



IN THE MATTER OF

FORTISBC INC.

2011 CAPITAL EXPENDITURE PLAN

DECISION

December 17, 2010

Before:

L.A. O'Hara, Panel Chair/Commissioner

A.A. Rhodes, Commissioner

D.A. Cote, Commissioner

TABLE OF CONTENTS

	<u>Page No.</u>
EXECUTIVE SUMMARY	1
1.0 INTRODUCTION AND REGULATORY CONTEXT	4
1.1 The Applicant and Application Overview	4
1.2 Orders Sought	6
1.3 Legislative and Regulatory Framework	6
1.4 Interveners and Issues	9
1.5 Consultation	10
1.6 Context	11
1.7 Growth of Capital Costs in Recent Years	14
2.0 GENERATION, TRANSMISSION AND STATIONS	16
2.1 Reliance on Historical Information in Support of Prospective Needs	16
2.2 Major Sustaining Generation Projects	17
2.3 Small Sustaining Generation Projects	19
2.4 Transmission and Stations Growth Projects	20
2.5 Transmission and Stations Sustaining Projects	22
2.5.1 Transmission Sustaining Projects	22
2.5.2 Stations Sustaining Projects	23
3.0 DISTRIBUTION	26
3.1 Distribution Growth Projects	26
3.1.1 New Customer Connects System Wide	27
3.1.2 Unplanned Growth Projects	27
3.2 Sustaining Programs and Projects	29

TABLE OF CONTENTS

	<u>Page No.</u>
4.0 TELECOMMUNICATIONS, SCADA AND PROTECTION AND CONTROL	31
4.1 Growth Projects	31
4.1.1 The Distribution Substation Automation Program	31
4.1.2 Two Fibre Optic Projects	32
4.1.2.1 Fibre Installation on the Kelowna 138 kV Loop	32
4.1.2.2 Fibre Installation Between Grand Forks and Warfield	36
4.2 Sustaining Projects	41
5.0 DEMAND-SIDE MANAGEMENT	43
5.1 Legislative DSM Requirements	44
5.2 DSM Plan Preparation	45
5.3 Program Description	47
5.3.1 Residential Programs	47
5.3.2 General Service Programs	49
5.3.3 Industrial Programs	51
5.3.4 Supporting Initiatives	51
5.3.5 Planning and Evaluation	53
5.3.6 Sources of Budget Increase	54
5.3.7 Program Delivery Efficiency and Risks	55
5.4 FortisBC's Submission on Cost-Effectiveness of the 2011 DSM Plan	56
5.5 Interveners' Positions on the DSM Plan	57
6.0 GENERAL PLANT	60
7.0 OTHER MATTERS	64
7.1 Capitalization Policy	64
7.2 Accounting Treatment of Sustaining Programs	65
7.2.1 Transmission and Distribution Right-of-Way Reclamation	66
7.2.2 Transmission and Distribution Pine Beetle Kill Hazard Tree Removal	67

TABLE OF CONTENTS

	<u>Page No.</u>
7.2.3 Distribution Line Rehabilitation: “Hot Tap Connector Replacement” Program	68
7.3 Other Issues	70
7.3.1 Approved vs. Actual Capital Expenditures	70
7.3.2. Cost of Removal	71
8.0 SUMMARY OF DIRECTIVES	72

COMMISSION ORDER G-195-10

APPENDICES

APPENDIX A	Extracts from the <i>Utilities Commission Act</i>
APPENDIX B	Extracts from the <i>Clean Energy Act</i>
APPENDIX C	Demand-Side Measures Regulation
APPENDIX D	Regulatory Process
APPENDIX E	List of Acronyms
APPENDIX F	Exhibit List
APPENDIX G	FortisBC Capitalization Policy

EXECUTIVE SUMMARY

FortisBC seeks approval of its 2011 Capital Expenditure Plan. In particular, acceptance is sought for expenditures associated with capital projects totalling \$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. This total also includes a \$5.764 million provision for Demand Side Management programs. The entire 2011 Capital Expenditure Plan consists of \$103.3 million in 2011 and a further \$5.3 million in 2012, which also include projects that have previously been accepted or approved by the Commission.

FortisBC filed its Application pursuant to sections 44.2(1)(a) and (b) and 45(2) of the *Utilities Commission Act* and seeks an Order of the Commission that the 2011 Capital Expenditure Plan is in the public interest pursuant to section 44.2(3) and satisfies the requirements of section 45(6), and that the Commission approves the capital projects described in the Application.

In its review of the Application the Commission Panel noted that in FortisBC's planning process 2011 is very much a transition year and, therefore, both the Capital Expenditure Plan and Demand Side Management Plan will be reviewed in that context. The following factors, among others, have led to this conclusion:

- The major projects identified in the 2005-2024 System Development Plan and planned for the medium term, with few exceptions, will have been completed by the end of 2011. The next Integrated System Plan, to be completed and filed in 2011, will outline a twenty-year horizon of planned future investment spending on FortisBC system assets.
- In 2009 FortisBC filed its Long-Term Resource Plan and it now plans to file an evidentiary update pursuant to section 44.1 of the *Act*. FortisBC has also indicated that in 2011 it intends to file an application requesting approval for the installation of an Advanced Metering Infrastructure.
- FortisBC operates under a Performance Based Rate Settlement, with the 2011 test year period being an extension and the final year of the 2006 Settlement.
- The new era introduced by the passing of the *Clean Energy Act*.

While considering 2011 as a transition year the Commission Panel also believes that it is equally important to look at the current 2011 Capital Expenditure Plan as a basis for future planning initiatives and, where possible, highlight and address any issues which have arisen and will have an impact on not only this Application but also on future plans.

During the review process the Panel identified the following key issues:

- Growth of capital expenditures in recent years, which is also a main concern of the Interveners, as it relates to the continued upward pressure on rates. Of particular concern to the Panel is whether all projects are required to be completed in the current year or whether some could be delayed and completed on an as required basis.
- Reliance primarily on historical average expenditures in support of prospective needs for sustaining capital.
- Failure to use the Certificate of Public Convenience and Necessity process for higher cost programs encompassing a number of years.
- Concern as to whether FortisBC has adequately considered and incorporated appropriate best practices and lessons learned in other jurisdictions to introduce new programs in conjunction with its growing DSM expenditures.
- Lack of emphasis on efficiency and performance measures as planning tools.
- FortisBC's application of its capitalization policy seems to result in some sustaining project expenditures being capitalized that are, in fact, operational in nature.

After reviewing the projects and addressing the above concerns, the Commission Panel has rejected a total of \$14.241 million from the applied for capital expenditures. This rejection does not mean that the projects cannot be executed, rather that they may require a further review process, that they may be postponed by a year or two or that the expenditures should be treated as O&M expenses. Specifically, the Commission Panel directs FortisBC to apply for a Certificate of Public Convenience and Necessity for its proposed two fibre optic projects (\$4.049 million in 2011) and to include its proposed General Plant SCADA expenditures in the amount of \$528,000 in the application as well. The Transmission and Distribution Right-of-Way Reclamation Program, the Pine Beetle Kill Hazard Tree Removal Program and the Hot Tap Connector Replacement Program (\$3.767

million) were rejected as capital expenditures. The Commission Panel has also reduced the sustaining capital expenditures by \$2.450 million in response to FortisBC's lack of rigor in determining requirements and concerns with timing. Finally, expenditures for Cost of Removal totaling \$3,447 are rejected due to lack of evidence.

The remaining capital expenditures of \$53.385 million in 2011 and 2012 are considered to be in the public interest pursuant to section 44.2(3)(a) and meet the requirements of section 45(6) of the *Act*.

1.0 INTRODUCTION AND REGULATORY CONTEXT

This Decision deals with an application by FortisBC Inc. (FortisBC or the Company) dated June 18, 2010. FortisBC seeks approval of its 2011 Capital Expenditure Plan (Application). In particular, approval is sought for expenditures on capital projects totalling \$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. The entire 2011 Capital Expenditure Plan (2011 CEP) of FortisBC consists of \$103.3 million in 2011 and a further \$5.3 million in 2012 but those totals include projects and/or expenditures that have previously been approved by the Commission. FortisBC states that the applied for expenditures are necessary to continue to provide reliable service, ensure public and employee safety, and to deliver Demand Side Management (DSM) programs to the Company's growing customer base.

This Section provides an overview of the Application, addresses the orders sought in the current legislative and regulatory framework, introduces the Interveners and their key issues, and finally sets the context in which this Decision is written.

1.1 The Applicant and Application Overview

FortisBC is an investor-owned utility engaged in the business of generation, transmission, distribution and sale of electricity in the southern interior of British Columbia. FortisBC currently serves more than 158,000 customers both directly to customers connected to the FortisBC infrastructure and indirectly through sales to five municipally-owned electric utilities. The Company owns assets with a gross book value in excess of \$1 billion, including four hydroelectric generating plants located on the Kootenay River with a combined capacity of 223 MW and approximately 7,000 circuit km of transmission and distribution power lines for the delivery of electricity to major load centers and customers in its service area.

Until 1998 the company was controlled by Cominco Ltd. and was known as West Kootenay Power Ltd. From 1998 to 2003 it was owned by Utilicorp Inc. (Aquila) after which it was purchased by Fortis Inc. and renamed FortisBC.

The 2011 Capital Expenditure Plan is summarized in the following table:

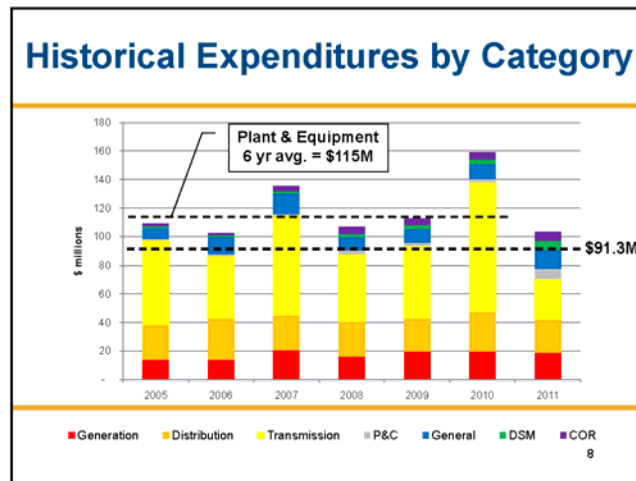
Table 1.1
2011 Capital Expenditure Plan

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	Subtotal - Plant and Equipment	56,976	1,439	34,347	3,842	91,323	5,281
10	Demand Side Management	5,764	-	-	-	5,764	-
11	Subtotal - Additions	62,740	1,439	34,347	3,842	97,087	5,281
12	Cost of Removal (net)	3,411	36	2,781	6	6,192	42
13	Total	66,151	1,475	37,128	3,848	103,279	5,323
14							
15	Annual Operating Savings					128	283

Source: Exhibit B-1, p. 3

By way of background, FortisBC outlines its actual expenditures over 2005-2009 and forecast for 2010 and 2011 as shown below:

Figure 1-1



Source: Exhibit B-2, p. 4

1.2 Orders Sought

FortisBC filed the Application pursuant to sections 44.2(1)(a) and (b) and 45(2) of the *Utilities Commission Act (Act, UCA)* and seeks an Order of the Commission that the 2011 Capital Expenditure Plan is in the public interest pursuant to sections 44.2(3)(a) and satisfies the requirements of section 45(6), and that the Commission accept the capital expenditures contained in the various tables and described in the Application.

1.3 Legislative and Regulatory Framework

FortisBC states that the projects associated with its forecast expenditures support British Columbia's energy objectives, as defined in section 2 of the *Clean Energy Act (CEA)*, meet the requirements of the *UCA*, are consistent with the November 2008 Demand-Side Measures Regulation (DSM Regulation) and applicable policy actions as outlined in the 2007 BC Energy Plan, and are in the public interest. (Exhibit B-1, p. 2)

Sections 44.2 and 45 of the *Act* are reproduced for the convenience of the reader in Appendix A. British Columbia's energy objectives from section 2 of the *CEA* are listed in Appendix B with those pertinent to this Application highlighted. Section 17(6) of the *CEA* is also included in Appendix B

because it reflects the pending implementation of smart metering and smart grid technology in the province. Appendix C is the Demand-Side Measures Regulation of the *UCA*.

After reviewing an expenditure schedule submitted under section 44.2(1) the Commission Panel can:

- Accept the schedule, if it considers that making the expenditures referred to would be in the public interest, or
- Reject the schedule, or
- Accept or reject a part of the schedule.

FortisBC Capital Expenditure Plan Section 44.2(5) Considerations

By section 44.2(5) of the *UCA*, in considering whether to accept an expenditure schedule the Commission Panel is required to consider:

- (a) The applicable of British Columbia's energy objectives;
- (b) The most recent long term resource plan filed by the public utility under s. 44.1, if any;
- (c) The extent to which the plan is consistent with the applicable requirements under sections 6 and 19 of the *Clean Energy Act*;
- (d) If the schedule includes expenditures on demand side measures, whether the demand-side measures are cost-effective within the meaning prescribed by regulation, if any, and
- (e) The interests of persons in British Columbia who receive or may receive service from the public utility.

British Columbia's energy objectives are set out in the *CEA* as noted above. The Commission Panel is of the view that the following objectives are most relevant to this Application:

- (a) To achieve electricity self-sufficiency;
- (b) To take demand-side measures and to conserve energy including the objective for the authority reducing its expected increase in demand for electricity by the year 2020 by at least 66%;
- (c) To generate at least 93% of the electricity in British Columbia from clean or renewable resources and to build the infrastructure necessary to transmit that electricity; ..., and
- (i) To encourage communities to reduce greenhouse gas emissions and use energy efficiently.
- ...

The Commission Panel finds that the Application is generally consistent with the above objectives as the proposed expenditures which prolong the life of hydro-electric generation and transmission assets will help the Province to achieve electricity self-sufficiency. Hydro-electricity is also a clean and renewable resource. The Application also includes proposed expenditures on demand-side measures which support the objectives relating to energy conservation, reduction of greenhouse gases and energy efficiency.

FortisBC's most recent Long-Term Resource Plan (2009 Resource Plan) was filed with the Commission on May 29, 2009 and covers the period from 2009 to 2028. It was also submitted as evidence in the Section 5 Inquiry into Long-Term Electricity Transmission Infrastructure undertaken by the Commission in 2009. The Commission Panel has reviewed the 2009 Resource Plan and considers that the current Capital Expenditure Plan is not inconsistent in its objectives.

Sections 6 and 19 of the *CEA* relate primarily to BC Hydro. Section 6 does require that a public utility consider British Columbia's energy objective to achieve electricity self-sufficiency when planning in accordance with section 44.1 of the *UCA* for the construction or extension of generation facilities and energy purchases. FortisBC's application is made under section 44.2 of the *Act*, therefore section 6 of the *CEA* is not relevant to this Decision.

FortisBC's Application does include demand-side measures. The DSM Regulation of the *UCA* (BC reg. 326/2008) is relevant. The Commission is required to consider whether the demand-side measures are cost-effective within the meaning prescribed by the Regulation. The demand-side measures proposed are considered in greater detail in Section 5.0 of this Decision.

The Commission is also required to consider the interests of persons in British Columbia who receive or may receive service from FortisBC. **The Commission Panel finds that, except where an expenditure is postponed or rejected, the Application is consistent with the interests of FortisBC's existing and potential customers.**

1.4 Interveners and Issues

The following parties intervened in the 2011 CEP regulatory review process, which is described in greater detail in Appendix D:

- District of Summerland;
- British Columbia Municipal Electrical Utilities (BCMEU) which include the municipalities of Grand Forks, Nelson, Kelowna, Penticton and Summerland;
- Horizon Technologies Inc.;
- BC Old Age Pensioners' Organization et al (BCOAPO);
- Buryl Slack;
- Hans Karow, Coalition to Reduce Electropollution;
- Irrigation Ratepayers Group (IRG) which is made up the Keremeos Irrigation District, Similkameen Improvement District, Fairview Heights irrigation District and Vincor Canada;
- BC Sustainable Energy Association (BCSEA); and
- Norman Gabana.

Out of this group, BCMEU, BCOAPO, IRG and BCSEA were most active in this proceeding and filed Arguments. The following key issues were raised by these Interveners:

- The BCMEU expresses concern over the continued upward pressure on customer rates noting that FortisBC already has made significant capital investments in recent years and that “there is little evidence that trend will abate.” Furthermore, the anticipated significant rate increases by BC Hydro, a key supplier to FortisBC, will in turn put more strain on FortisBC rates. The BCMEU also points out how the legislative environment of FortisBC has evolved with the passage of the *CEA* and how various policy actions outlined in the 2007 Energy Plan will put further pressure on ratepayers. As examples, BCMEU cites the encouraged investments in DSM and AMI. It is in this context that the BCMEU urges the Commission to “vigilantly enforce the statutory provisions of the *UCA*” to ensure the 2011 CEP projects are in the public interest as well as prudently planned and executed. In addition, the BCMEU raises a fundamental concern. This is the risk that customers are expected to pay over many years for capital expenditures which are in some cases more appropriately identified as operating expenses and, accordingly, should be undertaken within the annual operating and maintenance programs.
- The focus of the BCOAPO submissions is on the proposed DSM plan and expenditures related to Low-income and Senior-led households. While BCOAPO finds most projects in the 2011 CEP reasonable, it questions the proposed expenditures for “condition based maintenance.”
- The IRG is concerned with the trend of FortisBC’s capital expenditures significantly exceeding customer growth and states that this trend clearly is not sustainable. The IRG urges FortisBC to find ways to slow the pace of capital additions unless they are required by offsetting customer growth. With regard to the 2011 DSM Plan, the IRG believes that the Irrigation class has considerable DSM potential for cost-effective energy savings. However, the IRG is concerned that this ratepayer group is hampered by disproportionately low effective incentive levels and a lack of Irrigation-specific DSM programs to realize the opportunities identified by the EES Consulting Conservation and Demand Potential review.
- BCSEA support the 2011 DSM Plan portion of the Application but take no position regarding the capital expenditure portion of the Application.

1.5 Consultation

FortisBC states that it designed and carried out a comprehensive public consultation program as part of the development of its 2011 DSM Plan. However, it did not undertake general public consultation related to the 2011 CEP for which the impact on the public was assessed to be low.

This is because the 2011 CEP is primarily focused on sustaining and supporting the Company's existing power system, generation and business infrastructure assets.

For the same reason FortisBC has not undertaken any consultation or accommodation efforts with respect to First Nations. Notably, no First Nations have been identified as being potentially affected by any of the projects proposed in the 2011 CEP. FortisBC will advise First Nations prior to commencing work on any of the projects included in the 2011 Capital Plan that impact FortisBC facilities on or adjacent to any First Nations lands or reserves. Any issues or concerns identified by First Nations will be addressed by FortisBC as they arise. (Exhibit B-1, pp. 4-5)

1.6 Context

FortisBC filed its 2005-2024 System Development Plan (2005 SDP) on November 26, 2004. It identified the need for significant reinforcements to the bulk transmission system, the regional transmission and distribution systems, and the communications, protection, and SCADA (System Control and Data Acquisition) systems owned by the Company. FortisBC states that, with few exceptions, the major 2005 SDP projects planned during the medium term will have been completed by year end 2011. The next Integrated System Plan (ISP), to be completed and filed in 2011, will outline a twenty-year horizon of planned future investment spending on FortisBC system assets, in addition to the Company's plans to meet its electricity requirements. (Exhibit B-1, p. 2)

As noted earlier, on May 29, 2009, FortisBC filed the 2009 Resource Plan and it intends to file an evidentiary update (the Resource Plan Update) pursuant to section 44.1 of the *Act*. FortisBC has also indicated that it intends to file an application in the near future with the Commission requesting approval for the installation of an Advanced Metering Infrastructure (AMI). FortisBC operates under a Performance Based Rate (PBR) Settlement, with the 2011 test period being an extension and the final year of the 2006 PBR Settlement (Order G-58-06) which determines the annual operating and maintenance (O&M) component based on a formulaic approach.

A 2010 Annual Review and 2011 Revenue Requirement Workshop, including a Negotiated Settlement Process for 2011 was held on November 16-17, 2010. Accordingly, negotiations for the 2011 test year took place without the benefit of this Decision on 2011 Capital Expenditures.

All of the factors mentioned above, including the new era introduced by the passing of the *Clean Energy Act*, point to a conclusion that in FortisBC's planning process, 2011 is very much a transition year and, accordingly, the 2011 CEP and the 2011 DSM Plan should be reviewed in that context. However, in making this statement the Panel recognizes it is equally important to look at the current 2011 Capital Expenditure Plan as a basis for future planning initiatives and, where possible, highlight and address any issues which have arisen and will have an impact on not only this Application but also on future plans.

The Commission Panel, in reviewing the evidence presented in the Application and subsequent Information Requests (IRs) as well as the Final Submissions of the participants, has identified a number of issues related to this Application. These are as follows:

1. Growth of Capital Costs in Recent Years

As noted previously, both the BCMEU and the IRG have raised this as an issue. Of particular concern to the Panel is whether all of these projects are required to be completed in the current year or whether some could be delayed.

2. Reliance on Historical information in Support of Prospective Needs

The practice with many areas of sustaining capital has been to base future needs on historical averages rather than relying upon more sophisticated methods to determine sustaining capital requirements. The Panel is of the view that this relates to the Capital Cost Growth issue and raises the concern that prospective costs are planned on a less than optimum foundation.

3. Failure to use the Certificate of Public Convenience and Necessity (CPCN) Process

FortisBC is proposing to initiate a project or series of projects designed to expand the Company's Fibre Optic Network. The requested cost of the proposed projects is slightly over \$4 million in the current Application. However, the total expenditures required to complete these projects will be substantially greater. Given the size of these projects, the Commission Panel questions whether it is more appropriate to submit them as one CPCN rather than deal with them in annual capital expenditure plans.

4. DSM Projects

FortisBC is applying to significantly increase its DSM expenditures. The concern of the Commission Panel is whether FortisBC has adequately considered and incorporated appropriate best practices, evaluations and lessons learned from program studies and program models in other jurisdictions.

5. Emphasis on Efficiency and Performance Measures

Given the rapid growth in capital costs in recent years and the impact on customer rates, the Panel is concerned that insufficient emphasis is being placed on the development of meaningful performance measures, indicators and processes to ensure effective management decision making is enabled.

6. The Application of the Capitalization Policy

The Commission Panel is concerned that some project expenditures which have historically been capitalized are, in fact, operational in nature. This could have a significant impact on rates in the long term if the practice were to continue.

The Commission Panel is of the view that it must examine these issues carefully in reaching its determinations and the decision on this Application. Accordingly, each will be dealt with where appropriate in reviewing the specific capital project requests within the Application.

This Decision will first address those projects and programs related to Generation, Transmission and Stations (Section 2.0). An examination of Distribution (Section 3.0) and Telecommunications, SCADA and Protection and Control projects (Section 4.0) will follow. This will lead to a discussion of Demand-Side Management (Section 5.0) and General Plant (Section 6.0) initiatives before concluding with a review and discussion of Other Matters (Section 7.0).

1.7 Growth of Capital Costs in Recent Years

The 2011 CEP is being filed following a period of substantial capital expenditures by FortisBC. As outlined in the Application, FortisBC in its 2005 SDP identified the need for significant reinforcement of its bulk transmission system, regional transmission and distribution systems as well as the company owned communications, protection and System Control and Data Acquisition systems. The Company reports that with few exceptions, the medium term major 2005 SDP projects will have been completed by the end of 2011. In all, over 100 system development and improvement projects were implemented over the six year period. (Exhibit B-1, p. 2)

As noted previously, both the BCMEU and the IRG have expressed concern about the trend of capital expenditures being undertaken by FortisBC. The BCMEU has noted that it sees little evidence to suggest the trend is likely to abate and this will result in continued upward pressure on rates. (BCMEU Argument, p. 1) The IRG has pointed out that in its view the fact that the trend is exceeding customer growth is a concern. While offering no suggestions as to how or whether capital expenditures may be reduced, it has stated that the trend is clearly not sustainable. (IRG Argument, p. 3)

The Commission Panel has similar concerns and notes that the information in BCUC IR 2.1.1 indicates there has been a double digit increase in capital expenditures each year since 2006 with customer growth being less than two percent in each of these years. However, in expressing this concern, the Panel is equally mindful of the need to ensure that the infrastructure is maintained

and enhanced where necessary to ensure that FortisBC is able to continue to provide service which is reliable and ensures both public and employee safety.

Therefore, in considering the public interest, in addition to examining the individual projects in terms of need or necessity, the Commission Panel will examine following:

- the level of rigor with respect to cost-benefit justifications; and
- key indicators which have been used to drive the project timing which has been applied in this Application.

The purpose of this examination is not to put at risk the level of service FortisBC provides to its customers but rather, to ensure there has been a satisfactory case made for all of the projects which are proposed.

2.0 GENERATION, TRANSMISSION AND STATIONS

This Section first addresses issues identified during the review and then describes the proposed Generation, Transmission and Stations projects in more detail. It should be noted that in addition to previously approved projects, FortisBC is requesting approval of Generation Projects amounting to \$2.513 million and \$1.439 million in 2011 and 2012, respectively and Transmission and Stations Projects amounting to \$12.291 million in 2011. While the proposed generation projects are all of sustaining nature, transmission and stations include both growth and sustaining projects.

2.1 Reliance on Historical Information in Support of Prospective Needs

Of concern to the Panel is FortisBC's practice of relying on historical averages in calculating requirements for many sustaining projects especially within the Transmission and Stations area. In total, the Company is requesting \$9.463 million for sustaining projects in Generation, Transmission and Stations in 2011 in the current Application. Of this, over \$4 million in expenditures are based on what the Company terms as "historical cost information, adjusted for inflation and changes in overheads" and, in some cases, knowledge of what is being assessed. While a small amount of this, (\$443,000), related to assessment of transmission line condition may be justified as the process is similar each year, the balance is far more difficult to justify as requirements for sustaining projects change annually based upon a number of factors related to equipment life cycles. As a consequence, the Commission Panel is not persuaded that the scope and cost of such projects as outlined in the Application are directly linked to actual need. (Exhibit B-1, pp. 19-34)

A second concern of the Panel relates to the \$.957 million requested for "All Plants Minor Sustaining Capital" requirements within the Generation area. In the Application, FortisBC notes that these expenditures are for repairs that have been identified as a result of safety inspections, aging equipment, storm damage, reports by on call personnel and other inspections. The Company states that these projects will be undertaken as per schedule unless a new project, previously unidentified, is deemed to be a higher priority and approved by management. In this instance a project may be replaced and the schedule of projects modified accordingly. Of concern to the

Panel is whether the projects scheduled are all needed or whether some of them can be delayed. It appears it is FortisBC's intention to delay some of these projects in the event of an unforeseen, higher priority requirement. (Exhibit B-1, p. 17) Considering this, the Panel is not persuaded there is imminent need for all of these projects.

2.2 Major Sustaining Generation Projects

FortisBC states that its generation facilities consist of 15 hydroelectric units in four plants located on the Kootenay River. These hydroelectric generating plants, initially constructed between 1897 and 1932, are renewed by both major projects which include the Upgrade and Life Extension (ULE) program that began in 1998 and additional smaller sustaining projects which are addressed separately.

FortisBC further states that the scope of a ULE project is a "water to wires" refurbishment of each of the generating units' systems. With the completion of Corra Linn Unit 1 in 2011 and Corra Linn Unit 2 in 2012 (previously approved expenditures), eleven of the fifteen units will have been completed. The last four units at Upper Bonnington will be addressed in a future application. Total capital expenditures previously approved for this work is now forecast at \$16.156 million for 2011 and \$3.842 million for 2012. (Exhibit B-1, pp. 13-14)

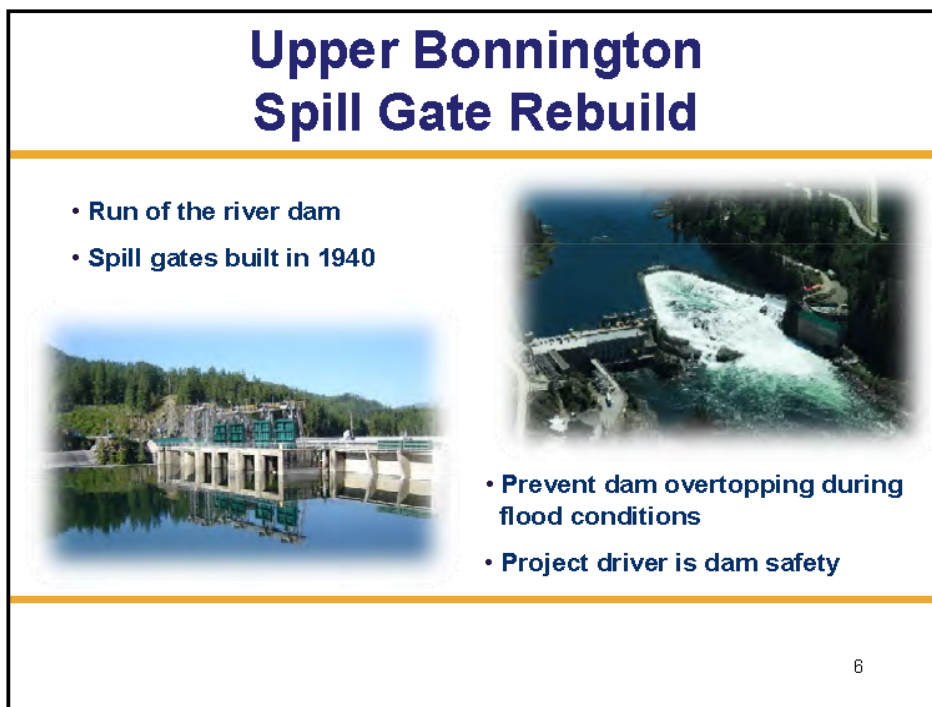
Upper Bonnington Spill Gate Rebuild

FortisBC asserts that the two 80 year old gates have never been maintained below the waterline due to lack of ability to isolate the facilities. Because of this, their condition has deteriorated and the spill gates are now at risk of failure. Specifically, there is a risk of the gates jamming and not opening during maximum flood conditions, resulting in water overtopping the dam and causing damage to the powerhouse. Deterioration as a result of age as well as corrosion can cause the collapse of the outer steel plates, which would cause water to spill from the dam. FortisBC forecasts this project to cost \$1.620 million with the 2011 portion used to cut stop log slots in the

existing structure. The 2012 portion involves the refurbishment of the two gates.
(Exhibit B-1, p. 15)

This project is described by the photo images shown below:

Figure 2.1



Source: Exhibit B-2, p. 3

Commission Determination

The Major Sustaining Generation Projects, other than the Upper Bonnington Spill Gate refurbishment, have previously been approved by the Commission, and accordingly no further determinations with respect to those projects are required. **The Commission Panel finds that refurbishment of the two spill gates is in the public interest to lower the risk of overtopping the dam and possible damage to the powerhouse associated with a gate failure, subject to determinations at the end of Section 2.0.**

2.3 Small Sustaining Generation Projects

The Application includes the projects shown in the table below. None of these projects have previously been granted approvals through a CPCN.

Table 2.1
Small Sustaining Generation Projects (\$000)

	2011	2012	Total
South Slocan Plant Automation	243		243
South Slocan Fire Panel	266		266
Lower Bonnington & Upper Bonnington Plant Totalizer Upgrade	86	85	171
Lower Bonnington Powerhouse Plant Windows	351	344	695
All Plants Minor Sustaining	957		957
Subtotal Small Projects	1,903	429	2,332

Source: Exhibit B-1, extract from p. 13

South Slocan Plant Automation will allow for the introduction of condition based maintenance and lead to lower maintenance costs over the long term;

South Slocan Fire Panel installation is required for employee safety;

Lower Bonnington & Upper Bonnington Plant Totalizer Upgrade involves replacement of obsolete and unreliable revenue meters which are required to determine plant output and entitlement under the Canal Plant Agreement;

Lower Bonnington Powerhouse Plant Windows replacement is required to partially address a safety issue with the aging windows; and

All Plants Minor Sustaining capital involves expenditures for repairs that are identified at the generating plants as a result of safety inspections, storm damage, aging equipment, reports by on-call personnel and other inspections. FortisBC states that these projects will be executed as scheduled in the budget year unless a new, previously unidentified project deemed of higher priority is approved by management to replace it. This list of projects may then change throughout the year, and will be managed as if it were a single project. Projects currently planned for 2011 together with brief descriptions are shown in the table below:

Table 2.2
All Plants Minor Sustaining Capital (\$000)

	2011	2012	Total
All Plants Power House Crane Brakes	231		231
UBO Extension Power House Crane Upgrade	241		241
Projects Under \$150,000	485		485
Total	957		957

Source: Exhibit B-1, p. 18

Commission Determination

The Commission Panel is concerned with the lack of evidence supporting the need to complete many of the Generation sustaining programs in 2011. An example of this is the South Slocan Automation Project where the Company “intends to move towards condition based maintenance.” While the Panel does not take issue with the need for this in the long term, it has not been persuaded that this project is required in 2011. Another example is the installation of the South Slocan Fire Panel. While the Panel accepts this may improve employee safety, the case for implementation of this project at this time has not been adequately made. This will be discussed further at the end of Section 2.0 “Generation, Transmission and Stations” as a part of an overall determination in conjunction with Transmission and Stations sustaining projects. (Exhibit B-1, pp. 15-16)

2.4 Transmission and Stations Growth Projects

In addition to the previously approved Okanagan Transmission Reinforcement project, FortisBC proposes two additional growth-driven projects in the 2011 CEP as shown in the table below:

Table 2.3
Transmission and Stations Growth Projects (\$000)

	Approval	to 2010	2011	2012	Total
Okanagan Transmission Reinforcement	C-5-08	89,923	16,056		105,979
Ellison to Sexsmith Transmission Tie			667		667
Huth Bus Reconfiguration		373	4,674		5,047
Total Growth		90,296	21,397		111,693

Source: Exhibit B-1, p. 20

The Ellison to Sexsmith Transmission Tie project is a \$.667 million provision for engineering and final estimating costs to provide N-1 level of reliability to the Kelowna area north to Duck Lake Substation. Expenditures for the actual implementation will be the subject of a future application. This project was identified in the Ellison Substation CPCN application. (Exhibit B-1, pp. 22-23)

The Huth Bus Reconfiguration project of \$4.674 million is designed to upgrade a Penticton substation bus in order to establish an N-1 level of reliability for the 50,000 customers in the area. At present, the two 63kV source lines cannot be operated in parallel, therefore, in the event of an unplanned outage a further two hour customer outage is required to switch from the faulted line to the alternate source line. Expenditures for the planning and engineering phase were previously approved by the Commission.

Commission Determination

The Commission Panel finds that the expenditure for the Ellison to Sexsmith Transmission Tie engineering and estimating costs, required for the design phase of a project to provide increased reliability to the 9,700 customers served by this line, is in the public interest. The Commission Panel also agrees with FortisBC that a two hour delay to 50,000 customers after a service interruption is an unacceptable level of reliability, and finds that the expenditures for the Huth Bus Reconfiguration project are also in the public interest.

2.5 Transmission and Stations Sustaining Projects

FortisBC proposes the following 2011 capital expenditures which total \$6.950 million:

Table 2.4
Transmission and Stations Sustaining Project (\$000)

	to 2010	2011	2012	Total
Transmission				
Transmission Line Urgent Repairs		468		468
Transmission Line Condition Assessment		443		443
Transmission Rehabilitation		1,518		1,518
Right-of-Way Enhancements		402		402
Right-of Way Reclamation		534		534
Transmission Pine Beetle Hazard Tree Removal		242		242
Stations				
Station Condition Assessment & minor Projects		913		913
Station Urgent Repairs		676		646
Lambert 230kV Switch Replacement		535		535
OKM Load Tap Changers Upgrade		681		681
Addition of Arc Flash Detection to Legacy Metal-Clad Switchgear		538		538
Total Sustaining		6,950		6,950

Source: Exhibit B-1, p. 20

2.5.1 Transmission Sustaining Projects

FortisBC states that its transmission assets require recurring capital expenditures to provide safe and reliable service. FortisBC has 58 transmission lines consisting of approximately 1,400 kilometres of line and 15,000 poles. FortisBC states that approximately 65% of these lines are more than 30 years old, and some are in excess of 60 years old. FortisBC follows a program wherein a transmission line receives a major visual inspection and a “test and treat” of each pole every eight

years. The results of the line assessment, as well as data collected on transmission line rights-of-way vegetation, are used to formulate the following year's rehabilitation program. FortisBC further states that, because of their nature, significant urgent repairs due to storm damage, vandalism or other unforeseen causes are not planned but are included in the sustaining program and estimated on historical levels of expenditures. Brief explanations for the various projects are as follows:

Transmission Line Urgent Repairs: Includes a provision for unplanned repairs due to severe weather, vandalism or other unexpected reasons;

Transmission Line Condition Assessment: Major line visual inspection and a test and treat component of wood poles on four of FortisBC's lines;

Transmission Line Rehabilitation: Expenditures to correct deficiencies identified in previous year's Line Condition Assessment;

Right-of-Way Enhancements: Funds to acquire right-of-way and easements as well as access roads to existing lines due to historical omissions;

Right-of-Way Reclamation: Funds to expand the tree free zone around transmission lines to improve reliability;

Pine Beetle Kill Hazard Tree Removal: Funds to remove dead trees that may fall on transmission lines in order to maintain reliability.

(Exhibit B-1, pp. 26-29)

2.5.2 Stations Sustaining Projects

Substations undergo a program similar to transmission lines where condition assessments are tabulated based on the condition of the equipment and replacements are planned for the following year. FortisBC states that the plan also includes replacement programs for outdated equipment such as protection relays and lightning arresters that are based on old, inferior technology. FortisBC further states that "Station Urgent Repairs" applies to transformers, breakers, batteries, ground grids, and related equipment that require repair or replacement due to unforeseen failures. Brief explanations for the various projects are as follows:

Station Condition Assessment & Minor Projects: Funds to perform major inspections of equipment and to correct minor deficiencies in order to maintain reliability;

Station Urgent Repairs: Provision for unplanned repairs due to natural and unexpected causes;

Lambert 230kV Switch Replacement: Replacement of two motorized 230 kV load break disconnect switches that are at end-of-life;

Okanagan Mission Load Tap Changers Upgrade: Upgrades to the undersized transformer on-load tap changer to utilize the full transformer rating; and

Arc Flash Detection to Legacy Metal-Clad Switchgear: Safety related project to reduce arcing time exposure to personnel in three locations.

(Exhibit B-1, pp. 30-34)

Commission Determination

The Commission Panel has reviewed the evidence with respect to the above projects, has considered the health, safety, regulatory, operational and financial impacts of the projects and notes that Interveners did not oppose expenditures in relation to any of the specific projects submitted. However, the Interveners raised concerns of a more general nature that were addressed in the introductory Section.

Subject to the determinations in Section 7.0, the Commission Panel finds that the expenditures for transmission and stations sustaining capital are, in general, in the public interest, as they are needed to ensure the integrity of 1,400 kilometres of transmission lines and 66 substations in FortisBC service territory. Section 7.0 addresses specifically the accounting treatment of certain sustaining programs, such as Transmission and Distribution Right-of-Way Reclamation and Pine Beetle Kill Hazard Tree Removal Programs.

The Commission Panel also shares the concerns raised by Interveners regarding the significant growth in capital investments and a need to contain this growth where feasible. As stated in Section 2.1 the Panel is not persuaded that the evidence presented by FortisBC with respect to

some of the sustaining programs adequately establishes that all of them are required in the current year. The reliance of FortisBC on estimates based primarily on historical average spending, while administratively simple, in the view of the Panel, does not accurately address what is actually required in a given time period. Moreover, the fact that the Company, in the case of minor sustaining capital for all plants, concedes that some of the projects may be delayed if a higher priority project emerges, increases the Panel's uncertainty as to whether capital expenditures requested are required in 2011. Finally, in providing some examples of Generation sustaining projects which could be delayed, the Panel remains concerned that while there may be a need for the projects, there is some flexibility in the timing.

While there are concerns with respect to the need and timing of Generation, Transmission and Stations sustaining capital requirements, the Panel does not believe it is in a position to determine on a project by project basis where reductions are most appropriately made. **Accordingly, the Panel determines that the sustaining capital expenditures request for Generation, Transmission and Stations totalling \$9.463 million in 2011 and \$1.439 in 2012 will be reduced by \$1.500 million. The determination of the specific projects to be affected and to what extent will be left to FortisBC.** Given that there does appear to be some flexibility concerning timing of projects and prospective needs have not always been determined through a rigorous process, the Panel is satisfied that the reduction can be managed by FortisBC with no impact on reliability of service and public and employee safety.

In addition, the Commission Panel encourages FortisBC to move toward developing a higher level of sophistication in preparing estimates for re-occurring regular sustaining capital expenditures. In doing so, FortisBC will be better able to demonstrate the need for projects and amounts on a prospective basis rather than relying upon past experience. As a starting point, the Company may consider canvassing other electrical utilities of similar size to determine whether there are forecast methods being employed by others that could be cost effectively deployed.

3.0 DISTRIBUTION

FortisBC's 2011 CEP for Distribution consists of expenditures on Distribution Growth projects, including Customer Connects, and Distribution Sustaining projects. Table 3.1 below summarizes the 2011 expenditures for Distribution projects for which FortisBC is seeking approval:

Table 3.1
Distribution Projects

1		Approval	2011	2012	Total
2				(\$000s)	
3	Growth				
4	New Connects - System Wide		10,581		10,581
5	Distribution Growth Projects		-		-
6	Unplanned Growth Projects		948		948
7	Subtotal Growth		11,529		11,529
8	Sustaining				
9	Distribution Urgent Repair		2,274		2,274
10	Distribution Line Condition Assessment		938		938
11	Distribution Line Rehabilitation		2,331		2,331
12	Distribution Line Rebuilds		1,783		1,783
13	Distribution Right-of-Way Reclamation		578		578
14	Distribution Pine Beetle Hazard Tree Removal		1,913		1,913
15	Small Planned Capital		802		802
16	Forced Upgrades and Line Moves		1,456		1,456
17	Subtotal Sustaining		12,075		12,075
18	Total		23,604		23,604

Source: Exhibit B-1, p. 35

3.1 Distribution Growth Projects

FortisBC states that Customer Connects involves projects to provide service to new customers. FortisBC further states the remaining projects in the Distribution Growth category are "driven by general load growth that over a period of time require[s] capacity upgrades or additions to lines in order to meet service requirements or legislated and industry standards." FortisBC points out that the 2011 CEP does not contain any planned Distribution Growth projects. (Exhibit B-1, p. 35)

3.1.1 New Customer Connects System Wide

FortisBC forecasts 2011 expenditures of \$10.581 million to meet its obligation to provide reliable service to customers in the service area. This project includes the installation of new electric services requiring additions to FortisBC's overhead and underground distribution facilities. FortisBC states that the cost estimate for new connects is based on historical averages, adjusted for projected customer growth, inflation and changes to overheads.

Historically, all costs except the transformer, drop service and metering equipment have been charged to the customer as a Contribution In Aid of Construction (CIAC). FortisBC notes that its 2009 Rate Design Application proposed a new methodology for calculating the amount that the Company contributes toward the construction of customer extensions. Under the proposed methodology, a capital credit or allowance is provided to each new customer, which is predicated on the amount of investment in distribution poles, conductors, and transformers for each rate class covered in the applicable retail rate. Any investment in poles, conductors and transformers required to provide service to a new customer in excess of this credit allowance would be paid as a capital contribution by the new customer. As a result of this proposal, the Company contribution of the transformer, drop service and meter will be replaced by the capital credit in 2011. FortisBC does not expect this change to have a material impact on the estimated expenditures for the new Customer Connects. (Exhibit B-1, p. 36)

By Order G-156-10 the Commission approved the proposed methodology in principle as it is comparable to the approach by other utilities in BC.

3.1.2 Unplanned Growth Projects

FortisBC states that capacity upgrades and line extensions are required periodically to keep pace with normal load growth on the distribution system and to ensure continuing acceptable standards of service. FortisBC further states experience has shown that unforeseen load emergence will require capacity upgrades and voltage correction projects not specifically identified in the capital

planning process. These projects typically include service upgrades, voltage regulation, ties to accommodate load splitting, single phase to three phase upgrades and conductor upgrades. Also included is the interconnection of feeders to permit load transfers. As the distribution load grows in different areas, the interconnection of feeders allows FortisBC to optimize loading.

FortisBC follows its past practice by including a provision of \$948,000 for 2011 Unplanned Growth projects. The estimates are based on a three year average of historical expenditure from 2007 to 2009, adjusted for inflation and changes in overheads. The following table shows the approved and actual expenditures for 2007–2009 and the forecast for 2010 and 2011. (Exhibit B-1, pp. 36-37)

Table 3.2
Unplanned Growth Projects

Year	2007	2008	2009	2010	2011
Cost (\$000s)⁽¹⁾	1,063	832	596	994	948
Approved by BCUC⁽²⁾	685	713	974		

Source: (1) Exhibit B-1, p. 37, (2) All Distribution Unplanned Growth Projects have been approved as filed in 2007-2009 (source: FortisBC's 2007-2008 CEP Decision, FortisBC's 2009-2010 CEP Decision)

Commission Determination

The Commission Panel finds that the forecast 2011 expenditures for New Customer Connects and Unplanned Growth projects have been estimated consistently with past practice, are required to provide service to new customers and to meet overall service requirements as well as legislated and industry standards and therefore are in the public interest. Further, the Panel notes that the unplanned nature of many of these projects precludes FortisBC from providing a more rigorous estimating methodology.

3.2 Sustaining Programs and Projects

FortisBC states that the Distribution Sustaining category includes those projects necessary to rehabilitate or upgrade distribution lines in order to ensure employee and public safety, and reliable customer service. The projects planned for 2011 are summarized as follows:

Distribution Urgent Repairs: Provision for unplanned repairs of components which have failed due to weather, defective equipment, animal intrusions, vandalism etc.;

Distribution Line Condition Assessment: A proactive program which is based on an eight-year cycle of visual inspection and testing all distribution lines. In 2011 a total of 21 lines are scheduled for assessment, including 16,260 poles;

Distribution Line Rehabilitation: Funding for stubbing poles, replacing poles, replacing cross-arms, guy wires, hot tap connectors, and other defects identified for rehabilitation in previous years' assessments;

Distribution Line Rebuilds: Funding for replacement of aged and/or deteriorated equipment (rotted poles, leaking transformers etc.);

Distribution Right-of-Way Reclamation: Funding for tree removal and, where necessary and feasible, expansion of the tree-free zone around the distribution lines;

Pine Beetle Kill Hazard Tree Removal: Funds to remove dead trees that may fall on distribution lines in order to maintain reliability;

Small Planned Capital: Funding for a program that supplements the Condition and Assessment and Rehabilitation programs by capturing off-cycle work required to keep the distribution lines safe and reliable; and

Forced Upgrades and Line Moves: Funding for upgrades driven by third party requests, such as relocation of a line due to highway/road widening based on requests from BC Ministry of Transportation and/or municipalities.

(Exhibit B-1, pp. 37-44)

Commission Determination

In Section 2.0 "Generation, Transmission and Stations" the Commission Panel noted its concern with the methodology used by FortisBC to develop estimates for sustaining capital expenditures. In

many cases FortisBC was reliant upon historical cost information adjusted for inflation and any changes in overhead as a means of estimating prospective needs for the 2011 CEP. In its determination, the Panel expressed its lack of confidence in this methodology as a means of accurately projecting actual requirements. As a consequence, the Panel approved a reduction in the amount FortisBC requested for sustaining capital.

In total, FortisBC has requested approval of \$12.075 million in sustaining capital for Distribution projects. Of these, three projects, Distribution Urgent Repair, Small Planned Capital and Forced Upgrades and Line Moves totalling \$4.532 million are capital projects which have been estimated on the basis of historical cost information. With respect to these, the Panel has similar concerns as outlined in Section 2.0 and lacks confidence in whether the need has been definitively established. Given the previously raised concerns for the growth in capital expenditures in recent years and the lack of confidence that all that is requested is actually needed in the current year, the Panel, as was the case with sustaining capital for Generation, Transmission and Stations, does not believe that FortisBC's reliance on estimates based primarily on historical average expenditures is sufficient justification. **Accordingly, the Panel has determined that a reduction of approximately 10 percent or \$450,000 is appropriate.** We believe this will provide a small cost saving yet still leave sufficient funds to adequately address these programs. Again, the determination of the projects to be affected and the extent will be left to FortisBC.

With respect to the remaining \$7.543 million in expenditures for sustaining projects, the Commission Panel is satisfied that there has been sufficient rigor to justify the requested amounts. **Therefore, the Panel finds that FortisBC's remaining expenditures to rehabilitate or upgrade distribution lines in order to ensure reliable customer service and employee and public safety are reasonable. Accordingly, the Panel finds the expenditures related to the proposed 2011 Distribution Sustaining programs and projects other than those addressed previously, are in the public interest subject to the determinations in Section 7.0.**

4.0 TELECOMMUNICATIONS, SCADA AND PROTECTION AND CONTROL

4.1 Growth Projects

FortisBC identifies three projects in the growth area of its Telecommunications, SCADA, and Protection and Control group of projects. These are:

1. The Distribution Substation Automation Program;
2. Fibre Installation on the Kelowna 138 kV Loop; and
3. Fibre Installation between Grand Forks and Warfield.

4.1.1 The Distribution Substation Automation Program

This Program was previously the subject of a CPCN application which was approved pursuant to Commission Order C-11-07, dated December 24, 2007. The Program consists of retrofitting 28 substations with automated control and data acquisition systems consistent with that used in new substations, to enable improved data collection and remote equipment operation and monitoring. The cost estimate at the time of the CPCN application was \$6.38 million (+/- 25%) in as-spent dollars including a 10 percent contingency allowance¹. The cost estimate provided in the Application is \$6.506 million, and it is expected to be completed in 2011. The most recent forecast to completion of the Program is a total cost of \$6.617 million. As work is completed at a substation, that component of the project is placed into rate base and accounted for in annual revenue requirements applications. (Exhibit B-1 p. 46; Exhibit B-4 BCUC IR 1.25.1; Exhibit B-4 BCUC IR 1.25.2)

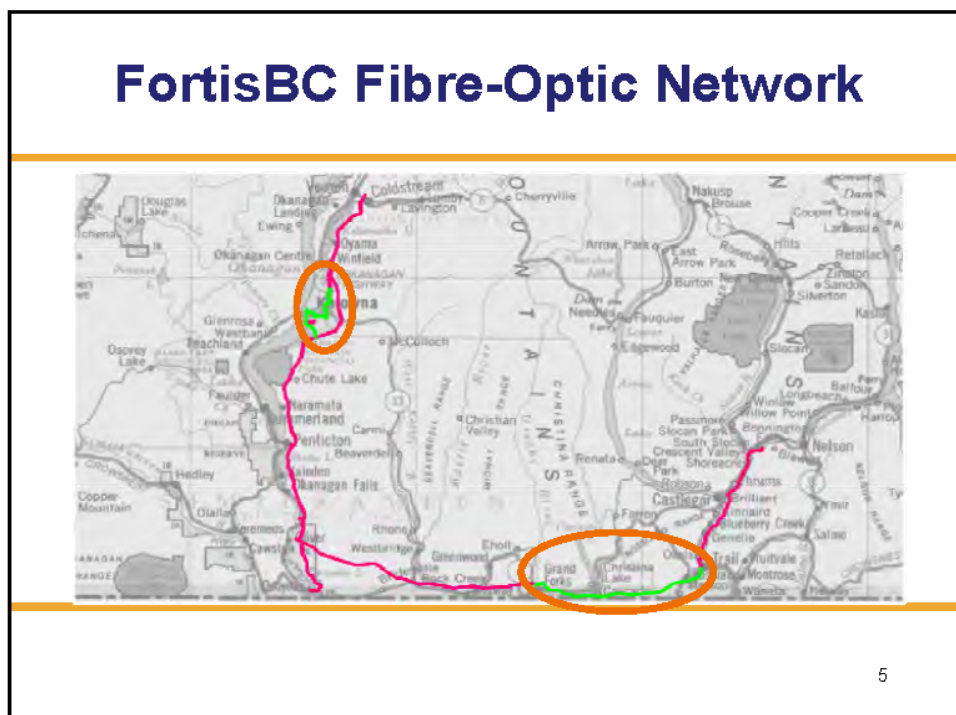
¹ An Application by FortisBC Inc. for a Certificate of Public Convenience and Necessity Distribution-Substation Automation Program Reasons for Decision p. 4)

4.1.2 Two Fibre Optic Projects

FortisBC proposes expenditures in the total amount of approximately \$20.849 million to be incurred over a number of years for two fibre optic projects, being fibre installation on the Kelowna 138 kV loop, and installation of fibre optic cable between Grand Forks and Warfield (the two projects).

An overview of FortisBC Fibre-Optic Network is provided in the following diagram:

Diagram 4.1



Source: Exhibit B-2, p. 3

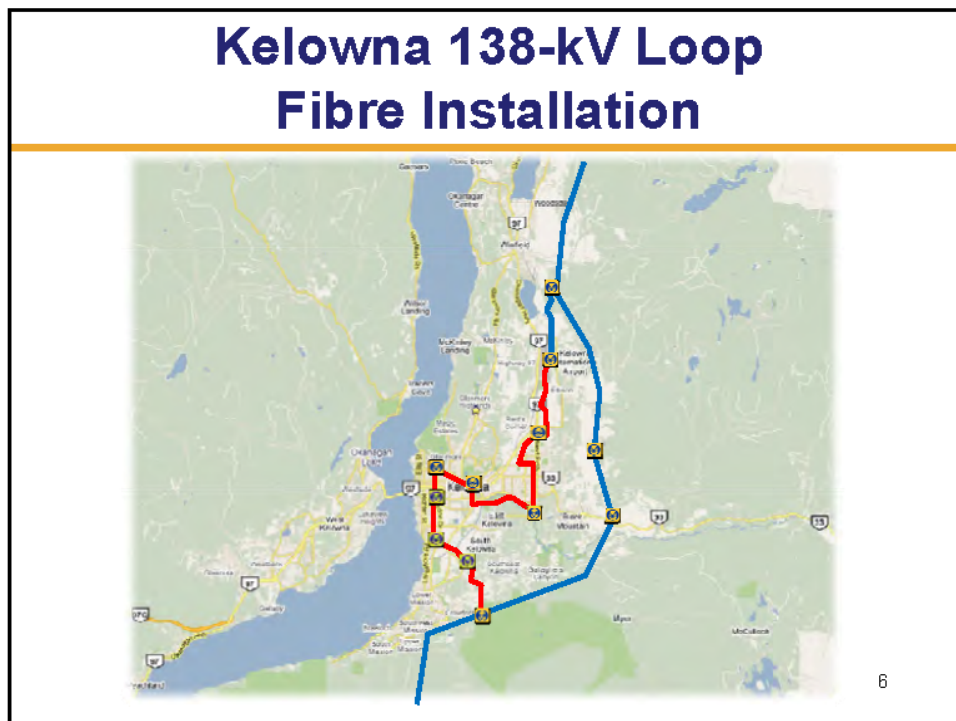
4.1.2.1 Fibre Installation on the Kelowna 138 kV Loop

This project, as put forward, is a request for approval of \$3.382 million to be spent in 2011 as part of a multi-phase, multi-year project to install full fibre-optic connectivity to all Kelowna area substations. According to FortisBC, once the Benvoulin Substation is completed in 2010, there will be twelve distribution and terminal stations which supply load in the Kelowna area. Of these

twelve stations, only five, (Lee Terminal, Bell Terminal, Black Mountain Substation, Ellison Substation, and Duck Lake Substation) have fibre-optic connectivity. The remaining seven, (Sexsmith, Glenmore, Recreation, Saucier, Hollywood, OK Mission and Benvoulin Substations) use a FortisBC-owned multipoint microwave system as well as leased facilities from local telecommunications providers. FortisBC states that “both of these systems have reliability issues and in the case of the leased services there are associated ongoing monthly O&M costs, in addition to the potential contractual risk associated with ownership of the facilities by a third party.” (Exhibit B-1, p. 47)

An overview of this project is provided in the diagram below:

Diagram 4.2



Source: Exhibit B-2, p. 3

FortisBC describes the current operating configuration in the Kelowna area as consisting of four 138-kV transmission lines supplying nine distribution substations. Each line is operated radially and supplies between two and five substations. FortisBC states that this configuration can result in

widespread and lengthy outages following a single contingency due to the steps that must be taken to restore power. The steps involved currently in restoring power in the event of a permanent fault occurring on a transmission line section are:

- a. Determine the location of the fault; and
- b. Once the fault has been located, the System Control Centre dispatchers will isolate the faulted section and manually reconfigure the network to restore power to the affected stations, normally by remote control.

FortisBC notes that this process can take up to 30 minutes resulting in a reliability designation of “N-1 (long-term outages).” (Exhibit B-1, p. 47)

Once the new fibre optic installation, which is the subject of this project, is complete, all Kelowna area substations will have full fibre optic connectivity such that the subtransmission network will be able to be operated in a “fully meshed configuration,” where the loss of one supply source will not result in the loss of any substation load, allowing for a reliability designation of “N-1 (all outages).” (Exhibit B-1, p. 47) Fortis BC submits that, given the “significant amount of load potentially exposed to long duration outages” it should proceed to begin implementation of this multi-year project. FortisBC also submits that, once this project is complete, it will provide high-bandwidth communications for ongoing day-to-day operations and well as support for future projects such as the planned Advanced Metering Infrastructure project or possible distribution network automation. FortisBC also suggests that operating costs will be reduced with less dependence on third party providers for operational and corporate communications.

Further, the fibre optic cable will replace the current microwave communication system, which FortisBC submits has “proven to be unreliable and difficult to maintain,” given the location of the master radio at a site on the top of a mountain (which is shared with numerous other telecommunication companies). FortisBC estimates that it has spent in the order of \$50,000 in operating and maintenance costs maintaining and troubleshooting problems with this system since 2006. (Exhibit B-1, p. 48)

FortisBC also notes that in the event of a contemporaneous failure of the radio system and major station or transmission outage, it may not be possible for the System Control Centre to reconfigure the power system using remote control. In this instance field crews would need to be dispatched, increasing the length of time required to resolve the problem.

FortisBC anticipates the following schedule:

Stage 1-2011	Install 25 km overhead fibre-optic cable to interconnect all distribution substations.
Stage 2-2012	Install fibre-optic multiplexing equipment at seven distribution substations for SCADA, voice, and teleprotection communications.
Stage 3-2013-2016	Install protection relays and perform the modifications to the stations needed to allow the Kelowna subtransmission system to be fully meshed.

With respect to the first stage, FortisBC expects to install (under-build) approximately 20 km of fibre-optic cable on its existing 138 kV transmission lines. The other five km of cable will be placed on existing distribution circuits, either overhead or underground, depending on the availability of existing infrastructure. (Exhibit B-1, pp. 48-49)

FortisBC advises that the existing wireless communications system has reached end of life such that “do nothing” is not an option. (Exhibit B-4, BCUC IR 1.26.3, p. 57)

FortisBC states that it examined alternate communication methods including power-line carrier, wireless and leased. The power-line and wireless options were rejected either due to comparative cost or feasibility. The leased option was rejected, at least in part, as “FortisBC standards do not permit the use of third-party (leased) equipment for teleprotection communications circuits.” FortisBC takes the position that third-party providers are not able to meet its stringent reliability requirements. (Exhibit B-1, p. 49)

With respect to its preferred option of replacing its existing system with FortisBC-owned fibre optic cable, FortisBC did not obtain third party quotes from any telecommunication providers, nor did it formally approach other telecommunication companies to investigate possible joint ventures. FortisBC further did not determine a value for unused fibre optic capacity. (Exhibit B-6, BCMEU IRs, 16.3, 16.5, 16.6)

As noted above, the cost of the first stage work (placement of cable) is estimated to be \$3.382 million. No new rights of way or line construction is required. The cost of the second stage is estimated to be a further \$1.1 million and the third stage is estimated to cost \$11.3 million for a total cost of \$15.8 million. FortisBC is only requesting approval of the stage one expenditures in this Application. (Exhibit B-1, pp. 49-50; Exhibit B-4, BCUC IR 1.26.1)

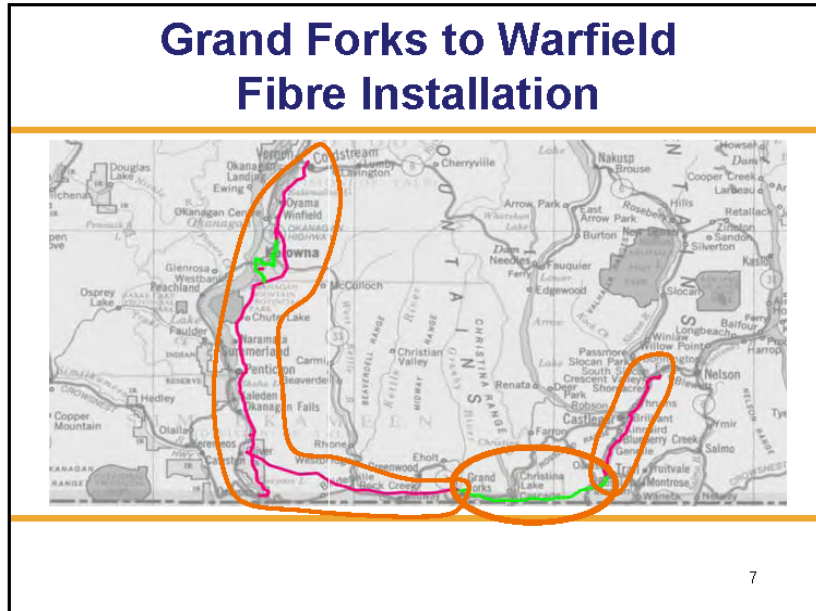
FortisBC suggests that the project is justifiable on the basis of the first two stages alone, although additional incremental reliability enhancements will be available from the stage 3 work, which would result in the ability of the Kelowna area system to be operated “fully meshed.” (Exhibit B-4, BCUC IR 26.3, pp. 57, 59)

4.1.2.2 Fibre Installation Between Grand Forks and Warfield

This project is intended to fill a gap between two existing fibre optic systems, joining them between Grand Forks, the south east terminus of the Okanagan system, and Warfield, the south west terminus of the Kootenay system. Currently, FortisBC uses leased-line communications as well as data channels provided by BC Hydro’s microwave system. (Exhibit B-1, pp. 50-51)

An overview of this project is provided in the diagram below:

Diagram 4.3



Source: Exhibit B-2, p.4

FortisBC plans to install new 72 strand fibre optic cable between the Grand Forks Terminal Station in Grand Forks, and the Mawdsley Terminal Station in Warfield, along with necessary splice points and fibre-optic terminations. FortisBC submits that the project is needed for system protection and remote monitoring and control of the system.

FortisBC advises that the new fibre-optic line will displace existing east to west lines which are currently leased and will alleviate the need to lease lines for future substations, reducing its dependence on third party telecommunication providers for critical operations data. FortisBC recognizes that the new fibre-optic cable will provide “ample capacity” for its operational and corporate telecommunications between the Okanagan and Trail “well into the future.” (Exhibit B-1, p. 51)

FortisBC is seeking approval of \$0.667 million for engineering and final estimating for the project. The remainder of the project costs, estimated to be \$4.4 million, is proposed to be the subject of a future application. The total estimated cost of this project is \$5.067 million. (Exhibit B-1, p. 52; Exhibit B-4, BCUC IR 1.27.1)

FortisBC advises that the \$0.667 million estimate for which it seeks approval in this application was derived from previous projects and no detailed cost breakdown was done. (Exhibit B-6, BCMEU IR 1.17.1)

Commission Determination

Distribution Substation Automation Program

The Commission Panel makes no determination on the expenditures relating to the Distribution Substation Automation Program. The Project itself was the subject of a CPCN application, which was approved by Commission Order C-11-07. The prudence of the expenditures will be the subject of a future revenue requirements application in the ordinary course.

Two Fibre Optic Projects

The Commission Panel rejects the expenditures related to the two fibre installation projects on the basis that these related multi-year, multi-phase projects are more properly the subject of an application for a CPCN than line items on a proposed expenditure schedule. As a result, the Commission Panel finds that subsection 45(2) of the *UCA* does not apply to these projects and to the SCADA project referred to below. If Fortis BC intends to proceed with these projects, it must apply for a separate Certificate of Public Convenience and Necessity in the ordinary course.

Section 45 of the *UCA* provides, in part:

- (1) Except as otherwise provided, ..., a person must not begin the construction or operation of a public utility plant or system, or an extension of either, without first obtaining from the commission a certificate that public convenience and necessity require or will require the construction or operation.
- (2) For the purposes of subsection (1), a public utility that is operating a public utility plant or system on September 11, 1980 is deemed to have received a certificate of public convenience and necessity, authorizing it

...

(b) subject to subsection (5), to construct and operate extensions to the plant or system.

...

- (5) If it appears to the commission that a public utility should, before constructing or operating an extension to a utility plant or system, apply for a separate certificate of public convenience and necessity, the commission may, not later than 30 days after construction of the extension is begun, order that subsection (2) does not apply in respect of the construction or operation of the extension.
- (6) A public utility must file with the commission at least once each year a statement in a form prescribed by the commission of the extensions to its facilities that it plans to construct.

The Commission's CPCN Application Guidelines provide some context. The publication states:

"[i]n order to evaluate whether a public utility should apply for a CPCN for a specific extension to utility plant or system and therefore whether to make an order pursuant to section 45(5)...the Commission needs to be aware of planned extensions that are significant. This information is provided in the statement of planned extensions that a utility is required to file at least once a year. The statement should be filed in a timely fashion and should identify each discrete extension to a utility plant or system that may have a material impact on customer rates or raise some other significant issue ." (p. 2 of 12)

The Application was filed, in part, to satisfy the requirements of section 45(6) of the *UCA*.

The Commission Panel considers that the two projects put forward, both of which involve the placement of fibre optic cable, should be combined and applied for as one. This will allow FortisBC to incorporate the costs for each stage through to completion so that the entire cost of the two fibre optic projects, together with Revenue Requirement implications, can be reviewed in detail. The Commission Panel finds that the multi-year, multi-phase approach being put forward in this Application tends to mask the ultimate cost and rate impact which, in its view, are important considerations among other factors in the analysis of a project in terms of the public convenience

and necessity. Further, once an initial phase is approved, it may make the analysis of a further related phase less independent, as the project is already underway.

The Commission Panel is not satisfied that the information provided in this Application in support of the two projects is sufficient to justify acceptance at this time. Nor is the Commission Panel satisfied that all reasonable alternatives have been adequately reviewed and appropriately costed, as the estimates put forward were general with wide margins of error. The Commission Panel further finds that this infrastructure has significant excess capacity which has not been adequately identified. Furthermore, opportunities for its potential utilization have not been sufficiently explored.

The Commission Panel further specifically rejects the notion of a corporate policy prohibiting the use of third party communications infrastructure as being a reasonable factor for inclusion in a review of the cost-effectiveness of the two projects. The Commission Panel is of the view that the public interest requires a proper, detailed examination of alternatives involving the use of third party providers and/or potential joint venture partners.

The Commission Panel notes that the total combined expenditure for the two fibre optic projects advanced is in the \$20 million range, which is the unofficial threshold amount for projects requiring a CPCN. (Exhibit B-1, pp. 8-9) The Commission Panel does not accept FortisBC's separation of what could be described as a single fibre optic project into two multi-year, multi-phase projects, serving to reduce the expenditure below the threshold. The Commission Panel further notes FortisBC's acknowledgment of the Commission's ability to require a CPCN at page 9 of the Application, and confirms its earlier advice that it intends to review each capital expenditure plan and will determine with reasons which projects will require a CPCN. In any event, the Commission Panel is of the view that regardless of the amount involved, these projects require the additional review inherent in a CPCN process, particularly at this time where rate base growth and ongoing pressure on rates is becoming increasingly important as an issue.

Further, FortisBC has proposed additional expenditures relating to SCADA as part of its General Plant category. FortisBC states that it “does not consider the distinction between growth and sustaining to be useful in the context of the general plant projects.” (Exhibit B-4, BCUC IR 1.33.1) The planned expenditure on SCADA enhancements for 2011 under the General Plant category is \$528,000. (Exhibit B-1, p. 58) and does not include the installation of any field equipment. (Exhibit B-4, BCUC IR 1.33.2) FortisBC differentiates the two SCADA budgets on the basis that the SCADA expenditures envisioned in the Growth area relate to field equipment installed for protection and controls, along with supporting communications infrastructure, whereas the SCADA enhancements under the General Plant are related to software and supporting computer hardware located at the System Control Centre used to control the SCADA equipment and to store system data. (Exhibit B-4, BCUC IR 38.1)

The Commission Panel considers that the proposed General Plant SCADA expenditures of \$528,000 support and are directly tied to the SCADA expenditures proposed for the two projects which the Commission Panel has rejected.

The Commission Panel therefore rejects the expenditures related the SCADA enhancements under General Plant and directs FortisBC to include the proposed SCADA enhancement expenditures for General Plant in its application for a CPCN for the two projects should it wish to proceed with them.

4.2 Sustaining Projects

As 2011 sustaining projects FortisBC proposes the Lee to Vernon 230 kV Line Protection Upgrade at \$1.286 million and miscellaneous Communication Upgrades for \$265,000. FortisBC states that the Lee to Vernon project will update the relaying and teleprotection equipment for 72 Line and 74 Line at both FortisBC’s Lee and BC Hydro’s Vernon Terminal Stations. The existing analog teleprotection equipment will be retired and direct, digital relay-to-relay communications will be used instead to provide improved reliability and power quality. FortisBC further states that these lines are part of the Okanagan bulk electric system and provide a utility interconnection at the

Vernon Terminal; thus being directly subject to the Commission's Mandatory Reliability Standards (MRS).

The Communications Upgrade project is composed of a group of projects individually valued under \$75,000. FortisBC states that this project will upgrade telecommunications routes and will improve emergency response capability. (Exhibit B-1, pp. 52-53)

Commission Determination

The Commission Panel notes the value of modernization and the importance of the Mandatory Reliability Standards and accordingly finds the sustaining projects for 2011 in the public interest.

5.0 DEMAND-SIDE MANAGEMENT

Table 5.1 below summarizes the 2011 expenditures for DSM for which FortisBC is seeking approval:

Table 5.1
2011 Demand Side Management Plan

1	Sector/Component	Savings	Cost	TRC
2		MWh	(\$000s)	Benefit/Cost
3	Residential	16,422	3,636	1.8
4	General Service	13,940	2,118	2.8
5	Industrial	9,360	613	4.8
6	Subtotal Programs	39,722	6,367	2.5
7	Supporting Initiatives		725	
8	Planning and Evaluation		750	
9	Total	39,722	7,842	2.3
10	Income Tax Impact		(2,078)	
11	Total (Net of Tax)		5,764	

Source: Exhibit B-1-2, Updated p. 72

The table below shows FortisBC's actual and planned DSM expenditures for 2009 and 2010:

Table 5.2

2009 Actual		2010 Plan		2011 Plan	
Expenditure	Savings	Approved	Savings	Proposed	Savings
(\$000s)	GWh	(\$000s)	GWh	(\$000s)	GWh
3,464	28.4	3,952	27.5	7,842	39.7

Source: Exhibit B-4, BCUC 1.48.1

The 2011 planned expenditure of \$7.842 million is about a 100% increase over the actual and approved DSM expenditures in 2009 and 2010. FortisBC states the “increase reflects the major shift in provincial policy that places demand-side management as the priority resource to meet growing electricity demand in BC.” (Exhibit B-1, p. 71)

The 2011 DSM Plan estimates achievement of a 44% increase in energy savings over the 2010 savings. FortisBC states the 2011 Plan estimates around a 100% increase in spending and only a 44% increase in energy savings over 2009 due to:

- the mandatory DSM programs legislated by the DSM Regulation of the *Act* (See Section 5.1) which came into effect in June 2009; and
- the planned achievement of more difficult (or more expensive) energy savings than in previous years (Exhibit B-4, BCUC IR 1.48.1).

FortisBC’s 2011 DSM Plan requests approval for expenditures for 2011 which FortisBC states will have a 1.1 percent rate impact. (Exhibit B-4, BCUC IR 1.56.3) The Company states it will file a long-term multi-year DSM Plan in May 2011. (Exhibit B-4, BCUC IR 1.50.2)

5.1 Legislative DSM Requirements

As noted in Section 1.3, the DSM Regulation (Appendix C to this Decision) governs DSM programming for regulated utilities in British Columbia and the assessment of the cost-effectiveness of demand-side measures by the Commission.

Section 3 of the DSM Regulation deals with the adequacy of a public utility’s “plan portfolio”, which consists of all the demand-side measures proposed by the public utility in its long-term resource plan, filed under s. 44.1 of the *Act*. As the Application is filed under s. 44.2 of the *Act*, the adequacy provision is not directly relevant, other than through the fact that the Commission is required to consider the most recent long-term resource plan filed by the [non-BC Hydro] public utility under

s. 44.1, if any, in considering whether to accept its expenditure schedule. As previously noted, FortisBC filed its most recent Long-Term Resource Plan on May 29, 2009.

Section 4 of the DSM Regulation pertains to FortisBC's 2011 DSM Plan as filed with the Commission under section 44.2(1)(a) of the *Act*. Section 4 directs the Commission to assess the cost-effectiveness of demand-side measures individually, together with other measures, or on a portfolio basis, with the exception of specified measures which must be assessed by determining whether the portfolio as a whole is cost-effective. The specified measures which must be assessed on a portfolio basis are public awareness programs, community engagement programs, education programs, energy efficiency training, community engagement programs and technology innovation programs, all as defined in the DSM Regulation (Appendix C).

5.2 DSM Plan Preparation

FortisBC completed End Use Studies, a Conservation and Demand Potential Review (CDPR) and public consultation to develop its 2011 DSM Plan.

Discovery Research completed a Residential End Use Study (REUS) and a Commercial End Use Study (CEUS) for FortisBC in 2009. The studies compile detailed information gathered through customer surveys about the characteristics of customers' homes and business' buildings and customer attitudes about energy conservation. (Exhibit B-1, Appendices B and C to Appendix 3)

EES Consulting used the REUS and CEUS, and other inputs to develop a Conservation and Demand Potential Review (CDPR) for FortisBC in 2010. The CDPR estimates potential energy savings for the residential, commercial (general service) and industrial sectors for the years 2011 to 2030. (Exhibit B-1-1)

FortisBC developed three DSM plan portfolios from the findings of the End Use Studies and the CDPR, DSM Program best practices, models of programs from other jurisdictions, and local market knowledge. For the best practices it relied on, FortisBC states it performed a literature review and

employed social marketing best practices including Community-Based Social Marketing. FortisBC states it reviewed other utilities' programs and considered various models of programs from Ontario, Manitoba, BC, and Massachusetts. (Exhibit B-4, BCUC IRs 1.51.1, 1.57.3 and 1.66.1.1 and Exhibit B-1-2, Updated p. 24)

FortisBC presented the three DSM plan portfolios to the public at four open houses in different locations in the FortisBC service area, at a DSM Advisory Committee meeting and at a City of Grand Forks Council Meeting. (Exhibit B-4, BCUC IR 1.78.1)

Fifty-four participants attended the four open houses and identified themselves as residential (35), wholesale (1), commercial/business (5), industrial (1) and irrigation (1), and local government (4).

Thirty-seven feedback surveys and 6 comments on the DSM portfolios were returned to FortisBC. (Exhibit B-4, BCUC IR 1.54.1 and 1.78.1)

FortisBC also mailed information on its DSM plan to the First Nations in its service area but received no response. (Exhibit B-1, p. 19)

FortisBC interpreted the results of its public consultation to say there is "strong support for increased DSM spending." (Exhibit B-1, Appendix 3, p. 20)

In the preparation of its plan and the CDPR, FortisBC and EES primarily used the Total Resource Cost (TRC) test to assess cost effectiveness. The TRC test is a cost benefit analysis calculation comparing the program cost incurred by the utility and the customer participants with avoided cost of energy saved and monetized non-energy benefits. The TRC test is the most widely used cost-effectiveness test for DSM programs across North America.

5.3 Program Description

FortisBC's 2011 DSM Plan contains enhanced and new programs for Residential, General Service and Industrial customers. The enhanced programs have been offered by FortisBC in previous years but will be enhanced primarily by increasing financial incentives to customers. FortisBC offers financial incentives to customers and retailers for its various programs by way of mail-in, online or instant rebate offers and by way of approval of mail-in or on-line applications. (Exhibit B-6, BCUC IR 2.36.1)

5.3.1 Residential Programs

Table 5.3

Residential Programs				
Program Description	MWh	Cost (\$000s)	TRC	Status
Building Envelope	5,460	1,379	1.7	Enhanced
Heat Pumps	3,397	694	1.4	Enhanced
Lighting	3,420	438	2.4	Enhanced
New Home	105	54	1.4	Enhanced
Appliances	680	245	3.0	New
Electronics	180	49	4.8	New
Water heating	960	162	2.1	New
Low Income	540	305	1.5	Enhanced
Behavioural	1,680	310	6.8	Enhanced
Residential Total	16,422	3,636	1.9	

Source: Exhibit B-1-3, Updated p. 21

The enhanced Residential DSM programs for 2011 are summarized as follows:

Building Envelope/Home Improvement: Increased incentives for installation of insulation, air sealing and Energy Star windows and doors and a new incentive for electronic thermostats;

Heat Pumps: Increased incentives for replacement of less efficient heating systems with heat pumps. Continuation of offer for low-interest loans for customers to purchase heat pumps. Pilot of an upgrade and maintenance incentive program on existing heat pumps;

Lighting: Increased rebate program for the purchase of ENERGY STAR fluorescent and light emitting diode (LED) lighting;

New Home: Incentives to achieve an EnerGuide rating of 80 or 90 and funding for engineering and other assessment studies to determine the baseline electrical use for multi-family and larger developments and the energy savings potential if energy efficient measures are installed;

Behavioural: Funding for educational campaigns on methods to reduce energy use for heating and cooling, electronics, laundry and appliances and use of compact fluorescent lighting, and funding for PowerSense Month and an Earth Hour campaign. Free product samples will also be given out as part of the laundry and appliance use awareness campaigns; and

Low Income/Rental: Continuation of the provision of Energy Saving Kits² to low-income households and First Nation housing societies. Enhancements to the Program include funding for installation of the kits, provision of an Energy Conservation Assistance Program (light retrofit program) to evaluate home energy use and fund selected energy efficiency upgrades in collaboration with other utility companies in the province. Specifically for rental properties, FortisBC plans to provide financial incentives directly to landlords, property managers and rental agencies for energy efficiency upgrades. For multi-family rental properties FortisBC will pilot a social marketing program to create tenant energy saving teams. Specifically for First Nation housing societies, FortisBC will train and contract with First Nations residents to deliver the program.

FortisBC provided further details of some of its planned low income/rental programs:

Table 5.4

Measures	Energy Savings (MWh)	Utility Cost (\$000s)	TRC	Status	Net Load (GWh)	Potential (GWh)	Savings (%)
ESK	335	\$84	2.4	Enhanced	n/a	n/a	n/a
Light retrofit	206	\$221	1.1	New	n/a	n/a	n/a
CFLs	350	\$40	2.7	Continuing	n/a	n/a	n/a
Clotheslines ¹	92	\$15 ¹	12	Continuing	n/a	n/a	n/a

¹ – This is 10 per cent of the clothesline budget and savings, the balance is attributed to the general population.

Source: Exhibit B-6, BCUC IR 2.31.3

² Energy Savings Kits provide free energy efficient materials such as compact fluorescent light (CFL) bulbs, pipe wrap and a low-flow showerhead. (Exhibit B-4, FortisBC Response to BCUC IR 1.69.1)

FortisBC states it is still in the planning stages for its Low Income Rental programs. FortisBC plans to deliver its Low Income/Rental programs primarily through existing service providers and advocacy organizations because they are trusted by low-income communities and can therefore facilitate communication and education with customers. (Exhibit B-6, BCOAPO IRs 1.32.8, 1.37.1)

The new Residential DSM programs for 2011 are summarized as follows:

Appliances: New rebate and incentive offerings for customers purchasing ENERGY STAR appliances;

Electronics: New rebate offers for customers purchasing energy efficient electronics such as televisions; and

Water Heating: New offer of a demand-side measure for heat pump water heaters and low flow showerheads, and an increased rebate for installation of solar water heaters.

(Exhibit B-1, Appendix 3, pp. 25-26 and 30 and Exhibit B-1-3, Updated p. 29, and Exhibit B-6, BCUC IR 2.35.1)

5.3.2 General Service Programs

Table 5.5

General Service Programs				
Program Description	MWh saved	Cost (\$000s)	TRC	Status
Lighting Street Lighting	7,130	1080	2.4	Enhanced New
Building Improvement Weatherization Building envelope Refrigeration HVAC Pumps and fans Compressed air	3,010	572	2.8	Enhanced
Computers Servers/Networks	240	34	2.6	Enhanced New
Municipal Wastewater Irrigation	3,560	432	4.0	Enhanced
General Service Total	13,940	2,118	2.8	

Source: Exhibit B-1-2, Updated p. 22

In response to an IR, FortisBC provided further details of a new program for the Irrigation rate class. The cost and savings of the Irrigation program are included in the General Service Programs total figures:

Table 5.6

Program	Savings (MWh)	Cost (\$000s)	TRC	Status	Net Load (GWh)	Potential (GWh)	Savings (Per cent)
Irrigation Hi/Med to Low Press pivot Pump Nozzle/Gasket Hi-efficiency motors	580	\$40	7.1	new	50.0	10.8	5.4%

Source: Exhibit B-4, BCUC 1.55.1

The enhanced General Service DSM programs for 2011 are summarized as follows:

Lighting: Incentives for energy efficient lighting measures;

Building Improvement: Assessments of building efficiency and variable rebates for efficiency measures. FortisBC plans to develop a suite of standard fixed rebates for common heating, ventilation, and air conditioning measures, pumps and motors and compressed air and refrigeration technologies;

Computers: Funding of studies for the identification of and incentives for the implementation of server consolidation opportunities; and

Municipal: Incentives and support for local governments to determine opportunities for energy efficiency upgrades, especially in water and wastewater operations and street lighting.

The new General Service DSM programs planned for 2011 are:

Street Lighting: Promotion of street and parking lot lights capable of dimming; and

Irrigation: Incentives for improvements to irrigation systems and equipment.

(Exhibit B-1, Appendix 3, pp. 27-29)

5.3.3 Industrial Programs

Table 5.7

Industrial Efficiency Programs				
Program Description	MWh saved	Cost (\$000s)	TRC	Status
Integrated Building Optimization	80	10	0.5	New
Industrial Efficiency Lighting Pumps and fans Refrigeration Motor rewinds Compressed air Information systems	9,280	603	5.2	Enhanced
Industrial Total	9,360	613	4.8	

Source: Exhibit B-1, Appendix 3, p. 22

The planned Industrial DSM programs for 2011 are:

Integrated Programs (listed as Integrated Building Optimization in table above): Financial incentives and operational assistance for customers to purchase building and process optimization technology; and

Industrial Efficiency: Customized financial incentives and assistance for assessment of building efficiency and purchase and installation of efficiency measures.

(Exhibit B-1, Appendix 3, p. 28)

5.3.4 Supporting Initiatives

FortisBC plans to offer Supporting Initiative Programs which do not provide direct energy savings but support the savings from other DSM programming.

Table 5.8

Component	Details	Budget (\$000s)
Education	• Sponsorship of ENGO programs (schools) • Support and sponsorship of trades training	250
Awareness	• Direct and face-to-face information • Collateral • Product and sample give-aways • Targeted customer information campaigns • Public relations • Partnerships • Social networking	200
Codes & Standards Support	• Support of policy development initiatives	25
Community Engagement	• Support and sponsorship of community energy efficiency programs, workshops and events • Support and sponsorship of community events • Public consultation	250
Total		725

Source: Exhibit B-1, Appendix 3, p.23

The Supporting Initiatives for 2011 are:

Education: Financial support for elementary, middle and high school education events such as science fairs, delivery of curriculum-approved education through non-profit organizations, development of a curriculum-based Grade 11 energy and conservation course in collaboration with other BC utilities. Funding for training and provision of guest speakers for post-secondary courses at Northern Lights, Selkirk and Okanagan Colleges. Sponsorship of training for tradespeople;

Awareness: Promotional materials to promote rebate programs, distribution directly to residential customers at trade shows and community events, to trades people, and to wholesale and retail partners;

Codes and Standards Support: Funding for research and policy making for improved building, appliance, electronics, and other equipment codes and standards; and

Community Engagement/Community Energy Planning: Financial support for community studies and planning sessions for local governments for the preparation of their community plans and regional growth strategies and funding for community events and public consultation.

(Exhibit B-1, Appendix 3, pp.32-34 and Exhibit B-4, BCUC IR 1.75.1)

FortisBC estimates changes to Codes and Standards will achieve 7.6 GWh of energy savings in 2011. (Exhibit B-4, BCUC IR 1.52.2) FortisBC did not estimate the energy savings from the other Supporting Initiatives.

5.3.5 Planning and Evaluation

In 2011, FortisBC plans expenditures of \$750,000 for planning and evaluation:

Table 5.9

Planning and Evaluation	2011	
	(\$000s)	%
Planning		
Salaries, Manager and Engineer (loaded)	305	
Office Expense (travel, telephony, training)	50	
Consultants	75	
DSM Advisory Committee	10	
Sub-total	440	59%
Evaluation		
Salaries, Monitoring and Evaluation Analyst (loaded)	115	
Office Expenses	10	
Monitoring and Evaluation Reports	175	
Monitoring and Evaluation Plan 2012-2015	10	
Sub-total	310	41%
Total Planning and Evaluation	750	100%

Source: Exhibit B-6, BCUC IR 2.43.1

FortisBC plans the following Planning and Evaluation activities for 2011:

- Evaluate the residential lighting, commercial lighting and behavioural programs;
- Incorporate and track programs from the 2011 DSM Plan into the overall evaluation plan; and
- Create an updated Monitoring and Evaluation Plan. (Exhibit B-1, Appendix 3, pp. 35-36)

5.3.6 Sources of Budget Increase

As presented in Section 5.0 FortisBC's requested DSM expenditure of \$7.842 million in 2011 is almost twice the approved budget in 2010 of \$3.952 million in 2010. The following table shows the planned increased expenditures by program:

Table 5.10

	Program	2010				2011			
		Total Program Cost (\$000s)	Savings (MWh)	TRC	Incentive Level (¢/kWh)	Total Program Cost (\$000s)	Savings (MWh)	TRC	Incentive Level (¢/kWh)
Residential	Building Envelope	309	953	0.7	24.6	1379	5460	1.7	20.5
	Heat Pumps	629	6377	1.7	5.3	694	3397	1.4	15.7
	Lighting	248	2383	2.2	4.5	438	3420	2.4	8.1
	New Home	268	1392	1.3	13.9	54	105	1.4	46.7
	Appliances					245	680	3.0	31.3
	Electronics					49	180	4.8	22.8
	Water Heating					162	960	2.1	12.1
	Low Income	120	1000	3.8	10.0	305	540	3.0	35.8
General Service	Behavioural					310	1680	6.8	16.1
	Lighting	731	5304	1.1	9.1	1080	7130	2.4	11.1
	Building Improvement	589	6138	1.7	5.3	572	3010	2.8	15.0
	Computers Server/Network					34	240	2.6	10.2
	Municipal Wastewater	74	613	2.4	4.8	432	3560	4.0	8.9
Industrial	Integrated Building Optimization					10	80	0.5	11.3
	Industrial Efficiency	404	3350	1.8	8.2	603	9280	5.2	5.0
Irrigation	Low Press pivot Pump Nozzle					40	580	7.1	4.0

Source: Exhibit B-6, BCUC IR 2.41.1

The following table shows the increased expenditures for the Supporting Initiatives:

Table 5.11

	Approved Expenditures (000s)		Planned (000s)
Supporting Initiatives	2009	2010	2011
Education	\$91	\$91	\$250
Awareness	\$141	\$148	\$200
Codes and Standards Support	n/a	n/a	\$25
Community Engagement	n/a	n/a	\$250

Source: Exhibit B-4, BCUC IR 1.74.1

The Planning and Evaluation budget for 2011 compared to previous years is:

Table 5.12

	2005	2006	2007	2008	2009	2010	2011
	Actual					Approved	Plan
	(\$000s)						
P&E	\$363	\$314	\$324	\$419	\$402	\$519	\$750
Total DSM	\$2,350	\$2,241	\$2,549	\$2,683	\$3,464	\$3,952	\$7,842
Per cent attributable to P&E	15%	14%	13%	16%	12%	13%	10%

Source: Exhibit B-6, BCUC IR 2.43.2

Around 77% (\$2.995 million) of the expenditure increase request is for the Residential (\$2.095 million), General Service (\$724,000) and Industrial Programs (\$209,000) while the remainder (around \$717,000) is for Supporting Initiatives and Planning and Evaluation.

5.3.7 Program Delivery Efficiency and Risks

FortisBC's 2011 DSM Plan aims to improve the delivery of its programs by partnering with:

- Retailers and wholesalers for appliance take-back programs, appliance and electronic rebate programs, and energy efficient lighting;
- Other utilities to offer LiveSmart BC and Low Income programs, and to provide training to trades and education programs in secondary and post-secondary schools;

- Trade organizations and trades people; and
- Non-profit organizations.

FortisBC also plans to increase the number of standardized rebates and develop a “one-stop” electronic rebate portal to improve program delivery and optimize employee time. (Exhibit B-1, Appendix 3, pp. 30-32)

FortisBC acknowledges risks to the achievement of savings estimated in its 2011 DSM Plan from customer participation rates, savings per participant, program costs, and performance and customer adoption of new technologies that are different than forecast. FortisBC states its forecasts are based on the best information available and that the risks will be monitored through the Planning and Evaluation activities. (Exhibit B-1, Appendix 3, pp. 38-39) FortisBC also states it has achieved greater than 100% of planned savings in every year from 1999-2009 while actual program costs, in the same time period have ranged from 91-128% of planned. (Exhibit B-4, BCUC IRs 1.55.3.1 and 1.55.3.2)

5.4 FortisBC’s Submission on Cost-Effectiveness of the 2011 DSM Plan

FortisBC submits that the 2011 DSM Plan is cost-effective with a TRC value of 2.3. (FortisBC Argument, para. 46) FortisBC submits that its 2011 DSM Plan meets the requirements of legislation:

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). (FortisBC Argument, para.46)

5.5 Interveners' Positions on the DSM Plan

BCOAPO submits that FortisBC's 2011 DSM Plan is a "commendable first step" and recommends the Commission approve the plan but require FortisBC to file a more comprehensive multi-year plan in 2012 which incorporates DSM best practices for low-income, senior-led, and First Nations households. (BCOAPO Argument, paras. 57-58)

BCOAPO raises concerns that the planned 2011 level of funding for Low Income Programs is disproportionately low compared to the number of low-income households in FortisBC's service area. Based on the estimation that 16.5% of households in FortisBC's area are low income, BCOAPO suggests FortisBC should increase the budget for the Low Income Program from \$305,000 to at least \$600,000 with at least a third of the total residential budget directed at senior-led households. (BCOAPO Argument, paras. 34-38)

BCOAPO submits that FortisBC should establish a database, in conjunction with other utilities, to identify areas with high numbers of hard to reach customers such as low-income, seniors and renters. (BCOAPO Argument, para. 39) BCOAPO finds it appropriate that FortisBC is offering its Low Income DSM programs through service providers and advocacy organizations. (BCOAPO Argument, paras. 41 and 48)

BCSEA supports FortisBC's 2011 DSM Plan. It finds the Plan cost effective with a portfolio TRC of 2.3 and acceptable in relation to government legislation and objectives. (BCSEA Argument, pp. 5) BCSEA accepts FortisBC's DSM saving forecasts but encourages FortisBC to include more "transparency between DSM assessment and DSM programs." (BCSEA Argument, p. 4)

IRG raises concerns that the incentive level planned for the Irrigation class is the lowest of all incentives as shown in the Table 10 in Section 5.4.6. IRG submits that the potential for energy savings from DSM will be "hampered by disproportionately low effective incentive levels and a lack of Irrigation-specific DSM programs to realize the opportunities." (IRG Argument, para. 17) IRG submits that the Commission should direct FortisBC to "initiate consultations with Irrigation

ratepayers to explore opportunities for realizing greater energy efficiency and understanding what incentives would be most appropriate.” (IRG Argument, para. 18)

Buryl Slack submits “DSM is very important and should always be pursued.” (Exhibit C5-2, p. 1)

Commission Determination

The Commission Panel has assessed the 2011 DSM Plan on a portfolio basis using the TRC test and finds it to have a portfolio TRC of 2.3. **The Panel accordingly also finds the expenditures to be cost-effective within the meaning of the DSM Regulation. The 2011 DSM Plan also supports British Columbia’s energy objective 2(b) “to take demand-side measures and to conserve energy.” Therefore, the Commission Panel accepts the expenditures portfolio for the 2011 DSM Plan.**

The Commission Panel does not agree with BCOAPO that funding for the Low Income Programs should be increased to \$600,000 based on population numbers because FortisBC has not completed a detailed analysis of whether increased programming amounting to that level of expenditure is cost effective. The Commission Panel notes that FortisBC will increase its expenditures from \$120,000 in 2010 to \$305,000 in 2011 (see Table 5.10) in a cost-effective manner which the Panel finds to be sufficient at this time.

The Commission Panel agrees with the IRG that FortisBC should explore opportunities for realizing greater energy efficiency with the Irrigation Rate Class. FortisBC must consult with the Irrigation Rate Class pursuant to Order G-156-10, Directive 22 of the FortisBC 2009 Rate Design Decision dated October 19, 2010 (p. 119) in any event. **The Commission Panel therefore directs FortisBC to include the topics of energy efficiency and incentive opportunities in its consultation with the Irrigation Rate Class.**

FortisBC plans to file a long-term DSM Plan in May 2011. The Panel has considered the effort that FortisBC undertook to prepare the 2011 DSM Plan (Section 5.2) and encourages FortisBC to incorporate additional best practices, empirical research, and evaluations and lessons learned from pilot programs and program models in other jurisdictions in the preparation of its long-term plan. The Commission Panel is aware that DSM programming is quite advanced in other jurisdictions in North America and considers it prudent for FortisBC to incorporate the learnings and innovative ideas from these other programs into its own DSM programs whenever possible.

The Commission Panel encourages FortisBC to continue to collaborate with other utilities in the planning and delivery of DSM programs. The Panel considers it likely that there are additional opportunities for new initiatives which may serve to increase the cost-effectiveness of the programs.

6.0 GENERAL PLANT

FortisBC states that in addition to the usual General Plant investments, the expenditures in 2011 also include regulatory and legislative compliance initiatives. The following table shows the 2011 expenditures for General Plant:

Table 6.1
General Plant Projects

1		Approval	to 2010	2011	2012	Total
2		(\$000s)				
3	Mandatory Reliability Standards Compliance	G-67-09, G-162-09	2,000	595		2,595
4	Vehicles			2,000		2,000
5	Meter Inventory			213		213
7	Information Systems			5,550		5,550
8	Telecommunications			358		358
9	Buildings			1,244		1,244
10	Kootenay Operations Centre			485		485
11	Kelowna Long Term Solution			489		489
12	Furniture and Fixtures			176		176
13	Tools and Equipment			601		601
14	PCB Environmental Compliance			1,852		1,852
15	Total		2,000	13,563		15,563

Source: Exhibit B-1, p. 55

FortisBC states that the proposed expenditures for General Plant Projects also support British Columbia's energy objectives as defined in the CEA. Brief explanations for the various projects are as follows:

Mandatory Reliability Standards Compliance: A continuation of compliance efforts for the Mandatory Reliability Standards as approved by Order G-67-09. The 2011 expenditures are related to the completion of the projects to implement protection and the recovery plan for the Critical Cyber Assets.

Vehicles: Replacement and/or addition of heavy fleet vehicles, service vehicles, passenger vehicles, equipment and off road vehicles necessary for FortisBC to conduct its operations in a safe and efficient manner.

Meter Inventory: Expenditures for the purchase of new revenue metering infrastructure driven by customer growth as well as replacement for metering equipment that fails during test programs.

Buildings: Expenditures on Buildings projects are related to FortisBC's 15 office, shop, warehouse and yard sites ranging in age from 7 to 87 years. They are primarily required to conduct operations in a safe, efficient and environmentally conscious manner. Development funding (\$5 million) is also requested for a Kootenay Operations Centre project. Similarly, a \$5 million expenditure is planned to develop a long-term solution to house all of the Kelowna operations staff, warehouse, and fleet maintenance in one location.

PCB Environmental Compliance: Federal Regulation under the Canadian Environmental Protection Act (PCB Regulations) set specific deadlines for elimination of electrical equipment with Polychlorinated Biphenyls. FortisBC seeks approval of \$1.9 million for 2011 to enable compliance with the PCB Regulations. (Exhibit B-1, pp. 54-70)

Information Systems: Since Information Systems (IS) represents the single largest expenditure category, the projects are described separately below:

Table 6.2
Information Systems Projects

1		2011	2012	Total
2		(\$000s)		
3	Infrastructure Upgrade	939		939
4	Desktop Infrastructure Upgrade	1,010		1,010
5	SAP & Operations System Enhancements	1,198		1,198
6	AM/FM Enhancements	493		493
7	Customer Service Systems Enhancements	904		904
8	SCADA Enhancements	528		528
9	HR Payroll Conversion	478		478
10	Total	5,550		5,550

Source: Exhibit B-1, p. 58

The infrastructure upgrade project includes replacing outdated hardware and software. The cost estimate is predicated on a 20 percent replacement of the asset based on a five year life cycle. Similarly, the Desktop Infrastructure Upgrade is based on a 20 percent replacement of the asset over a five year life cycle. The SAP and Operations System Enhancements project will fund any SAP and operations based application enhancements that are required during the year. FortisBC has

implemented much of the SAP suite to support a variety of its business functions, including Human Resources, Finance, Materials Management and Project Management.

In 2008 FortisBC completed the implementation of the ESRI AM/FM system, which delivers comprehensive Geographic Information System, Asset Management and Facilities Management functionality. FortisBC states that the enhancement component of the 2011 plan primarily consists of a transmission records update project which will update structure numbers and identify the placement of all Transmission switching devices.

The Customer Service System Enhancements project will fund enhancements to customer service related applications, including the Customer Information System (CIS billing systems). The enhancement component of the 2011 budget will primarily be used to complete the CIS Modernization project started in 2010.

FortisBC states that the reliability of the power system in general and the supply to its customers is highly dependent on the reliability of the SCADA system. The enhancement component of the 2011 budget will be used primarily to address issues involving the Cyber Infrastructure Protection standards that arise from the first MRS audits.

ADP Canada has provided payroll service function to the Company since 1995 but is no longer able to meet FortisBC's business needs. After considering a number of options, FortisBC determined that the most cost effective alternative was to switch payroll providers to Ceridian Canada Ltd. (Exhibit B-1, pp. 59-65)

Commission Determination

As commented upon in the Commission Determination for Generation, Transmission and Stations (Section 2.5), the Panel is not satisfied that FortisBC's reliance on historical data as a means of establishing prospective needs accurately addresses what is actually required in a given time period. The Company's request for \$5.5 million for Information Services (approximately \$5.0

million following removal of the proposed SCADA expenditures – see Section 4.1) is mainly based on this approach and provides little persuasive evidence to suggest this is the correct amount on a prospective basis. Consequently, the Commission Panel has little confidence that this number is the result of a rigorous process review. The Panel recognizes that there will be a need for upgrades and enhancements to fully utilize the available information systems but FortisBC has not persuaded the Panel that all of this work must be completed in the current year. **Therefore, the Panel has determined that approving 90% of the remaining funds of \$5.022 million will leave a sufficient amount for FortisBC to adequately address its IS requirements in 2011. Accordingly, the Commission Panel rejects IS capital expenditures of \$500,000 and accepts the balance of \$4.522 million.** As with the Panel's previous sustaining capital determinations, the projects to be affected and specific amounts will be left to FortisBC to manage.

All other expenditures for General Plant in the amount of \$8.013 million are accepted as requested. The Commission Panel finds these expenditures to be in the public interest as they are required for Mandatory Reliability Standards and PCB environmental compliance as well as to ensure that FortisBC can continue to conduct its operations in a safe, efficient and environmentally conscious manner.

7.0 OTHER MATTERS

7.1 Capitalization Policy

As part of its compliance filing under direction from the 2009-2010 Capital Expenditure Plan Decision, FortisBC submitted its updated Capitalization Policy guidelines to the Commission on May 27, 2009 (Compliance Filing), attached as Appendix G. FortisBC notes that the capitalization principles are intended to conform with Canadian Generally Accepted Accounting Principles (GAAP) and provide an overriding guidance regarding what costs are to be considered capital. (Compliance Filing, p. 7) Generally, all costs are to be considered expenses unless they meet the criteria for capitalization.

Based on its examination of the two rounds of IR responses from the Company, the Commission Panel believes that there are inconsistencies in FortisBC's interpretations of its Capitalization Policy guidelines. BCMEU expressed concerns that FortisBC's customers are at risk for capital expenditures which, in some areas, should be undertaken within existing operating and maintenance budgets. BCMEU also noted that FortisBC's Capitalization Policy provides for a broad discretion and flexibility with regard to its characterization of costs as Capital versus Operating Expenditures. (BCMEU Argument, p. 2)

FortisBC submits that the expenditures referred to in BCMEU's argument are in accordance with GAAP as outlined in its Capitalization Policy. (FortisBC Reply Argument, paras.6-10) FortisBC further submits that the expenditures at issue are not Operating and Maintenance expenses as they have been defined within the framework of the current PBR.

The Commission Panel acknowledges that FortisBC's treatment of capital projects has been consistent throughout the term of the PBR Plan but does not agree with the suggestion that a review of the Capitalization Policy should not be undertaken before the end of the PBR term. The Commission Panel views the current test year to be ideal timing for developing a proper and

mutual understanding of the Company's Capitalization Policy so these concerns can be addressed before next year's anticipated regulatory filings.

The Commission Panel further acknowledges that FortisBC's Capitalization Policy has a direct impact on its revenue requirements including Operating and Maintenance Expenses, Rate Base, associated Depreciation Expense, Return on Equity, Interest Expense and Income Taxes.

Accordingly, the Commission Panel directs FortisBC to prepare and file a report detailing a list of Transmission and Distribution Capital Sustaining programs (with the exception of the programs discussed in Section 7.2 below) each referencing specific sections of the Company's Capitalization Policy guidelines, along with a discussion on the Company's interpretation of why it considers each program to be capital in nature. In addition, the Commission Panel directs FortisBC to include a discussion and analysis on its determination of the \$1,000 minimum capitalizable amount, as stated in its current Capitalization Policy, along with a detailed assessment on the justification for this minimum and an assessment of the minimum capitalizable amounts of comparable utilities within British Columbia and other jurisdictions. This report is to be filed to the Commission within 90 days from the date of this Decision.

7.2 Accounting Treatment of Sustaining Programs

In the Panel's view, FortisBC applies the definitions and criteria for capitalization from its Capitalization Policy in a liberal manner. In the IR responses and submissions, FortisBC appears to continually support a status quo treatment for all capital projects as they have been accepted within the framework of the PBR. The Commission Panel is not convinced that all sustaining programs described in the Application are appropriately categorized under a capital plan even though these programs may have been previously accepted as such in the past.

The Panel views FortisBC's Sustaining Programs to be Repairs and Improvements (as described in its Capitalization Policy) and has selected three programs of particular concern for discussion and determination below:

7.2.1 Transmission and Distribution Right-of-Way Reclamation

There are two distinct programs that FortisBC uses for vegetation management: a) cyclical brushing, which is considered an operating expense, and b) Right-of-Way Reclamation, which is considered a capital expenditure. FortisBC describes the activities of the latter to include “the complete removal of trees in order to re-establish the existing right-of-way.” (Exhibit B-4, BCUC IR 1.13.1, emphasis added) FortisBC forecasts the Distribution and Transmission Right-of-Way Reclamation programs to be:

Table 7.1
Forecast Right-of-Way Reclamation’(000)

	2010	2011
Transmission	\$496	\$534
Distribution	\$646	\$578

Source: Exhibit B-1, pp. 29, 42

The Commission Panel is concerned with the capitalization of the clearing of an existing right-of-way more than once. When the original right-of-way is established, the Commission Panel agrees that the vegetation clearing should be included as part of the capital project costs. Subsequently, if cyclical brushing is not routinely completed, the Commission Panel is concerned that the Company could have to re-clear the existing right-of-way, which would lead to incremental capital costs to be borne by ratepayers.

Commission Determination

The Commission Panel has reviewed FortisBC’s Application as well as IR responses with respect to this proposed project³ and considers that FortisBC’s Transmission and Distribution programs of Right-of-Way Reclamation are more appropriately classified as routine operating expenses or

³ Exhibit B-1, pp. 29, 41-42; Exhibit B-4, BCUC 1.13.0; Exhibit B-6, BCUC A4.0

preventative maintenance required to maintain the safe and reliable operation of the system.

Accordingly, the Commission Panel rejects these expenditures as part of FortisBC's 2011 CEP

Application. FortisBC should apply the criteria from its Capitalization Policy to the accounting treatment for the expenditure and therefore should no longer continue to capitalize expenditures which are operating in nature.

7.2.2 Transmission and Distribution Pine Beetle Kill Hazard Tree Removal

FortisBC's program to address trees killed by the Mountain Pine Beetle (MPB) involves identifying and removing failure trees that have a high probability of falling directly onto energized lines.

FortisBC forecasts the Distribution and Transmission Pine Beetle Kill Hazard Tree Removal programs to be:

Table 7.2
Pine Beetle Kill Hazard Tree Removal '(000)

	2010	2011
Transmission	\$821	\$242
Distribution	\$551	\$1,913

Source: Exhibit B-1, pp. 30, 43

While there was an expectation for the MPB infestation and activity to decrease, recent warmer winters have resulted in low beetle mortality leading to an increase of activity and associated infestation in FortisBC's service territory (Exhibit B-4, BCUC IR 1.22.6). The Commission Panel notes that FortisBC's program costs to control the infestation have been recurring since at least 2009 and there is anticipation that this will continue into the foreseeable future. A study conducted by the BC Forest Services in 2008 identified the timelines and increased risk in areas of Okanagan, Boundary, and West Kootenay with significant MPB infestation between 2009 and 2015. The BC Ministry of Forests and Range anticipates that the MPB infestation is expected to peak in 2012 in the Arrow Pine Unit and then in 2013 in the Okanagan, Boundary and Kootenay Lake areas (Exhibit B-6, BCUC A15.5). While it is estimated that approximately 65 percent of the pine volume

in the province will be destroyed by 2016 (Exhibit B-6, BCUC IR 1.15.5), there is no indication how much of this volume is within FortisBC's service territory.

FortisBC submits that this program should be considered a capital expenditure because there is a long term benefit obtained. The Commission Panel does not consider this argument persuasive as this determination may be made for all programs regardless of their capital or operating and maintenance classification.

Commission Determination

The Commission Panel has considered the FortisBC Application and IR responses with respect to this proposed project⁴. Due to the recurring nature of these programs, the Commission Panel no longer considers the MPB Tree Removal programs to be an extraordinary event for accounting purposes.

Accordingly, the Commission Panel rejects these expenditures as part of FortisBC's 2011 CEP Application and considers these programs to be more appropriately addressed as routine operating and ordinary maintenance expense. FortisBC should apply the criteria from its Capitalization Policy to the accounting treatment for the expenditure and therefore should no longer continue to capitalize expenditures which are operating in nature.

7.2.3 Distribution Line Rehabilitation: "Hot Tap Connector Replacement" Program

In 2009 FortisBC introduced an initiative in conjunction with the other distribution rehabilitation initiatives, which involved the removal and safe reattachment of hot tap connectors in its existing infrastructure. In the 2009-2010 Capital Expenditure Plan, FortisBC included \$0.75 million per year for 2009 and 2010 and estimated that expenditures of approximately \$0.5 million per year would be required for the years 2011 to 2016 to cover the cost of this initiative.

⁴ Exhibit B-1, pp.29-30, 42-43; Exhibit B-4, BCUC A22.0; Exhibit B-6, BCUC IR 1.15.5

Although the 2009-2010 Capital Plan Decision dated February 27, 2009 (2009 Decision) did not specifically reject FortisBC's Hot Tap Connector Replacement program, the Commission Panel notes that FortisBC was denied two capital Rebuild projects (Line 20 and Line 27) in that Decision, on the basis that the following extract from the Copper Conductor Replacement Project CPCN (Order G-165-08, November 7, 2008) was applicable:

"However, the Commission Panel accepts that the options of "do nothing" or "run to failure" are not viable where there are safety concerns. If, in fact, FortisBC has knowledge of specific conditions in its legacy copper system where factors such as hot taps, splices, or other circumstances are playing a role in triggering failures in its legacy copper system, then, given its obligation to mitigate risks to the safety of its workforce and the public, the Commission Panel believes that Fortis BC should be addressing these on a priority basis in the normal course of the operations and maintenance of its system." (2009 Decision, p. 17)

FortisBC submits that the copper or aluminum hot taps identified in this initiative were not the same hot taps as identified in the Copper Conductor Replacement CPCN.

Commission Determination

As with other project categories, the Commission Panel has considered the FortisBC Application as well as IR responses with respect to this proposed project⁵ and previous related Decisions (2009-2010 Capital Expenditure Plan and Copper Conductor Replacement CPCN) and has determined that expenditures of this nature are not appropriate to include in the Capital Expenditure Plan. The Commission Panel is of the opinion that the intent of the denied CPCN should apply to FortisBC's Hot Tap Connector Replacement initiative, as this appears to be an on-going issue with respect to FortisBC's legacy system, regardless of the conductor type. **Accordingly, the Commission Panel rejects the 2011 "Hot Tap Connector Replacement" expenditure of \$500,000.** On a go-forward basis, the Commission Panel expects FortisBC to address this initiative in its ordinary operating and maintenance expense budget.

⁵ Exhibit B-1, p.40; Exhibit B-4, BCUC A19.0; Exhibit B-6, BCUC IR 1.12.0

7.3 Other Issues

7.3.1 Approved vs. Actual Capital Expenditures

The Commission Panel has an area of particular concern that relates to actual capital expenditures, particularly in the Transmission and Stations Growth & Sustaining category. The total variance between approved and actual expenditures in 2008 and 2009 was \$24 million and \$30 million, respectively (Exhibit B-4, BCUC Table A2.1). The Commission accepts that minor differences will arise between forecast and actual expenditures in the ordinary course, however it notes that major differences have occurred in the years 2008 and 2009 and continue to occur, as for example, seen in the Okanagan Transmission Reinforcement (OTR) project. The Commission Panel notes that the OTR project was originally budgeted at \$141.4 million with a revised budget of \$139.1 million on March 10, 2009. FortisBC now states that the current forecast for this project is \$109.2 million (a forecast of \$29.9 million under budget). (Exhibit B-1, p. 21)

If actual capital expenditures are less than the approved amounts, the existing PBR mechanism allows for a “true up” of the difference and awards half of the difference to the shareholder. However, the 2011 Revenue Requirement is set based on an approved capital expenditure budget provided in this Application. The Commission Panel acknowledges that FortisBC generally provides a conservative capital budget and trusts that it will make efforts to minimize the actual costs to ratepayers. For ratemaking purposes, FortisBC’s 2011 forecast expenditures should closely reflect the Company’s eventual actual expenditures, supporting a robust and comprehensive capital budgeting process. **For these reasons, the Commission Panel directs FortisBC to provide information, in its next revenue requirement application, on how it plans to narrow the variance between approved and actual capital expenditures to ensure that rates charged to customers and the return received by shareholders are both fair and equitable.**

7.3.2. Cost of Removal

FortisBC also seeks acceptance of expenditures for Cost of Removal (net) totalling \$3.411 and \$0.036 million in 2011 and 2012 respectively. These amounts are included in Tables 1.1 and 1.2 of the Application as the last line item. (Exhibit B-1, pp. 3, 10) The Company provides no further explanation or justification for these expenditures elsewhere in the Application.

Given this failure on the part of FortisBC to provide any evidence in support of these proposed expenditures or any linkage to other proposed expenditures or categories of proposed expenditures to which these items may relate, the Commission Panel has no choice but to reject them. **Accordingly, the Panel rejects the expenditures for Cost of Removal of \$3.411 and \$0.036 million in 2011 and 2012 due to lack of evidence.**

8.0 SUMMARY OF DIRECTIVES

This Summary is provided for the convenience of readers. In the event of any difference between the Directives in this Summary and those in the body of the Decision, the wording in the Decision shall prevail.

	Directive	Page
1.	The Commission Panel finds that the Application is generally consistent with British Columbia's energy objectives as the proposed expenditures which prolong the life of hydro-electric generation and transmission assets will help the Province to achieve electricity self-sufficiency.	8
2.	The Commission Panel finds that, except where an expenditure is postponed or rejected, the Application is consistent with the interests of FortisBC's existing and potential customers.	9
3.	The Commission Panel finds that refurbishment of the two spill gates is in the public interest to lower the risk of overtopping the dam and possible damage to the powerhouse associated with a gate failure, subject to determinations at the end of Section 2.0.	18
4.	The Commission Panel finds that the expenditure for the Ellison to Sexsmith Transmission Tie engineering and estimating costs, required for the design phase of a project to provide increased reliability to the 9,700 customers served by this line, is in the public interest. The Commission Panel also agrees with FortisBC that a two hour delay to 50,000 customers after a service interruption is an unacceptable level of reliability, and finds that the expenditures for the Huth Bus Reconfiguration project are also in the public interest.	21
5.	The Panel determines that the sustaining capital expenditures request for Generation, Transmission and Stations totalling \$9.463 million in 2011 and \$1.439 in 2012 will be reduced by \$1.500 million. The determination of the specific projects to be affected and to what extent will be left to FortisBC.	25
6.	The Commission Panel finds that the forecast 2011 expenditures for New Customer Connects and Unplanned Growth projects have been estimated consistently with past practice, are required to provide service to new customers and to meet overall service requirements as well as legislated and industry standards and therefore are in the public interest.	28

7.	The Panel has determined that a reduction of approximately 10 percent or \$450,000 is appropriate for Distribution Urgent Repair, Small Planned Capital and Forced Upgrades and Line Moves projects.	30
8.	The Panel finds that FortisBC's remaining expenditures to rehabilitate or upgrade distribution lines in order to ensure reliable customer service and employee and public safety are reasonable. Accordingly, the Panel finds the expenditures related to the proposed 2011 Distribution Sustaining programs and projects other than those addressed previously, are in the public interest subject to the determinations in Section 7.0.	30
9.	The Commission Panel rejects the expenditures related to the two fibre installation projects on the basis that these related multi-year, multi-phase projects are more properly the subject of an application for a CPCN than line items on a proposed expenditure schedule. As a result, the Commission Panel finds that subsection 45(2) of the <i>UCA</i> does not apply to these projects and to the SCADA project which is a part of General Plant.	38
10.	The Commission Panel therefore rejects the expenditures related the SCADA enhancements under General Plant and directs FortisBC to include the proposed SCADA enhancement expenditures for General Plant in its application for a CPCN for the two projects should it wish to proceed with them.	41
11.	The Commission Panel notes the value of modernization and the importance of the Mandatory Reliability Standards and accordingly finds the sustaining projects for 2011 in the public interest.	42
12.	The Panel accordingly also finds the expenditures to be cost-effective within the meaning of the DSM Regulation. The 2011 DSM Plan also supports British Columbia's energy objective 2(b) "to take demand-side measures and to conserve energy." Therefore, the Commission Panel accepts the expenditures portfolio for the 2011 DSM Plan.	58
13.	The Commission Panel therefore directs FortisBC to include the topics of energy efficiency and incentive opportunities in its consultation with the Irrigation Rate Class.	58
14.	The Panel has determined that approving 90% of the remaining funds of \$5.022 million will leave a sufficient amount for FortisBC to adequately address its IS requirements in 2011. Accordingly, the Commission Panel rejects IS capital expenditures of \$500,000 and accepts the balance of \$4.522 million.	63

15.	All other expenditures for General Plant in the amount of \$8.013 million are accepted as requested. The Commission Panel finds these expenditures to be in the public interest as they are required for Mandatory Reliability Standards and PCB environmental compliance as well as to ensure that FortisBC can continue to conduct its operations in a safe, efficient and environmentally conscious manner.	63
16.	The Commission Panel directs FortisBC to prepare and file a report detailing a list of Transmission and Distribution Capital Sustaining programs (with the exception of the programs discussed in Section 7.2) each referencing specific sections of the Company's Capitalization Policy guidelines, along with a discussion on the Company's interpretation of why it considers each program to be capital in nature. In addition, the Commission Panel directs FortisBC to include a discussion and analysis on its determination of the \$1,000 minimum capitalizable amount, as stated in its current Capitalization Policy, along with a detailed assessment on the justification for this minimum and an assessment of the minimum capitalizable amounts of comparable utilities within British Columbia and other jurisdictions. This report is to be filed to the Commission within 90 days from the date of this Decision.	65
17.	The Commission Panel rejects Right-of-Way Reclamation expenditures as part of FortisBC's 2011 CEP Application.	67
18.	The Commission Panel rejects Pine Beetle Kill Hazard Tree Removal expenditures as part of FortisBC's 2011 CEP Application and considers these programs to be more appropriately addressed as routine operating and ordinary maintenance expense.	68
19.	The Commission Panel rejects the 2011 "Hot Tap Connector Replacement" expenditure of \$500,000.	69
20.	The Commission Panel directs FortisBC to provide information, in its next revenue requirement application, on how it plans to narrow the variance between approved and actual capital expenditures to ensure that rates charged to customers and the return received by shareholders are both fair and equitable.	70
21.	The Panel rejects the expenditures for Cost of Removal of \$3.411 and \$0.036 million in 2011 and 2012 due to lack of evidence.	71

DATED at the City of Vancouver, in the Province of British Columbia, this 17th day of December 2010.

Original signed by: _____

LIISA A. O'HARA

CHAIR OR PANEL CHAIR/COMMISSIONER

Original signed by: _____

ALISON A. RHODES

COMMISSIONER

Original signed by: _____

DENNIS A. COTE

COMMISSIONER

**BRITISH COLUMBIA
UTILITIES COMMISSION**

**ORDER
NUMBER G-195-10**

TELEPHONE: (604) 660-4700
BC TOLL FREE: 1-800-663-1385
FACSIMILE: (604) 660-1102

SIXTH FLOOR, 900 HOWE STREET, BOX 250
VANCOUVER, BC V6Z 2N3 CANADA
web site: <http://www.bcuc.com>



**IN THE MATTER OF
the Utilities Commission Act, R.S.B.C. 1996, Chapter 473**

and

**An Application by FortisBC Inc.
for Approval of 2011 Capital Expenditure Plan**

BEFORE: L.A. O'Hara, Panel Chair/Commissioner
A.A. Rhodes, Commissioner December 17, 2010
D.A. Cote, Commissioner

O R D E R

WHEREAS:

- A. On June 18, 2010 FortisBC Inc. (FortisBC) filed its 2011 Capital Expenditure Plan (the Application) with the British Columbia Utilities Commission (the Commission) pursuant to sections 44.2 (1)(a) and (b) and 45(2) of the *Utilities Commission Act* (the Act);
- B. FortisBC requests an order that its 2011 Capital Expenditures Plan (2011 CEP) is accepted by the Commission, satisfies the requirements of section 45(6) of the Act and that the expenditures for the capital projects contained therein are in the public interest pursuant to Section 44.2(3)(a) of the Act;
- C. The FortisBC 2011 CEP seeks acceptance of expenditures of \$66.151 million in 2011 and \$1.475 million in 2012. FortisBC states these expenditures are necessary to continue to provide reliable service, ensure public and employee safety, and to deliver Demand Side Management (DSM) programs to the Company's growing customer base;
- D. By Order G-112-10 dated June 25, 2010 the Commission established a Written Hearing Process and Regulatory Timetable for its review of the Application and also ordered that a Workshop be held in Kelowna, BC on August 4, 2010;
- E. By Order G-147-10 dated September 24, 2010 the Commission established a Regulatory Timetable for Final Submissions;
- F. The filing of Final Submissions was completed with the Reply Argument of FortisBC dated and filed on October 21, 2010;
- G. The Commission has reviewed the evidence and submissions of FortisBC and Registered Interveners.

**BRITISH COLUMBIA
UTILITIES COMMISSION**

**ORDER
NUMBER** G-195-10

2

NOW THEREFORE the Commission, for the reasons stated in the Decision issued concurrently with this Order, orders that:

1. Capital expenditures in the total sum of \$53.385 million for 2011 and 2012 as described in Appendix A to this Order are in the public interest and are accepted.
2. Capital expenditures in the total sum of \$14.241 million for 2011 and 2012 as described in Appendix A to this Order are not in the public interest and are rejected. Of this total, expenditures in the sum of \$3.767 million are more appropriately classified as operating expenses.
3. Subsection 45(2) of the *Act* does not apply to the Kelowna 138 kV Loop project, the Grand Forks to Warfield Fibre Installation project and the SCADA project included under “General Plant” in the Application (the “Projects”). If FortisBC intends to proceed with the Projects, it must apply for a separate Certificate of Public Convenience and Necessity which includes all three Projects.
4. The 2011 CEP satisfies the filing requirements of section 45(6) of the *Act*.
5. Fortis BC is directed to comply with all the determinations and directives set out in the Decision.

DATED at the City of Vancouver, in the Province of British Columbia, this 17th day of December 2010.

BY ORDER

Original signed by:

L.A. O’Hara
Panel Chair and Commissioner

Attachment

FortisBC Inc.
2011 Capital Expenditure Plan

Expenditures by Plant Category

1		2011	2012	Adjustments	Accepted	(a)
2		(\$000s)		(\$000s)		
3		Requested				
4	Generation					
5	Growth	-	-			
6	Sustaining	2,513	1,439	*	3,952	(a)
7	Subtotal	2,513	1,439	*	3,952	(a)
8	Transmission and Stations					
9	Growth	5,341	-	Nil	5,341	
10	Sustaining	6,950	-	(2,276) ¹	4,674	
11	Subtotal	12,291	-	(2,276)	10,015	
12	Distribution					
13	Growth	11,529	-	Nil	11,529	
14	Sustaining	12,075	-	(3,441) ²	8,634	
15	Subtotal	23,604	-	(3,441)	20,163	
16	Telecom, SCADA, and P&C					
17	Growth	4,049	-	(4,049) ³	0,000	
18	Sustaining	1,551	-	Nil	1,551	
19	Subtotal	5,600	-	(4,049)	1,551	
20	General Plant					
21	Mandatory Reliability	-	-			
22	Vehicles	2,000	-	Nil	2,000	
23	Metering	213	-	Nil	213	
24	Information Systems	5,550	-	(1,028) ⁴	4,522	
25	Telecommunications	358	-	Nil	358	
26	Buildings	1,244	-	Nil	1,244	
27	Kootenay Operations Centre	485	-	Nil	485	
28	Kelowna Long Term Solution	489	-	Nil	489	
29	Furniture	176	-	Nil	176	
30	Tools and Equipment	601	-	Nil	601	
31	PCB Environmental Compliance	1,852	-	Nil	1,852	
32	Subtotal	12,968	-	(1,028)		
33	Subtotal - Plant and Equipment	56,976	1,439	(10,794)		
34	Demand Side Management	5,764		Nil	5,764	
35	Subtotal	62,740	1,439	(10,794)	53,385	
36	Cost of Removal (net)	3,411	36	(3,447)	0,000	
37	Total	66,151	1,475	(14,241)	53,385	

(a) Acceptance of Generation, Transmission, and Stations Capital is subject to a global reduction of \$1.5 million pertaining to sustaining capital referred to in the Decision Section 2.0.

¹ \$2,276 = (\$1.500*million sustaining capital reduction for Generation, Transmission and Stations total of \$9.463 million in 2011 and \$1.439 in 2012) + (Transmission Right-of-Way Reclamation denial of \$534K) + (Transmission Pine Beetle Kill Hazard tree removal denial of \$242K)

² \$3,441 = (Distribution Urgent Repair, Small Planned Capital, and Forced Upgrades and Line Moves reduction of \$450K) + (Hot Tap Connector Replacement denial of \$500K) + (Distribution Right-of-Way Reclamation denial of \$578K) + (Distribution Pine Beetle Kill Hazard tree removal denial of \$1,913K)

³ 4,049 = (Kelowna Fiber Loop \$3.382 million denial) + (Grand Forks to Warfield Tie \$0.667 million denial)

⁴ \$1,028 = (denial of General Plant SCADA enhancements \$528K) + (Information Services reduction of \$500K)

UTILITIES COMMISSION ACT EXTRACTS

Demand-Side Measure has the same meaning as in section 1 (1) of the *Clean Energy Act*;

- (a) to conserve energy or promote energy efficiency,
- (b) to reduce the energy demand a public utility must serve, or
- (c) to shift the use of energy to periods of lower demand;

Expenditure schedule

44.2 (1) A public utility may file with the commission an expenditure schedule containing one or more of the following:

- (a) a statement of the expenditures on demand-side measures the public utility has made or anticipates making during the period addressed by the schedule;
- (b) a statement of capital expenditures the public utility has made or anticipates making during the period addressed by the schedule;
- (c) a statement of expenditures the public utility has made or anticipates making during the period addressed by the schedule to acquire energy from other persons.

(2) The commission may not consent under section 61 (2) to an amendment to or a rescission of a schedule filed under section 61 (1) to the extent that the amendment or the rescission is for the purpose of recovering expenditures referred to in subsection (1) (a) of this section, unless

- (a) the expenditure is the subject of a schedule filed and accepted under this section, or
- (b) the amendment or rescission is for the purpose of setting an interim rate.

(3) After reviewing an expenditure schedule submitted under subsection (1), the commission, subject to subsections (5), (5.1) and (6), must

- (a) accept the schedule, if the commission considers that making the expenditures referred to in the schedule would be in the public interest, or
- (b) reject the schedule.

(4) The commission may accept or reject, under subsection (3), a part of a schedule.

(5) In considering whether to accept an expenditure schedule filed by a public utility other than the authority, the commission must consider

- (a) the applicable of British Columbia's energy objectives,
- (b) the most recent long-term resource plan filed by the public utility under section 44.1, if any,
- (c) the extent to which the plan is consistent with the applicable requirements under sections 6 and 19 of the *Clean Energy Act*,
- (d) if the schedule includes expenditures on demand-side measures, whether the demand-side measures are cost-effective within the meaning prescribed by regulation, if any, and
- (e) the interests of persons in British Columbia who receive or may receive service from the public utility.

(5.1) In considering whether to accept an expenditure schedule filed by the authority, the commission, in addition to considering the interests of persons in British Columbia who receive or may receive service from the authority, must consider and be guided by

- (a) British Columbia's energy objectives,
- (b) an applicable integrated resource plan approved under section 4 of the *Clean Energy Act*,
- (c) the extent to which the schedule is consistent with the requirements under section 19 of the *Clean Energy Act*, and
- (d) if the schedule includes expenditures on demand-side measures, the extent to which the demand-side measures are cost-effective within the meaning prescribed by regulation, if any.

(6) If the commission considers that an expenditure in an expenditure schedule was determined to be in the public interest in the course of determining that a long-term resource plan was in the public interest under section 44.1 (6),

- (a) subsection (5) of this section does not apply with respect to that expenditure, and
- (b) the commission must accept under subsection (3) the expenditure in the expenditure schedule.

Certificate of Public Convenience and Necessity

- 45** (1) Except as otherwise provided, after September 11, 1980, a person must not begin the construction or operation of a public utility plant or system, or an extension of either, without first obtaining from the commission a certificate that public convenience and necessity require or will require the construction or operation.
- (2) For the purposes of subsection (1), a public utility that is operating a public utility plant or system on September 11, 1980 is deemed to have received a certificate of public convenience and necessity, authorizing it
- (a) to operate the plant or system, and
 - (b) subject to subsection (5), to construct and operate extensions to the plant or system.
- (3) Nothing in subsection (2) authorizes the construction or operation of an extension that is a reviewable project under the *Environmental Assessment Act*.
- (4) The commission may, by regulation, exclude utility plant or categories of utility plant from the operation of subsection (1).
- (5) If it appears to the commission that a public utility should, before constructing or operating an extension to a utility plant or system, apply for a separate certificate of public convenience and necessity, the commission may, not later than 30 days after construction of the extension is begun, order that subsection (2) does not apply in respect of the construction or operation of the extension.
- (6) A public utility must file with the commission at least once each year a statement in a form prescribed by the commission of the extensions to its facilities that it plans to construct.
- (6.1) and (6.2) [Repealed 2008-13-8.]
- (7) Except as otherwise provided, a privilege, concession or franchise granted to a public utility by a municipality or other public authority after September 11, 1980 is not valid unless approved by the commission.
- (8) The commission must not give its approval unless it determines that the privilege, concession or franchise proposed is necessary for the public convenience and properly conserves the public interest.
- (9) In giving its approval, the commission
- (a) must grant a certificate of public convenience and necessity, and
 - (b) may impose conditions about

(i) the duration and termination of the privilege, concession or franchise, or

(ii) construction, equipment, maintenance, rates or service,

as the public convenience and interest reasonably require.

CLEAN ENERGY ACT EXTRACTS

PART 1 - BRITISH COLUMBIA'S ENERGY OBJECTIVES

British Columbia's energy objectives

2 The following comprise British Columbia's energy objectives:

- (a) to achieve electricity self-sufficiency;
- (b) to take demand-side measures and to conserve energy, including the objective of the authority reducing its expected increase in demand for electricity by the year 2020 by at least 66%;
- (c) to generate at least 93% of the electricity in British Columbia from clean or renewable resources and to build the infrastructure necessary to transmit that electricity;
- (d) to use and foster the development in British Columbia of innovative technologies that support energy conservation and efficiency and the use of clean or renewable resources;
- (e) to ensure the authority's ratepayers receive the benefits of the heritage assets and to ensure the benefits of the heritage contract under the *BC Hydro Public Power Legacy and Heritage Contract Act* continue to accrue to the authority's ratepayers;
- (f) to ensure the authority's rates remain among the most competitive of rates charged by public utilities in North America;
- (g) to reduce BC greenhouse gas emissions
 - (i) by 2012 and for each subsequent calendar year to at least 6% less than the level of those emissions in 2007,
 - (ii) by 2016 and for each subsequent calendar year to at least 18% less than the level of those emissions in 2007,
 - (iii) by 2020 and for each subsequent calendar year to at least 33% less than the level of those emissions in 2007,
 - (iv) by 2050 and for each subsequent calendar year to at least 80% less than the level of those emissions in 2007, and
 - (v) by such other amounts as determined under the *Greenhouse Gas Reduction Targets Act*;

- (h) to encourage the switching from one kind of energy source or use to another that decreases greenhouse gas emissions in British Columbia;
- (i) to encourage communities to reduce greenhouse gas emissions and use energy efficiently;
- (j) to reduce waste by encouraging the use of waste heat, biogas and biomass;
- (k) to encourage economic development and the creation and retention of jobs;
- (l) to foster the development of first nation and rural communities through the use and development of clean or renewable resources;
- (m) to maximize the value, including the incremental value of the resources being clean or renewable resources, of British Columbia's generation and transmission assets for the benefit of British Columbia;
- (n) to be a net exporter of electricity from clean or renewable resources with the intention of benefiting all British Columbians and reducing greenhouse gas emissions in regions in which British Columbia trades electricity while protecting the interests of persons who receive or may receive service in British Columbia;
- (o) to achieve British Columbia's energy objectives without the use of nuclear power;
- (p) to ensure the commission, under the *Utilities Commission Act*, continues to regulate the authority with respect to domestic rates but not with respect to expenditures for export, except as provided by this Act.

PART 5 — ENERGY EFFICIENCY MEASURES AND GREENHOUSE GAS REDUCTIONS

- 17** (6) If a public utility, other than the authority, makes an application under the *Utilities Commission Act* in relation to smart meters, other advanced meters or a smart grid, the commission, in considering the application, must consider the government's goal of having smart meters, other advanced meters and a smart grid in use with respect to customers other than those of the authority.

DEMAND-SIDE MEASURES REGULATION
OF THE UTILITIES COMMISSION ACT
BC REG. 326/2008

Definitions

1 In this regulation:

"**Act**" means the *Utilities Commission Act*;

"**bulk electricity purchaser**" means a public utility that purchases electricity from the authority for resale to the public utility's customers;

"**community engagement program**" means a program delivered by

(a) a public utility to a public entity either

(i) to increase the public entity's awareness about ways to increase energy conservation and energy efficiency or to encourage the public entity to conserve energy or use energy efficiently, or

(ii) to assist the public entity to increase the public's awareness about ways to increase energy conservation and energy efficiency or to encourage the public to conserve energy or use energy efficiently, or

(b) a public utility in cooperation with a public entity to increase the public's awareness about ways to increase energy conservation and energy efficiency or to encourage the public to conserve energy or use energy efficiently;

"**education program**" means an education program about energy conservation and efficiency, and includes the funding of the development of such a program;

"**energy device**" has the same meaning as in the *Energy Efficiency Act*;

"**energy efficiency training**" means training for persons who

(a) manufacture, sell or install energy-efficient products,

(b) design, construct or act as a real estate broker with respect to energy-efficient buildings,

(c) manage energy systems in buildings, or

(d) conduct energy efficiency audits;

"energy-using product" has the same meaning as in the *Energy Efficiency Act* (Canada);

"expenditure portfolio" means the class of demand-side measures that is composed of all of the demand-side measures proposed by a public utility in an expenditure schedule submitted under section 44.2 of the Act;

"low-income household" means a household whose residents receive service from the public utility and who have, in a taxation year, a before-tax annual household income equal to or less than the low-income cut off established by Statistics Canada for that year for households of that type;

"plan portfolio" means the class of demand-side measures that is composed of all of the demand-side measures proposed by a public utility in a plan submitted under section 44.1 of the Act;

"public awareness program" means a program delivered by a public utility

(a) to increase the awareness of the public, including the public utility's customers, about ways to increase energy conservation and energy efficiency or to encourage the public, including the public utility's customers, to conserve energy or use energy efficiently, or

(b) to increase participation by the public utility's customers in other demand-side measures proposed by the public utility in an expenditure portfolio or a plan portfolio

but does not include a program to increase the amount of energy sold or delivered by the public utility;

"public entity" means a local government, first nation, non-profit society incorporated under the *Society Act* or trade union;

"regulated item" means

(a) an energy device,

(b) an energy-using product,

(c) a building design, or

(d) thermal insulation;

"school" means a school regulated under the *School Act* or the *Independent School Act*;

"specified demand-side measure" means

- (a) a demand-side measure referred to in section 3 (c) or (d),
- (b) the funding of energy efficiency training,
- (c) a community engagement program, or
- (d) a technology innovation program;

"specified standard" means a standard in any of the following:

- (a) the Energy Efficiency Standards Regulation, B.C. Reg. 389/93;
- (b) the Energy Efficiency Regulations S.O.R./94-651;
- (c) the British Columbia Building Code, if the standard promotes energy conservation or the efficient use of energy;

"technology innovation program" means a program

- (a) to develop a technology, a system of technologies, a building design or an industrial facility design that is
 - (i) not commonly used in British Columbia, and
 - (ii) the use of which could directly or indirectly result in significant reductions of energy use or significantly more efficient use of energy,
- (b) to do what is described in paragraph (a) and to give demonstrations to the public of any results of doing what is described in paragraph (a), or
- (c) to gather information about a technology, a system of technologies, a building design or an industrial design referred to in paragraph (a).

Application

- 2 (1) This regulation applies only with respect to demand-side measures proposed by the authority.

(2) Effective June 1, 2009,

(a) subsection (1) is repealed, and

(b) section 3 does not apply to a public utility that is owned or operated by a local government or has fewer than 10,000 customers.

Adequacy

3 A public utility's plan portfolio is adequate for the purposes of section 44.1 (8) (c) of the Act only if the plan portfolio includes all of the following:

(a) a demand-side measure intended specifically to assist residents of low-income households to reduce their energy consumption;

(b) if the plan portfolio is submitted on or after June 1, 2009, a demand-side measure intended specifically to improve the energy efficiency of rental accommodations;

(c) an education program for students enrolled in schools in the public utility's service area;

(d) if the plan portfolio is submitted on or after June 1, 2009, an education program for students enrolled in post-secondary institutions in the public utility's service area.

Cost effectiveness

4 (1) Subject to subsections (4) and (5), the commission, in determining for the purposes of section 44.1 (8) (c) or 44.2 (5) (d) of the Act the cost-effectiveness of a demand-side measure proposed in an expenditure portfolio or a plan portfolio, may compare the costs and benefits of

(a) the demand-side measure individually,

(b) the demand-side measure and other demand-side measures in the portfolio, or

(c) the portfolio as a whole.

(2) In determining whether a demand-side measure referred to in section 3 (a) is cost effective, the commission must,

(a) in addition to conducting any other analysis the commission considers appropriate, use the total resource cost test, and

(b) in using the total resource cost test, consider the benefit of the demand-side measure to be 130% of its value when determined without reference to this subsection.

(3) In determining whether a demand-side measure of a bulk electricity purchaser is cost-effective, the commission must consider the benefit of the avoided supply cost to be the authority's long-term marginal cost of acquiring new electricity to replace the electricity sold to the bulk electricity purchaser and not the bulk electricity purchaser's cost of purchasing electricity from the authority.

(4) The commission must determine the cost-effectiveness of a specified demand-side measure proposed in a plan portfolio or an expenditure portfolio by determining whether the portfolio is cost effective as a whole.

(5) If the commission is satisfied that a public awareness program proposed in a plan portfolio or an expenditure portfolio is likely to accomplish the goals set out in paragraph (a) or (b) of the definition of "public awareness program", the commission must determine the cost-effectiveness of the program by determining whether the portfolio is cost-effective as a whole.

(6) The commission may not determine that a proposed demand-side measure is not cost effective on the basis of the result obtained by using a ratepayer impact measure test to assess the demand-side measure.

(7) In considering the benefit of a demand-side measure that, in the commission's opinion, will increase the market share of a regulated item with respect to which there is a specified standard that has not yet commenced, the commission may include in the benefit a proportion of the benefit that, in the commission's opinion, will result from the commencement and application of the specified standard with respect to the regulated item.

REGULATORY PROCESS

FortisBC filed its 2011 Capital Expenditure Plan and the 2011 Demand Side Management Plan on June 18, 2010 with the Commission.

By Order G-112-10, dated June 28, 2010, the Commission established a Written Public Hearing process for the review of the Application, instructed FortisBC to give notice in local newspapers to adequately inform the public of the Application, and established a Regulatory Timetable.

A 2011 Capital Plan Workshop took place in Kelowna, BC on August 4, 2010.

The review process included two rounds of Information Requests (IR) from the Commission and one round of IRs from the Interveners.

FortisBC filed its Final Submission on October 8, 2010, which was followed by Final Submissions from BCOAPO, BCSEA, the IRG and the BCMEU on October 18, 2010. FortisBC filed its Reply Submission on October 21, 2010.

As an option to expedite the review process, the Commission also offered an opportunity of an oral phase of an argument but the Participants saw no need for this option.

LIST OF ACRONYMS

2005 SDP	2005-2024 System Development Plan
2009 Resource Plan	Long-Term Resource Plan
2011 CEP	2011 Capital Expenditure Plan
AMI	Advanced Metering Infrastructure
Application	2011 Capital Expenditure Plan
BC Hydro	British Columbia Hydro and Power Authority
BCMEU	British Columbia Municipal Electric Utilities
BCOAPO	BC Old Age Pensioners' Organization, BC Coalition of People with Disabilities, Council of Senior Citizens' Organizations of BC, and Tenant Resource and Advisory Centre
BCSEA	BS Sustainable Energy Association
CDPR	Conservation and Demand Potential Review
CEA	<i>Clean Energy Act</i>
CEUS	Commercial End Use Study
CIAC	Contribution In Aid of Construction
CIS billing systems	Customer Information System
Commission	British Columbia Utilities Commission
CPCN	Certificate of Public Convenience and Necessity
DSM	Demand Side Management
DSM Regulation	Demand-Side Measures Regulation
FortisBC or the Company	FortisBC Inc.
GAAP	Generally Accepted Accounting Principles
IR	Information Request
IRG	Irrigation Ratepayers Groups

IS	Information System
ISP	Integrated System Plan
kV	kilovolt
LED	Light Emitting Diode
MPB	Mountain Pine Beetle
MRS	Mandatory Reliability Standards
MW	Megawatts
O&M	Operating and Maintenance
OTR	Okanagan Transmission Reinforcement
PBR	Performance Based Rate
REUS	Residential End Use Study
SCADA	System Control and Data Acquisition
<i>UCA or the Act</i>	<i>Utilities Commission Act</i>
TRC	Total Resource Cost
ULE	Upgrade and Life Extension
WAN	Wide Area Network
WKPL	West Kootenay Power Ltd.

IN THE MATTER OF
the Utilities Commission Act, R.S.B.C. 1996, Chapter 473

and

FortisBC Inc.
Application for Approval of 2011 Capital Expenditure Plan

EXHIBIT LIST

Exhibit No.	Description
--------------------	--------------------

COMMISSION DOCUMENTS

A-1	Letter dated June 28, 2010 – Commission Order G-112-10, Regulatory Timetable, Notice of Written Hearing
A-2-	Letter dated August 4, 2010 – Appointment of Panel
A-3	Letter dated August 12, 2010 – Commission Information Request No. 1 to FBC
A-4	Letter dated August 26, 2010 – Amended Regulatory Timetable
A-5	Letter dated August 30, 2010 – Revised Regulatory Timetable
A-6	Letter dated September 10, 2010 – Commission Information Request No. 2 to FBC
A-7	Letter dated September 24, 2010 – Commission Order G-147-10 Regulatory Timetable and Reasons for Final Submissions
A-8	Letter L-87-10 dated October 21, 2010 – Revised Regulatory Timetable
A2-1	Letter dated August 12, 2010 – Commission Staff filing FortisBC Strategic-Demand Side Management Report, December 2009
A2-2	Letter dated August 12, 2010 – Commission Staff filing FortisBC DSM Monitoring and Evaluation Plan 2009 through 2011, December 7, 2008

Exhibit No.	Description
--------------------	--------------------

APPLICANT DOCUMENTS FORTISBC

B-1	FORTISBC INC. (FBC) - Application dated June 18, 2010 – F2011 Capital Expenditures Plan
B-1-1	Letter dated June 29, 2010 - Erratum to 2011 Capital Expenditure Plan Application
B-1-2	Letter dated August 26, 2010 – FBC Errata No. 2
B-1-3	Letter dated October 1, 2010 – FBC Errata No. 3
B-2	Letter dated August 4, 2010 – FBC Workshop Presentation
B-3	Letter dated August 11, 2010 – FBC Comments on Regulatory Timetable
B-4	Letter dated August 26, 2010 – FBC Responses to BCUC Information Request No. 1
B-5	Letter dated August 27, 2010 – FBC Request for filing extension to Commission Information Request No. 2 and Intervener Information Request No. 1
B-6	Letter dated October 1, 2010 - FBC Responses to BCUC Information Request No. 2

INTERVENOR DOCUMENTS

C1-1	DISTRICT OF SUMMERLAND (DS) Letter dated July 14, 2010 Via Email - Requesting Intervener status by Ken Ostraat and registration for the Workshop
C2-1	BRITISH COLUMBIA MUNICIPAL ELECTRICAL UTILITIES (BCMEU) Letter dated July 19, 2010 Via Email - Requesting Intervener status by Heather Grant
C2-2	Letter dated July 22, 2010 Via Email – BCMEU adding contact information
C2-3	Letter dated July 27, 2010 Via Email – BCMEU Addition of council
C2-4	Letter dated August 11, 2010 – BCMEU Comments on regulatory process
C2-5	Letter dated September 10, 2010 – BCMEU Information Request No. 1
C3-1	HORIZON TECHNOLOGIES INC. (HT) Online Registration dated July 29, 2010 - Requesting Intervener status by Ludo Bertsch

Exhibit No.	Description
C4-1	BRITISH COLUMBIA OLD AGE PENSIONERS' ORGANISATION (BCOAPO) Letter dated August 3, 2010 – Requesting Intervener Status by Sarah Khan
C4-2	Letter dated August 12, 2010 – BCOAPO Comments on regulatory timetable
C4-3	Letter dated August 27, 2010 – BCOAPO Comments on Commission Information Request No. 2 and Intervener Information Request No. 1
C4-4	Letter dated September 10, 2010 – BCOAPO Information Request No. 1
C5-1	SLACK, BERYL (SB) Letter dated July 29, 2010 - Filing request by Beryl Slack for Intervener status
C5-2	Letter dated October 15, 2010 – SB Submitting comments
C6-1	KAROW, HANS (KH) Letter dated August 11, 2010 – Request for Intervener Status by Hans Karow
C6-2	Letter dated September 10, 2010 – KH Information Request No. 1
C7-1	IRRIGATION RATEPAYERS GROUP (IRG) Letter dated August 11, 2010 – Request for Intervener Status by Fred Weisberg
C8-1	BC SUSTAINABLE ENERGY ASSOCIATION (BCSEA) Letter dated August 11, 2010 – Request for Intervener Status by Thomas Hackney
C8-2	Letter dated August 19, 2010 – Submitting request to add Sierra Club of BC (SCBC) to BCSEA intervention by Thomas Hackney and for W.J. Andrews be added to the distribution list
C8-3	Letter dated September 10, 2010 – BCSEA Information Request No. 1
C9-1	GABANA, NORMAN (GN) Letter dated August 17, 2010 – Request for Late Intervener Status by Norman Gabana
C9-2	Letter dated September 9, 2010 – GN Information Request No. 1
C9-2-1	Letter dated September 9, 2010 – GN Revised Information Request No. 1



Capitalization Policy

This Capitalization Policy provides guidelines for the allocation of costs to either Capital or Operating Expense. These principles are intended to conform to Generally Accepted Accounting Principles ("GAAP") as outlined in the Canadian Institute of Chartered Accounts Handbook, regulatory requirements as well as industry best practices. Where differences exist between this policy and British Columbia Utilities Commission Orders, the regulatory Order will prevail.

FortisBC's capital spending policy provides uniformity and consistency throughout the organization for the accounting of assets that are acquired, built, developed, installed, retired, removed or replaced. This policy should be used to complete both the operating and capital budgets.

Capitalization Principles:

1. All expenditures are considered Operating Expense until it is proven that they meet the capital criteria.
2. In certain cases neither GAAP nor regulatory requirements provide definitive rules that apply to every possible situation. In these cases, prior to approval of the expenditure, the Manager of the department initiating the project should confirm with the Manager, Budgets and Forecasts whether the project is capital or expense.
3. Costs include the amount to acquire, construct, develop or better an asset.
4. Capital assets include but are not limited to land, buildings, property, equipment, machinery, poles, wires, insulators, underground cable, furniture and fixtures, tools and instruments, computers, software, motor vehicles, reservoirs, dams and waterways, water wheels and turbines.
5. All capital assets will be shown at historical cost.
6. Capitalization of all costs will be based on effort (including all support functions) associated with the capital work being performed.
7. Staff will direct charge to projects where possible.
8. Where there is a regulatory GAAP variance, a copy of the variance will be filed with the finance department.

Capital Expenditures are expenditures in excess of \$1,000 and that meet all of the following criteria:

1. Provide substantial benefits for a period of more than one year.
2. Extend the useful life of an asset or increase the capacity of an asset or the quality of output efficiency and may reduce operating costs (non-recurring expenditures) Note: this does not include routine maintenance.
3. Are held for use to conduct business/generate income.

Capital Expenditures include the following costs:

- Internal Labour costs directly charged
- Contract Work directly charged
- Vehicle Hours directly charged
- Materials & Supplies directly charged
- Overhead recoveries
- AFUDC (Allowance for Funds Used During Construction)



Capitalization Policy

Additional Guidelines

Investigative Spending Projects

1. Investigative projects are defined as projects requiring investigation work to be completed before a proper scope and budget estimate can be submitted.
2. Investigative projects require an order to be set up to capture dollars while investigation is under way and will be reported as a deferred charge.
3. Once a capital project is set up the dollars will transfer to this approved project.
4. If a project is not approved the dollars in this project will be charged to Operating Expense.

Cost of Removal and Retirement

1. When an asset is retired from service, the asset account will be credited with the historical cost of the asset being removed.
2. If the asset being retired is a depreciable asset, the historical cost less any net salvage value and/or any insurance recovered, will be charged to accumulated depreciation.
3. If any material is salvaged, the net salvage value is the salvage value less any removal costs.
4. Salvage value is, if the material is sold, the selling price, or if the material is retained for use by the company, the original cost.

Staff Training & Development

1. Training to operate or maintain a new plant facility (e.g. substation) being constructed may be capitalized as a part of construction costs.
2. Training and other ongoing support costs related to IT software projects must be treated as an operating expense.
3. General training, once a plant facility is in service must be treated as an operating expense.

Repairs and Improvements

1. **Ordinary Repairs (Normally Operating Expenses)**
Recurring or routine costs for parts, labour etc that do not extend the useful life of the capital asset but are necessary to keep the asset in normal operating condition (preventative maintenance costs/high wear items) are to be expensed.
2. **Extraordinary Repairs (Normally Capital Expenditures)**
Large significant expenditures (relative to the total capital cost of the asset) for major repairs that extend the useful life of the capital asset and are not recurring in nature are generally to be capitalized.
3. **Improvements (Normally Capital Expenditures)**
Involves the installation of a new part that is a betterment to the old part and will provide benefit in the form of greater output or lower operating costs for many years

Questions:

Should you have any questions pertaining to the above policy please contact the Manager, Budgets and Forecasts or the Controller.