FORTISBC

2005 Revenue Requirements

8. Revenue Requirement

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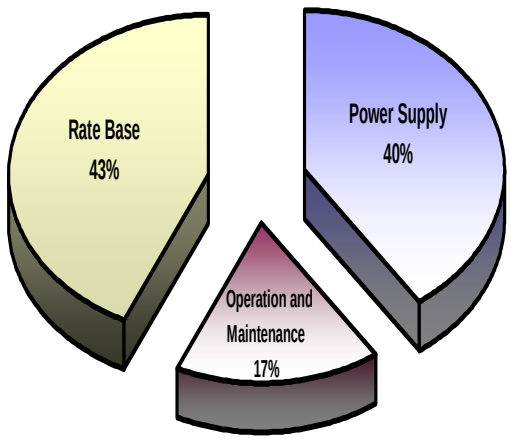
Introduction

FortisBC is applying to the Commission to approve a revenue requirement that yields the Company the opportunity to earn fair and reasonable compensation for the services required by its customers. This Tab examines FortisBC's 2005 Revenue Requirement and provides supporting financial detail.

Revenue Requirement is the sum of all costs of providing service to customers. For the purposes of this Application these costs have been divided into (1) costs related to acquiring energy resource for customers, known as **Power Supply** costs, (2) **Operation and Maintenance** costs, (3) those costs related to the Company's investment in **Rate Base**, and (4) the impact of **Incentive Adjustments** related to Performance Based Regulation.

The graph below provides an overview of the components of revenue requirements.



Note: For presentation purposes, Incentive Adjustments have been included in Operation and Maintenance

Table 8.0 compares the Revenue Requirement for 2004 as approved Commission Order G-38-04, with the Revenue Requirement requested in this Application. As is apparent from the table, each of the major components has increased beyond approved levels. The increase in cost, totaling $14.462 million, is partially offset by increased sales revenue associated with

higher sales volumes. The resulting net revenue deficiency of $7.754 million necessitates a rate increase of 4.4 percent effective January 1, 2005.

Each component of the Revenue Requirement is discussed in turn below.

Table 8.0
Revenue Requirement Analysis
($000)

		Approved 2004	Requested 2005	Increase	Reference Tab 8 Section
1	**COST CATEGORY**				
2					
3	**POWER SUPPLY**				
4	Power Purchases & Wheeling	65,188	66,522		1.1
5	Water Fees	7,328	7,741		1.2
6		72,516	74,263	1,747	
7					
8	**OPERATION AND MAINTENANCE**				
9	O&M Expense	32,845	36,293		2
10	Other Income	(3,861)	(3,785)		2
11		28,984	32,508	3,524	
12					
13	**RATE BASE**				
14	Cost of Debt	22,157	23,253		3.1
15	Cost of Equity	19,638	22,779		3.2
16	Income Taxes	6,134	6,972		3.4
17	Property Tax	9,820	10,850		3.6
18	Depreciation	16,805	18,766		3.7
19	AFUDC	(3,098)	(3,102)		3.8
20		71,456	79,518	8,062	
21					
22	**INCENTIVE ADJUSTMENTS**	(3,030)	(1,901)	1,129	4
23					
24	**TOTAL REVENUE REQUIREMENT**	169,926	184,388	14,462	
25					
26	**Less: REVENUE AT APPROVED RATES**		(176,634)		
27	**REVENUE DEFICIENCY**		7,754		
28					
29	**RATE INCREASE**		4.4%		

1. Power Supply

Power Supply cost is composed of (1) power purchase expense, (2) wheeling expense and (3) provincial water fees.

1.1 Power Purchases and Wheeling

The forecast 2005 increase in Power Supply costs beyond 2004 approved revenue requirement is $1.747 million. Energy sales are forecast to increase by 109 GW.h in 2005 beyond those provided for in 2004 rates. This results in increased revenues which partially offsets the increased costs.

An increase in volume of 109 GW.h would ordinarily have resulted in a much larger increase in Power Purchase expense. However, forecast 2005 Power Supply costs are reduced primarily by (1) the return to customers, on a flow through basis, of the difference between forecast and actual 2004 costs under the Brilliant Power Purchase Agreement, (2) a return to customers of the reduced cost of supply from BC Hydro resulting from a decrease in their rates in 2004 and (3) the anticipated successful negotiations with BC Hydro related to the Canal Plant Agreement, which are forecast to result in higher entitlements for FortisBC's generating plants in the amount of 28 GW.h.

These three factors are explained in detail in the Power Purchase and Wheeling Forecast at Tab 7.3. Power purchase and wheeling expenses are summarized in Table 8.1.1.

Table 8.1.1
Actual and Forecast Power Purchase and Wheeling Expense
($000s)

		2002	2003	2004	2005
1	Power Purchase Expense	52,261	58,436	60,389	62,644
2	Wheeling Expense	3,996	3,727	3,785	3,878
3	**Total Power Purchase & Wheeling**	56,257	62,163	64,174	66,522

1.2 Water Fees

Water Fees are assessed by the provincial government and are based on the value of FortisBC's generation entitlements from the previous year. The rates and charges assessed are calculated based on the schedule and fees in the Water Act, and escalate with changes in BC Hydro rates. Table 8.1.2 provides a summary of Water Fees for forecast 2004 and forecast 2005. The 2005 rates reflect a 4.85 percent increase in BC Hydro's 2004 rates and an expected 20 GW.h adjustment to the 2004 entitlement resulting from the tentative Canal Plant Agreement Entitlement Adjustment Agreement.

Table 8.1.2

Forecast Water Fees

		Rates 2004	Rates 2005
1	Total GW.h Generated (Prior Year)	1,518.39	1,503.50
2	Total Capacity	184.75	207.73
3	First 250 GW.h (mills/kW.h)	2.417	2.534
4	Remaining Energy (mills/kW.h)	4.835	5.069
5	Capacity ($/kW-year)	3.453	3.624
6			
7			
8		Forecast 2004 ($000s)	Forecast 2005 ($000s)
9	First 250 GW.h	604	634
10	Remaining GW.h	6,134	6,354
11	Capacity	638	753
12		7,376	7,741

2. Operation and Maintenance

In this Section each component of Operation and Maintenance ("O&M") expense will be explained in detail. Continuity schedules are provided from 2002 to 2005, on an "as spent" and inflation-adjusted basis.

Table 8.2 A shows the Company's O&M Expense by function.

Table 8.2 A
O&M Expense
($000s)

		Actual 2002	Actual 2003	Actual 2004	Forecast 2005	Increase 2005 vs 2002
1	**Generation**	1,668	1,760	1,690	1,860	11.5%
2	**Power Supply**	593	690	651	661	11.5%
3	**Transmission & Distribution**	9,963	10,184	10,607	12,034	20.8%
4	**Customer Service**	4,711	3,761	4,827	5,599	18.8%
5	**Administration & General**	15,157	13,667	17,216	16,139	6.5%
6	**Total O&M Expenses**	32,092	30,062	34,991	36,293	13.1%

Notes:

1. *Functional groupings conform to the Uniform System of Accounts for Electric Utilities, as amended for FortisBC by certain BCUC Orders.*
2. *The values presented in this table represent a revision of similar information previously filed. No changes occur in Total O&M Expenses, however a comprehensive review resulted in the reclassification of expenses between functions. These reclassifications were mainly items of expense that had been captured in the Administration and General category but properly belong under various operating functions.*
3. *2004 Administration and General expense includes $1.4 million in severance costs related to the change in ownership.*
4. *2004 and 2005 Transmission and Distribution costs include Brilliant Terminal Station rental fees.*

Total O&M expense is forecast to be $36.3 million in 2005. This represents a $4.2 million, or 13.1 percent, forecast increase over actual O&M expense for 2002. However, on a per-customer basis, and adjusted for inflation, O&M expenses have remained stable, as demonstrated in Table 8.2 B. The 2005 O&M expense forecast represents the prudent operating requirements of the utility. The components and underlying drivers of increases in O&M expense are addressed throughout the remainder of this section.

Table 8.2 B
O&M Expense per Customer

	Actual 2002	Actual 2003	Forecast 2004	Forecast 2005	Increase (Decrease) 2005 vs 2002
O&M Expense ($000)	32,093	30,062	34,991	36,293	13.1%
Average Number of Customers	89,890	91,736	93,953	96,267	7.0%
Expense per Customer ($)					
Nominal	357	328	372	377	5.7%
Inflation-adjusted (BC CPI) (2002 = 100)	357	321	356	354	(- 0.7%)

2.1 Generation Expense

FortisBC owns, operates and maintains four hydroelectric generation plants, which produce approximately 50 percent of the energy and 34 percent of the capacity necessary to meet existing customer demand. The low embedded cost of power from these generating facilities is a significant benefit to FortisBC customers.

Table 8.2.1
Generation Expense
($000s)

	2002	2003	2004	2005	Increase 2005 vs 2002
Actual Expense	1,668	1,760	1,690	1,860	11.5%
Inflation – Adjusted (CPI BC)	1,668	1,723	1,617	1,747	4.8%

As shown in Table 8.2.1, generation O&M expense for 2005 is forecast at $1.9 million, an increase of $0.2 million, or 11.5 percent, over the three year period. On an inflation-adjusted basis, the increase is 4.8 percent.

Generation O&M expense consist primarily of the costs to operate and maintain equipment. The Company's generating facilities range to 60 or more years of age, and the O&M requirements reflect this vintage. An unplanned forced outage due to equipment failure has the potential to attract incremental costs for replacement power at high and potentially volatile rates. A catastrophic failure at any of the plants would have material financial impact and possibly environmental consequences. The operation and maintenance of this aging generation infrastructure will continue to

challenge the Company over the next six years as the Life Extension and Upgrade program (described at Tab 9 of this Application) is concluded.

Power generation operations have experienced significant increased requirements to comply with current dam safety, workplace safety and environmental requirements. Examples are dam integrity monitoring and reporting, potable water regulations, oil spill containment measures and training and a continued increase in our involvement with fisheries related issues in the Kootenay and Columbia River systems.

2.2 System Control and Power Supply

The Power Supply group is responsible for acquiring and aggregating the electricity necessary to serve customer load and for optimizing the availability and reliability of power supply on a real-time, hour-by-hour basis. Duties include monitoring water levels and generation output, negotiating commercial arrangements required on an hour-by-hour basis to meet customer load, monitoring electrical voltages and flows on the FortisBC system, and taking preventive or corrective action to minimize the number and duration of customer outages. This group also manages the System Control Centre which is a 24x7 operation that remotely controls the Generation, Transmission and Distribution Systems.

Table 8.2.2
System Control and Power Supply Expense
($000s)

		2002	2003	2004	2005	Increase 2005 vs 2002
1	Actual Expense	593	690	651	661	11.5%
2	Inflation – Adjusted (CPI BC)	593	676	623	621	4.7%

As shown in Table 8.2.2, the inflation-adjusted increase is modest. These additional funds are directed towards two key areas: the assumption of centralized distribution system monitoring and control activities, and an increased workload resulting from FortisBC's participation in real time power markets. The latter activity requires additional monitoring, reporting and controls in order to achieve an optimal mix of power resources, and hence reduced power purchase costs.

2.3 Transmission & Distribution

The Transmission and Distribution function is responsible for the safe and reliable delivery of electricity to customers.

As shown in Table 8.2.3, Transmission and Distribution operating expenses are forecast to increase by $2.1 million, or 20.8 percent, compared to 2002 expenses. The forecast increased costs are associated with a focus on safety, reliability, customer service and sustainable practices. Specific important categories are described below.

Table 8.2.3
Transmission And Distribution Expense
($000s)

	2002	2003	2004	2005	Increase 05 vs 02
Actual Expense	9,963	10,184	10,607	12,034	20.8%
Inflation – Adjusted (CPI BC)	9,963	9,973	10,151	11,035	10.8%

The Transmission and Distribution department's primary responsibility is to keep the lights on. They are responsible for patrolling the lines, performing minor maintenance and responding to outages on these lines. They are also responsible for construction and maintenance of substations, transmission and distribution lines and connecting new customers.

Line Maintenance

To mitigate declines in reliability associated with aging lines, expenditures in this category are expected to increase slightly. Upgrades of both the Transmission and Distribution network, as outlined in the *2005 - 2024 System Development Plan* ("System Development Plan"), will mitigate upward cost pressures over time. The upgrades will also increase customer reliability and reduce safety concerns.

FortisBC, along with utilities throughout the industry, faces the challenge of an aging workforce in the utility trades. Approximately 30 percent of the Company's line forces will be eligible for retirement within the next five years and high demand for

this skilled work force is expected to cause further attrition in 2005. The Company will increase its focus on its apprenticeship program to combat the expected turnover in the long term. As the time for an apprentice to become fully qualified is typically five to ten years, the Company is also planning to increase the number of journeyman to supplement the apprentice hiring, as well as to mitigate the expected attrition. Operating expenditures will increase marginally as the majority of incremental positions will be working on capital construction.

Vegetation Management

Brushing is a significant component of Transmission and Distribution line maintenance expenditures. FortisBC takes an integrated approach to minimize costs, maximize reliability and reduce public safety hazards. The Company continues to improve its vegetation management program, focusing on controlling tree growth under or near power lines to ensure adequate clearances. This minimizes public and worker safety hazards, tree-related fires and the occurrence of customer outages. Regular surveys are conducted to determine the physical location of hazard trees and general brush clearance locations. Wherever possible, vegetation that could grow or fall into FortisBC lines is removed or, where removal is not possible, problem vegetation is dealt with using proven arboricultural methods.

The Company adapts its brushing program annually with consideration of cycle times, seasonal weather anomalies (fire season) and permit requirements. Vegetation management expenditures fell partly as a result of a ban on backcountry industrial work in the summer and fall of 2003. To recover from 2003, brushing activity increased in 2004. Forecast 2005 brushing activity is comparable to the level of activity prior to 2002, and is likely to remain at this level in the next few years.

New initiatives planned for 2005 include the use of the Company's mapping system to notify property owners and customers of upcoming brushing.

Substation Maintenance

Substations contain power transformers, breakers and ancillary equipment that control the supply of electricity to customers. This equipment is energized at high voltages, so safety measures to protect the public and workers are essential. Substation expenses include the costs of the operation and maintenance of the Company's substations, including the cost of materials and supplies incurred in connection with the inspection and maintenance of substation equipment. Sixty-five percent of the protective relays used for equipment and human safety are electromechanical, and at nearly 70 years of age, are two technological generations older than the current relay equipment. The age of the substation plant is a significant influence on the maintenance program. This deficiency is addressed through the programs defined in the System Development Plan.

More proactive testing of oil-filled equipment will provide advance warnings of failures that are likely to result in costly outages. This testing along with thermal scanning and completion of the scheduled maintenance plan will enable the Company to repair or replace deteriorating equipment on a planned basis, thereby avoiding more costly emergency repairs while also reducing customer outages.

Maintenance expenditures for 2005 will be higher than those seen in 2004, but consistent with historical levels. Maintenance levels in 2004 were lower than previous years as maintenance crews were deployed to support the substations under construction.

Also included in Transmission and Distribution expenses are the facility rental charges of approximately $3.2 million for the Brilliant Terminal Station constructed in 2003 (see Table 8.2.6, line item Rental of Transmission and Distribution Facilities).

2.4 Customer Service

Customer Service processes include direct customer contact (call center), billing and account management, collections, and management of Key Customer relationships. Only the last item is now resident within the service area. During 2005, FortisBC will undertake several significant initiatives to improve customer service, including: establishing a customer contact centre in Trail, re-formatting of customer bills, and increasing billing accuracy. These plans are described in detail in the Transition Plan in Tab 10 and will serve to explain the change in operating cost.

Table 8.2.4
Customer Service Expense
($000s)

	2002	2003	2004	2005	Increase 2005 vs 2002
1 Actual Expense	4,711	3,761	4,827	5,599	18.8%
2 Inflation – Adjusted (CPI BC)	4,711	3,683	4,617	5,260	11.7%

As indicated in Table 8.2.4, Customer Service expenses are forecast to increase by $0.9 million, or 18.8 percent, compared to 2002 expenses.

2.5 Administration & General

This function includes the costs of support services such as Information Technology, Procurement, Materials Management, Fleet Services, and Human Resources. It also includes corporate costs associated with Finance and Accounting, Regulatory and Legal Services, and Executive Management.

Table 8.2.5
Actual And Inflation Adjusted/Administration and General Expense
($000s)

		2002	2003	2004	2005	Increase 2005 vs 2002
1	Actual Expense	15,157	13,667	17,216	16,139	6.5%
2	Inflation – Adjusted (CPI BC)	15,157	13,383	16,475	15,162	0.0%

As shown in Table 8.2.5, administration and general operating expenses are forecast to increase approximately 6.5 percent or $1.0 million compared to 2002. Some of the more significant cost pressures that have faced this group include increased insurance costs, increased accounting and treasury costs associated with internal and external audits, and increased reporting requirements due to the issuance of public debt.

Wherever possible, the Company will seek opportunities to reduce expense. In 2005, Fleet Services intends to reduce its O&M expense through the buy-out of a number of vehicle leases. The operating impact of this decision is an expense reduction of approximately $1 million, and will benefit customers through lower rates over the life of the assets. The associated vehicle purchase costs, and an analysis of the lease-buy decision, are included in the 2005 Capital Plan at Tab 9. Also the Company was able to participate in the Fortis Inc. insurance program that has reduced insurance by approximately $0.7 million from the cost forecast in the 2004 Revenue Requirement.

2.6 Labour

Table 8.2.6 details total Operating expenses for the major cost categories of labour, contracted manpower, and other significant components.

Table 8.2.6
Operating and Maintenance Expense
($000s)

		Actual 2002	Actual 2003	Forecast 2004	Forecast 2005	Increase 05 vs 02
1	Labour	20,513	19,072	21,037	22,696	10.6%
2	Contracted Manpower	4,324	4,255	4,772	5,199	20.2%
3	Total Operating Labour	24,837	23,327	25,809	27,895	12.3%
4	Rental of T&D Facilities	239	239	3,215	3,318	1,288.3%
5	(TeckCominco & Brilliant Terminal Station)					
6	Materials	1,692	705	820	504	(70.2)%
7	Vehicle Expenses	1,924	831	1,269	648	(66.3)%
8	Uncollectable Accounts	951	438	1,259	445	(53.2)%
9	Insurance	844	1,757	1,870	1,661	96.8%
10	Capitalized Overhead	(2,175)	(2,583)	(2,874)	(3,396)	56.1%
11	Other Operating Expenses	3,781	5,348	3,623	5,218	38.0%
12	Total Operating Expenses	32,093	30,062	34,991	36,293	13.1%

As shown, the most significant increases occur in labour, rental of transmission and distribution facilities, and insurance costs. These increases are partially offset by reductions in material and vehicle expenses.

Labour costs are forecast to increase by $2.2 million, or 10.6 percent over 2002, reflecting primarily wage escalation. Contracts with the Company's two unions expire after year end 2005.

2.7 Contracted Manpower

Contracted Manpower costs are forecast to increase $0.9 million, or 20.2 percent over 2002. Contracted manpower covers contractors, consultants, auditors, (including contracts with FortisAlberta for the ongoing provision of metering information services), and for temporary customer contact center services until mid 2005. Other contracted services purchased by the Company include brushing, bill printing and payroll cheque processing.

2.8 Materials

Materials costs are forecast to decrease by $1.2 million, or 70.2 percent, from 2002. The materials cost fluctuations are primarily due to the nature of work being performed from year to year. These costs are directly correlated to the timing of major maintenance projects. In years where the Company has focused on capital construction projects the costs would be lower. This is consistent with the capital expenditure programs in recent years and will likely continue in 2005 due to the large capital program forecast for the period.

2.9 Vehicle Expenses

Vehicle costs are forecast to decrease by $1.3 million, or 66.3 percent, from 2002. This decrease is partly the result of a decision to purchase a number of vehicles and was outlined earlier in this Section.

2.10 Uncollectable Accounts

Uncollectable accounts are forecast to be $0.4 million in 2005. This amount represents approximately one-quarter of one percent of revenues from electricity sales. These costs fluctuate and are generally influenced by local economic conditions.

2.11 Insurance

Insurance costs are forecast to increase by $0.8 million, or 97 percent, from 2002. Insurance cost for 2004 will be lower than approved in the 2004 Revenue Requirement. This saving is flowed through to reduce customer rates in 2005. Insurance costs include general property, liability, vehicle, and fire suppression insurance. Insurance costs have increased primarily as a result of events such as 9/11 in the United States, accounting scandals and the general poor performance of financial markets. The large impact of these events on 2003 insurance expense is evident in Table 8.2.6. For 2005 the Company has been able to gain access to lower cost insurance premiums through its affiliates and to decrease insurance expense

below the 2003 level. Offsetting this reduction is the B.C. government's introduction of a fire suppression insurance premium in 2004 of $0.2 million.

2.12 Capitalized Overhead

Capitalized overhead is forecast to increase by $1.2 million, or 56.1 percent, over the three year period. Capitalized overhead has increased primarily because of the large capital expenditure programs in recent years.

2.13 Other Operating Expenses

Other operating expenses are forecast to increase by $1.4 million, or 38.0 percent, over the three year period. Major components of this increase are software licenses and telecommunications related to the new call centre, and the Trail and Kelowna office leases. Also included in this category are miscellaneous office, training, travel and other expenses.

2.14 Forecast Other Income

FortisBC's 2005 revenue requirement forecast is reduced by non-tariff revenues ("Other Income"). These revenues include apparatus and facilities rentals, distribution pole space rentals and the sublease of office space in the Trail office. Other Income also includes contract revenue associated with the operation and maintenance agreements with TeckCominco's Waneta and Columbia Power Corporation's Brilliant generating stations. The premium on labour and material transfers associated with non-regulated contracts is also included in other revenue.

Table 8.2.14 summarizes other income from 2002 to forecast 2005.

Table 8.2.14
Actual And Forecast Other Income
($000s)

		Actual 2002	Actual 2003	Forecast 2004	Forecast 2005
1	Apparatus and Facilities Rental	2,442	2,337	2,311	2,102
2	Contract Revenue	2,796	2,026	1,155	1,154
3	Miscellaneous Revenue	530	603	553	529
4	Investment Income	148	284	154	-
5	Total	5,916	5,250	4,173	3,785

The decrease in Other Income from 2002 to 2005 is mainly attributable to decreased revenue from third party contracts.

3. Rate Base Costs

The Company's total investment in plant and equipment, plus an allowance for working capital, is known as the Rate Base. The components of Rate Base are detailed in Tab 6.

The Company's investment in Rate Base is financed by a combination of debt and equity. The total of the Company's debt and equity is termed the invested capital, and the percentage of each of these components is referred to as the Company's capital structure. FortisBC's forecast capital structure is 40 percent equity and 60 percent debt. The prudent relative share of debt and equity is discussed at length in Tab 5 and summarized in a subsequent section below.

3.1 Cost of Debt

Tables 8.3.1 A and Table 8.3.1 B summarize FortisBC's weighted debt and cost of debt for forecast 2004 and 2005 respectively.

Table 8.3.1 A
Forecast Interest – 2004
($000)

		Rate	Year End Balance	Annual Weighted Balance	Annual Weighted Interest
1	***Long-Term Debt - 2004***				
2	Series E due December 1, 2009	11.00%	6,750	7,438	818 (1)
3	Series F due October 16, 2012	9.65%	15,000	15,000	1,448
4	Series G due August 28, 2023	8.80%	25,000	25,000	2,200
5	Series H due February 1, 2016	8.77%	25,000	25,000	2,192
6	Series I December 1, 2021	7.81%	25,000	25,000	1,953
7	Series J Due July 31, 2009	6.75%	50,000	50,000	3,375
8	Series 04-1 Due November 30, 2014	5.48%	140,000	11,667	640 (2)
9		7.94%	286,750	159,105	12,626
10	***Short-Term Debt - 2004***				
11	Credit Facility and related party debt	5.49%	36,902	126,624	6,950
12	***Total Interest - 2004***				19,576

13 *(1) Face value of this debt was outstanding for only 11 months of the year. A sinking fund payment of $750,000 was made in December of each respective year.*

14 *(2) Includes amortization of debt discount of $0.05 million.*

Table 8.3.1 B
Forecast Interest – 2005
($000)

		Rate	Year End Balance	Annual Weighted Balance	Annual Weighted Interest
1	***Long-Term Debt - 2005***				
2	Series E due December 1, 2009	11.00%	6,000	6,688	736 [(1)]
3	Series F due October 16, 2012	9.65%	15,000	15,000	1,448
4	Series G due August 28, 2023	8.80%	25,000	25,000	2,200
5	Series H due February 1, 2016	8.77%	25,000	25,000	2,192
6	Series I December 1, 2021	7.81%	25,000	25,000	1,953
7	Series J Due July 31, 2009	6.75%	50,000	50,000	3,375
8	Series 04-1 Due November 30, 2014	5.485%	140,000	140,000	7,677[(2)]
9	Series 05-1 (forecast)	6.50%	75,000	31,250	2,031
10		6.80%	361,000	317,938	21,613
11	***Short-Term Debt - 2005***				
12	Credit Facility	5.01%	39,234	26,949	1,350
13	***Deemed Debt – 2005***	6.50%		$4,456	290
14	***Total Interest - 2005***				**23,253**

15 *(1) Face value of this debt was outstanding for only 11 months of the year. A sinking fund payment of $750,000 was made in December of each respective year.*

16 *(2) Includes amortization of debt discount of $0.05 million.*

1

2 As shown in these tables, the majority of FortisBC's debt costs are associated with
3 already-existing long-term debt. The forecast weighted average of long-term debt
4 outstanding for 2004 is $159.1 million with an average cost of borrowing of 7.94
5 percent. The increase in average debt outstanding for the year was the result of a new
6 $140 million long-term debt issue. On November 30, 2004, the Company will issue
7 ten-year $140 million in Series 04-1 unsecured debentures as approved by
8 Commission Order G-77-04, at a coupon rate of 5.48 percent with an effective rate of
9 5.485 percent. This $140 million public issue of long-term debt will substantially
10 reduce the average cost of borrowing, to the immediate and long-term benefit of
11 customers.

12

13 The forecast weighted average of long-term debt outstanding for 2005 is $317.9
14 million with an average cost of borrowing of 6.80 percent. The increase in average

debt outstanding for 2005 is associated with the $140 million issue in November 2004 and the planned issue of $75 million in unsecured debentures forecast for August 2005, with an assumed interest rate of 6.50 percent.

FortisBC raises its debt capital on a "stand alone" basis, meaning that its creditworthiness and consequently the cost of debt is not influenced by the business and financial risks associated with its parent or affiliated companies. Over the long term the stand-alone debt financing model will contribute to continued access to debt at reasonable terms, providing greater rate stability and transparency for customers.

The estimated weighted average of short-term debt outstanding for 2004 is $126.6 million with an average cost of borrowing of 5.49 percent. In 2005 the weighted average short-term debt outstanding is forecast to be $26.9 million with an average cost of borrowing of 5.01 percent. The assumed average cost of short-term borrowing is based on forecast prime rates, which provides a reasonable estimate of future borrowing costs under FortisBC's $100 million revolving credit facility and its $10 million overdraft credit line.

3.2 Return on Common Equity

The return on equity is based on the recommendations of FortisBC's expert witness Ms. Kathleen McShane (see Tab 5). Ms. McShane recommends that the forecast return on equity for FortisBC for 2005 be established based on the following:

Table 8.3.2 A
Expert Evidence – Recommendation Summary

Low risk benchmark utility return on equity set by the Commission	9.03% (1)
Risk premium upward adjustment of (Target Range 50-100 Basis Points)	0.75% (2)
Recommended Return on Equity	9.78%

(1) Low risk BCUC adjustment as provided in BCUC Letter No. L-55-04 dated November 18, 2004.

(2) Ms. McShane recommends that the additional risk premium is necessary given FortisBC's higher than average business risk and financial risk

Ms. McShane's recommendation for a 75 basis point upward adjustment on risk premium from the low risk benchmark utility is based on her assessment of FortisBC's business risk and financial risk. In particular Ms. McShane commented on the credit rating agencies' (DBRS and Moody's) assessments of FortisBC and their concern with FortisBC's low interest and cash flow coverages.

Ms. McShane further recommended a capital structure containing 40 percent common equity.

Return on Common Equity is calculated using the average common equity for the year. Average Common Equity is the sum of weighted average of common share equity and a simple average of retained earnings. A more detailed calculation of Average Common Equity is shown in Table 8.3.2 B, as reproduced from Schedule 4 of Tab 4.

Table 8.3.2 B

Actual And Forecast Common Share Equity

($000s)

		Actual 2002	Actual 2003	Forecast 2004	Forecast 2005
1	Share Capital	61,500	76,500	76,500	106,500
2	Retained Earnings	99,846	104,855	114,487	126,478
3	COMMON EQUITY - OPENING				
4	BALANCE	161,346	181,355	190,987	232,978
5	Less: Common Dividends	(9,639)	(10,618)	(10,587)	(8,000)
6	Add: Net Income	14,630	20,250	22,578	22,779
7	Shares Issued	15,000	-	30,000	-
8	Closing Balance	181,337	190,987	232,978	247,757
9	SIMPLE AVERAGE	171,341	186,171	211,982	240,367
10	Adjustment for Share Issue	6,223	-	7,603	-
11	Deemed Equity Adjustment	-	-	-	(7,471)
12	COMMON EQUITY - AVERAGE	177,564	186,171	219,585	232,896

Note: (1) Source for actuals-Annual Reports filed with BCUC

The Company expects that for 2005 its actual average equity will exceed the recommended 40 percent. As a result, in order not to overstate allowed revenue requirement, the 2005 forecast average common equity has been reduced by $7.5 million (see line 15), in order to bring the equity component of average invested capital to a value equal to 40 percent of Rate Base. Return on Common Equity is shown as Net Income at Line 10 of Table 8.3.2 B.

3.3 Return on Capital

Schedule 5 of Tab 4 summarizes the components of return on capital and return on utility rate base, and is reproduced in Table 8.3.3 below. It includes both the average invested capital used to fund Rate Base and the return on the components of that invested capital.

Table 8.3.3
Actual And Forecast Return On Capital
($000s)

		Actual 2002	Actual 2003	Estimate 2004	Existing Rates Forecast 2005	Proposed Rates Forecast 2005
1	Secured Debt & Senior Unsecured	121,962	148,192	159,105	317,938	317,938
2	Proportion	32.10%	33.82%	31.73%	54.61%	54.61%
3	Embedded Cost	8.43%	8.16%	7.94%	6.80%	6.80%
4	Cost Component	2.71%	2.76%	2.52%	3.71%	3.71%
5	Return	10,283	12,087	12,626	21,613	21,613
6						
7	Unsecured Debt & Bank Loans	80,473	103,814	122,815	26,949	26,949
8	Proportion	21.18%	23.69%	24.49%	4.63%	4.63%
9	Embedded Cost	6.11%	6.77%	5.66%	5.01%	5.01%
10	Cost Component	1.29%	1.61%	1.39%	0.23%	0.23%
11	Return	4,917	7,033	6,950	1,350	1,350
12						
13	Deemed Debt	-	-	-	4,456	4,456
14	Proportion	-	-	-	0.77%	0.77%
15	Embedded Cost	-	-	-	6.50%	6.50%
16	Cost Component	-	-	-	0.05%	0.05%
17	Return	-	-	-	290	290
18						
19	Common Equity	177,564	186,171	219,585	232,896	232,896
20	Proportion	46.73%	42.49%	43.79%	40.00%	40.00%
21	Embedded Cost	8.24%	10.88%	10.28%	7.64%	9.78%
22	Cost Component	3.85%	4.62%	4.50%	3.05%	3.91%
23	Return	14,630	20,250	22,578	17,787	22,779
24						
25	TOTAL CAPITALIZATION	379,999	438,177	501,505	582,239	582,239
26						
27	Earned Return	29,830	39,370	42,154	41,040	46,038
28	RETURN ON CAPITAL	7.85%	8.98%	8.41%	7.05%	7.91%
29						
30						
31	RATE BASE	382,503	442,688	494,712	582,239	582,239
32	RETURN ON RATE BASE	7.80%	8.89%	8.52%	7.05%	7.91%
33						
34	Note: Source for actuals Annual Reports filed with BCUC					

The utility's Average Common Equity is reduced to the proposed 40 percent of Rate Base for purposes of Revenue Requirement. This results in a shortfall in invested capital compared to Rate Base; the shortfall is deemed as debt with a forecast rate equal to the marginal cost of long term debt for 2005, assumed to be 6.50 percent.

3.4 Income Taxes

Income and Capital Taxes are assessed by the Provincial and Federal governments. Table 8.3.4 A sets out the calculation of capital and income taxes for forecast 2004 and forecast 2005, and is reproduced from Schedule 3 in Tab 4.

The items listed in the Table have been calculated elsewhere in this Application, with the exception of Capital Cost Allowance and Large Corporation Capital tax, both of which are described below.

Table 8.3.4 A
Forecast Income Tax
($000)

	Forecast 2004	Forecast 2005
UTILITY INCOME BEFORE TAX	50,133	53,004
Deduct:		
Interest on Rate Base	19,576	23,253
ACCOUNTING INCOME	30,557	29,752
Adjustments to Accounting Income to arrive at Taxable Income		
Deductions		
Capital Cost Allowance	18,998	22,781
Capitalized Overhead	2,874	3,396
AFUDC	2,394	3,102
Net taxable additions to Deferred Charges	3,285	3,0033
Incentive adjustment	1,494	1,901
All Other (net effect)	584	(458)
	29,629	33,725
Additions		
Amortization of deferred charges	1,847	1,911
Depreciation	15,007	16,855
	16,854	18,766
TAXABLE INCOME	17,782	14,793
Tax Rate	35.62%	35.62%
Taxes Payable	6,334	5,269
Power Smart Tax Impact	711	653
Large Corporation capital tax	884	950
Provision for Tax Audits	50	100
REGULATORY TAX PROVISION	7,979	6,972

Capital Cost Allowance shown in Table 8.3.4 B, is the amount of “depreciation” allowed as a deduction from income under the Income Tax Act.

Table 8.3.4 B
Forecast Capital Cost Allowance
($000s)

	Class		CCA Rate	Forecast 2004	Forecast 2005
1	01	Buildings - Post 1987	4%	10,457	12,852
2	02	Plant - Pre 1987	6%	1,916	1,801
3	03	Buildings - Old	5%	92	87
4	06	Buildings - Frame	10%	2	2
5	08	Furniture, Fixtures and Tools	20%	835	835
6	10	Vehicles and Computers	30%	1,447	1,764
7	12	Computer software	100%	670	215
8	13	Leasehold Improvements	13%	52	52
9	17	Generation	8%	3,528	5,173
10				18,999	22,781

3.5 Capital Tax

The Company is liable for payment of the federal Large Corporation Capital Tax. The statutory rate in 2004 was 0.2 percent and was reduced to 0.18 percent on paid up capital greater than $25.0 million.

The Company was previously liable for payment of the BC Capital Tax. The province eliminated the BC Capital Tax in 2002. An appeal of previous years' capital tax payments is pending, and may result in a refund of taxes previously paid. It is not known when this appeal will proceed.

3.6 Property Tax

Property Taxes are based on the value of utility and general plant as determined by the BC Assessment Authority. Property tax rates are set by local taxation authorities. Table 8.3.6 provides a summary of the Property Tax in revenue requirement from 2002 to 2005 Forecast.

Table 8.3.6
Forecast Property Taxes
($000s)

		2004 Forecast			2005 Forecast		
		Rural Tax	**Urban Tax**	**Total**	**Rural Tax**	**Urban Tax**	**Total**
1	**Class**						
2	Building & Land	57	477	534	58	487	545
3	Distribution	805	701	1,506	829	723	1,552
4	Generation	2	2,568	2,570	3	2,912	2,915
5	Substation	573	1,695	2,268	611	1,810	2,421
6	Transmission	2,401	857	3,258	2,518	899	3,417
7		3,838	6,298	10,136	4,019	6,831	10,850

The Company requests that a deferral account be established to record any difference between the 2005 forecast of Property Taxes and actual Property Taxes paid. The Company has limited control over the amount of Property Taxes, although it has been successful in appealing assessments in the past. These amounts have been to the benefit of customers, as property taxes have been treated as a flow through to rates for several years, including the years immediately prior to the PBR and Negotiated Settlement Agreements established in 1996.

3.7 Depreciation

Depreciation and Amortization Expense is summarized in Table 8.3.7 below.

Table 8.3.7
Actual and Forecast Depreciation and Amortization Expense
($000s)

	2002	**2003**	**2004**	**2005**
Depreciation Expense	14,344	12,340	15,007	16,855
Amortization Expense	0	2,297	1,847	1,911
Total Depreciation and Amortization	14,344	14,637	16,854	18,766

Detailed calculations can be found in Tab 6, Rate Base.

3.8 AFUDC

Allowance for Funds Used During Construction ("AFUDC")

AFUDC represents the cost of capital incurred by the Company while assets are under construction. In recognition that customers should contribute only to assets that are "used and useful" that is, only when assets are in service, AFUDC is deducted from Revenue Requirements and applied to capital, to be recovered through Depreciation Expense over the life of the asset.

The application of AFUDC is neutral with respect to customer rates and to income when the AFUDC rate is equal to the weighted return on equity plus the after tax cost of debt. In 2004, AFUDC was applied at a rate (8.0 percent) agreed to in the 2004 Revenue Requirements Negotiated Settlement Agreement. For 2005, the appropriate AFUDC rate is 6.5 percent (rounded), as calculated in the Table 8.3.8.

Table 8.3.8

Calculation of the AFUDC Rate for 2005

1	**Debt**	
2	Component of Rate Base	60.00%
3	Weighted Average Cost of Debt	6.66%
4	**Equity**	
5	Component of Rate Base	40.00%
6	Return on Equity	9.78%
7	**Income tax rate – 2005**	35.62%
8	**Calculation:**	
9	Debt component x Interest rate after tax	
10	60% x 6.66% x (1-35.62%)	2.57
11	Plus Equity component x Return on Equity	
12	40% x 9.78%	3.91
13	**AFUDC Rate**	6.48%

4. Incentive Adjustment

Since 1996, the Company and its stakeholders have agreed to the sharing of variances from negotiated targets for such items as operating expenses and non-tariff revenue, and to the flow-though treatment of certain other expense items. In addition, sharing mechanisms relating to market prices for power purchase expense and to the provision of energy efficiency services have benefited both the Company and its customers.

4.1 Adjustments to 2004 and 2005

The incentive mechanisms first established via Commission Order G-73-96 have been amended through subsequent orders including Order G-134-99 and most recently Order G-38-04. These various sharing mechanisms serve to reduce rates in 2004 and 2005 as shown in Table 8.4.1 below.

Table 8.4.1
Adjustments to 2004 and 2005 Revenue Requirements

		Adjustment to Revenue Requirements in:	
		2004	2005
		($000s)	
1	Operating Incentives		
2	2003 Incentive	(1,663)	
3	Preliminary 2004 Incentive	(175)	175
4	Power Purchase Incentives		
5	2003 Incentive	(1,105)	
6	Preliminary 2004 Incentive	2,076	(2,076)
7	Prior Year Incentives	(262)	
8	Total Adjustment to Revenue Requirements	(1,129)	(1,901)

4.2 Operating Expense Incentives

The operating expense incentive mechanism is premised on an equal, symmetrical utility/customer sharing of variances from target costs for controllable O&M expenses, for non-tariff revenue, and for financing variances attributable to efficiencies in capital spending for certain categories of capital work.

Cost categories that are largely beyond the control of management flow to customers through the incentive calculation.

Table 8.4.2 sets out the calculation of the Preliminary Incentive Adjustment, based on a forecast to year-end, for 2004. The Final 2004 Incentive Adjustment, based on full year results, may result in small variations to the incentive and hence to future customer rates.

Table 8.4.2
Preliminary 2004 Incentive Adjustment

	2004 Target Cost	Current Estimate	Variance	Customer Shared Percentage	Adjustment to Rates
	($000s)				($000s)
Shared Components					
OPERATING EXPENSES					
Brushing & Substation Mtce	2,100	2,350	250	50%	125
Other O&M	27,834	30,179	2,345	0%	-
Other Income	(3,822)	(4,061)	(239)	50%	(119)
FINANCING COSTS					
Cost of Capital – Base Capital (Volume Variance)	-	-	-	n/a	
	26,112	**28,468**	**2,356**		**6**

	2004 Target Cost	Current Estimate	Variance	Customer Shared Percentage	Adjustment to Rates
	($000s)				($000s)
Flow-through Components					
OPERATING EXPENSES					
Extraordinary O&M	6,085	5,336	(749)	100%	(749)
Extraordinary Other Income	(78)	(112)	(34)	100%	(34)
Capitalized Overhead	(2,038)	(2,874)	(836)	100%	(836)
Wheeling	3,822	3,785	(37)	100%	(37)
Water Fees	7,328	7,376	48	100%	48
FINANCING COSTS					
Cost of Capital - Base Capital (Rate Variance)	-		-	n/a	-
Amortization Expense	16,805	16,854	49	100%	49
AFUDC	(3,098)	(2,394)	704	100%	704
TAXES					
Income Tax	7,273	7,981	708	100%	708
Property Tax	9,820	10,136	316	100%	316
	45,919	**46,088**	**169**		**169**
PRELIMINARY 2004 ADJUSTMENT					175

The inflation and customer variables used to determine the target costs for calculating the variances, and the calculation of the O&M and "Base Capital" targets for incentive purposes, are included in Appendix A of this Section. Also shown are the components of "Extraordinary O&M" expense, which is a flow-through component.

4.3 Power Purchase Incentives

The Power Purchase Incentive mechanism was introduced to permit sharing of market price risks and opportunities, and results in a benefit to customers of $2.2 million for 2004. Customers will also benefit from a reduction in the April 1, 2004

interim rate increase granted to BC Hydro (reduced from 7.23 percent to 4.85 percent).

The mechanism itself, and the circumstances underlying the 2004 Power Purchase Incentive, are described in Section Tab 7, Section 7.3.

4.4 Energy Management Incentives

FortisBC also earns incentives arising from its Demand Side Management program. These initiatives, and the incentives, are described in Tab 10 of this Application. The incentive for 2003 was $69,000, and is forecast to be $33,000 in 2004.

4.5 Proposal for Sharing Mechanisms for 2005

FortisBC is proposing to retain certain aspects of the existing sharing mechanisms in 2005. The Power Purchase Incentive and the Demand Side Management Incentive Mechanisms have been shown to be effective and desirable to customers and the Company. No changes are proposed to either mechanism for 2005.

With respect to the operating incentive, it has been recognized by all parties that changes to the existing mechanism are required. Given the transitional nature of its operations in 2005, FortisBC is proposing a simple asymmetric sharing of potential savings in net operating expenses. That is, to the extent that 2005 O&M expenses, net of capitalized overheads, are lower than the forecast in this Application, the variance will be shared equally with customers.

As in the existing mechanisms, the customer portion of these incentives will be deferred for recovery in 2006.

APPENDIX A Detail of Incentive Adjustment Calculations

Operating Incentives - 2004 Targets

Target Cost Variables

		Normalized 2003	Current Estimate Normalized 2004	Notes
1	**Cost Drivers**			
2	Number of Direct Customers (Year-End)	92,753	95,153	*(1)*
3				
4	Number of Direct Customers (Simple Average)	91,736	93,953	
5	Customer Growth (Simple Average)	2.0%	2.4%	
6	**Base Cost Escalators**			
7	CPI – Canada	2.8%	2.0%	*(2)*
8				
9	CPI - British Columbia	2.1%	2.3%	*(3)*
10				
11	Notes:			
12	*(1) 2005 Load and Customer Forecast (Tab 7.3)*			
13	*(2) Consensus Economics Forecast, November 2004*			
14	*(3) B.C. Ministry of Finance, B.C. Economic Review and Outlook, September 2004*			

Operating Expense Targets

			2003	2004	
			Target	Target	Actual
1	**Operating & Maintenance**				
2	Cost Driver	Direct customers	91,736	93,953	
3	Base Cost	($ 1998)	305.30	305.30	
4	Base Cost Escalator	CPI BC (Cumulative)	1.095	1.120	
5	Productivity Improvement Factor (Cumulative)		0.932	0.932	
6			28,564	29,934	32,529
7					
8	**Extraordinary O&M**		1,072	6,085	5,336
9					
10	**Capitalized Overhead**				
11	Cost Driver	Capital exp. excl. DSM	53,220	81,770	-
12	Base Cost		4.0%	2.5%	
13	Base Cost Escalator	None			
14			(2,214)	(2,038)	(2,874)
15					
16	**Wheeling**				
17	Cost Driver	MW Months	2,199	2,259	
18	Base Cost	(weighted average)	1,689	1,692	
19	Base Cost Escalator	BC Hydro rate	1.000	1.000	
20			3,715	3,822	3,785
21					
22	**Water Fees**				
23	Cost Driver	GW.h	1,504	1,518	-
24	Base Cost	(includes upgrade)	4,967	4,827	
25	Base Cost Escalator	BC Hydro rate	1.000	1.000	
26			7,470	7,328	7,376
27					
28	**Other Income**				
29	Cost Driver	Direct customers	91,736	93,953	
30	Base Cost	($ 1998)	(35.44)	(35.44)	
31	Base Cost Escalator	CPI Canada (Cumulative)	1.126	1.148	
32			(3,661)	(3,822)	(4,061)
33					
34	**Extraordinary Income**		(75)	(78)	(112)
35					
36	**Total Operating Expenses**		$ 34,870	$ 41,222	$ 41,979

Extraordinary O&M Expense

		Actual 2003	Target 2004	Current Estimate 2004
			($000s)	
1	Head Office Lease Payments	104	373	373
2	Pension Expense Adjustments	773	773	773
3	Wide Area Network Lease	309	250	252
4	Lease Savings - Kelowna Consolidation	(114)	(156)	(156)
5	Subtotal - 2003 Settlement Agreement	1,072	1,240	1,242
6	Incremental Pension Expense		351	(90)
7	Incremental Insurance Expense		1,479	1,206
8	Transmission Facilities Leases			
9	BTS Sustaining Capital Charge		2,314	2,314
10	BTS Operating Expenses		855	855
11	TeckCominco Facilities		(154)	(191)
12	**Total Extraordinary O&M Expenses**	**1,072**	**6,085**	**5,336**

Extraordinary Other Income

		Actual 2003	Target 2004	Actual 2004
1	Head Office Lease Receipts	$ (271)	$ (78)	$ (78)
2	Third Party Penalty Revenue	-		(34)
3	**Total Extraordinary Income**	**$ (271)**	**$ (78)**	**$ (112)**