
14. FortisBC is requesting approval for the Lower Bonnington and Upper Bonnington Plant Totalizer (meter) Upgrade, which will replace the existing meters with the same network-capable meters in use at the Company’s other generating plants, at a cost of \$0.09 million in each of 2011 and 2012. There is a lack of available parts for, and there are inaccurate readings from the existing meters, which are required to determine Entitlement use under the Canal Plant Agreement (Exhibit B-4, response to BCUC Information Request No. 1 Q6.1).
15. Minor Sustaining Capital projects in the amount of \$1.0 million are requested for 2011, comprised of two safety-related projects (the replacement of the four Power House Crane Brakes and the upgrade of the Upper Bonnington Extension Power House Crane to meet

WorkSafeBC regulations), in addition to small projects each valued at less than \$150,000 (Exhibit B-1, Table 2.2, page 18).

**(b) Transmission and Stations**

16. The Application includes Transmission and Stations Growth projects with estimated expenditures of \$21.4 million in 2011 (Exhibit B-1, Table 3.1, page 20). The majority of these expenditures (\$16.1 million) are for the Okanagan Transmission Reinforcement project which was approved by Order C-5-08 and will be completed in 2011.
17. The Company is requesting \$0.7 million for engineering and estimation for a 138 kilovolt (“kV”) transmission line from the Ellison Substation to a tap into FortisBC’s 50 Line near the Sexsmith Substation, which will result in N-1 transmission reliability for the Kelowna area. The project was identified in FortisBC’s 2005 System Development Plan and in the subsequent CPCN application for the Ellison Substation approved by Order C-4-07, which included the acquisition of any necessary rights-of-way.
18. The Ellison to Sexsmith Transmission Tie will greatly reduce the risk of potentially lengthy outages (8 or more hours in duration) to this growing area of Kelowna, which includes Kelowna International Airport and the University of British Columbia Okanagan in addition to BC Hydro customers in the Winfield area.
19. The project also has safety and cost benefits as live-line procedures will not be necessary for maintenance work on FortisBC’s 138 kV 46 Line, which is currently the only supply source to approximately 9,700 customers served from 46 Line (Exhibit B-1, page 22).
20. The Huth Bus Reconfiguration is also a reliability-driven project involving the upgrade of the 63 kV bus work at Huth Substation in Penticton. Expenditures of \$0.4 million for the planning and engineering phases of the project were approved by Order G-11-09. Completion of the project, estimated at \$4.7 million in 2011, will establish an N-1 level of transmission reliability for a population base of approximately 50,000 residents in the Penticton, Kaleden, and Summerland areas (Exhibit B-1, page 24).
21. FortisBC also forecasts expenditures for the sustainment of its Transmission and Stations infrastructure in the amount of \$7.0 million in 2011 (Exhibit B-1, Table 3.1, line 21).
22. The installation of Arc-Flash Detection relays to legacy metal-clad switchgear in three locations, estimated at \$0.5 million, will mitigate a significant safety hazard to FortisBC

personnel at a relatively low cost compared to alternate solutions such as replacement of metal-clad switch gear. As indicated in response to BCUC Information Request No. 2 Q6.3, it is impractical to de-energize switch gear in all cases prior to working in the vicinity.

23. Also included in the Sustaining capital projects are the Lambert 230 kV Switch Replacement, required to address reliability and operational and safety issues, estimated at \$0.5 million, and the reliability-driven Okanagan Mission Load Tap Changer Upgrade project estimated at \$0.7 million. Additionally, completion of the Load Tap Changer Upgrade project will permit full utilization of the 32 megavolt ampere (“MVA”) transformer T1 at the Okanagan Mission Substation (Exhibit B-1, pages 32-33).
24. Expenditures for Station Condition Assessments and Minor Planned Projects include \$0.3 million to replace a number of battery banks based on age or condition testing. These battery banks are necessary to provide a reliable power source to substation protection systems in the event of a power outage at the station. Failure of this critical equipment can result in significant reliability impacts as the battery banks are required to support protection and control equipment which communicates vital information to the System Control Centre regarding the status of system alarms and transformer monitoring devices (Exhibit B-1, page 31).
25. The remainder of the Transmission and Stations Sustaining capital expenditures is for ongoing programs pertaining to transmission line and station condition assessments, repairs and rehabilitations, and transmission line rights-of-way. These expenditures are required to address public and employee safety issues and environmental concerns, and to maintain reliable service to FortisBC’s customers. Expenditures for these programs are generally derived from historical average expenditures, in some instances adjusted for known factors related to the 2011 work (for example, Exhibit B-6, response to BCUC Information Request No. 2 Q10.1).

**(c) Distribution**

26. The 2011 Capital Plan for Distribution consists of Distribution Growth projects, which include Customer Connects and Unplanned Growth, in the amount of \$11.5 million, and Distribution Sustaining projects totaling \$12.1 million (Exhibit B-1, Table 4.1, page 35).

27. The 2011 Capital Plan does not contain any planned Distribution Growth projects.
- Unforeseen load emergence will require capacity-driven projects not specifically identified in the capital planning process. These Unplanned Growth projects are forecast at \$0.9 million in 2011 (Exhibit B-1, Table 4.1, page 35).
28. Distribution Sustaining capital expenditures include projects necessary to rehabilitate or upgrade distribution lines in order to ensure employee and public safety and reliable customer service (Exhibit B-1, page 35). Expenditures in the amount of \$12.1 million in 2011 are forecast in a similar manner to the forecast Transmission and Stations Sustaining expenditures referred to in paragraph 25 above.
29. The Distribution Sustaining capital expenditures include a continuation of the Company's hot tap connector replacement program which was previously approved as part of the Distribution Line Rehabilitation program (Exhibit B-6, response to BCUC Information Request No. 2 Q12.2). The hazard related to conductor burn off resulting from deteriorated hot tap connectors is applicable to aluminum conductors and No. 3 and No. 4 copper conductors, which were not the subject of the Copper Conductor Replacement program previously proposed by FortisBC (Exhibit B-6, response to BCUC Information Request No. 2 Q12.1).

**(d) Telecommunications, SCADA, and Protection and Control**

30. The Application requests approval for two projects for the enhancement of the Company's fibre-optic communications network to improve the adequacy and security of the Company's telecommunications system.
31. The 2011 Kelowna 138 kV Loop Fibre Installation project (\$3.4 million) is the first stage of a multiple-year project which will improve safety and reliability in the Kelowna area. (Exhibit B-1, pages 46 – 50). The existing communications systems have a demonstrated record of unreliability (Exhibit B-6, response to BCMEU Information Request No. 1 Q16.2), which has directly resulted in extended customer outages (over 35,000 customer-hours to date).
32. FortisBC requests \$0.7 million to carry out detailed engineering and estimating for the Grand Forks to Warfield Fibre Installation project, which was first identified in the Company's 2005 System Development Plan. The installation will improve FortisBC's internal

communication system reliability by connecting the Kootenay and Okanagan fibre-optic backbones, and will also reduce future operating costs due to decreased reliance on third parties for telecommunications services (Exhibit B-1, pages 50 – 52).

33. The Commission in its Information Request No. 1 asked whether a CPCN application should be filed for the Kelowna 138 kV Loop Fibre Installation and the Grand Forks to Warfield Fibre Installation projects. In response, FortisBC states that the two Fibre Optic projects contained in the Application are independent of one another and that neither meets the Company's current criteria for CPCN applications which are set out at pages 8-9 of the Application (BCUC Information Request No. 1 Q25.3). FortisBC submits that a CPCN application is not required for either of these projects and that the costs associated with a CPCN application process would not justify the benefits associated with that process.
34. The remainder of the expenditures in this category are for Sustaining capital projects (\$1.6 million) and for the Distribution Substation Automation Program, approved by Commission Order C-11-07, which will be completed in 2011 with expenditures of \$1.5 million (Exhibit B-1, Table 5.1, page 46).

**(e) General Plant**

35. General Plant consists of Vehicles, Metering, Information Systems, Telecommunications, Buildings, Furniture and Fixtures, and Tools and Equipment. The 2011 Capital Plan contains expenditures of \$13.6 million, including \$0.6 million required to achieve compliance with the Mandatory Reliability Standards approved by the Commission by way of Order G-67-09.
36. The 2011 capital expenditures for Information Systems (\$5.6 million) are primarily based on enhancing and upgrading existing technologies, system and business applications. In addition to its ongoing programs of system enhancements and upgrades, the Company is requesting approval of \$0.5 million in 2011 to replace its existing payroll system, which is no longer adequate to meet current data requirements or to provide clear and complete payroll statements for its employees (Exhibit B-6, response to BCOAPO Information Request No. 1 Q21.1).
37. FortisBC confirms that none of the 2011 expenditures for the \$0.9 million Customer Service Systems Enhancement component of the Information Systems expenditures will become



redundant or stranded with the future implementation of Advanced Metering Infrastructure (Exhibit B-6, response to BCUC Information Request No. 2, Q25.1).

38. Expenditures on Buildings projects are related to FortisBC's fifteen office, shop, warehouse and yard sites ranging in age from 7 to 87 years (Exhibit B-1, page 65, line 17). Proposed expenditures of \$1.2 million are primarily required to conduct operational requirements in a safe, efficient and environmentally conscious manner.
39. The Application requests development funding of \$0.5 million to determine a cost-effective long term solution for a Kootenay Operations Centre project, which would encompass the requirements of the Company's generation office facilities, System Control Centre, and the Castlegar and Warfield Network Operations Centres (Exhibit B-4, response to BCUC Information Request Q42.1).
40. Similarly, a \$0.5 million expenditure is planned to develop a long-term solution to house all of the Company's Kelowna operations staff, warehouse, and fleet maintenance, required in part by the expiration in 2012 of the lease on one of the two operations sites in Kelowna and inefficiencies with the existence of two operations sites (Exhibit B-1, page 67, line 26 – page 68, line 6). The Company will avoid the leasing costs of the Enterprise site with the construction of the Kelowna site (Exhibit B-6, response to BCUC Information Request No. 2 Q29.2).
41. Federal regulation under the Canadian Environmental Protection Act (the "PCB Regulations") set specific deadlines for elimination of electrical equipment with Polychlorinated Biphenyls ("PCBs") (Exhibit B-1, page 69, lines 10 – 13). FortisBC requests approval of \$1.9 million in 2011 for work required to enable compliance with the PCB Regulations.

**(f) Demand Side Management**

42. The Company forecasts expenditures on Demand Side Management of \$5.8 million on a net of tax basis, approximately twice the approved 2010 expenditures, with savings increasing by 44 per cent (Exhibit B-4, response to BCUC Information Request No. 1 Q48.1). This expenditure increase reflects the major shift in provincial policies which are embodied in the Act and the DSM Regulation (Exhibit B-1, page 71)

43. The Demand Side Management expenditures consist of all programs, including a number of new and enhanced residential (low-income, rental and education programs), general service and industrial efficiency programs, required for the Demand Side Management portfolio to be considered adequate pursuant to the Act (Exhibit B-1, Tables 7.2, 7.3, 7.4, pages 73-74, and Exhibit B-4, response to BCUC Information Request No. 1, Q48.1).
44. No measures have been included specifically for senior-led households, with no such measures required for adequacy under the Act. However, senior-led households are eligible for low-income programs to the extent that they qualify as low-income customers (Exhibit B-6, response to BCOAPO Information Request No. 1 Q32.7).
45. The 2011 expenditures are supported by the Company's Residential and Commercial sector End Use Surveys and its 2010 Conservation and Demand Potential Review (Exhibit B-1 and B-1-1, Appendix 3, Appendices B, C, and D respectively).
46. Individual demand-side measures are generally cost-effective as specified in the Act, having a total resource cost ("TRC") value greater than or equal to unity (Exhibit B-4, response to BCUC Information Request No.1 Q55.2). In a few cases, the Company has elected to include measures that are slightly below a TRC of one in order to complement other programs. In these cases, the programs can be evaluated for cost-effectiveness on a portfolio basis (Exhibit B-6, response to BCUC Information Request No. 2 Q33.6.1). Overall, the 2011 DSM Plan has a robust TRC ratio of 2.3 (Exhibit B-4, response to BCUC Information Request No. 1 Q56.1).
47. The programs selected in the 2011 DSM plan target those end-uses that have the most cost-effective efficiency measures (Exhibit B-6, response to BCUC Information Request No. 2 Q48.1). FortisBC has reviewed other utilities' Demand Side Management programs and where appropriate is mirroring successful programs (Exhibit B-4, response to BCUC Information Request No. 1 Q57.3). The Company has also identified a number of collaborative programs for 2011 that it will participate in with BC Hydro, Terasen Gas Inc., and the provincial Ministry of Energy, Mines and Petroleum Resources (Exhibit B-4, response to BCUC Information Request No. 1, Q70.1.1).
48. The public consultation process indicated strong support for increased DSM program spending and savings acquisition (Exhibit B-1, Appendix 3, section 3.1 page 20).

**C. ACCOUNTING PRACTICE**

49. FortisBC categorizes expenditures in accordance with its approved Capitalization Policy, which is in accordance with Canadian Generally Accepted Accounting Principles (Exhibit B-6, response to BCMEU Information Request No. 1, Q3.2), and its treatment of capital projects has been consistent at least throughout the term of its current Performance-Based Regulation (“PBR”) Plan (for example, BCUC Information Request No. 1, Q11.4). The Company further submits that categories of expenditure which have previously been approved as capital, under the terms of the PBR Plan, in order to be reclassified as Operating and Maintenance expense, would require a Z-factor adjustment to 2011 Revenue Requirements.
50. The Company also confirms that the capitalization of expenditures is reviewed for appropriateness both during the budget process and on an operating basis (Exhibit B-6, response to BCMEU Information Request No. 1 Q7.1 and Q7.3).

**D. Conclusion**

51. The Company submits that the 2011 Capital Plan meets the requirements of the Utilities Commission Act, that, as set out in the 2011 Capital Plan, the projects support the applicable of British Columbia’s energy objectives as set out in the Clean Energy Act, and that all are in the public interest.
52. The Company strongly believes that the projects proposed in the 2011 Capital Plan are necessary to be completed in 2011. FortisBC submits that any delay in performing the capital additions and upgrades detailed in the application would not be in the public interest.
53. Accordingly, FortisBC requests that the Application for its 2011 Capital Expenditure Plan be approved as submitted.

ALL OF WHICH IS RESPECTFULLY SUBMITTED



Dennis Swanson  
Director, Regulatory Affairs