

MANITOBA

Order No.

51/96

THE PUBLIC UTILITIES BOARD ACT

THE MANITOBA HYDRO ACT

THE CROWN CORPORATIONS PUBLIC
REVIEW AND ACCOUNTABILITY ACT

April 15, 1996

BEFORE: G. D. Forrest, Chairman
M. J. Anseeuw, Vice-Chairman
H. Enns, Member
J. Hillard, Member

**AN APPLICATION BY MANITOBA HYDRO
FOR AN ORDER APPROVING RATES
TO BE EFFECTIVE APRIL 1, 1996 AND APRIL 1, 1997**

An Application By Manitoba Hydro

For An Order Approving Rates to be Effective April 1, 1996
and April 1, 1997

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Executive Summary

Manitoba Hydro applied to the Board for approval of rate schedules incorporating average increases in General Consumer revenues of 2.0% effective April 1, 1996 and a further 2% effective April 1, 1997. Manitoba Hydro adheres to a policy of requesting overall rate increases that are at or below the rate of inflation.

The requested increase was to result in additional revenue of approximately \$13.4 million in 1996/97 and \$13.9 million in 1997/98.

With the proposed increases, Manitoba Hydro projected that its Net Income for 1996/97 would be \$58.7 million and for 1997/98 would be \$47.2 million.

Manitoba Hydro's objectives to attain an improved financial position and to cover increased costs were the basis for the requested rate increases. Manitoba Hydro has stated that in combination with ongoing cost control efforts, these rate increases are necessary to support Manitoba Hydro's long-term financial viability in an increasingly uncertain environment. By 2005/06, Manitoba Hydro hopes to meet its newly-developed financial targets of a 75:25 debt to equity ratio and a 1.25 gross interest coverage ratio. Manitoba Hydro's debt to equity ratio and gross interest coverage ratio as at March 31, 1995 is 92:08 and 1.13 respectively.

In considering this application the Board, together with the Intervenor of Record, reviewed all aspects of Manitoba Hydro's operation including the issue of pending competition in the electrical industry, the new financial objectives, the financial projections including operation and maintenance expenses, the capital forecast, and Manitoba Hydro's cost of service and rate design.

The Intervenor argued that Manitoba Hydro's previous financial objective of attaining a debt to equity ratio of 85:15 was adequate under the circumstances and that Manitoba Hydro should be making a greater effort to attain this goal through operational efficiencies rather than rate increases.

The Board accepts the consensus found at this hearing that an improved debt to equity ratio has advantages for ratepayers. While the optimal financial objectives and the time frame for achievement were reviewed at great length in the public hearing, the Board will only deal with Manitoba Hydro's objectives in the more immediate horizon. In this regard, the Board believes that all reasonable

efforts must be made to reach an 85:15 debt to equity ratio by 2001/02.

The Board agreed with Manitoba Hydro that improvement of the balance sheet of Manitoba Hydro was to be dealt with immediately and the following aspects of the balance sheet necessitate this attention. The long-term debt of Manitoba Hydro is \$4.4 billion. This debt is guaranteed by the Province and is approximately 40 percent of the total debt of the Province. Approximately 45 percent of Manitoba Hydro's total expenses relate to its cost of debt, and the total annual operating cost of Manitoba Hydro is projected, for the first time, to exceed \$1 billion in 1999. In entering into a period of non-expansion in which no new major generation facilities are required, Manitoba Hydro has forecast \$2.7 billion in capital expenditures over the next ten years. The Board has stated its concerns regarding these levels of capital expenditures, and has required Manitoba Hydro to re-assess its capital expenditure forecast.

The Board agreed with the Intervenors that before seeking any rate relief from the ratepayers, Manitoba Hydro has a responsibility to employ all reasonable cost efficiencies. To reach its financial objectives, the Board will allow rate increases lower than requested by Manitoba Hydro and recommend that Manitoba Hydro make up any shortfall from operational efficiencies.

Manitoba Hydro's financial position can be seriously affected by a number of risks including low water flows, weather, economic and market conditions, major equipment failure, and loss of load. A new potential risk identified by Manitoba Hydro is the entry of competitors into the Manitoba electricity marketplace. Competition may occur from non-utility generators, independent power producers, other utilities in export markets, alternate fuels such as natural gas, and technological advancements. The strengths, weaknesses, opportunities, and threats of competition for Manitoba Hydro were analyzed extensively.

Since Manitoba Hydro is amongst the lowest cost-producers of electricity in North America, competition might be favourable to it. Although it is impossible to predict how and when competition will occur, the Board believes that Manitoba Hydro should take the necessary steps, including improvement of its balance sheet, to position itself and its customers for competition.

Manitoba Hydro has amongst the lowest electricity rates in North America and residential rates in Winnipeg are substantially lower than those in other Canadian cities. Low electricity rates contribute positively to existing industries and it is important to the Province to maintain this competitive advantage.

The Board also examined several rate design features in this application and these are dealt with in detail in the Order.

The overall rate increases allowed by the Board are 1.5 percent and 1.3 percent for the 1996/97 and 1997/98 fiscal years respectively. The rate adjustments as approved, will increase the monthly bill of a typical residential customer residing in Winnipeg by approximately \$1.21 per month on an annual basis. In rural areas, a typical residential customer with electric heating will experience monthly bill increases of approximately \$3.29 per month on an annual basis.

The following table shows the percentage increases by customer class:

Customer Class	Percentage Increase			
	1996		1997	
	As Requested	As Approved	As Requested	As Approved
Residential	3.18	2.84	3.16	2.34
General Service Small (Average)	1.71	1.22	1.57	1.20
General Service Medium	1.95	1.46	1.94	1.46
General Service Large	0.92	0.00	0.55	0.00
Area and Roadway Lighting	(5.00)	(5.00)	0.00	(5.00)
Overall General Consumers Revenue	2.00	1.50	2.00	1.30

An Application By Manitoba Hydro

For An Order Approving Rates to be Effective April 1, 1996
and April 1, 1997

1.0 Appearances

R. F. Peters	Counsel for the Public Utilities Board of Manitoba
K. L. Kalinowsky	(Athe Board≅)
K. D. Munro P. Ramage	Counsel for Manitoba Hydro (AHydro≅)
A. Peltz	Counsel for the Consumers= Association of Canada (Manitoba) Inc. and Manitoba Society of Seniors (ACAC/MSOS≅)
A. L. Campbell, Q.C.	Counsel for the Manitoba Industrial Power Users Group ("MIPUG")
D. W. Buhr	Counsel for the City of Winnipeg (Athe City≅)
L. Bateman	League of Citizens for Equitable Electricity Rates (Athe League≅)

2.0 Witnesses for Hydro

Dr. J. S. McCallum	Chairman of the Board of Directors
R. B. Brennan, CA	President and Chief Executive Officer
V. A. Warden	Vice-President, Finance and Chief Financial Officer
C. E. Wray, CA	Corporate Planning Officer
E. Wojcznski, P.Eng.	Manager, Power Resource Planning Department

A. D. Cormie, P. Eng.	Manager, Reservoir and Energy Resources Department
G. W. Rose	Manager, Energy Management Department
K. R. Wiens	Manager, Rates Department
J. T. Browne	Partner, Deloitte & Touche
D. Hall	Vice President and Director, RBC Dominion Securities Inc.

3.0 Intervenors

The City of Winnipeg
Consumers= Association of Canada (Manitoba) Inc. and Manitoba
Society of Seniors
League of Citizens for Equitable Electricity Rates
The Manitoba Industrial Power Users Group

4.0 Witnesses for CAC/MSOS

J. D. Todd	President, Ecoanalysis Consulting Services, Inc.
Dr. M. J. Gordon	Professor of Finance, Faculty of Management, University of Toronto

5.0 Witness for MIPUG

C. F. Osler	President, Intergroup Consultants Ltd.
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6.0 Presenters

In Winnipeg, Manitoba

Mr. Martin	Private Citizen
Mrs. Wabick	Private Citizen
Mr. Fedak	Private Citizen
Mr. Treichel	Private Citizen

Mr. Maendel and Mr. Hofer Representing the Hutterian Communities
in Manitoba
M. Goble Superintendent of Special Projects,
Manitoba Division, Inco Limited B.
Prosser Plant Manager,
CXY Chemicals Ltd.
G. Wasny Manager, Pulp and Paper Division, Repap
Manitoba Inc.
G. Collis Plant Administrator, Simplot
Canada Limited
B. Chandler Manager, Maintenance and Engineering
Services/Small Mines and Projects,
Hudson Bay Mining & Smelting Co.,
Limited
Mr. Eyjolfson Plant Engineer, The Seagram Company
Limited (Gimli Plant)

In Thompson, Manitoba

His Worship, Mayor Bill Comaskey Mayor of Thompson,
Manitoba

7.0 The Application

Hydro applied to the Board on November 22, 1995 for an order approving rate increases to be effective April 1, 1996 and April 1, 1997, pursuant to the *Crown Corporations Public Review and Accountability Act* (Athe Accountability Act \cong), the *Manitoba Hydro Act* (AHydro Act \cong), and the *Public Utilities Board Act* (Athe Act \cong).

The Board held a pre-hearing conference on November 28, 1995 to consider the procedures and issues related to the application. Subsequent to the pre-hearing conference, the Board issued Board Order 120/95 dated December 6, 1995, which approved applications for intervenor status from CAC/MSOS, MIPUG, the City and Pollution Probe Inc./Manitoba Naturalists Society (APP/MNS \cong) (subject to the filing of A further detail related to their articles of incorporation, mandate and financial status \cong) and established a timetable for the orderly exchange of information and procedures to be followed. The Board later issued Board Order 2/96 dated January 2, 1996, which approved an application for intervenor status from the League. Prior to the commencement

of the public hearing PP/MNS withdrew their intervention in correspondence to the Board dated February 22, 1996.

The Board held a public hearing at the Fort Garry Hotel, Winnipeg, Manitoba from February 26, 1996 to March 13, 1996. A public meeting was also held at Thompson City Hall, Thompson, Manitoba on February 22, 1996. The Board heard closing argument on March 15, 1996.

7.1 Two-Year Application

Hydro last appeared before the Board with respect to a rate increase in February 1994, after which rate increases averaging 1.2 percent were approved effective April 1, 1994 and April 1, 1995, subject to specific monitoring and reporting requirements.

Hydro has again proposed a two-year rate application. Hydro considers their request to be reasonable for the following reasons:

1. To provide a reasonable balance between the need for detailed regulatory review and the time and costs incurred by all parties.
2. Hydro does not expect to see significant changes in its operations or plans within the 1996/97 to 1997/98 period.
3. With the reduced load growth forecast, new major generation is not expected to be required until 2011 and capital expenditures have been reduced.
4. Further development and evaluation of DSM programs has resulted in substantial reductions in planned expenditures.
5. Corporate initiatives with respect to downsizing have been undertaken and are, in Hydro's view, on track.
6. Expenditure reduction remains an ongoing guiding principle, provided that it does not compromise customer service, system reliability or safety.

7. Updates with respect to financial performance and projected results will be provided to the Board and interested intervenors as required.

Dr. McCallum, the Chairman of the Hydro Board, testified that the Hydro Board is supportive of a two year application because the regulatory process is expensive and demanding on Hydro management's time and resources. Mr. McCallum stated that the Hydro Board feels very strongly that an annual application does not justify the costs incurred. Dr. McCallum further testified that he felt that the workshops held in April, 1995 gave the parties concerned an opportunity in a more relaxed setting to consider a number of ideas that are important to the future of the company.

The concept of a generic hearing on a wide variety of rate issues was proposed by several intervenors. In closing argument, Hydro emphasized that it does not support the concept of a generic hearing in the intervening year between regular rate hearings. Hydro believes that a generic hearing is an inappropriate forum to discuss certain topics including financial objectives, capital expenditures and competition. Hydro prefers that these topics be discussed in connection with a general rate application.

Hydro has stated that if a material change in revenue requirement prior to March 31, 1998 was necessary due to drought or other economic factors, Hydro would submit a revised application to the Board.

7.2 Proposed 1996/97 and 1997/98 Rate Increases

Hydro applied to the Board for approval of rate schedules incorporating average increases in General Consumers revenues of 2.0 percent effective April 1, 1996 and a further 2.0 percent effective April 1, 1997.

Hydro explained that the rate increases are required to cover increased costs, to strengthen Hydro's financial position by improving its interest coverage ratio and ultimately its debt to equity level and to support Hydro's long-term financial viability

in what it perceives as an increasingly uncertain business environment.

The rate schedules were prepared in accordance with Hydro's rate increase policy which is to seek average rate increases at or below the projected level of inflation. The proposed average rate increase of 2 percent per annum for 1996/97 and 1997/98 is approximately equal to the expected rate of inflation during that two year period.

Hydro's cumulative average rate increase between 1991 and 1995 has been 8.8 percent. Hydro has implemented average rate increases lower than most other electrical utilities in Canada over this period and at levels below the rate of inflation.

7.3 Revenue Increase by Customer Class

The requested rate increases, if approved, will result in additional revenue of approximately \$13.4 million being generated in 1996/97 and a further \$13.9 million (\$27.3 million cumulative) being generated in 1997/98. The requested increase in revenues is allocated between the major customer classes as follows:

Customer Class	1996/97			1997/98		
	Revenue at Existing Rates* (\$000s)	Additional Revenue (\$000s)	Percentage Increase	Revenue at Existing Rates* (\$000s)	Additional Revenue (\$000s)	Percentage Increase
Residential General Service Small	\$285,492	\$9,081	3.18	\$296,623	\$9,375	3.16
Small (Demand)	56,613	984	1.74	58,934	1,039	1.76
General Service Small	70,142	1,111	1.58	72,874	1,082	1.49
Small (Non-Demand)		104	1.82		106	1.46
General Service Small	5,739	1,454	1.95	7,277	1,498	1.94
Small	74,667	1,397	0.92	77,310	864	0.55

(Other) General Service Medium	152,729 14,628	(731)	(5.00)	156,834 13,936	-	0.00
General Service Large Area and Roadway Lighting						
Total General Consumers	660,010	13,400	2.03	683,788	13,964	2.04
Diesel Full Cost Adjustments, net of DSM Reduction	9,037 (1,216)	- (59)	0.00 (4.90)	7,910 (3,513)	- (121)	0.00 (3.44)
Miscellaneous	474	9	2.00	483	10	2.00
Bulk	173	-	0.00	173	-	0.00
Total Consumers	\$668,478	\$13,350	2.00	\$688,841	\$13,853	2.01

Note: Rate changes to individual customers within each rate class may be more or less than the class average depending on a number of factors including geographic location and usage.

* Excludes revenue from Winnipeg Hydro and extra provincial sales.

8.0 Competition

In its current application, Hydro has indicated that its financial position can be seriously affected by water flows, weather, economic and market conditions, the erosion of domestic firm load, self-insured losses, major equipment failures and government payments. The threat of drought remains a major concern to the financial security of Hydro. In addition, Hydro faces a new potential risk from the entry of competitors into the Manitoba electricity market.

Hydro indicated in this application that it needs to strengthen its balance sheet in order to be in a stronger position to deal with the various business risks, including the potential impact that competition and deregulation may have. Competition and deregulation may come in the following forms:

- non utility generators and independent power producers in the domestic market
- American electrical utilities in the extra-provincial markets
- alternate fuels such as gas
- technology advancements
- generation, transmission, distribution and supply

8.1 Strengths, Weaknesses, Opportunities and Threats (ASWOT≅)

Hydro filed responses to information requests detailing its SWOT analysis relative to competition as follows:

Strengths

- high degree of customer satisfaction
- highly skilled and productive workforce
- effective management practices
- low short-run marginal costs of production compared to expected competition
- a reliable generation, transmission and distribution system
- significant capability to export power due to a heavily interconnected system
- large reservoir storage capability
- low emissions from production (an important consideration should a carbon tax be imposed in the future)

Weaknesses

- weak financial position which could limit Hydro=s ability to weather price wars with new market entrants
- long lead times (including regulatory approvals) of new hydraulic generation may preclude future hydraulic additions
- distance to markets (generation to final consumers)
- legislative constraints

Opportunities

- access to export market prices which may be higher than Hydro=s cost of production
- low production costs which will enable Hydro to retain and attract domestic customers
- operating capabilities associated with Hydro=s hydraulic system may have a high value (e.g. energy storage, Automatic Generation Control and ramping services)
- relatively low cost and environmentally benign hydraulic resources are still available for potential development

Threats

- increasing operating constraints on generating system from competing resource users in Manitoba
- lower water flows due to changing climate and/or increased upstream withdrawals (e.g. due to irrigation)
- low gas prices which could lead to gas combustion turbine supply costs less than new hydraulic supply and potentially less than current embedded costs of supply
- independent power producers with more experience in providing small, flexible, decentralized plants better able to deal with lower load growth and environmental reviews
- independent power producers with lower overheads
- some customers could migrate to other suppliers or self generate (potentially also selling into a grid).

8.2 Potential Impact

As a result of competition, Hydro expects prices to equalize across wider geographic areas as low-cost suppliers sell into high-cost jurisdictions. Hydro indicated that if it has a relative advantage in production costs, rates will tend to rise generally in Manitoba, to follow a market clearing price within a trading area (as domestic rates would be influenced by market conditions). However if Hydro does not have a relative production cost advantage, the reverse would tend to occur.

Hydro projects the likely effects of competition within Manitoba will be:

- lower rates to large users served at high voltages
- the unbundling of services to provide:
 - transmission
 - spot interruptible service
 - real time pricing based on access charges and energy rates tied to short run marginal cost
 - separate pricing of DSM and other energy services
- higher rates to smaller users
- pricing tailored to load characteristics to encourage the retention of lower cost residential loads (e.g. air conditioning) and encourage conservation or other load reductions by high cost residential loads such as space heating
- fierce competition for loads on the basis of rebundled pricing packages, customer service and information technology

8.3 Barriers to Entry

Hydro has suggested that barriers to entry to the Manitoba electricity market place by competitors include costs and legislative factors.

Hydro noted that existing hydraulic generation is low cost compared to other generation sources. Hydro further believes that existing hydraulic and other Manitoba resources are sufficient to supply current provincial domestic demand and firm

export commitments as well as growth in domestic demand. Hydro cautioned however, that while this asset currently may be viewed as a barrier to entry, the large fixed cost asset could become a liability if lower cost suppliers compete with Hydro. Manitoba Hydro and Winnipeg Hydro are currently the only entities with legislative authority to sell electricity at the retail level in Manitoba. Other generation of electricity is currently only permissible either for self-use or for resale to Hydro.

8.4 Probability and Time Frame

Hydro indicated that a limited window of opportunity is available now to make significant progress towards improved earnings levels and a capital structure closer to industry norms that will allow Hydro to face future uncertainties and challenges arising from competition.

The DBRS report discussed in Section 8.5 acknowledged that there will be a very difficult five to ten year transition period as electric deregulation occurs. The report further acknowledged that there will likely be delays to open competition in the Canadian electrical industry due to the time needed to implement change and indecision as to whether the Apool method or bi-lateral agreements will be used to sell electricity in the open market with interconnections between utilities being limited.

8.5 The Dominion Bond Rating Service Limited (ADBRS) Report

The DBRS report titled *The Public Electric Utilities in Canada - An Emerging Problem for Provincial Credit Ratings*, dated February 1996, was filed by Hydro at the public hearing. The authors of the document were not requested to appear before the Board in order to provide testimony in support of their opinions contained in the report. However extracts of the untested report were discussed by the participants at the public hearing.

The DBRS report states that publicly owned electrical utilities are facing substantial challenges and change in order to meet the problems which will be created by potential competition. The report makes the following points relevant to Hydro:

1. Hydro and Hydro Quebec have the lowest cash variable cost structures and competitively are in the strongest position of all the provincial electrical utilities.
2. Hydro=s weaknesses include:
 - a) The peaking power that it needs between November to February, with power demand used for heating increasing significantly.
 - b) Hydro=s high debt level ensures that the company=s interest costs are high and will cause the company to have difficulty being cost competitive, with growing levels of competition from the private sector.
 - c) The low average prices received for its power which affect the company=s profitability.
3. The greatest competition in the short term will likely come from other provincially-owned Canadian electrical utilities. For instance, Ontario Hydro=s and Saskatchewan Power=s cash variable cost structures are higher than Hydro=s and therefore possible future competitive pressure may be brought to bear on Ontario Hydro and Saskatchewan Power by Hydro.
4. Potential U.S.A. competition in electricity may result due to the excess generating capacity of their electrical utilities. With a heavy proportion of fixed costs, the U.S.A. electrical utilities only need to price and sell excess electricity at a level where they just meet their cash variable cost. This pricing strategy could lead to a price war situation with Hydro.
5. Canadian electrical utilities have a potential competitive advantage in most of the U.S.A. markets because the American electrical utilities generally have a higher cost structure than their equivalent Canadian counterparts.
6. Co-generation of power is a potential competitive threat for Canadian provincially- owned electrical utilities if natural gas prices are at low levels. There have been instances recorded where large volume customers of electricity are

building their own plants in order to gain lower electricity rates from the utilities. Mr. E. Wojcznski, Hydro=s Manager, Power Resource Planning Department, testified that co-generation of power was already a reality in the Manitoba electricity market and cited specific instances.

The DBRS report summarized Hydro=s competitive position as follows:

AHydro with its low variable and semi-variable costs, helped by the high hydro generation base is probably in the best competitive position of any of the Canadian electrical utilities. It should be able to compete in any market, east, west or south, although it is vulnerable to short-term spot sales of excess energy under open market conditions. Its weak balance sheet and high interest costs become its greatest challenges and this will restrict profitability in a tough competitive environment.≡

8.6 Intervenors= Positions

Dr. Gordon on behalf of CAC/MSOS testified that in his opinion, while he had not studied the specifics of competition, wholesale competition will be an opportunity for Hydro and not a threat. Dr. Gordon further noted that in his opinion the likelihood is practically zero that competing sources of power or technologies that are as yet undiscovered will make Hydro=s system non-competitive in the foreseeable future.

CAC/MSOS noted that since Hydro was such a low-cost producer of electricity, the most probable impact of competition would be to enhance Hydro=s profitability, since competition might lead to increases rather than decreases in net export revenue. CAC/MSOS argued that the most significant threat that competition poses is that Hydro will fail to adjust its mind-set to the realities of the competitive marketplace.

MIPUG submitted that all of its members are subject to competition and market forces on a day-to-day basis and that the potential challenges facing Hydro because of competition are no different from those currently facing MIPUG members. MIPUG noted that one of the biggest surprises arising from evidence presented

at the public hearing was the extent to which Hydro rested its argument on the risk of a changing competitive environment. Hydro argued that it had a limited window of opportunity to enhance its competitive position prior to entering the competitive environment. MIPUG suggested that the window of opportunity appears to be that there is a time period when Hydro can charge higher rates, but at some indeterminate point in the future, the market will shut off this opportunity.

MIPUG noted that the DBRS report, as well as other sources, emphasized a need to rebalance rates to address concerns about competition. Large industrial rates, in particular, were identified as being susceptible to competitive opportunities. Mr. Osler emphasized that if competition were to cause problems for Hydro, the present window of opportunity provides time to align industrial rates with cost. Hydro should be trying to reduce the risk of future rate shock or problems to Hydro if the competitive environment materializes, and should be doing so by accentuating and accelerating rate rebalancing as a primary element of its competitive strategy.

The League argued that competition did not currently exist other than in the area of rural gasification which is a government policy. The League believes that competition was unlikely to be harmful to Hydro in the future since Hydro is one of the lowest cost producers of energy in the nation. However, Hydro's rates should not be increased as this could threaten Hydro's competitive advantage. The League holds that Hydro is in a good competitive position. However Hydro should become a member of the Mid-Continent Area Power Pool to ensure its ability to protect its position for competing for low cost power sales and purchases.

8.7 Board Findings

Competition in the electrical industry in Canada is inevitable. Competition is already affecting Hydro in the form of non-utility generators and utilities in other jurisdictions competing with Hydro for export revenue. The Board recognizes that competition will alter the electrical industry in North America dramatically, and that the consequences to Hydro could be significant.

Although it is difficult to predict what the specific consequences of competition will be on Hydro, the Board believes that it is prudent for Hydro to take actions to better position itself to meet competition and thus protect its customers. The Board is of the view that many of the initiatives necessary to strengthen Hydro's position are not rate related, but include aggressive cost control and significant curtailment of discretionary capital expenditures. These matters are discussed in other sections of the Board Order.

For Hydro, the relevance of competition in this rate application is that it creates an urgency to improve its financial position.

An important issue for the Board is AWhat should be done in the best interest of the ratepayers during this period of uncertainty?≅ The Board believes that an argument has been made for the achievement of a stronger balance sheet by Hydro due to this uncertainty. However, Hydro's movement to a stronger balance sheet must be accomplished in part by Hydro's efforts to look within the Corporation before seeking increased rates.

9.0 Financial Objectives

At the time of the 1994 rate application, Hydro's financial objectives were essentially unchanged from the financial objectives established in 1989, as follows:

1. To achieve a debt to equity ratio of 85:15 by March 31, 2005.
2. To maintain a gross interest coverage ratio of 1.15 to 1.25, except prior to and during periods when the costs of new generating facilities are being absorbed.
3. To reach a level of retained earnings sufficient to withstand the negative financial effect of two years of drought equal to the worst on record plus the maximum loss under Hydro's self insurance program.

The required level of retained earnings was initially calculated at \$370 million and was initially forecast to be achieved by March 31, 1995. Hydro has stated that applying these financial objectives to the current environment would require a retained earnings balance of something in excess of \$650 million.

9.1 Manitoba Hydro Review

Hydro indicated at the time of the public hearing in 1994 that it was reviewing its long-term financial objectives. This review was to consider the adequacy of the 85:15 debt to equity ratio target and the appropriateness of other possible targets such as the generation of internal funds to cover capital expenditures other than major generation facilities. This review was undertaken because of concerns held by Hydro regarding its financial position relative to other Canadian electrical utilities and the need to address future risks including recent trends in the electrical industry to deregulation and greater competition. Hydro's interest coverage and debt ratio is lower than most other Canadian electric utilities.

9.2 Deloitte & Touche Report

In order to assist Hydro's review, Deloitte & Touche (ADeloittes) were commissioned by Hydro to conduct a review of other electric utilities, discuss factors that should be considered in setting financial targets and analyze different financial targets. The report, issued by Deloittes in May 1995 focussed on the following five main areas:

- trends in the electric utility industry and in particular competition
- Hydro's status
- financial objectives and performance of Canadian Crown electric utilities
- financial and regulatory principles
- financial targets

The author of the Deloittes report, Mr. J. T. Browne, appeared at the hearing as Hydro's witness. Mr. Browne gave evidence that Hydro has the lowest equity ratio of all major government-owned electric utilities in Canada and a gross interest... coverage ratio... at the low end for Crown electric utilities. Mr. Browne concluded by stating that achievement of the new targets will provide significantly greater protection for the Province and give Hydro greater flexibility to respond to an uncertain future.

Under cross examination by Board counsel Mr. Browne conceded that Hydro's low-cost hydro generation enhances its competitive position against other electric utilities.

9.3 RBC Dominion Securities Inc. Report

Hydro also commissioned RBC Dominion Securities Inc. (ARBC) to examine various financial targets and capital structures for Hydro and to review their effect on Hydro. RBC issued a report in April 1995 detailing their views on the following financial targets and capital structures as they pertain to Hydro:

- financing with 91% debt and the Provincial guarantee
- financing with 85% debt and the Provincial guarantee
- financing with 80% debt and the Provincial guarantee

- capital structure without the Provincial guarantee
- financing with a gross interest coverage of 1.25

Each of the examined financial targets and capital structures were reviewed and concluded on under the following criteria:

- contribution to the Provincial credit rating
- cost of capital, being a function of the cost of debt and the cost of equity
- the impact on electric rates
- long-term financial viability as determined by Hydro's ability to be self supporting and self sustaining

The author of the RBC report, Mr. D. Hall, appeared at the hearing as Hydro's witness. Mr. Hall gave evidence that his review was entirely financial in nature. Mr. Hall stated that his examination was based on the criteria for capital attraction, which was his mandate, and not the overall business risks of Hydro. Mr. Hall made the point that Hydro needs to be in good financial health, able to respond to outside pressures and challenges. In his opinion with the capital structure in place today the company is dangerously exposed from a financial perspective. Mr. Hall concluded his comments regarding the RBC report by indicating that in his view the company is, in fact, going in the right direction from a financial perspective but they're taking too long to get there.

9.4 New Financial Objectives

Hydro's Board of Directors approved the following new financial objectives in September 1995:

1. To achieve and maintain a minimum debt to equity ratio target of 75:25 by no later than 2005/2006.
2. To achieve and maintain an annual gross interest coverage ratio in the range of 1.20 to 1.35 as soon as possible.
3. To fund all capital construction requirements from internal sources, except during periods when major new generation and/or major transmission facilities are being added to the system.

Hydro listed the following benefits that the new financial objectives will afford:

- a) the risk that Hydro could become a financial burden to the taxpayers of the Province will be greatly reduced.
- b) improving interest coverage and debt ratios will enhance the confidence of capital markets, credit rating agencies, and customers in Hydro's financial stability.
- c) internally generated funds will be higher, allowing for capital construction to be financed from internal sources.
- d) consumers will be protected from future rate shock that could occur with an unforeseen event or when major new generation and transmission facilities are added to the system.
- e) the long-term debt of Hydro will be reduced, putting Hydro on a more comparable basis with other Crown-owned electrical utilities.
- f) the reduction in interest costs resulting from lower debt will ultimately assist rate competitiveness.
- g) Hydro will be less susceptible to the potential financial impacts of emerging and unforeseen technologies.
- h) Hydro will have greater flexibility to deal with the challenges and opportunities arising from competition.

Hydro noted that it was imperative to the management and Board of Manitoba Hydro that the new targets incorporate the fundamental objectives of fairness and sensitivity towards customers.

9.5 Intervenor's Positions

CAC/MSOS's witness, Dr. Myron Gordon, advised the Board against the desirability of changing Hydro's long-term debt to equity target ratio from 85:15 to 75:25. In his judgment, a debt to equity target ratio of 85 percent or 90 percent may be adequate.

He further noted that this target could be reached by 2001 without further rate increases. Dr. Gordon criticized both the Deloitte's and RBC reports for failing to establish whether the old financial targets were too high or whether the environment within which Hydro now operates has changed so as to require a change in the target.

Dr. Gordon examined Hydro's performance from 1984 to 1995 and noted that the debt to equity ratio fluctuated in a very narrow range around 94 percent. During this period of time there were substantial increases in rates, including a 14 percent increase in 1988 alone. Dr. Gordon attributed these rate increases to the inflation rate over the period, the severe drought of 1988/89, the high cost of the increase in generating capacity, the export of power at very low rates in most years and high interest rates.

These adverse events compelled Hydro to raise rates at a higher level than inflation. Dr. Gordon argued that if the debt to equity ratio had been lower, say 80 to 85 percent, it would have been possible to experience these adverse events without the large rate increases that occurred.

Dr. Gordon concluded that with an 85 percent debt to equity ratio, one can be confident that even in the most difficult circumstances, the actual debt to equity ratio can be kept below 100, while keeping rate increases within reason. Dr. Gordon objected to consumers having to prepay now to provide for the possibility of a negative event in the future.

CAC/MSOS argued that Hydro's existing debt to equity ratio target of 85 percent is fully adequate to ensure self-supporting status.

At the same time, Hydro would be capable of responding to any unfavourable event by increasing rates if and when an increase became necessary. The debt ratio of 85 to 90 percent provides Hydro with sufficient cushion to respond to any situation that may arise without threatening its financial integrity or causing rate shock.

MIPUG supported the old financial targets, in particular the debt to equity ratio of 85:15, and achievement of this target within ten years. MIPUG noted that the mandate for selecting specific financial targets rests with the Hydro Board. However, it also noted that the issue of approving rate increases as a means to pursue such targets rests squarely with the Board. MIPUG opposes the Board approving rate increases for the purpose of increasing the equity of Hydro=s shareholder beyond 85:15. Rather, the Board should urge Hydro to improve its financial strength through cost control, improved productivity, contributions of capital, and other measures. MIPUG urged that the evidence provided at the public hearing has not demonstrated any clear net benefit to ratepayers that would justify more than doubling the average rate increases required over the next decade in order to finance the extra equity needed to achieve a debt to equity ratio of 75:25 versus 85:15.

9.6 Board Findings

The Board concurs with the views expressed by MIPUG that the mandate for selecting specific financial objectives rests clearly with the Hydro Board. The Board notes the considerable effort put forward by Hydro in developing its new financial objectives, including retaining the services of two independent professional firms to assist in this matter.

In reviewing Manitoba Hydro=s new financial objectives, the Board considered the evidence of all parties presented at the public hearing and noted a number of important points:

1. Hydro has a weak financial position relative to other Canadian and American electrical utilities.
2. There is increasing risk and uncertainty facing Hydro due to the changing market including competition.
3. By 1999, the total operating costs of Hydro will exceed \$1 billion and will grow moderately in the next ten years.
4. Financing costs represent 45 percent of Hydro=s total expenses.

5. 26 percent of Hydro=s revenues are derived from export sales which are subject to the risks of a competitive environment.
6. Hydro may not be able to sustain its margins when competing to retain existing high load factor customers and to gain new sources of revenue.
7. Hydro=s current minimum retained earnings target (AMRET≡) is \$650 million. The projected level of retained earnings as of March 31, 1996 is \$343.1 million or 42 percent below its MRET.

The Board accepts as directionally correct the Corporation=s financial objective of achieving a minimum debt to equity target of 85:15 and an annual gross interest coverage ratio in the range of 1.15 to 1.20 by 2001/02, as indicated by IFF95-1. The Board will evaluate the reasonableness of Hydro achieving and maintaining a minimum debt to equity ratio target of 75:25 by no later than 2005/06 and an annual gross interest coverage ratio in the range of 1.20 to 1.35 as approved by the Hydro Board once Hydro achieves a minimum debt to equity ratio of 85:15 and an annual gross interest coverage ratio in the range of 1.15 to 1.20.

In order to ensure that Hydro achieves this minimum debt to equity and annual gross interest coverage ratio targets, the Board encourages Hydro to adopt specific annual retained earnings targets based on IFF95-1, with a view to achieving its financial objectives by the dates established and ensuring that these targets and the inherent annual timetable do not slip.

The Board urges Hydro to improve its financial position through capital and operating expenditure control, aggressive implementation of the Quality Improvement Initiative, consultation with employees for continual improvement ideas, productivity increases and organizational structure reviews before looking to the ratepayers for assistance.

The Board further accepts the Corporation=s third objective relating to the funding of all capital construction requirements from internal sources as reasonable. However, the Board

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recommends that Hydro stringently limit its capital expenditure where safety and reliability constraints allow and apply itself to reducing its long-term debt with urgency. Hydro should also review its policy for capitalizing labour and overhead in light of an expected non-expansionary period.

10.0 Financial Projections

Net income for the year ended March 31, 1995 was \$55.9 million, the second highest net income recorded in Hydro=s history. Export sales set a new record for the third consecutive year at \$253.1 million. Overall, revenues from electricity sales reached \$937.3 million, 2.1 percent greater than the previous year. Total expenses of Hydro increased by 3.8 percent over the previous year, primarily due to higher fixed costs associated with new plant placed in service and the Corporation Capital Tax which was applied to Hydro for the first time effective April 1, 1994.

For the year ended March 31, 1996, Hydro is forecasting that net income will be \$59.0 million.

10.1 Integrated Financial Forecast ("IFF95-1")

Hydro filed its current corporate planning document, IFF95-1, which includes the projected operating statement, balance sheet and appropriate ratios, financing requirements and capital expenditures for the period 1996 to 2006. The purpose of the IFF is to provide a general indication of Hydro=s long-term financial direction for use in sensitivity analysis and in evaluating strategic alternatives.

The following are attached as appendices to this Order:

Appendix A	Operating Statement IFF95-1
Appendix B	Balance Sheet IFF95-1
Appendix C	Financing Requirements IFF95-1
Appendix D	Capital Expenditure Forecast

The most significant financial highlights of IFF95-1 are as follows:

1. Forecast General Consumers Revenue includes the requested rate increases of 2.0 percent effective April 1, 1996 and 2.0 percent effective April 1, 1997 and 1.5 percent rate increases are assumed after 1997/98. The only rate increases under consideration by the Board in the current application relate to the fiscal years ending March 31, 1997 and 1998. The rate

increase scenario of 1.5 percent from 1998/99 to 2005/06 is only one rate scenario intended to illustrate the level of future rate increases necessary to meet Hydro=s new financial objectives, given base case assumptions.

2. The requested rate increases are forecast to generate additional General Consumers Revenues of \$13.4 million and \$27.3 million and net income of \$59.0 million and \$58.7 million in 1996/97 and 1997/98 respectively.
3. The retained earnings balance is projected to increase to \$449.1 million by March 31, 1998.
4. A retained earnings balance of \$1,220.6 million is forecast by March 31, 2006 resulting in the current financial objective of a 75:25 debt to equity ratio being achieved in that year. IFF95-1 also indicates that annual rate increases approximately equal to the rate of inflation are forecast to be required after 2006 for a number of years to maintain the 75:25 debt to equity ratio financial objective.
5. The gross interest coverage ratio over the period 1996 to 2006 ranges from a low of 1.06 in 1999 to a high of 1.35 in 2005. The current financial objective of achieving and maintaining a gross interest coverage ratio in the range of 1.20 to 1.35 is achieved in 2003. IFF95-1 also indicates that annual rate increases approximately equal to the rate of inflation are forecast to be required after 2006 for a number of years to maintain a gross interest coverage ratio in the range of 1.20 to 1.35.
6. Capital expenditures are forecast to range between \$204 million to \$322 million over the period 1996 to 2006 with total capital expenditures over the 11-year period estimated at approximately \$2.7 billion.
7. Long-term debt is projected to decrease insignificantly over the 11-year period from approximately \$4.45 billion to \$4.30 billion.
8. Operating and administrative expenses reflect only marginal increases.

Some of the key financial and operating results included in IFF 95-1 are as follows:

	IFF95-1 Forecast		
	1995/96	1996/97	1997/98
Average rate increase	1.2 percent	2.0 percent	2.0 percent
Net income	\$59.0 million	\$58.7 million	\$47.2 million
Retained earnings	\$343.2 million	\$401.9 million	\$449.1 million
Debt/equity ratio	91:09	90:10	90:10
Interest coverage	1.13	1.12	1.09
Internally generated funds	\$326.7 million	\$242.5 million	\$244.0 million
Capital expenditures	\$313.8 million	\$297.3 million	\$285.1 million

10.2 Economic Assumptions

IFF95-1 includes many variables, assumptions and strategies. The projection for the years 1995/96 to 2005/06 is used by Hydro as the basis of the requested rate increases, and for this reason a substantial amount of time was spent at the public hearing reviewing the various inputs and major variables and assumptions inherent in IFF95-1.

The financial forecasts of Hydro are sensitive to interest rate and inflation rate assumptions because of Hydro's high level of long-term debt and the relationship between Hydro's variable costs and inflation. The long-term debt interest rate forecast

incorporated in IFF95-1 is 8.5 percent. This compares to a long-term debt interest rate forecast of 9 percent incorporated in IFF93-3. The reduction of 0.5 percent impacts the profitability of Hydro because approximately 45 cents of every dollar earned by Hydro is used to meet financing costs.

IFF95-1 also includes forecast inflation rates of 2.0 percent from 1996/97 to 1998/99, 2.25 percent in 1999/00 and 2.5 percent thereafter. In addition IFF95-1 assumes that there is no real growth in operating expenses after 1995/96.

Both the inflation rate and long-term debt forecasts are compatible with projections by forecasting agencies, financial institutions and other Canadian electric utilities as at September 1995.

The following table prepared by Hydro reflects the degree to which the retained earnings balance at 2005/06, under two different scenarios, would be affected by a change in various assumptions, including drought, interest rate, inflation and load growth. Hydro's ability to absorb risk is calculated to be as follows:

Risks	IFF95-1 (Base case with new financial targets)	IFF95-1 (Alternate scenario with previous financial targets)
	2005/06 (millions)	2005/06 (millions)
Retained earnings balance	\$1,221 (25% equity by 2006)	\$652 (15% equity by 2005)
Drought 1996/97 and 1997/98	65%	122%
Drought 1996/97	34%	63%
Interest + 2% 1996/97 and	26%	49%

1997/98		
Interest + 1% throughout	15%	28%
Inflation + 1% throughout	16%	29%
Lower Load Growth	25%	46%
Lower Economic Growth*	73%	136%

* Represents a scenario in which protracted lower Gross Domestic Product growth is correlated with reduced load growth, higher inflation and interest costs, and lower interruptible export rates.

10.3 Operating and Administrative Expenses

Operating and administrative expenses include the labour, materials and services associated with operating, maintaining and administering the facilities of Hydro. From 1991/92 to 1994/95, there has been an average annual decrease in operating and administrative expenses of 1.4 percent, as well as a 1.3 percent decrease in Hydro=s workforce. Over the same period of time, Hydro has experienced a 7.3 percent average annual increase in energy sales, a 0.8 percent average annual increase in the number of customers, and has brought over \$1 billion dollars of plant into service.

Within the annualized period, 1994/95 reflected a 2.7 percent increase in operating and administrative expenses. This was largely due to increased uncontrollable costs for system maintenance requirements, and increased emergency repairs resulting from a higher than normal frequency of ice and wind storms in southern Manitoba during 1994/95.

IFF95-1 indicates that over the period 1995/96 to 2005/06 operating and administrative expenses are projected to increase at an average annual rate of 1.4 percent. Over the same period, inflation is projected to average 2.3 percent per year and system load growth is projected to average 1.5 percent per year to 2005/06. Hydro has stated that in order to meet the target set out in IFF95-1 while responding to an expanding customer base as

well as increasing demands in areas such as reliability and environmental management, productivity must be continuously improved. The areas Hydro will focus on to accomplish productivity improvements will include more aggressive use of emerging technologies and adherence to such programs as the Quality Improvement Initiative.

10.3.1 Employee Levels and Compensation Costs

The following two tables summarize the changes in gross and net wages and salaries and equivalent full-time staff ("EFT") for the years ended March 31, 1994 to 1998.

Wages and Salaries

	\$000's									
	Actual		Forecast		Forecast		Forecast		1994 to 1998	
	1994	1995	1996	Change	1997	Change	1998	Change	Change	%
Wages and salaries (Gross)	183,946	184,567	196,813	12,246	198,243	1,430	203,390	5,147	19,444	10.6
Wages and salaries (Net)	143,344	147,166	152,872	5,706	153,419	547	159,656	6,237	16,312	7.7

Equivalent Full-time Staff

	Actual	Actual		Forecast		Forecast		1994 to 1997	
	1994	1995	Change	1996	Change	1997	Change	Change	%
Capital	869.7	774.4	(95.3)	905.5	131.1	918.3	12.8	48.6	5.6
Operating	3,332.9	3,259.7	(73.2)	3,238.7	(21.0)	3,260.6	21.9	(72.3)	(2.2)
Total	4,202.6	4,034.1	(168.5)	4,144.2	110.1	4,178.9	34.7	(23.7)	(0.6)

Hydro filed evidence at the hearing indicating that the average salary per equivalent full time employee (excluding overtime and benefits) was \$45,753 for the fiscal year ended 1994/95.

Hydro provided evidence that it introduced a staffing initiative in June 1993 with the objective of reducing approximately 500 staff positions over a two year period ending in June 1995 as a part of its down-sizing program. Hydro achieved this objective through early retirements (260 staff positions), redeployments, elimination of hourly term and vacant positions and normal attrition (234 staff positions) and the laying off of employees (24 staff positions).

During the hearing Hydro made the distinction between staff positions and equivalent full time employees. Hydro's staffing initiative and Quality Improvement Initiative provide for ongoing improvements in labour productivity.

Provincial Wage Reduction Program

The ten days of unpaid leave provided under the Public Sector Reduced Work Week and Compensation Management Act has been eliminated from 1995/96 with the expiry of the legislation. Hydro provided evidence that the increase in gross wages and salaries of approximately \$12.2 million in 1996 was mainly related to the elimination of the ten days of unpaid leave and an increase in capital activity.

New Labour Contracts

The majority of Hydro employees belong to one of three bargaining units: the Canadian Union of Public Employees (CUPE), the International Brotherhood of Electrical Workers (IBEW) and the Association of Manitoba Hydro Staff and Supervisory Employees (AMHSSE).

Mr. Brennan confirmed that Hydro has secured agreements with their three bargaining units which provide for:

- a) a two-year contract term expiring March 31, 1997 (CUPE)/December 31, 1996 (AMHSSE)
- b) a benefit surplus withdrawal in the first year equivalent to a 2.2 percent of basic payroll or \$3.6 million saving

c) a labour cost reduction equivalent to five days off without pay or 2 percent in savings.

Hydro has signed agreements with CUPE and AMHSSE to date.

Hydro indicated that the actual savings as a result of the contract negotiations was approximately \$6.7 million which is approximately \$2.8 million higher than the \$3.9 million labor reduction assumption included in IFF95-1. This additional saving is largely offset in 1996/97 by the financial impact of having to pay water rentals on a monthly basis.

10.3.2 Cost Control and Operating Efficiencies

Board Order No. 62/94 ordered that Hydro continue its pursuit of achieving further internal efficiencies and cost controls. Hydro has responded to this instruction through four main initiatives:

Quality Improvement

Hydro reviews its operations continually to determine those reductions in costs that can be made with the least impact on its customers and profitability.

Hydro formally initiated its Quality Improvement Initiative (AQII) in October 1994. Hydro views process improvement, through either utilizing continuous improvement methodologies or benchmarking, and integrated key performance indicators as critical components to QII implementation. Training programs have been implemented to educate staff about quality and create an environment where continuous improvement is encouraged. Through the QII, Hydro pursues improvements to methods and processes with the focus being on customer needs and resource inefficiencies.

Information Technology

Hydro identified an Information Technology Strategic Plan - Phase I in October 1994 initially dealing with the company's vision and principles. This document specifically identifies the importance of including a re-engineering assessment of affected business processes when new systems are being introduced. As well, Hydro encourages the utilization of personal computers to automate work processes.

Planning/Budgeting

Cost control is continuous through the planning/budgeting cycle employed by Hydro and encompasses establishing a plan or standard and monitoring results against the plan. The formalized planning/control procedures of Hydro consisted of the following:

- an approval process
- monthly reporting and variance analysis
- an annual formalized analysis of operating and capital expenditures and financial statement information

Hydro uses this process to allow its senior management to:

- prioritize programs/projects
- manage changing conditions
- provide changes in corporate direction
- establish performance communication
- react to unforeseen conditions on a timely basis

IFF95-1 incorporates a cost control target of no real growth in expenditures.

Contracting Services

Hydro filed evidence detailing that contracting out meter reading activities, various repairs and maintenance duties at the Winnipeg River Station and the Grand Rapids Station and cleaning services at specific locations saved the company \$482,385 for the fiscal year ended 1994/95 and \$573,912 for the fiscal year ending 1995/96. The majority of these cost savings were made in the contracting out of meter reading duties (1995: \$325,273/1996: \$416,800).

The process Hydro uses to identify opportunities to contract out work involves periodic reviews of business processes throughout Hydro. A cost/benefit analysis is performed and the company's collective bargaining agreements and issues of safety and system reliability are given due consideration.

Under cross examination from counsel for CAC/MSOS, Dr. McCallum testified that the Hydro Board is confident that Hydro has been diligent, almost relentless, in keeping . . . costs as low as possible.

10.3.3 Payments to the Provincial Government by Hydro

Provincial Government Guarantee Fee

The Province of Manitoba requires Hydro to pay a Provincial government guarantee fee in return for the risk the Province bears in guaranteeing Hydro's long-term debt. The fee is currently set at 0.50 percent of the outstanding debt guaranteed by the Province at the preceding year end. The level of the fee is set as a matter of government policy and there is no negotiation between the Province and Hydro associated with the fee. Hydro has no control with regard to the payment of the fee.

Mr. Hall of RBC testified that only when Hydro achieved a debt to equity ratio of 60:40 would the Provincial government guarantee not be required in order for Hydro to raise finance in the capital markets.

Water Rental Rates

Hydro entered into an agreement with the Province of Manitoba to freeze water rental rates from April 1, 1997 to June 30, 1999. In return Hydro agreed to assume the Province's responsibility of costs for certain mitigation payments and for the North Central Transmission Program. The cost of these projects is estimated at \$33.1 million.

Hydro indicated that in comparison with the water rental rates paid in other Provinces it paid average rates.

The Province recently changed the method of payment of water rental rates from an annual to monthly basis. Hydro has estimated that the increased interest costs will approximate \$2 million a year.

Corporation Capital Tax

The Corporations Capital Tax is levied against businesses employing capital in the Province. Hydro had been exempt from paying the Corporations Capital Tax until the 1994 Provincial Budget rescinded Hydro's exemption. The assessment for the 1994/1995 fiscal year was calculated at \$11.5 million based on a formula being applied to the taxable capital of Hydro. The

calculation of the capital tax has been revised to reflect the end of the transition period in which Hydro paid the tax at a lower rate. The capital tax is now calculated under the full requirements of the legislation, effective for the 1995/1996 fiscal year, resulting in a required payment of approximately \$25 million per year.

Major payments to the Provincial Government by Hydro are summarized as follows:

Year	Provincia l Governmen t Guarantee Fee	Water Rental Rates	Corporati on Capital Tax	Total
	\$ 000s	\$ 000s	\$ 000s	\$ 000s
1992/1993 (actual)	12,966	44,784	Nil	57,750
1993/1994 (actual)	24,607	43,207	Nil	67,814
1994/1995 (actual)	26,890	44,390	11,500	82,780
1995/1996 (forecast)	25,252	45,859	24,646	95,757
1996/1997 (forecast)	27,025	47,483	25,216	99,724
1997/1998 (forecast)	27,025	47,690	25,467	100,182

10.4 Intervenor=s Positions

CAC/MSOS argued that Hydro=s approach to financial planning is based upon a worst case scenario, and not a scenario that is

likely to occur. CAC/MSOS stated that since weather variability will likely have the greatest effect on Hydro yet cannot be controlled, the most important determinant of Hydro=s future financial position will be Hydro=s own efforts to contain its own operating costs and capital expenditures. CAC/MSOS argued that should drought occur and competition unfold such as to cause a decline in revenues, then Hydro or the Board would not permit further decline in revenue without resorting to cost cutting and/or rate increases.

With respect to the various Provincial Government charges, CAC/MSOS stated that Hydro=s belief that rate increases will not spawn increased government charges is simplistic and at odds with reality. The reality is, according to CAC/MSOS, that what the Board grants to Hydro, the Provincial Government will take away.

The shareholder therefore, is not too concerned about Hydro=s financial health and the current debt to equity ratio. CAC/MSOS argued that the Provincial Government has consistently impeded Hydro=s ability to improve its debt ratio by matching increased revenue from rate increases with increased levies on Hydro.

MIPUG noted with concern that the operating costs of Hydro continued to escalate, even during a forecasted period of non-expansion. MIPUG further noted that if annual operating costs could be reduced by 0.5 percent, annual rate increases could be adjusted down by 0.19 percent. MIPUG urged the Board to direct Hydro to improve its financial strength through cost control, improved productivity, contributions of capital and other measures.

MIPUG noted that the financial forecasts assume no further increases in Provincial Government charges, and questioned the prudence of accepting these assumptions. MIPUG suggested that any increased equity paid by the ratepayers would simply lead to new Provincial Government charges. MIPUG further noted that one of the biggest problems is the persistent introduction of new and unexpected charges by the Provincial Government, and questioned the timing and element of surprise in their introduction. MIPUG further identified these new and unexpected charges as the most serious risk that has materialized to Hydro. MIPUG urged the Board to consider establishing reserves built up from customer

rates that are customer-owned rather than shareholder owned and thus impervious to Provincial Government charges.

The League also noted that there could be no assurance that an increase in rates will improve the debt to equity ratio of Hydro.

Rather, it may be used to balance the provincial budget, as has been the recent experience. The League viewed Hydro's payment of the province's obligations for the Northern Flood Agreement in exchange for freezing water rentals as excessive. The League also supported MIPUG's recommendation for separate customer owned reserves.

10.5 Board Findings

Hydro's projections are based upon a number of assumptions and variables, many of which are outside of Hydro's control. The Board is satisfied that the economic and other assumptions used by Hydro in preparing IFF95-1 are reasonable. As a consequence, the integrated financial forecast is a useful management tool that reflects a general indication of Hydro's long-term financial direction and as such, is a sound basis for making decisions regarding the proposed rate adjustments for 1996 and 1997.

The Board is of the strong view that any strengthening of Hydro's balance sheet over the next few years cannot and should not come from rate increases alone. It is absolutely imperative that Hydro management contribute towards the building of a stronger equity base through a number of non-rates initiatives including continued diligence in cost control, aggressive management of the labour force and an increased effort to manage payments to government.

The Board appreciates that Hydro is recognized as having a low variable cost structure and that a number of initiatives have been undertaken by Hydro to control its operating and administrative expenses including the signing of bargaining agreements that reflect labour cost savings to Hydro and the contracting out of services. However, the Board notes with concern the projected 10.6 percent increase in net wages and salaries from 1994 to 1998. The Board encourages Hydro to pursue with increased vigour, cost control and to decrease its costs through the Quality Improvements Initiative and the use of

emerging technologies rather than looking to increases in rates to meet increased costs.

The Board further notes that Hydro has indicated throughout its application that savings have been achieved through the elimination of 518 staff positions. However based on the evidence presented at the public hearing, this down-sizing only equates to the elimination of 239 equivalent full-time employee positions. Therefore the Board directs Hydro to file all information in subsequent General Rate Applications concerning wages and salaries in an equivalent full-time employees format (and not a staff positions format) to ensure that the relevant context of this information is not lost.

The Board also notes that the corporate performance measures discussed in Section 17.4 are of great assistance in assessing the performance of Hydro compared to other utilities, even though the comparisons can never be direct nor exact. Accordingly, the Board encourages Hydro to continue to participate in benchmarking initiatives, to help identify and implement further efficiencies and enhancements in its operations as compared to other utilities.

The Board is cognizant of the uncontrollable nature of the removal of its exemption from the Corporations Capital Tax by the Provincial government and the difficulty of managing such a change. Payments made by Hydro to the Provincial government represent commercially appropriate charges, but must be managed more aggressively. The Board encourages Hydro to continue in its attempt to strengthen its financial position through improving its operational efficiency and cost control and notes that the Provincial government as a major shareholder has an important role to play in this effort.

In response to Hydro's questions posed in final argument whether Hydro had done everything it could to reduce operating costs, the Board is not fully satisfied that Hydro has indeed done so to the maximum extent possible.

Accordingly, the Board will recommend that Hydro:

1. Continue discussion with its employees in order to, through consultation, identify opportunities for further operational efficiencies.
2. Continue its evaluation of the Corporation in order to achieve an organizational structure that best reflects the company=s current non-expansionary capital program and its positioning for competition and deregulation.
3. Aggressively manage its payment obligations to the Provincial government.

11.0 Capital Expenditures

11.1 New Capital Expenditure Forecast and Changes From 1993 Application

The Capital Expenditure Forecast (ACEF) forms part of Hydro's annual planning and forecasting process which culminates in the production of the company's IFF. CEF95-2 is included in the current application of Hydro and is incorporated into IFF95-1. The CEF reflects all capital expenditures including additions to plant in service and deferred assets.

Capital expenditures from 1995/96 to 2005/06 are projected to total \$2.7 billion. This total represents an increase of \$82 million or 3 percent over IFF94-4 excluding mitigation expenditures.

For 1996/97 and 1997/98, the capital expenditures in IFF95-1 are greater by approximately \$190 million, or 50 percent greater than those contained in IFF93-3 for the same period. Hydro indicated that much of the increase is due to the delay in the North Central Transmission Project, the addition of new projects to refurbish the transmission system and increased costs associated with the Grands Rapids re-running. However, Hydro also acknowledged that there was a decrease of approximately \$31 million in capital expenditures during this period attributable to reductions to the DSM program.

In the initial ten year forecast, the capital expenditures are heavily weighted towards the upgrading of existing facilities, especially transmission and distribution. Although upgrades for existing generation facilities are forecast in the first ten-year period, construction on the next major generation capital project (Wuskwatim), will not commence until 2005 for in service in 2011.

In the first two years of the CEF, capital expenditures total \$313 million in 1996 and \$297 million in 1997, but then decrease in later years. This was explained as Hydro having the ability to more accurately forecast those capital expenditures required in the near future, but not being able to adequately identify all capital expenditures in the longer term. Rather than viewing

this as front-end loading, a witness for Hydro identified this as rear-end starving. Although Hydro has considered including a contingency provision for those capital expenditures which are not identified though will likely occur in the longer term, it has decided against doing so in the absence of specific projects and estimates.

11.2 Process and Control

In response to questioning by Board Counsel as to the process and control exercised by Hydro in preparing its CEF, and in particular in considering each capital expenditure, Hydro provided a nine step process that each capital expenditure is subject to prior to its inclusion in the CEF.

1. Need is recognized by planning (either a condition exists or a condition will exist as determined through physical review, reliability studies, outage statistics and/or system load studies).
2. Alternatives are considered.
3. A Planning Report is prepared which defines the situation and proposes alternatives that meet load supply criteria, a cost benefit analysis of alternatives is performed when appropriate, factors such as reliability, environmental impacts, financial constraints, and risks of deferral are considered, and finally recommendations are provided and alternatives are ranked.
4. The Planning Report is reviewed by Hydro's Vice-President, Finance, for its justification of the project and to ensure that it is within the financial constraints of Hydro.
5. The Planning Report is submitted to Hydro's Technical Review Committee and/or the Planning Review Committee and the company's newly established Capital Review Committee. Hydro's Capital Review Committee was established so as to subject capital expenditures to additional scrutiny prior to proceeding so as to ensure conformance with the new financial target in respect of capital expenditures.

6. The capital items are then submitted to the IFF process.
7. The CEF is reviewed and approved by Hydro=s Executive Committee.
8. The CEF is incorporated into the IFF and presented to the Hydro Board for approval.
9. The individual capital items are further reviewed by Hydro=s Executive Committee prior to the commencement of the project.

Despite this rigorous process, the President of Hydro acknowledged concern about the levels of expenditures:

A...management is continually surprised by new items appearing in the forecast and I think we have to refine our methods of just looking at what the system requires. This seems to be an ongoing problem and one that really understates our capital expenditures.≡

(Transcript Pages 1500-1501)

The main criteria used to determine whether to conduct a cost benefit analysis is whether a project is required to meet reliability criteria for customer load reliability. Cost benefit analyses are only undertaken on larger capital expenditures and in appropriate circumstances since many capital expenditures required to ensure the reliability of the system could not be quantified on a cash basis. Similarly, if reliability were required, and there were no viable alternatives, then a cost benefit analysis would not be undertaken, rather a cost evaluation would be performed. If the expenditure was not merely to satisfy system load reliability requirements, then a cost benefit analysis would be undertaken.

The majority of the capital expenditures contained in the CEF are committed. Uncommitted capital projects return to Hydro=s Executive Committee on an individual basis even though they are included in the CEF, to determine whether they still need to be proceeded with or if they can be deferred or altered.

The Chairman of the Hydro Board stated that the Hydro Board presses management to make only those capital expenditures that

are absolutely necessary to the safety, security, and reliability of the system and that the Hydro Board was satisfied that the process of capital expenditure evaluation assured adequate control over capital expenditures. Indeed, Dr. McCallum stated that the evaluation process used for large capital expenditures was state of the art and led to a good analysis. However, Dr. McCallum stated that,

AI am confident that we have done a pretty good job in pushing the management to manage the capital plan effectively. But had we had this conversation six months ago, I think I would have pursued it a little more vigorously and I think you can be pretty sure we are going to pursue it more vigorously in the future.≡

(Transcript Page 254)

In closing argument, Hydro argued that it had provided evidence demonstrating that the generation, transmission, and distribution systems clearly are not overbuilt and that further deferral or elimination of capital projects would result in an unacceptable deterioration in customer load reliability, particularly under high winter load conditions.

11.3 Categories of Capital Expenditures

Each capital expenditure is subject to a justification which is categorized on the basis of capacity, load/reliability, safety, rehabilitation, service, efficiency, and other.

In 1995/96 the capital expenditure forecast by predominant justification category is as follows:

	1995/96	Five Year
Capacity	4.9%	\$ 33.5
Load/Reliability	39.7%	348.6
Safety	2.4%	16.3

Rehabilitation	39.7%	248.5
Service	3.4%	14.6
Efficiency	5.7%	76.6
Other	4.2%	91.6
Subtotal	100%	829.7
Domestic Items		526.8
Total Capital Expenditures		\$1,556.5

Domestic items are not divided into these categories, but rather consist of the ongoing capital costs of serving customers, and are primarily customer related and small. Approximately 50 percent (or \$49 million) of domestic items are for customer service in 1996/97. The domestic items identified in the CEF for 1995/96 are \$98 million, which are one-third of the capital expenditures forecast for that year. The domestic items are subject to a rigorous process of cost control and scrutiny similar to the other capital expenditures.

11.4 Information Technology

Hydro filed its Information Technology (AIT≅) Strategic Plan - Phase 1 as part of the current application. In Phase I, Hydro has forecast capital expenditures of approximately \$51 million from 1993 to 1998 for IT, excluding replacement of personal computers. A summary of the specific projects is as follows:

Specific Project	Completion Date	Cost (millions)
Corporate History Energy and Revenue	August 1993	\$ 0.9
Generation Planning System	April 1994	\$ 2.5

Facilities Maintenance System	June 1994	\$14.4
Regional Unit Cost Estimating System	November 1994	\$ 2.4
MapInfo (Phase I)	March 1995	\$ 2.7
Prime Replacement	June 1996	\$ 0.9
Financial Reporting System/ Material Maintenance System	June 1997	\$15.7
Data Network Expansion	September 1997	\$ 9.5
Windows 95	December 1997	\$ 2.0

The benefits identified in the IT Strategic Plan include:

- the ability to interconnect technologies to facilitate data access throughout Hydro;
- the minimization of support requirements (staffing, training, and products);
- the reduction in time to deliver new systems with enhanced useability;
- the upgrading of system components in a consistent manner; and
- the alignment of information technology deployment with Corporate business objectives.

11.5 Depreciation and Amortization

Hydro filed a new depreciation study for rates effective April 1, 1995. These depreciation rates are reflected in IFF95-1. Although some rates have increased and other rates have decreased, the overall rate is almost identical. The previous overall depreciation rate was 2.35 whereas the new overall depreciation rate is 2.36. The only significant movement was in the category of computers, where contrary to industry trends, Hydro has decreased the depreciation rate from 11 to 7.29 percent due to the longer life experience that Hydro has had with its computers. The depreciation rate on hydraulic station turbines and generators was increased by .88 percent because Hydro and

industry studies indicated that the useful life was 50 rather than 75 years.

The CEF includes planning study expenditures of approximately \$46 million, of which only \$1.6 million has been amortized since the costs for such planning studies are amortized over a fifteen year period following the incurrence of the expenditure. The fundamental purpose of capitalizing expenditures is to appropriately match the cost of an expenditure with the period in which the benefit is received. Hydro indicated that planning study costs are to have future benefit, though there is uncertainty associated with them as not all will be proceeded with, so those costs are amortized only after the year of the expenditure. When a project is committed, the amortization is stopped and any unamortized balance is transferred into the capital project at that time. Current ratepayers are not charged with the cost of planning

11.6 Crown Corporation Council Report on Capital Program

In October 1995 the Crown Corporations Council (ACCC) submitted a Report on the Review of Manitoba Hydro's Capital Program and Capitalized Internal Labour Resources. The CCC reviewed the capital budgeting and monitoring processes in place at Hydro, placing particular emphasis on the process for budgeting and managing individual capital projects within the total program and the associated capitalized internal labour component. The objective of the review was to assess whether Hydro's processes support appropriate decisions in setting budgets, managing and monitoring projects and controlling cost.

The CCC concluded as follows:

Manitoba Hydro has developed appropriate criteria to evaluate the need for the individual capital projects making up the capital program. It also has in place an appropriate process to monitor the performance of the system in relation to these criteria and to identify situations requiring capital expenditures to maintain the adequacy, reliability, and safety of the system.

The Executive Committee through its initial direction to management and its subsequent review and challenge of each fiscal year=s capital program provides appropriate control over the determination of the total capital program.

As such, management has put objective measures in place, which when combined with engineering and managerial judgment, provides a rational basis for ensuring that capital projects are in fact required for the ongoing effective and efficient operation of the system.

Appropriate processes are in place to budget for, and manage, individual capital projects.≡

The CCC recommended that:

- Asimplifying and strengthening the ability of the central system to measure capital costs and labour against related budgets be accorded a high priority in the implementation of the new general ledger system.
- the System Planning and Environment Division consider implementing some of the reporting mechanisms used by other areas within Hydro to enhance its monitoring of capital expenditures and labour usage.≡

This CCC Report was filed at the hearing.

11.7Intervenors= Positions

The members from MIPUG indicated in their presentations that their member companies were subject to tight controls on all expenditures, including capital projects, and suggested that Hydro should endeavour to exercise similar restraint. MIPUG expressed significant concerns about the 50 percent increase in capital expenditures for the two years of the application over what was presented to the Board in the 1994 application. MIPUG further noted that additional capital expenditures affect the costs and net income of Hydro and increases the borrowing needs of Hydro. MIPUG urged Hydro to control its capital expenditures.

CAC/MSOS questioned the validity of setting the capital budget based on staff requests for funds since the demand for capital projects far exceeds available resources. Whatever the capital expenditure budget, the available funds will be utilized fully by justifiable projects. It was argued that the capital budget should be set by the broader economic conditions and financial constraints on Hydro. CAC/MSOS argued that the most important determinant of Hydro's future financial position will be its own efforts to contain its operating costs and capital expenditures.

Like other companies, Hydro can be given a budget to work within, and be expected to manage its affairs according to the financial constraints placed upon it by its Board of Directors, the market and this Board.

In respect of the financial target of funding all capital construction requirements from internal sources except major new generation and transmission, Dr. Gordon advocated that the possibility of doing better should be considered in view of the substantial excess load capacity that exists at the present time and the lack of evidence supporting the fact that additions to load capacity are generating revenues in excess of the increased costs at a rate that contributes to debt reduction. CAC/MSOS holds the view that Hydro should limit its capital expenditure to the level of its depreciation and amortization expense and commit its net income to the reduction of debt and not to increase capital.

11.8 Board Findings

The Board notes with concern the high level of capital expenditures as forecast in the CEF, in a non-expansionary period for capital projects.

During the first two years of the CEF, 1995/96 and 1996/97, Hydro forecasts capital expenditures of approximately \$300 million annually followed by a substantial drop to approximately \$207 million for the next three years then climbing to \$322 million by the year 2005/06. The Board has concerns that Hydro appears to have front-end loaded its CEF and perhaps has included capital projects that could have been deferred. At the same time, the Board is also concerned that in future years Hydro has not identified all of the future capital projects that may be

required and therefore the decreased forecast expenditures will not come to fruition but rather Hydro might be faced with increased expenditures.

The Board recommends that Hydro re-examine their capital expenditure forecast procedures. There appears to be a need to further develop the risk assessment procedures to allow Hydro to forecast capital expenditures and capital expenditure deferrals with greater confidence.

The Board recommends that Hydro re-examine all CEF planning and design criteria covering capacity additions, dependable energy, transmission and substation additions (including contingency). This critical analysis may reveal areas where capital expenditure deferrals or design and construction cost reductions can be made.

Since the major issue of this application is to improve Hydro's equity position, and almost one third of the revenue requirement is required for capital expenditures, the Board views as appropriate that Hydro reduce these costs, along with its operating and administration requests. The Board notes the comments of all intervenors and presenters that most companies and individuals in the Province are having to operate on decreased budgets and reduced expenditures.

The Board encourages Hydro to reduce capital expenditures during this period of non-expansion. If Hydro is to improve its debt to equity ratio, then this is to be accomplished by controlling internal expenditures such as capital projects, and not solely by increasing rates to the consumers.

12.0 Cost of Service

The revenue cost coverage ratio (ARCC ratio) is the ratio of the revenue from a particular customer class to the allocated cost of providing service to that customer class. Hydro's requested rate increases and rate design changes are predicted to result in the RCC ratios by customer class, as shown in Section 13.5.

12.1 Allocation of Costs to Winnipeg Hydro

In response to Board Order No. 25/92, Hydro developed a revised method of reflecting its cost of serving Winnipeg Hydro in its 1994/95 Cost of Service Study. The revised method distinguishes between plant vintages which are not considered in the standard cost of service methodology. However, Hydro prefers to use the Winnipeg Hydro RCC ratio based on its standard methodology because it is consistent with the other classes.

12.2 Zone of Reasonableness

In Board Order No. 25/92 the Board requested Hydro to present a detailed plan for the improvement of interclass equity and to have all RCC ratios fall within the range of 90 to 110, while being sensitive to the issue of rate shock. In its application, Hydro has succeeded in reaching that goal with General Consumer classes (excluding Winnipeg Hydro) having ratios ranging between 91.4 and 108.8.

Hydro has modified their target zone for RCC's from 90 to 110 (short-term) to unity (long-term). Hydro's application recognizes that the existence of the Zone of Reasonableness does not address the issue of persistent differences between major classes. However, they claim that a convergence of RCC's towards unity can be achieved by showing different scenarios by the year 2001/02. Hydro claims that future rate increases will further reduce the existing interclass inequity as they strive to bring all classes to unity but they are unable to say when this might take place.

12.3 Load Research

In Board Order 62/94, the Board directed Hydro to undertake a study with the objective of defining the magnitude of error in determining cost of service procedures. The results of this study submitted in the application show that Aimprecision of +/- 10 percent at the class level is plausible. However, this review also indicates that the methodology is not biased for or against any class of service.≡

While the results of the study are preliminary it suggests that the existing ZOR of 90 to 110 is not unreasonable. Hydro states that study methodologies could be improved to provide a more detailed review but this would take 6 - 12 months. The improved study would recognize emphasis being placed on different factors that lead to imprecision such as load measurement variation, Generation/Transmission classification, and allocation. Ability to aggregate individual impacts would also be recognized. Weight would continue to be given to non-cost factors.

12.4Area and Roadway Lighting

In Board Order 62/94, Hydro was instructed to reduce the RCC ratio of this class to approximately 110 in 1994/95 and approximately 109 in 1995/96. Hydro made an adjustment to correct this but the actual figures were 116.2 in 1994/95 and 112.5 in 1995/96 after costs had been established. The proposed Area and Roadway Lighting rate decrease of 5 percent for the 1996/97 attempts to bring the RCC down to 108.8. Hydro stated in its final argument that it carried out its conversion of the entire Street Lighting system to High Pressure Sodium between 1991 through 1995. This rapid changeover may have had some effect on their ability to forecast costs accurately.

12.5 Allocation of Net Export Revenue

Export revenue plays a significant role in the determination of revenue cost coverage. Export revenue is distributed on the basis of generation and transmission costs associated with each customer class. This gives a greater allocation of net export revenue to General Service Large (above 100kV) which is supplied at high voltage and therefore contains generation and transmission costs exclusively. At the other end of the scale, Residential customers' costs contain generation and transmission costs along with the additional burden of sub-transmission and distribution costs so that their allocation of net export revenue is relatively less, as shown below:

March 31, 1997	RCC	Net Export Component of RCC
Residential	0.914	0.215
General Service Small	1.060	0.248
General Service Medium	1.024	0.273
General Service Large	1.082	0.319
Area and Roadway Lighting	1.088	0.082
Winnipeg Hydro	1.110	0.333

A large portion of the RCC is determined by the allocation of export revenue to different classes; an increase in export revenue would increase the spread of RCC.

It is apparent that the allocation of net export revenue accounts for 25 - 30 percent of the RCC factor. The Area and Roadway Lighting and Residential classes are allocated a lower credit for net export revenue and the General Service Large and Winnipeg Hydro classes are allocated the most credit. When export revenue rises the degree of benefit to classes is weighted to the same

groups. Consequently the spread on RCC=s increases even though the Residential class moves toward unity.

In Board Order No. 62/94 the Board found that Hydro=s allocation of net export revenue is appropriate because it is based on the principle of cost responsibility rather than mere judgment.

12.6 Intervenor=s Positions

CAC/MSOS believes that Zone 3 customers should not be expected to pay 100 percent of their costs and given that some customers will not pay their allocated costs in full, the source of the necessary contribution should be all other customers.

CAC/MSOS claims that Residential Zone 3 as a subclass is also outside the ZOR at 81.6. They recommend the redistribution of export revenue to provide an explicit subsidy to this zone to ease the burden of this zone, thus bringing it closer to unity. They also claim the current rate structure is not inequitable. Mr. J. Todd representing CAC/MSOS stated that if there is an explicit contribution towards Zone 3 costs and if the cost of that contribution is borne by all customer classes through a first claim on net export revenue, then the rate changes that will be needed to bring all classes to an RCC of 100 percent are relatively modest. Mr. Todd further stated that there is no urgency to achieve a significant shift in the costs borne by the different customer classes.

MIPUG=s position is that the Board should not consider any adjustments to the export revenue allocations or Cost of Service methodology in association with establishing some explicit subsidy policy for Residential customers in Zone 3. They note that the Board approved the present allocation methods for dealing with the export revenues in the last decision in 1994. They further claim that there is no evidence that any other utility has considered or adopted adjustments to the allocation of export revenues as a means of recognizing an explicit subsidy to any rate group. MIPUG points out that Hydro has no specific plans or schedules relating to inter- and intra-class equity and suggests that an appropriate process be established to rectify this situation prior to the next application.

MIPUG also urges the Board to assign greater priority to moving the RCC=s closer to unity, particularly General Service Large (over 100kV) achieving unity before 2005/06.

Although the RCC of the General Service Large class is proposed to be 108.2, MIPUG points out that General Service Large (above 100kV), as a subclass, is still outside the ZOR at 111.1. MIPUG requests that this subclass be reclassified as a separate class.

12.7 Board Findings

The Board finds it appropriate to continue to calculate the Winnipeg Hydro RCC as shown in the current Cost of Service Study and to not adopt the proposed alternative method.

The Board directs Hydro to continue to improve the quality of the load research information with a view to improving the accuracy of the Cost of Service study. The study is to be completed before the next General Rate Application.

The Board finds it appropriate to continue with the present net export revenue allocation but directs Hydro to undertake a study before the next General Rate Application to examine the following:

X Alternative methods of solving the persistent problem of certain subclasses (e.g., Zone 3 Residential and General Service Large) being outside the ZOR.

X The merits of considering General Service Large (over 100kV) as a separate customer class for Cost of Service purposes.

The study, which is intended to examine all alternatives, including subsidies, should recognize a time limit to address the problems of inter-and intra-class equity, and should assume a revised ZOR target of 95-105.

It is noted that a considerable difference of opinion exists between Hydro and the City on the matter of the RCC for Area and Roadway Lighting. The Board, therefore, directs Hydro to undertake an actual Cost of Service Study for 1995/96 on Area and Roadway Lighting to determine actual conditions including the

real coincident peak factor. The study is to be completed before the next General Rate Application by which time all the necessary information will be available.

13.0 Rate Design

Since 1989 Hydro has had an official long-term objective to achieve and maintain a long-term Zone of Reasonableness (AZOR \cong) for class Revenue Cost Coverage (ARCC \cong) of 0.90 to 1.10 as a guideline to the reasonableness of relative class revenues.

In October 1995, Hydro confirmed this ZOR as an indicator that class revenues generally attract costs and therefore, Hydro has modified its policy regarding long-term RCCs as follows:

- X that within the ZOR, Hydro will adopt a program with the intent of gradually moving all classes towards RCC of unity; and
- X that annual adjustments be permitted which result in class increases up to two percentage points higher than the average rate increase to total General Consumer Revenue.

The following simplifications from part of Hydro's long-term rate direction are:

- X eliminate current Multi-Residential charge
- X blend all seasonal rates into regular rate categories

Hydro also proposes to continue with the development and evolution of alternative rates to industrial customers such as Time of Use, Real Time Pricing, Standby and Wheeling rates.

The Board has in Board Order No. 25/92 requested Aa detailed plan, with time parameters, for the improvement of inter-class equity and to have all class revenue cost ratios fall within the range of 0.90 to 1.10".

However, Hydro has not adopted a particular plan at this point in time to achieve convergence of all classes towards unity.

13.1 Manitoba Hydro's Rate Increase Policy

While Hydro now has a policy of moving class RCCs towards unity, there are limitations on increases to individual customer bills

that Hydro has put in place to address the compound effects of RCC alignment and rate restructuring within classes.

In November 1995, Hydro modified its policy which limits individual customer rate increases as follows:

- (a) For residential customers, a customer=s monthly bill increase, at the same level of consumption, shall not exceed the greater of \$3.00 per month or three percentage points above the average increase for the class.
- (b) For General Service customers, a customer=s monthly bill increase, at the same level of consumption, when averaged over the year, shall not exceed the greater of \$5.00 per month or five percentage points above the average increase for the class.

These rate increase policy changes were required to enable Hydro to have fewer restrictions in moving the class RCCs towards unity.

13.2 Incremental Cost as a Rate Design Test

According to Hydro, traditional rate design has focused on recovering a revenue requirement and aligning class revenues with allocated embedded costs. However, Hydro maintains that it has been long recognized that the most efficient price signals are those which are related to the relevant incremental cost. This, Hydro says, is because a customer=s decision to consume or not to consume occurs or avoids the cost associated with the incremental kilowatt or kilowatt hour.

Hydro acknowledges that pricing strictly on the basis of incremental cost raises a number of problems that do not occur with average cost pricing. For example, incremental costs are calculated and may turn out to be inaccurate. The nearer the term of the forecast, the more accurate the forecast is likely to be. Hydro does concede that for some types of service, pricing on the basis of short-term incremental costs is appropriate (i.e. ISE type of rate where service is indefinitely interruptible or a firm service for which fixed costs are recovered by some alternative mechanism). However, in other cases a customer

contemplating a long-term commitment to an incremental use (i.e. purchase of a new appliance) will prefer assured long-term energy at a reasonable stable price. Pricing in accordance with long-term incremental costs provides an appropriate signal for both the utility and the customer and is to be preferred subject to a reasonable forecast of the long-term incremental cost.

Whether short-term or long-term prices tied to incremental costs may not, in total, yield revenue requirement or may not yield a fair share of allocated costs from individual classes. For such reasons, rate design incorporating incremental costs typically applies to those elements of a rate schedule where customers' use decisions are most sensitive to price. These are typically for the last block of energy in a demand/energy rate structure. Prices of less sensitive elements in the rate structure (i.e. customer charges) are allowed to vary from incremental cost in such a way as to achieve desired overall revenue or class revenue objectives.

As part of a longer term strategy, Hydro proposes to incorporate consideration of incremental costs in design of both regular firm rates and certain special rate options (i.e. DFH/ISE). Hydro proposes that design of regular firm rates will continue to emphasize gradual change but relative emphasis on rate elements and long-term direction will reflect relevant incremental cost.

The rate changes proposed by Hydro in this application do not radically alter rates in the direction of incremental cost pricing. However, they do move in a direction which is consistent with long run adaptation towards that type of pricing, including:

- (a) emphasis on last block and customer charges for residential and small commercial customers has the greatest effect on heating loads where long-term avoided costs exceed the rate, at least for residential customers;
- (b) emphasis on energy charges in rate changes to General Service Large, Medium and Small demand; and
- (c) the phasing out of the winter ratchet and replacing it with seasonal demand and energy charges.

Hydro concludes its evidence on this issue by indicating that to show greater recognition to avoided costs in the future, more structural changes will be required including reblocking of energy rates and seasonal distinctions for residential and general service customers.

13.3 Intervenor= Positions

CAC/MSOS argued that Hydro is allowing its costs to drive its rates and proposed that Hydro adapt to the mind set that rates and revenues drive costs. CAC/MSOS believes that Hydro should be expected to live within its budget and should not have the luxury of determining how much it would like to spend and then be able to ask for a rate increase to cover increased costs. Furthermore, an assumption of zero percent rate increases was built into IFF93-3 for 1997 to 2004 and CAC/MSOS questioned why this rate strategy was not continued by Hydro in IFF95-1.

Counsel for MIPUG queried what has changed since the last application put before the Board when Hydro had projected no further rate increases would be required before 2005. MIPUG believes that Hydro=s request for a 2 percent rate increase for each of the next two years is a radical departure from what the Board and the ratepayers should have expected. MIPUG further believes that the evidence provided at the public hearing did not describe any circumstances sufficient to justify the dramatic and wholesale reversal in Hydro=s anticipated rate increases.

MIPUG advocated that the Board should establish General Consumers rate increases between 0.5 and 0.8 percent each year for 1996/97 and 1997/98, respectively. These rate increases would yield a debt to equity ratio in the range of 90:10 to 85:15 by the year 2005/06. MIPUG has and continues to consistently request that the Board adopt a long term approach which is likely to yield reasonably stable annual rate increases. It was further noted by MIPUG that since the establishment of *The Accountability Act*, the Board has consistently reduced the overall rate increase applications requested by Hydro and MIPUG urged the Board to continue to do so.

MIPUG holds that Hydro should develop comprehensive plans that will improve its financial and competitive strength without resorting to rate increase requirements beyond those consistent with ratepayer interests.

MIPUG stated that the principle of setting firm rates to reflect incremental levelized avoided costs rather than embedded costs raises major concerns for large industrial users. It is not appropriate that such measures be introduced without careful review of all potential rate design options prior to implementation.

The City requests an actual Cost of Service Study be performed for 1995/96 to confirm the RCC of street lighting. They believe that the study should include a coincident peak value of 83 percent. Instead of a rate decrease of 5 percent proposed by Hydro for the first year and zero percent for the second year, the City requests a 10 percent decrease in each of the two years.

The League put forward their view that Hydro should not request a rate increase in light of the current economic position of its customers who should be treated fairly and equitably and with the wellness and viability of Hydro at the present time in mind.

13.4 Board Findings

The Board notes that while Hydro has claimed achievement of their goal in reaching a ZOR of 0.90 to 1.10, there is no plan yet to bring all classes to unity within a certain time frame. The Board refers Hydro to the findings in Section 12.7 where this item is discussed in more detail and which suggests that a ZOR goal of 0.95 to 1.05 be first adopted before unity is considered.

The Board recognizes Hydro's policy in limiting class increases to two percentage points higher than the average rate increase to total General Consumers Revenue but reserves its right to revise this as circumstances dictate. This position also applies to the stated limitations of customer impacts for Residential and General Service customers.

In Board Order No. 62/94, the Board recognized the appropriateness of long-run incremental cost as a price signal where additional load will necessitate construction of new, high cost generating capacity. The Board further qualified this by stating that future estimates of incremental costs can be subject to considerable error, particularly when construction of the next source of generation is in the distant future.

The Board, therefore, directs Hydro to study and report on the implications of using incremental versus embedded (average) costs as they would apply to Hydro's rate design and the impact on various customer classes, recognizing that additional generation will not be installed until the year 2011 due to low load growth. This report should be made available to all parties well before the next General Rate Application.

The Board, consistent with its findings in Board Order No. 62/94 accepts Hydro's reasons for proposing a two-year rate increase as reasonable. The Board notes that no intervenor opposed Hydro's request for a two-year rate increase. Although Hydro does not expect to see significant changes in its operations or plans within the 1996/97 period, the Board also notes that the Accountability Act provides that the Board or any interested parties can request a review of Hydro's rates should circumstances change significantly. The Board further expects that Hydro will submit a revised application to the Board if an immediate large change in revenue requirement prior to 1997/98 were necessary due to unforeseen circumstances.

The Board will therefore approve Hydro's request for a two-year rate increase subject to the Corporation meeting the same monitoring and reporting requirements outlined in Board Order No. 62/94.

The Board recognizes that Hydro's proposed 1996/97 and 1997/98 rate increases were set with the view of covering its increased costs and strengthening its financial position. The Board appreciates Hydro's viewpoint that its request has been made with its customers' current economic position in mind. However the Board also recognizes that Canada and Manitoba are currently experiencing low economic growth which is forecast to continue, limiting the ability of Hydro's customers to absorb rate

increases. The achievement of Hydro's financial objectives should not come from rate increases alone but from internal operating efficiencies and reduced capital expenditures. Hydro has exhibited an ability to consistently increase its equity during difficult operating conditions including periods of drought and uncertainly.

Based on all of the evidence presented to the Board and considering the viewpoints expressed by the intervenors, the Board will approve an overall rate increase in General Consumers' revenue of 1.5 percent effective April 1, 1996 and 1.3 percent effective April 1, 1997.

In determining how the revenue reduction is to be applied to the various customer classes, the Board approves the following rate increases:

Customer Class	1996/97	1997/98
Residential	2.84%	2.34%
General Service Large	0.00%	0.00%
General Service Medium	1.46%	1.46%
General Service Small -	1.31%	1.33%
General Service Small - Non-	1.19%	1.12%
General Service Small -	0.85%	0.88%
Area Roadway and Lighting	-5.00%	-5.00%
DSM Reduction	2.25%	1.90%
Bulk	0.00%	0.00%
Diesel Full Cost	0.00%	0.00%
Miscellaneous Revenue	1.50%	1.30%
Adjustments	1.50%	1.30%
Overall	1.50%	1.30%

The Board orders Hydro to file for approval, a revised schedule of rates together with a proof of revenues and revenue to cost

ratios for 1997 that reflects all of the decisions set out in this Board Order.

13.5 Seasonal Rates

A major rate change proposed by Hydro in this application, is the introduction of seasonal rates for General Service Large and Medium customers. Over the next four rate changes, Hydro proposes the gradual elimination of the winter ratchet rate which is considered outdated and unfair to certain customers. The winter ratchet has been used to signal customers regarding the higher cost of winter capacity; but it is a crude signal which sends far too strong an incentive to some customers and none at all to others. With the present ratchet, a customer with a low summer demand compared to his winter demand is disadvantaged because he will pay a premium for summer demand. Customers with steady year round demand pay no more for summer demand than for winter demand. With the introduction of seasonal rates, summer rates would be less than winter rates and the rate design system would be fairer. With the winter ratchet phase-out, lost revenue (approximately \$4 million per year) would be replaced with higher charges for demand and energy during the winter season, defined to be the months of November to April.

Hydro maintains that seasonal differences in cost of demand and energy are more appropriately reflected by seasonal variation in the actual rate charged. While the rates which collect the revenue currently provided by the winter ratchet will not reflect differences in incremental cost relative to energy and capacity in the winter versus the summer, the annual reduction in the winter ratchet and the introduction of seasonal rates represent a reasonable first step.

13.5.1 Intervenor's Positions

The City of Winnipeg questioned the merits of the proposed seasonal rates that Hydro is advancing. The City also has concerns that the introduction of seasonal rates may be to the disadvantage of customers who have taken steps to reduce their load because of the existing winter demand ratchet. The City requests that the Board allow more time for consultation and consideration of the implications of such a rate structure change. In addition, the City objects to the increase in water heating rates, pointing out that the RCC will be raised above 110 (to 113.7). Winnipeg Hydro has, and wants to continue to serve, its own water heating market and objects to Hydro not consulting with them on this issue.

MIPUG argues that Hydro's proposal to introduce seasonal rates took several parties by surprise. MIPUG is supportive of the removal of the winter demand ratchet, at least for General Service Large (over 100 kV. customers). However, MIPUG maintains the proposal for new seasonal rates is premature and should not be approved by the Board at this time. Rather, MIPUG supports implementing time of use rates, including off-peak and seasonal rates. MIPUG suggested that this process could take place outside of the normal General Rate Application process.

13.5.2 Board Findings

In previous Board Orders, the Board has encouraged Hydro to meet with its various customer groups to discuss implementation of new and innovative rates as well as to review the implementation of new rate structures. It is therefore of concern to the Board that apparently little discussion has taken place prior to the proposed introduction of the seasonal rates. Additionally, there appears to be unresolved issues that need to be addressed before seasonal rates can be introduced for other major classes such as the Residential and General Service Small classes.

Because of the lack of clarity as to the impact on the General Service Large and Medium classes, the Board will not, at this time, approve the introduction of seasonal rates. Consistent with the rejection of seasonal rates for the present application, the current application of the winter ratchet should continue.

The Board notes that Hydro may re-apply for approval of seasonal rates upon resolution of the concerns of the Board and need not wait until the next General Rate Application.

The Board will direct Hydro to prepare a comprehensive rate policy which gives full consideration to all issues related to implementing time of use rates, including off-peak and seasonal rates. This report should include consultation with all interested parties and consideration of the rationale and implications of any future phase-out of the winter ratchet.

The Board is in agreement with and will approve the elimination of the Multi-residential Charge as well as the blending of the General Service seasonal rate. The increases to water heating rates are approved.

13.6 Dual Fuel Heating/Industrial Surplus Energy (ADFH/ISE \cong)

The Board approved DFH/ISE rates in Board Order 101/95, dated October 20, 1995. However, in this application by Hydro, several revisions to the terms and conditions of the DFH/ISE rates are requested. The reasons Hydro requests these changes are to clarify the intent of the DFH/ISE programs, to assist in implementation of these programs and to reconcile the rates with the newly proposed seasonal differentiation to firm General Service Large and Medium rates as contained in this application.

In the proposed rate schedules filed in this application, Hydro has requested the following revisions:

- (I) Clause 11(b) of the DFH and Clause 12(b) of the ISE terms and conditions set summer rates equal to 75 percent of the corresponding firm rate. Also, winter rates are set equal to 100 percent of the corresponding firm rate. If the proposed seasonal rates for firm service are approved by the Board, the percentages presently in the terms and conditions would no longer yield appropriate DFH/ISE rates relative to the short-term supply cost.

Consequently, Hydro proposes to revise these clauses to tie changes in the rate, including the distribution charge, to percentage changes in the corresponding firm energy rates, weighted average summer and winter rates.

(ii) Clause 2(c) of the spot market replacement energy terms and conditions for ISE customers is currently silent as to whether distribution charges apply during periods in which spot market energy is delivered to customers. Hydro proposes to revise this clause to indicate that distribution charges apply to all energy deliveries including spot energy provided during interruption periods. Hydro has testified that this was their intention when the program was introduced but it was omitted in the terms and conditions previously filed with the Board.

(iii) Clause 2 of the ISE terms and conditions defines a customer=s reference load above which consumption is eligible for the ISE rate. Hydro proposes to revise this clause to define the minimum reference load of an existing customer as the average demand and average energy of the highest three months of energy use during the most recent twelve months prior to the customer=s request for ISE service. It is also proposed by Manitoba Hydro to amend this clause to allow for revisions to the reference load to account for changes in the customer=s power factor and to allow for energy efficiency measures undertaken by the customer.

13.6.1 Intervenors= Positions

MIPUG maintains that the new seasonal rates are premature and should not be approved by the Board at this time. However, if such seasonal rates are not approved, then there would be no need to amend Clause 11(b) of the DFH and Clause 12(b) of the ISE terms and conditions.

MIPUG supports the amendments sought to Clause 2(c) of the spot market replacement energy terms and conditions dealing with distribution charges even though it may disagree, from a methodological point of view, as to whether such a charge is appropriate.

MIPUG also supports the amendment to Clause 2 of the ISE terms and conditions which will redefine the customer=s reference load above which consumption is eligible for the ISE rate.

13.6.2 Board Findings

The Board has not approved seasonal rates for firm service as requested by Hydro, therefore it is not appropriate to revise Clause 11(b) of the DFH terms and conditions and Clause 12(b) of the ISE terms and conditions to set summer rates equal to 75 percent of the corresponding firm rate and winter rates equal to 100 percent of the corresponding firm rate. Therefore this request for changes to the terms and conditions is not approved.

The Board will approve the requested revisions to Clause 2(c) of the spot market replacement energy terms and conditions to include distribution charges applying to all energy deliveries, including spot energy, provided during interruption periods.

The Board will also approve the requested revision to Clause 2 of the ISE terms and conditions which will define the minimum reference load of an existing customer as the average demand and average energy of the highest three months of energy use during the most recent twelve months prior to the customer=s request for ISE service. The Board will further approve the amendment to this clause to allow for revisions to the reference load to account for changes in the customer=s power factor and to allow for energy efficiency measures undertaken by the customer.

14.0 Curtailable Rates

On February 1, 1996, Hydro filed an application for an amendment and extension to the Experimental Curtailable Rates Program, requesting that the proposed amendments be heard at the public hearings for the general rate application. The Board accepted the filing of the application and notice of the application was sent to intervenors and applicable customers.

In Board Order 148/93 the Board gave approval for Hydro to initiate a three year experimental Curtailable Rate Program for General Service Large customers with a minimum curtailable load of 5MW. The Curtailable Rates Program commenced November 1, 1993 and is due to expire on October 31, 1996.

Curtailable service provides Hydro with the flexibility to respond to emergencies, or to firm up export sales during peak periods. It can also be used to reduce import costs during peak periods and for peak shaving in general. Operating savings are also available to Hydro such as when load curtailment permits Hydro to avoid start-up and fuel costs associated with peaking generation. Over the long-term the cost associated with new generating stations can also be deferred. The customer, an industrial operation with the ability to interrupt certain processes with some notice, benefits by paying a lower rate for a lower reliability of service. The Curtailable Rates Program is an important component of the DSM strategy of Hydro due to its load shifting and energy conservation aspects.

The Curtailable Rates Program is composed of nine options for different conditions of curtailment. These include variations in the minimum time to give notice to curtail, maximum duration of the curtailment, and the maximum daily and hourly interruptions.

The discount ranges from a maximum of \$1.50/kW based on Hydro's long-term avoided cost, to a minimum of \$0.53/kW. Customers are guaranteed replacement off-peak energy as well as additional or constrained off-peak energy, if costs permit, with no demand charge.

In accordance with the Board's approval of the curtailable rates program in Board Order 148/93, Hydro was requested to provide progress reports every six months, which it has done. To date,

there are two curtailable rates customers and in the first two years of the program there were 24 curtailments. However, since November 1, 1995 there have been 26 curtailment incidents, 24 due to peak shaving in the extremely cold weather, and two to maintain short-term firm exports.

The benefits to Hydro from the Curtailable Rates Program include: 1) increased system reliability; 2) reduced operating cost; 3) deferral of facility additions; 4) reduced customer costs; 5) use of an experiment to reduce risks and uncertainty; and 6) provide further experience to Hydro and its customers in managing curtailable load. A further benefit, although intangible, is the knowledge that the system can be operated with the knowledge of the curtailability possible.

14.1 Proposed Amendments and Extension to Curtailable Rates Program

The proposed amendments to the Curtailable Rates Program are as follows:

1. An extension of a further 17 months to March 31, 1998;
2. That the revisions below, if approved, be effective May 1, 1996;
3. The maximum average annual hours interruption be increased by 50 percent for each option available;
4. Hydro be allowed to roll over the difference between maximum average annual hours and actual hours curtailed to May 1, 1996 into the extension period;
5. The current limitation on hours of interruption in any three consecutive days be removed;
6. AOption A≅ limitation on hours of interruption in any one day be raised from the current six hours to eight hours for the periods May 1 to August 31;
7. The discounts, expressed as a percentage of Reference Discount be increased from 50 percent to 60 percent for Option C and

from 80 percent to 90 percent for Option CE to better recognize benefits to Hydro. The Reference Discount would remain at \$1.50 per kW;

8. Terms and conditions associated with each option, other than the associated discount, may be altered during the experimental period on the basis of mutual agreement between Hydro and customers participating in that option.

In respect of the first point, when questioned why this was an extension of the experimental phase, witnesses for Hydro stated that they could gain additional experience to be able to verify the degree to which concerns with the program are addressed by the modifications and be in a better position to respond to potential requests for Hydro to further modify the terms and conditions if so required at the end of the extension. By extending the experimental phase Hydro could better evaluate the program, especially with the proposed modifications. If the experimental period is successful for both Hydro and its customers, then Hydro indicated that it will consider establishing it as a permanent program.

As indicated in the eighth point above, Hydro has applied to have the ability to modify the terms and conditions of the Curtailable Rates Program with the consent of the customer and without seeking approval of the Board. This modification would not extend to the discount. The ability to modify the terms and conditions would provide Hydro with the flexibility to make minor changes without the delay and cost incurred in seeking Board approval. The preference of Hydro would be to alter certain non-rate terms and conditions and then notify the Board. Such terms and conditions would likely include the maximum interruption duration, maximum hours of interruption, and number of interruptions.

It is the position of Hydro that these alterations would not require approval of the Board because these are not the rates nor the rate schedules. Any rate alterations concerning the rate discounts would be submitted to the Board for its approval. When questioned by Board counsel whether the terms and conditions of service were exclusive of the rates, the witness for Hydro

indicated that the terms and conditions of service impact the rate for that customer=s option.

The economic evaluation which shows the benefits and costs for each year into the future, indicates that the proposed extension of the Curtailable Rate Program shows a net benefit of \$14.1 million but results in about a \$1 million loss at the end of the proposed extension (March 31, 1998). The reason for the loss is the discounting of the long-term avoided costs (i.e., benefits).

The financial evaluation which shows the impact on Hydro=s retained earnings over time, indicates that if the Curtailable Rates Program is extended to 1998 then retained earnings will have increased by \$3 million and if extended permanently thereafter, by \$21 million by 2006, assuming that the Winnipeg Hydro Cost Sharing Agreement continues in its present form beyond its expiry in 2000. If the program were discontinued, then retained earnings would be reduced by \$6 million in 1998 and \$34 million by 2006.

14.2 Intervenor=s Positions

MIPUG supported the extension of the Curtailable Rates Program as applied for by Hydro.

The City expressed the concern that none of Winnipeg Hydro=s customers were eligible to take advantage of this special rate due to the criteria established by Hydro (i.e., minimum curtailable load must be 5MW).

14.3 Board Findings

The Board notes both the financial and DSM benefits forecast by continuing the Curtailable Rates Program as opposed to cancellation. Further benefits include offering alternative rates to industrial customers, in addition to those other benefits listed.

The Board views this program to be of limited success since only two customers have participated. Perhaps with approval of the modifications of the terms and conditions of the program and the extension of the program, more customers will be attracted. Hydro should no longer consider this an experimental program, but

rather a permanent rate, thereby attracting customers who wish to ensure that their investment in the necessary equipment and education are recognized throughout a longer program.

Accordingly, the Board approves the modification of the terms and conditions of the Curtailable Rates Program as proposed and its extension until March 31, 1998 with one exception. The Board will not approve that part of the application that the terms and conditions associated with each curtailable rate option may be altered with the mutual consent of Hydro and that customer. The Board considers the terms and conditions of service of each curtailable rate option to be an integral component of the rate approved by the Board and as such cannot be altered without approval by the Board.

The Board further notes that Hydro has been filing reports on the Curtailable Rates Program every six months. Since the program is well underway, the Board considers such frequent reporting not to be necessary. Accordingly the Board directs that Hydro file a final report on the Curtailable Rates Program subsequent to March 31, 1998, in conjunction with any future plans Hydro may have for this program.

The Board also directs that Hydro examine the City's request for a reduction in the minimum load requirement to allow greater participation in the program by Winnipeg Hydro and Hydro's customers.

15.0 Load Forecast

The load forecast has been reduced since the last application by Hydro. The ten-year growth rate is now forecasted at 1.6 percent per year compared to 1.7 percent previously. Based on the current load forecast, the next source of generation required to meet the domestic load will be Wuskwatim in the year 2011.

15.1 Methodology

The methodology employed by Hydro in the May 1995 load forecast has evolved slightly since May 1993; notably, the May 1995 load forecast:

- ⊘ Includes a reduction for future DSM savings.
- ⊘ Includes a reduction due to rural gasification.
- ⊘ Excludes station service loads from net energy and peak values.
- ⊘ Excludes interruptible sales from firm energy and excludes curtailable loads from firm peak loads.

There is no change to the weather adjustment models, which use a 25-year moving-average to calculate normal weather. These are not sensitive to one-year changes in weather. In Hydro's view, even longer term weather shifts would have little impact.

Load forecasting accuracy, which was scrutinized in the 1990 public hearing, has for the past five years produced an overstatement of Manitoba firm load by 5 to 10 percent. This has been recognized in the May 1995 load forecast, which is 14 percent lower than the May 1989 load forecast, largely due to lower than forecast economic growth.

Compared to the last application by Hydro, the Net Firm Energy growth rate has been reduced from 1.7 percent/year to 1.6 percent/year for the next ten years and from 1.6 percent/year to 1.5 percent/year for the next 20 years.

15.2 Power Resource Plan

Hydro's 1995 Power Resource Plan, includes the All Economic Lost Opportunities Option of DSM and identifies the following 20-year plan of action:

- ☐ Continued supply side management
- ☐ Continued demand side management
- ☐ Existing thermal plant life
 - Brandon Nos. 1 to 4 (132 MW) lay-up in 1996
 - Selkirk Nos. 1 and 2 (132 MW) lay-up in 2005
 - Brandon No. 5 (105 MW) lay-up in 2006
- ☐ Wuskwatim Generating Station (340 MW) - in service by 2011
- ☐ Combined Cycle Combustion Turbine (200 MW) - in service by 2016

Hydro's assessment of the alternatives for the next major addition in generation capacity has identified the Wuskwatim project in 2011. Based on current technology and forecasts for natural gas prices, a combined cycle combustion turbine (CCCT) would be at least 40 percent higher in on-line costs. These costs may have to decline significantly for a CCCT to become a good investment for balancing off the drought risk.

The above program is expected to meet the needs of Manitoba customers (19,000 to 21,000 Gwh/3700 to 4100 MW), plus committed export sales (4500 to 5500 Gwh/600 to 800 MW) over the next ten years. Surplus energy (1000 to 2000 Gwh) and capacity (500 to 1000 MW) will provide for additional sales opportunities until the 2002 to 2005 period, when generation and associated transmission capabilities may become constraints on load growth.

Hydro, to date, has not undertaken serious consultations with Winnipeg Hydro on the future redevelopment of Winnipeg Hydro's Pointe du Bois Generating Station on the Winnipeg River. Although this is a City responsibility, the timing, capacity and energy rating of such a project could affect the in-service date for the Wuskwatim Station. Given the advanced age (99 years) of the Pointe du Bois station by the year 2010, its structural and operational integrity may also present some risk for future availability.

15.3 Drought Risks

Hydro has adopted power demand and revenue scenarios that provide greater allowances for drought risk than previously defined in earlier applications by Hydro. The rationale for this falls from the experience of the 1987 to 1992 period when Hydro had negative earnings in three of six years, due primarily to the drop in net export revenue.

Hydro's approach to defining available energy and peak load generation capacity involves the use of median flows for the three years and the use of mean flows for all future years. This means that the flow generated power identified as available for export sales in the first three years is likely to be exceeded (or not) 50 percent of the time. However, in the last seven years of the forecast the actual available power in each year will be less 40 percent \forall of the time and greater 60 percent \forall of the time.

This definition of available flow for power is justified by Hydro on the basis that the flow shortfall in drought years will be greater than the useable flow surplus in wet years. It was also suggested that because export sale prices in wet years are expected to be less than dry years when import prices are likely to be high, the drought years are more significant. To address the concern for longer duration and more intense droughts, Hydro wishes to provide financial reserves of \$590 million to deal with a five-year drought (compared to \$320 million for a two-year drought).

15.4 Intervenor's Positions

Testimony provided by Mr. Osler on behalf of MIPUG suggested that some caution should be taken in interpreting the application's emphasis on drought risk with respect to reductions in the load forecast for future export revenues because extra provincial revenues have not in fact declined. MIPUG also believes Hydro's financial performance will be better than its forecast.

The League contends that drought is not a major factor to Hydro's performance as the Corporation has reservoir storage to manage outflow. The League advocates that Hydro should consider diversification of generation types to reduce drought effects.

Testimony by Dr. Gordon on behalf of CAC/MSOS indicated that Hydro was overstating the consequences of drought given that Hydro=s financial performance through the 1987 to 1990 drought period was still positive and Hydro is now enjoying the best retained earnings ever, given that export prices have risen significantly since 1990.

15.5 Board Findings

The Board concurs with Hydro=s approach and methodology relating to load forecasts and the determination of future power resources using median flows for the first three years and mean flows for all future years. This approach provides sufficient balance to address the uncertainties related to load growth variations and any significant risk of drought.

Because of the uncertainties of timing, ratings and safety associated with the future development of Winnipeg Hydro=s Pointe du Bois generating station on the Winnipeg River and recognizing that this will have an impact on Hydro=s future power resource plans, the Board recommends that Hydro resolve these uncertainties with Winnipeg Hydro as soon as possible.

16.0 Demand Side Management

16.1 Hydro=s Proposed DSM Program and Amendments

The Board notes that the proposed DSM program in this application (called the All Economic Lost Opportunities Option) is considerably less intense than in the previous application and that Hydro has deferred many of the earlier components of the program due to reduced load growth, a deferred in-service date for Wuskwatim and lower avoided costs. The cost reduction is almost 50 percent of the previous plan bringing the utility cost down to \$137 million instead of the previous \$270 million up to the year 2001/02 for a 207 MW, 584 GWh load reduction.

16.2 Intervenor=s Positions

No intervenors expressed opinions on Hydro=s proposed DSM program.

16.3 Board=s Findings

The Board notes that no intervenors objected to Hydro=s DSM proposal. The Board also is in agreement with Hydro=s DSM proposal and encourages Hydro to maintain its vigilance in expenditures in this area. The Board further directs that for future Cost of Service studies, DSM costs for General Service Small and Medium customers shall be directly assigned.

17.0 Other Issues

17.1 Mitigation and Northern Flood Agreement

Hydro has been engaged in a difficult and protracted process of settling outstanding obligations to the Aboriginal people of Manitoba. Of the five First Nations Bands that were signatories to the Northern Flood Agreement in 1977, Hydro has reached agreements with three. For the years 1993 to 1998 Hydro has forecast the costs of all Aboriginal settlements, including those encompassed in the Northern Flood Agreement, at a total of \$221 million. Hydro has recorded as a mitigation liability \$117 million, the remaining amount of which is the liability of the Province. There remains an undetermined liability that has not yet been recorded for Hydro.

In the past year Hydro has entered into an agreement with the Province whereby Hydro assumed the obligations of the Province, totalling \$88 million, with respect to various northern development projects, including the Northern Flood Agreement and the North Central Transmission Line, among others. In return for assuming the provincial obligations of \$33 million, the Province agreed to freeze water rental rates at current levels until June 30, 1999. In entering into this agreement, Hydro ensured that the benefit received equated the payments made.

Construction of the North Central Transmission Project which is to provide transmission line service to seven communities currently served by diesel is proceeding slowly due to new demands and conditions being placed on the project by various First Nations Bands. The total cost of the project is \$126 million, and is funded by the Government of Canada (75 percent), the Government of Manitoba (15 percent), and Hydro (10 percent).

17.2 Rural Gasification Program

Centra Gas Manitoba Inc. has embarked upon an expansion of its franchise to customers in Southwestern Manitoba and various other towns in Manitoba. This expansion is heavily subsidized by various levels of government. Since the overwhelming majority of these customers will be switching from electricity to gas for

space heating purposes, the impact on Hydro will be noticeable. The effect of this rural gasification program is to reduce electricity sales by 56 GW.h and revenues by \$26.5 million by 2005/06. This impact on the load forecast has been reflected in IFF95-1.

17.3 Diesel Rates

No change has been requested in the full cost and government surcharge rates since Board Order 62/94. Enhancement to service has occurred in two communities with diesel generation and is planned to proceed in a further two communities. Hydro is currently negotiating with the Province on payment to cover the cost of constructing a line from Thompson to Thicket Portage and Pikwitonei.

17.4 Corporate Performance Measures

In Board Order 62/94, Hydro was ordered to file information on benchmarking and key performance indicators. Included in the filing was Hydro's Corporate Performance Report which focussed on customer service, system reliability, safety, environmental protection, productivity, finance, and rates. This report compares Hydro to other major electrical utilities within the Canadian Electrical Association (ACEA) for the past ten years. Hydro's performance is generally more favourable than the CEA composite average, especially in the areas of customer satisfaction, reliability, and low rates. Hydro ranked below the CEA composite average in certain safety categories, amongst others. Also filed in response to an information request of the Board was the Canadian Utility Composite Performance and Productivity (ACOPE) Results Report and Hydro's data submitted for that report.

In comparing the Hydro statistics to those of the COPE Report, the performance of Hydro in the categories of labour productivity, transmission unit cost, and distribution unit cost were below the composite average, but above for generation unit cost. Generation unit costs and system unit costs are better than the Canadian average, providing further evidence that Hydro is one of the lowest cost producers in Canada.

Although there are differences in comparisons between utilities because of the unique operation of each utility, the benchmarking studies do provide assistance to Hydro in a number of ways. The benchmarking studies provide an indication of the performance of the utility, are a valuable means of gaining otherwise confidential information and can be used to gain information on similarities with other utilities to improve performance.

The vision of Hydro is to be the best electrical utility in North America with respect to rates, reliability, customer satisfaction, and to be considerate of all people with whom it has contact. This is to be achieved in an efficient, economical and environmentally responsible manner. Hydro has indicated that to create a framework to achieve these goals, performance measures are developed to chart its progress towards the attainment of operational and financial targets. The performance measures highlight the areas in which Hydro excels, as well as those areas where opportunities exist for improvement.

18.0 City of Winnipeg Application for Refund of Perceived Overpayment

In Board Order No. 62/94, with respect of Area and Roadway Lighting, the Board stated that:

The Board finds unacceptable the fact that the Area and Roadway Lighting RCC ratio would still be outside of the zone of reasonableness. The Board will therefore approve rates which will reduce the prospective RCC of this class (after allocation of DSM cost) to approximately 110 in 1994/95 and approximately 109 in 1995/96.≅

In filing the Prospective Cost of Service Study for 1996/97 the actual RCC for this class for 1994/95 was 114.4 and for 1995/96 112.5. For 1996/97 the prospective RCC is 108.8.

By way of letter dated February 14, 1996 from Mr. Buhr, the solicitor for the City to the Board, the City pursuant to sections 28(1), 33, and 44 of The Public Utilities Board Act, applied to the Board for an Order requiring overpayments, with interest, to be refunded to the City either in cash or through an adjustment in the proposed rate as set out in in the general rate application. The calculation for the overpayment by the City according to the City of Winnipeg, is \$258,817 for 1994/95 and \$209,367 for 1995/96. Overpayments were also made by other municipalities for their Area and Roadway Lighting.

Hydro explained the reasons for the variations from the PCOSS. At the time of designing the rates flowing from Board Order 62/94, Hydro was relying on its forecasting model which takes that year=s cost of service into account and projected costs based on what Hydro believed to be the trends at that time.

18.1 Intervenor=s Positions

The City argued that the Board should determine this issue at this public hearing. As the Board has all the evidence before it, it would be inefficient and costly to initiate a separate public hearing. The City viewed this as an issue as to whether the Board can enforce its Board Orders, in particular noting that in

the last application, before the Board ordered a reduction, the RCC was 113. After the ordered reduction, the RCC is projected to be 2.5 points higher in 1996/97. In addition to ordering a refund of the overpayment, the City encouraged the Board to adopt a further rate reduction over the two years of this application.

This would have the benefit, according to the City, of having practically no cost to other classes and would further accomplish the goals of Hydro of lowering RCCs to unity and to not leaving those at the highest Zone of Reasonableness in that position.

Hydro argued that it is opposed to any retroactive rate adjustment or refunds, and was in fact opposed to the hearing of the application of the City. Hydro argued that it had charged the rate approved in Board Order No. 67/94 which was the Board Order approving rates flowing from Board Order No. 62/94. Hydro submitted that to approve the application of the City, would be tantamount to retroactive rate making. Furthermore, Hydro argued that limitation issues precluded the City from addressing this issue now.

MIPUG indicated that it did not support the application of the City.

The League did not comment on this issue.

Counsel for CAC/MSOS indicated that the request of the City was beyond the jurisdiction of the Board as the request amounted to retroactive rate making and that the Board approved the actual rates in Board Order No. 67/94. All rates are based upon projections, some of which in hindsight are more accurate than others.

18.2 Board Findings

In setting the rates for Area and Roadway Lighting in Board Order No. 62/94, the Board ordered that the rate be reduced and calculated so as to produce an RCC of approximately 1.10 in 1994/95 and approximately 1.09 in 1995/96. Board Order No. 67/94 confirmed rates that, based upon the PCOSS, should have achieved these RCCs for this class. For various reasons as explained by Hydro, the RCC for this class did not emerge as intended by the rates approved, but rather increased.

The Board recognizes that with any PCOSS or forecast, there will be a difference between forecast and actual. Based on an actual Cost of Service, the rates set on a PCOSS basis yielded a higher RCC than anticipated. The Board rejects the City's application for a refund.

19.0 Presenter Issues

19.1 Presenters from MIPUG

Presentations were made on behalf of five of the six MIPUG member companies. MIPUG members updated the Board on some of the changes in their operations since the last hearing and described the impacts of the last rate hearing and subsequent developments.

The members of MIPUG provided the Board with comments and concerns about the current rate adjustments before the Board. All emphasized that global competition was a reality and that 90 percent of their production was exported out of the Province. MIPUG members stated that if we are to remain competitive, electricity rates in Manitoba must help offset some of the geographic and climatic disadvantages we face.

Mr. Posser of CXY Chemicals Ltd. (ACXY) informed the Board that TransAlta is still the lowest cost electricity jurisdiction for his company although Manitoba is second. Electricity is its largest cost of production. CXY participates in the Curtailable Rates Program and will participate in the ISE program. Based on the improvements to the electricity rates, CXY is increasing its plant capacity by 15 percent, to run under ISE.

Mr. Collis from Simplot Canada Limited (ASimplot) emphasized how the Board's decision are very important to establishing a level playing field for Manitoba's major industrials with other competitors. He suggested that if Hydro and the Board are concerned with competition in electricity, then the first priority should be to establish cost-based electric power rates as done in Alberta. Mr. Collis was critical of Hydro's application for a rate increase to improve equity, arguing that to prepare for competition, Hydro should cut its costs, create value for its customers, and reduce, not increase rates.

Repap Manitoba Inc.'s (AREpap) position was presented by Mr. Wazny. Repap is engaging in substantial capital projects and highlighted its need for stability and predictability in rates so that competing projects may be properly evaluated. In this regard, he expressed concern about the proposed introduction of new seasonal rate structures without consultation with customers.

He indicated to the Board that non-firm rate options will play a significant role in Repap's analysis of future development.

Mr. Chandler from Hudson Bay Mining & Smelting Co. Limited informed the Board that electricity is the second highest cost of doing business after wages. Just as his company is forced to cut costs to remain competitive, Hydro must cut its rates to remain competitive. Increasing rates would be counter-productive to Hydro improving its competitive position. Concern about competition should require Hydro to have its rates for large industrial customers more closely reflect the cost of producing and delivering electricity.

Inco Limited's (AInco's) position was presented by Mr. Goble who explained to the Board that one tenth of all expenditures by Inco was for electricity and that the viability of its operation depends upon the availability of reliable, competitively-priced electricity. Mr. Goble indicated that the introduction of seasonal rates created an added challenge and that to compete in the global market, Inco must decrease its costs. Recent improvements in electricity costs such as DSM initiatives and curtailable rates were highlighted.

19.2 Other Presenters

Mr. Eyjolfson presented on behalf of Seagram Company Limited (ASeagrams's). With a declining market, Seagrams is forced to cut its costs and pursue all opportunities to minimize inefficiencies and inflationary actions. Due to this, Seagrams has implemented energy efficiency projects in its operations.

Mr. Eyjolfson questioned the need for Hydro's increases, noting that these were not in accordance with the down-sizing and restructuring that were occurring in the private and public sectors.

Mr. Maendel and Mr. Hofer represented the 104 Hutterian Communities (Athe Communities's) in Manitoba. They commended Hydro on the quality of its service, yet questioned the need for increases in electricity rates. Mr. Maendel urged the Board to question Hydro's wages, capital expenditures, payments to the Provincial Government, and the ability of customers to pay the increase. Mr. Maendel also noted that many of the Communities

had the capacity to switch to alternate energy sources and would do so if advantageous in cost.

The Mayor of Thompson, His Worship Mr. Bill Comaskey, made a presentation to the Board. The Mayor questioned the need for such increases, the Zone structure that places Northern Manitoba into the highest cost Zone despite its physical proximity to the generation facilities, and advocated a postage stamp rate for Hydro rates throughout the Province.

Various other individuals made presentations to the Board, opposing the need for increased rates, and urging the Board to get Hydro to manage its costs more aggressively than to pass such costs onto the consumers in the form of increased rates.

This application by Hydro generated an enormous amount of letters from the public. All letters were in opposition to the requested rate increase and a variety of themes emerged from these letters.

The letters urged the Board to ensure that Hydro should decrease its staff costs, reconsider capital projects, pursue cost cutting with more vigour, and not pass on increased costs to the residential consumers. Tough economic times and the ability of those with fixed or declining incomes to pay for such requested increases in rates were mentioned frequently. The impact of these rate increases, especially for those who rely on Hydro for space heating, was brought forward to the Board through these presentations and letters.

19.3 Board Findings

The Board wishes to thank all who either made presentations or wrote letters to either the Board or to Hydro with respect to this application before the Board. All letters were read into the record and the sentiments and observations expressed therein were duly considered by the Board in making its decision. In discharging its duties, the Board was greatly assisted by and appreciative of this input by the public.

20.0 IT IS THEREFORE RECOMMENDED THAT:

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Reference**

- 16 1. Manitoba Hydro achieve a minimum debt to equity ratio target of 85:15 and a gross interest coverage ratio in the range of 1.15 to 1.20 by 2001/02, and consider adopting specific annual retained earnings targets.
- 17 2. Manitoba Hydro stringently limit its capital expenditures where safety and reliability constraints allow and apply itself to reducing its long-term debt with urgency.
- 17 3. Manitoba Hydro review its policy for capitalizing labour and overhead in light of an expected non-expansionary period.
- 28 4. Manitoba Hydro file all information in subsequent General Rate Applications concerning wages and salaries in an equivalent full-time employee format.
- 28 5. Manitoba Hydro continue to participate in benchmarking initiatives to help identify and implement further operational efficiencies.
- 29 6.
 - a) Manitoba Hydro continue discussion with its employees in order to, through consultation, identify opportunities for further operational efficiencies.
 - b) Manitoba Hydro continue its evaluation of the Corporation to achieve an organizational structure that best reflects its current non-expansionary capital program and its positioning for competition.
 - c) Manitoba Hydro aggressively manage its payment obligations to the Provincial government.
- 37 7. The capital expenditure forecast procedures be re-examined, as well as all capital expenditure forecast planning and design criteria for capacity additions, dependable energy, transmission and sub-station additions (including contingency).

- 57 8. Manitoba Hydro resolve uncertainties, as soon as possible, relating to timing, ratings and safety associated with the future development of the Pointe du Bois generating station.

21.0 IT IS THEREFORE ORDERED THAT:

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Reference**

- 46 1. Manitoba Hydro=s application for a two-year rate increase BE AND IS HEREBY APPROVED as follows, subject to the same monitoring and reporting requirements outlined in Board Order No. 62/94:

Customer Class	1996/97	1997/98
Residential	2.84%	2.34%
General Service Large	0.00%	0.00%
General Service Medium	1.46%	1.46%
General Service Small -	1.31%	1.33%
General Service Small - Non-	1.19%	1.12%
General Service Small -	0.85%	0.88%
Area Roadway and Lighting	-5.00%	-5.00%
DSM Reduction	2.25%	1.90%
Bulk	0.00%	0.00%
Diesel Full Cost	0.00%	0.00%
Miscellaneous Revenue	1.50%	1.30%
Adjustments	1.50%	1.30%
Overall	1.50%	1.30%

- 48 2. Manitoba Hydro=s application to introduce seasonal rates BE AND IS HEREBY DENIED. As a consequence, the current use of the winter ratchet should continue.
- 49 3. Manitoba Hydro=s request to eliminate the Multi-Residential charge, blend the general service seasonal rate, and increase the water heating rates BE AND IS HEREBY APPROVED.
- 50 4. Manitoba Hydro=s request to revise clause 11(b) of the DFH terms and conditions and Clause 12(b) of the ISE terms and conditions

is, as a result of the Board not approving seasonal rates, not required. This request is therefore DENIED.

- 50 5. Manitoba Hydro=s request to revise clause 2(c) of the Spot Market Replacement Energy terms and conditions and clause 2 of the ISE terms and conditions BE AND IS HEREBY APPROVED.
- 54 6. Manitoba Hydro=s request to modify the terms and conditions of the Curtailable Rate Program with the exception of the modification of the terms and conditions without Board approval, BE AND IS HEREBY APPROVED.
- 54 7. Manitoba Hydro file a final report on the Curtailable Rate Program subsequent to March 31, 1998, in conjunction with any future plans Manitoba Hydro may have for this program.
- 54 8. Manitoba Hydro consider a reduction in the minimum load requirements of the Curtailable Rate Program to allow greater participation by more customers.
- 41 9. Manitoba Hydro undertake a study and report to the Board by no later than the next General Rate Application on:
- a) alternate methods of solving the persistent problem of certain subclasses (e.g., Zone 3 Residential and General Service Large) being outside of the Zone of Reasonableness .
- b) the merits of considering General Service Large customers (over 100kV) as a separate customer class for Cost of Service purposes.
- 41 10. Manitoba Hydro undertake and report to the Board prior to the next General Rate Application an actual Cost of Service study for 1996/97 on Area and Roadway Lighting to determine actual conditions including the real coincident peak factor.
- 46 11. Manitoba Hydro undertake a study and report to the Board and interested parties by no later than the next General Rate Application on the implications of using incremental versus embedded costs as they would apply to Manitoba Hydro=s rate design, including the impact on various customer classes.

- 49 12. Manitoba Hydro undertake a study and report to the Board by not later than the next General Rate Application to develop a comprehensive rate policy which gives full consideration to all issues related to implementing time of use rates, including off peak and seasonal rates. This study should include consultation with interested parties and consideration of implications of the phase out of the winter ratchet.
- 58 13. Manitoba Hydro directly assign DSM costs for General Service Small and Medium customers in future Cost of Service studies.
- 41 14. Manitoba Hydro continue to calculate the Winnipeg Hydro RCC as reflected in the current Cost of Service Study and not adopt the proposed alternative method.
- 41 15. Manitoba Hydro continue with the present net export revenue allocation for Cost of Service purposes.
- 41 16. Manitoba Hydro continue studies to improve the quality of the load research information with a view to improving the accuracy of the Cost of Service Study. This study should be completed before the next General Rate Application.
- 62 17. The request by the City of Winnipeg for a refund of alleged overpayments of Area and Roadway lighting rate BE AND IS HEREBY DENIED.
- 47 18. Manitoba Hydro file for approval with the Board a revised schedule of rates together with a proof of revenue and revised Revenue to Cost ratios for 1996/97 that reflect the decisions set out above.

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Chairman

Associate Secretary

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THE PUBLIC UTILITIES BOARD

"G. D. FORREST"

Chairman

"B. BALL"

Associate Secretary

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The Public Utilities Board

Associate Secretary