FORTISBC

2005 Revenue Requirements

10. Regulatory Policy

10.1 Demand Side Management

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1. Introduction

1.1 Regulatory and Accounting Treatment for Demand Side Management ("Demand Side Management") Expenditures

Since 1989, the Company has sought and received approval from the British Columbia Utilities Commission ("Commission") for its Energy Management (Demand Side Management) service by filing Electric Tariff Sheets known as Rate Schedule 90. These sheets can be found at Appendix A of this Tab.

Under Commission order, the required accounting treatment is to capitalize all expenditures (except as discussed below) associated with the Energy Management service and amortize them at the straight-line rate of 12.5 percent subject to certain key conditions:

- That Demand Side Management costs capitalized be net of income taxes.
- The Company is to file Semi-Annual Demand Side Management reports.
- For economic evaluations of Demand Side Management projects, the customer and the Company's cost components shall be added together and tested for a net benefit with avoided marginal costs of delivery (The Total Resource Cost Test or "TRC").

In addition to evaluating its programs by the TRC the Company, in its semi annual reports, calculates the levelized cost of each program in cents (¢) per kW.h and calculates the rate impact ratio (the RIM). The Company's calculation of the RIM uses industry standard methodology, and does not include, as does BC Hydro's, market transformation as a benefit. BC Hydro's calculations tend to increase the RIM relative to the standard calculation we employ.

Section 3 of this Tab contains a reconciliation of Demand Side Management expenditures compared to the general ledger records, which details the various components of these expenditures.

At Appendix B and C of this Demand Side Management Tab, there are copies of the most recent semi-annual reports for the periods ending December 31, 2003 and June 30, 2004. For both the 2004 and 2003 reports, there is a Financial Results statement that summarizes the Total Resource Cost Test for all Demand Side Management programs at 1.5 and 1.6 respectively.

As part of the Company's PBR mechanism, a Demand Side Management Incentive Committee was formed in 1996 to review Demand Side Management planning and delivery. Section 4 provides a summary of Demand Side Management incentives earned for 2003 and projected for 2004 as a result of exceeding net benefit targets. These targets were established in conjunction with the Demand Side Management Incentive Committee. This incentive mechanism is consistent with the economic test ordered by the Commission.

1.2 Demand Side Management Business Plan

In 2000, the Company completed and filed a Residential conservation potential study and updated its general service and industrial potential studies as part of the formulation of its 1999 – 2004 Demand Side Management Business Plan. This plan is the foundation of our Demand Side Management activities. Based on Demand Side Management results, the plan has proven to be quite robust.

In 2003, the Company commissioned a comprehensive *2003 Demand Side Management Review*. This document, filed with the Commission and the Demand Side Management Incentive Committee was accepted by both as filed. The purpose of this review was to provide a "fresh and comprehensive" assessment of the Company's Demand Side Management strategy.

After the completion of the Company's Resource Plan, we will update and file our Demand Side Management potential study and complete a new plan covering the period 2005-2014. The terms of reference for this update are contained under Appendix D of this tab.

The following section summarizes our Planned 2005 Expenditures which are a one year extension of the 1999-2004 Plan.

2. Planned 2005 Demand Side Management Expenditures

2.1 Summary for 2004 and 2005

Table 10.1.2.1 is a summary of 2004 plan and forecast Demand Side Management costs and energy savings, and plan costs for 2005. The plans for 2004 ($1.814 million expenditure with 14.7 GW.h savings) and 2005 ($1.834 million and 19.1 GW.h) contain similar expenditure levels, but have differences in plan savings that are derived from the 2004 experience and reflected in the 2004 forecast costs and savings.

Forecast expenditures for 2004 ($1.996 million or 10 percent above plan) reflect the impact of a very successful compact fluorescent lighting campaign and a very strong residential building market in 2004. The 2005 plan assumes a strong but somewhat moderated residential sector performance, a fairly stable general service sector performance and an improvement to the industrial sector performance.

Table 10.1.2.1
Total Expenditures and Savings by Section

	Sectors	2004 Plan Costs ($000)	2004 Plan Savings GW.h	2004 Forecast Costs ($000)	2004 Forecast Savings GW.h	2005 PlanCosts ($000)	2005 Plan Savings GW.h
1	Residential	649	4.8	868	10.4	595	8.2
2	General Service	683	8.2	717	9.7	703	9.2
3	Industrial	181	1.7	121	0.9	181	1.7
4	Planning & Evaluation	301	-	290	-	355	-
5	Total	1,814	14.7	1,996	21.0	1,834	19.1

2.2 Proposed Change in Accounting Treatment of Demand Side Management Operating Budget

The current operating budget treatment began in 1989 when the Company initiated its PowerSense energy efficiency program. Prior to that year the Company had an energy conservation budget that was part of the annual operating costs. Under regulatory directive, PowerSense program costs were to be capitalized but rates for the years covered under the 1989 rate application had already been set to include the recovery of the $85,000 conservation operating budget. As a result, the Company was directed to maintain the operating budget. At that time, had these costs also been charged to PowerSense, they would have been recovered twice.

The current operating budget includes one half of the PowerSense engineer's cost equal to $50,000 and an amount of $35,000 amount for advertising. The activities covered under the current Demand Side Management operating budget promote customer awareness of the PowerSense programs and support their delivery through quality assurance reviews by the engineer. As a result we are proposing that these costs be treated in the same way as all other PowerSense costs and be charged to capital.

This change has been incorporated into the 2005 Revenue Requirements and the deferred charges in forecast utility rate base.

2.3 Review of the 2005 Demand Side Management Plan

The 2005 review involves a comparison of the total 2005 plan costs and energy savings and activities compared to the 2004 plan and forecast. As detailed below, the 2005 plan is a one year continuation of our existing resource acquisition strategy, programs, and incentives that have proven successful in previous years.

2.4 Residential Sector

This sector consists of programs for improvements to existing housing stock and a new construction program.

Descriptions of each of the residential programs can be found in the Energy Management Tariff Sheets, approved by the Commission which are found at Appendix A.

Table 10.1.2.4
Residential Expenditures and Savings by Program

	Program	2004 Plan Costs ($000)	2004 Plan Savings GW.h	2004 Forecast Costs ($000)	2004 Forecast Savings GW.h	2005 Plan Costs ($000)	2005 Plan Savings GW.h
1	Home Improvements	274	2.1	184	3.1	213	3.3
2	New Home Construction	375	2.7	684	7.3	382	4.9
3	Total	649	4.8	868	10.4	595	8.2

The Home Improvements category includes the Compact Fluorescent Light ("CFL") program and a housing retrofit program. The Compact Fluorescent Light program plan is $170,000 and 3.1 GW.h representing over 85 percent of the plan cost and savings. This relationship is similar to 2004 forecast and reflects

improved customer awareness of the technology, lower prices and an effective delivery channel involving retail and wholesale trade allies. We will continue with our $5 rebate program as the main incentive in this program.

The New Home Construction category includes all heat pump systems and envelope and lighting upgrades to new construction. Heat pump systems account for $292,000 in plan costs and 4.4 GW.h in savings with envelope upgrades at $70,000 and 0.5 GW.h in savings.

The Heat Pump program incentives involve either rebates or 4.9 percent loans. The 2005 plan cost reflects 2004 experience with 50 percent of program participants choosing the loan option, which is a lower cost component than rebates. The envelope and lighting upgrades to new construction consist of low-E window incentives and lighting kits consisting of ten sample Compact Fluorescent Lamps per residential unit. Multi-unit residential construction was our key market in 2004 and the same is projected for 2005. This market helps us deliver savings at a lower cost than single family housing due to the higher mix of Compact Fluorescent Lighting rebates for exterior and common areas compared to window incentives.

2.5 General Service Sector

Descriptions of each of the General Service programs can be found in the Energy Management Tariff Sheets, approved by the Commission which are found in Appendix A.

This sector consists of programs for improvements to existing facilities or upgrades to higher efficiency levels for new construction in the general service sector. The general service sector consists of non-residential customers and includes offices, retail outlets, hospitals, schools, hospitality and small manufacturing and processing facilities.

Table 10.1.2.5
General Service Expenditures and Savings by Program

	Program	2004 Plan Costs ($000)	2004 Plan Savings GW.h	2004 Forecast Costs ($000)	2004 Forecast Savings GW.h	2005 Plan Costs ($000)	2005 Plan Savings GW.h
1	Building Improvements	453	4.7	419	6.2	471	6.5
2	New Facilities						
3	Construction	230	3.5	298	3.5	232	2.7
4	Total	683	8.2	717	9.7	703	9.2

The Building Improvements category includes lighting upgrades, building retrofits and water handling infrastructure improvements to existing facilities. Technology efficiency measures include envelope, heating ventilation and air conditioning and wastewater and sewage treatment process improvements.

The Lighting upgrade plan is $207,000 and 3.0 GW.h, the building retrofits plan is $203,000 and 2.7 GW.h and the water handling infrastructure plan is $61,000 and 0.75 GW.h. The cost and savings relationship is based on the 2004 forecast costs and savings. It reflects an improvement in the way we do business by utilizing energy management committees to help us identify more opportunities and a reduction in the incentive rate paid for lighting technology upgrades.

The New Facilities Construction category includes the same technology improvement measures as those applied to the existing facility stock. The cost and savings relationship is based on 2004 forecast costs and savings. We have estimated a small decrease in the level of new construction within the General Service sector for 2005.

2.6 Industrial Sector

Descriptions of each of the Industrial programs can be found in the Energy Management Tariff Sheets, approved by the Commission which are found at Appendix A.

This sector consists of programs for improvements to existing facilities or upgrades to higher efficiency levels for new facilities in the industrial sector. The industrial sector consists of non-residential customers that have a demand of at least 500 kVA and includes sawmills, mining and other processing facilities.

Table 10.1.2.6
Industrial Expenditures and Savings by Program

	Program	2004 Plan Costs $000	2004 Plan Savings GW.h	2004 Forecast Costs $000	2004 Forecast Savings GW.h	2005 Plan Costs $000	2005 Plan Savings GW.h
1	Industrial Efficiency	160	1.4	111	0.8	159	1.4
2	New Process Design	21	0.3	10	0.1	22	0.3
3	Total	181	1.7	121	0.9	181	1.7

The Industrial Efficiency program applies to the retrofit of existing facilities including measures to improve motor utilization, introduce adjustable variable speed drives for pumps and fans and install sequencers and controls for compressed air systems.

The New Process Design program promotes efficiency upgrades to new facilities and uses the same technology profile as the industrial efficiency program.

Both of these programs offer rebates for energy efficiency improvements and engineering review costs to identify and implement efficiency measures.

The energy management committee process is used to identify energy efficiency opportunities for this sector. In 2004, we observed a general reluctance to invest

in capital improvements. Based on higher resource prices and improved profitability in 2004, a return to previous levels of investment is projected for 2005.

2.7 Planning and Evaluation

This sector includes the cost of managing, planning and evaluation related to all Demand Side Management sectors and programs.

Table 10.1.2.7
Planning and Evaluation Costs
($000s)

	2004 Plan Costs	2004 Forecast Costs	2005 Plan Costs
Planning & Evaluation	301	290	355

Costs in planning and evaluation include the salaries of the PowerSense manager and engineer, consulting fees for planning reviews, ongoing monitoring of annual program costs and benefits and periodic evaluation reports, travel and training costs.

The 2005 plan is based on the 2004 plan with the addition $50,000 representing 50 percent of the engineer's salary that was previously expensed in the Demand Side Management operating budget and is now proposed to be capitalized for 2005, as described previously.

3. Reconciliation of Demand Side Management Expenditures to Capital Plan

The following shows the costs associated with Demand Side Management as found at Tab 6 (Rate Base) of this Application.

Table 10.1.3
Reconciliation of Deferred Charges
($000s)

		2003 NBV	2004 Additions	2004 Amortization	2004 NBV	2005 Additions	2005 Amortization	2005 NBV
1	DSM	23,480	1,996	0	25,476	1,834	0	27,310
2	DSM Def Rebate	(56)	0	0	(56)	0	0	(56)
3	DSM Tax	(9,801)	(711)	0	(10,512)	(653)	0	(11,165)
4	DSM Incentive	654	33	0	687	0	0	687
5	DSM Amortization	(9,829)	0	(996)	(10,826)	0	(1,016)	(11,842)
6	**Total**	**4,447**	**1,318**	**(996)**	**4,769**	**1,181**	**(1,016)**	**4,934**

4. Demand Side Management Incentive for 2003 and Forecast Incentive for 2004

An incentive of $69,000 was earned for 2003 and approved by the Demand Side Management Incentive Committee as shown below.

As part of the Company's PBR mechanism, the Company may earn an incentive if, with the recommendation of the Demand Side Management Incentive Committee, the Company has been operating the program in a cost effective manner.

The Demand Side Management incentive mechanism is a Shared Savings Mechanism (SSM). It is based on a recommendation contained in the study of Demand Side Management incentive mechanisms for the Company completed in November 1999 by David Nichols of the Tellus Institute.

The SSM has been the most commonly used shareholder incentive during the 1990's. This approach provided FortisBC with a share of the net benefits from its Demand Side Management activities. Benefits are defined as the value of avoided energy and capacity costs and deferred capital expenditures. All utility program costs and the customer costs of energy efficiency are deducted from the benefits to arrive at the net benefits. This mechanism sends the signal to maximize the resource savings per dollar spent on energy efficiency measures. The SSM provides for a small share of the life-cycle benefits as a

potential reward to the shareholders. It also introduces sector penalties for not achieving a threshold level of net benefits.

The SSM approach requires both the power savings and the resource benefits flowing from those savings to be quantified. The benefits are calculated over the lifetimes of the Demand Side Management measures put into place. FortisBC will receive a share of the total net present value of these life-cycle benefits.

4.1 Shared Savings Mechanism (SSM) Incentive or Penalty Rates

There are different incentive or penalty levels based on FortisBC's performance compared to Plan Net Benefits for each of the three sectors. Incentives for the sectors are calculated for performances of 100 percent to 150 percent of the plan net benefits. There is no calculation for performance between 90 percent and 100 percent of plan net benefits for all sectors. Calculations for performance of less than 90 percent produce negative results. Maximum penalty is applied to performances of less than 50 percent of plan net benefits. If the sum of the sector incentives or penalties is greater than zero, then that sum is the Demand Side Management incentive for FortisBC for the year. If the sum is less than zero, then there is no Demand Side Management incentive for FortisBC for the year and no penalty is charged.

Table 10.1.4.1 A
Incentives (+) or Penalties (-) at Selected Performance Levels

% of Plan Net Benefits	<50%	<70%	<90%	90-100%	>100%	>110%	>120%
Residential	-6.0%	-4.5%	-3.0%	0.0%	3.0%	4.5%	6.0%
General Service	-4.0%	-3.0%	-2.0%	0.0%	2.0%	3.0%	4.0%
Industrial	-3.0%	-2.0%	-1.0%	0.0%	1.0%	2.0%	3.0%

For incentive purposes, FortisBC expenditures will be capped at 110% of the planned expenditure for program delivery. Planning and evaluation expenditures will not form part of the incentive calculation.

Table 10.1.4.2 B
Demand Side Management Incentive for 2003
($000s)

	Sector	2003 Net Benefits Plan A	Actual B	% of Plan C	Eligible Amount D	Incentive Rate E	Incentive (D + E))
1	Industrial	255	302	118 %	302	2%	6
2	General Services	1,323	1,405	106 %	1,405	2%	28
3	Residential	390	594	152 %	585	6%	35
4		1,968	2,301	117 %			69

Net benefits is the value of power saved
Less the utility and customer costs to save that power.

4.2 Forecast Incentive 2004

Based on experience year to date an incentive of $33,000 has been estimated for 2004. The actual Demand Side Management incentive earned may change based on the 2004 year-end results after the annual net benefits are determined and measured against the annual target.

4.3 Proposal for 2005

As mentioned previously, since 1996, there has been a Demand Side Management Incentive Committee whose purpose has been to:

- review operating results for incentive purposes
- provide advice and comment on the semi-annual Demand Side Management operating results and
- approve the Demand Side Management incentive calculation and report for the annual review and
- provide input and review the Company's activities related to its energy management programs.

The Demand Side Management Incentive committee has provided valuable input to the company regarding its Demand Side Management activities and the incentive mechanism has increased the Company's focus on meeting and exceeding the energy efficiency targets. The Company supports the continuation of this Demand Side Management Incentive Committee process. It is an effective means for the Company to involve interested stakeholders in the planning and implementation of its Demand Side Management activities.