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REPORT TO THE HONORABLE THE MINISTER
OF TRADE AND INDUSTRY

on

CALGARY POWER COMPANY
LIMITED

1909 to 1944

VOLUME 1 (NARRATIVE)

November 5, 1945

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WINSPEAR, HAMILTON, ANDERSON & COMPANY

Chartered Accountants

Winspear, Hamilton, Anderson & Company
Chartered Accountants

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Edmonton — Vancouver

4th Floor, Empire Block
Edmonton
Canada

November 5, 1945

The Honorable C. E. Gerhart
Minister of Trade and Industry
of Alberta

Sir:

We have the honor to submit

Volume I - Our report on the examination of the
accounts of Calgary Power Co Ltd from
the inception of the company in 1909
to December 31, 1944

Volume II - Exhibits supplementary to the above
report.

We have the honor to be, Sir,

Your obedient servants,

Fredrick Hamilton Anderson

Chartered Accountants



VOLUME 1

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SUMMARY

SUMMARY

The following summary is presented as a condensation of the main points dealt with, and is to be considered in the light of the context of the full report and the limitations therein expressed

Section 2 CORPORATE STRUCTURE AND MANAGEMENT

- 1) Calgary Power Co. Ltd. was incorporated October 20, 1909 by letters patent of the Dominion of Canada, with head offices in Montreal.
- 2) The powers of the company are subject to local or municipal regulation.
- 3) The authorized and issued share capital at December 31, 1944 are as follows:

	<u>Authorized</u>	<u>Issued</u>
6% cumulative non-participating redeemable preferred shares of par value of \$100.00 each	\$ 7,500,000	\$ 5,900,000
Common shares of par value of \$100.00 each	<u>5,000,000</u>	<u>3,500,000</u>
	<u>\$12,500,000</u>	<u>\$ 9,400,000</u>

Net funded debt at December 31, 1944 including bank loans secured by hypothecation amounted to \$11,373,500

- 4) Royal Securities Corporation Ltd., Montreal, is the security outlet and chief shareholder of the company, and has received total commissions estimated at \$1,203,700
- 5) Montreal Engineering Co. Ltd. is its technical engineering consultant and manager and as such has received total fees of \$262,786. In general management fees are determined as a percentage of gross revenue and engineering fees as a percentage of capital construction. Local executive salaries amount to \$36,552 per annum. The reasonableness of the remuneration paid to Montreal Engineering should be subject to determination by the regulatory body. We are

of the opinion that management fees should not be expressed as a percentage of gross revenue, particularly when the recipients are interested directly or indirectly in net income as junior security holders.

Section 3. PHYSICAL FACILITIES

1) The hydro generating plants are summarized as follows:

	<u>Year Completed</u>	<u>Cost</u>	<u>1944 K.W.H Production</u>
Horseshoe	1911	\$ 1,100,000	76 million
Kananaskis	1914	1,000,000	66 million
Ghost	1929	4,800,000	127 million
Cascade	1942	<u>2,700,000</u>	<u>53</u> million
		9,600,000	322 million
Barrier - under construction prospective	1946	<u>1,500,000</u>	<u>35</u> million
		<u>11,100,000</u>	<u>357</u> million

2) The company also operates steam, gas and oil plants, mainly as stand-by units.

3) Production has increased from 11 million K.W.H. in 1911 to 341 million K.W.H. in 1944.

4) The gross cost of transmission and distribution system at December 31, 1944 aggregated \$2,300,000 compared with \$10,500,000 for generating plants and dams.

5) The transmission system now extends from Nordegg on the British Columbia border to Macklin in Saskatchewan, and from Westlock in the north to the international boundary.

6) Line losses have ranged from 15.4% in 1937 to 10.5% in 1943.

Section 4. SOURCE OF CAPITAL FUNDS

1) Of total funds provided exceeding 31 million dollars, 46.1% have come from profits before depreciation, and 53% by issuance of bonds.

and shares 68.8% have been applied in financing capital projects, 9.9% in investments in subsidiary companies and 22.2% in payment of dividends.

- 2) Funds provided by bank loan and securities amounting to 68% may be broken down as follows:

Bonds debentures and bank loans	38%
Preferred shares	22%
Common shares	8%

- 3) Share and bond discounts and expenses have totalled \$3,882,035 in relation to a par value of \$26,315,813.
- 4) With respect to the first issue of common shares to Royal Securities Corporation \$1,850,000, we have accepted a bookkeeping interpretation imputing a discount of \$1,480,000 or \$80 per share, rather than a later interpretation which assigned a discount of \$500,000 or \$27 per share.
- 5) An issue of \$50,000 (par) common stock to Mr. R. B. Bennett K.C. in 1917 for services has been interpreted as subject to a discount of \$35,000. The balance of \$15,000 has been apportioned \$12,000 to tangible assets and \$3,000 to administrative expense.
- 6) In October 1928 and March 1930 existing common shareholders received and accepted the privilege of buying 3 shares at par for each 4 held. The quoted market value of the common stock ranged from \$165 in November 1928 to \$150 in May 1930.
- 7) Preferred share issues made in 1928 to 1931 inclusive were underwritten by Royal Securities and were subject to commissions to them of 7½% to 7%. Bond issues were also underwritten by Royal Securities and were usually offered to the public at an advance of \$5 over the issue price.

- 8) Preferred shareholdings in Alberta amount to 51.6% and common shareholdings to 1.6%. No details are available as to the geographical holdings of bonds or debentures.

Section 5 RATE BASE RECAPTURE AND EXPROPRIATION VALUES

- 1) The determination of property value is important from two aspects:
 - a) the determination of a fair return that utility property would be permitted to earn
 - b) the determination of fair compensation in the event of recapture or expropriation
 - 2) For rate purposes, historical cost, less depreciation, of tangible properties has been adopted by us as a basis of calculation. This basis (which would not appear inimicable to the provisions of the Public Utilities Act and receives partial contemporary legislative and regulatory acceptance in United States) excludes price level adjustments, water rights, franchises, unamortized bond discount, going value and other intangibles.
 - 3) For Dominion recapture purposes, certain special factors must be taken into account. The Dominion Water Power Regulations dealing with this matter, distinguish between assets within and outside the severance line, specify that adjustment is to be made for price level variations in the case of certain assets, and allow also for severance damages.
- For Provincial expropriation purposes the Power Commission Act merely provides "regard shall in all cases be had to the value of lands, works and other assets taken over."
- 4) Historical cost of tangible assets was subject to fixation by Dominion Water Power accountants, but for reasons detailed we were

unable to accept the findings thereof for rate base purposes

- 5) We have eliminated from the cost of tangible properties interest on capital during construction capitalized by the company in the amount \$1,032,555; but there are arguments both for and against inclusion of interest as an element of capital cost
- 6) Water rights, franchises going value, unamortized bond discount and other intangibles are excluded from historical cost for reasons given.
- 7) Total gross cost of tangible properties in Alberta has been determined in the amount of \$20,512,365.74 as at December 31, 1944 as compared with \$22,301,835.79 per the company's books
- 8) We have recomputed the depreciation reserve requirement as at December 31, 1944 in the amount of \$6,000,476.57. Depreciation (physical and functional) has been calculated on a straight line basis using rates published by the Federal Power Commission (U.S.) as the average rates used for various classes of property by representative United States electric utilities
- 9) Allowance for working capital is recommended on the basis of provision for inventory of materials and supplies plus 1/8 of a years cash operating expenses. The average allowance for the whole period of the company's operations has been set for convenience at \$275,000
- 10) Contributions from customers in the amount of \$154,291.26 as at December 31, 1944 are deemed deductible from rate base and recapture values.
- 11) Net rate base as at December 31, 1944 has been determined in the amount of \$14,357,597.91. For expropriation purposes this amount is subject to possible adjustment for water rights, franchises and

other intangibles, going value, unamortized bond discount and price level variations.

Section 6. HISTORY OF OPERATING RESULTS

1) Since the inception of the company on October 20, 1909 to December 31, 1944 gross revenue has exceeded \$38,333,000 and operating expenses before depreciation \$12,522,000; depreciation provision as computed herein has amounted to \$6,742,000; operating income before income and excess profits taxes \$19,069,000; income and excess profits taxes \$2,277,000; interest expense (net) including bond discount and amortization \$9,902,000 and net income \$6,890,000. Production expenses averaged 13.4% of gross revenue, transmission and distribution 9.1%, water utilities 1.2% and general and administrative 9.0% resulting in total operating expenses of 32.7% of gross revenue.

The depreciation provision as computed herein has amounted to 17.6%, income and excess profits taxes 5.9% and interest expense (net) 25.8%, leaving an average net income of 18% of gross revenue.

2) The operating history of the company may be divided into four phases:

- a) The development phase from 1909 to 1927, in which the company built its Horseshoe and Kananaskis plants
- b) The expansion phase from 1928 to 1931 during which the company built its Ghost dam and extended its investment in transmission and distribution systems over four times.
- c) The consolidation phase from 1932 to 1937.
- d) The war phase from 1938 to 1944, during which it increased its gross revenue from \$1,746,000 in 1938 to \$3,330,000 in 1944.

3) The rate of return on the average rate base during the four phases is as follows:

	<u>Before Income and Excess Profits Taxes</u>	<u>After Income but before Excess Profits Taxes</u>	<u>After Income and Excess Profits Taxes</u>
Development	6.63	6.48	6.48
Expansion	6.66	6.42	6.42
Consolidation	6.12	5.73	5.73
War	9.64	8.59	7.63
Entire history	7.56	7.00	6.66

These percentage returns are the inclusive rates on the total rate base. The portion thereof financed by borrowed capital is subject to payment of interest to bondholders, the remainder constituting earnings accruing to shareholders. It is considered that the particular conditions and circumstances under which the company has raised its funds are matters of internal concern which should not directly affect a consideration of the fairness of return on the property devoted to public service.

4) Arguments for and against the treatment of taxes on income as an expense of utility operation are considered of particular concern by reason of the high levels of wartime taxes.

5) The company has consistently met bond interest and preferred dividend requirements. Its failure to earn a reasonable return on common stock is attributable to:

- a) An investment in intangible assets of over \$647,000.
- b) Imputed discount on common stock of \$1,515,000 and commissions and expenses on preferred of \$440,000.
- c) Investments outside the Province of Alberta on which it earned an average of 5.5%.

- 6) Gross revenues rose gradually during the period to 1927 whereupon a sharp upward swing occurred for four years to 1931; revenues levelled off again until 1938 whereupon a further upward swing occurred lasting through 1944. Whether gross revenues will be maintained or increased in the post war period will depend upon the extent to which rural electrification and peacetime industry will absorb the expected decline from war industry.
- 7) Operating costs excluding depreciation, for the entire period of operation, may be analyzed for comparative purposes as follows:

Production	40.9%
Transmission and distribution	28 0
General and Administrative	27 5
Water utilities	<u>3 6</u>
Total cost (exclusive of depreciation and return on investment)	<u>100.0%</u>

- 8) This analysis may be expressed in terms of unit costs per K.W.H. for 1944 as follows:

	<u>Cents per K.W.H.</u>
Production	.24
Transmission and distribution	.16
General and administrative	<u>.10</u>
Total cost (exclusive of return on investment)	<u>.50</u>

Relating this cost to average selling price of .96 cents per K.W.H. leaves .46 cents for return on investment.

- 9) The production cost of 24 cents above mentioned is after line losses. Before line losses the comparative costs of different forms of production for 1944 are as follows:

	<u>Cents per K.W.H.</u>
Hydro	.12
Steam and other plants	.90
Purchased	<u>.56</u>
Average	<u>.21</u>

10) As between different hydro plants, the following comparison reflects the 1944 costs (before depreciation):

	<u>Cents per K.W.H.</u>
Horseshoe	.041
Kananaskis	.051
Ghost	.027
Cascade	<u>.135</u>
Average	<u>.053</u>

Special circumstances are to be taken into account in considering the costs of Cascade in relation to other plants.

11) We have considered the findings of Professor Andrew Stewart in his recent report on rural electrification, in relation to accounting information now available to us. On the basis of Professor Stewart's report subject to certain qualifications, we have estimated an annual income (after 10 years) of \$523,350. Adopting a straight line basis of depreciation (in substitution for Professor Stewart's sinking fund method) would reduce annual income to \$298,350 before taxes thereon and without provision for contribution toward existing transmission costs. Professor Stewart's cost estimates (subject to his reservations) would appear liberal. It is emphasized however that the scheme presupposes continuous loyalty to the plan by 30,000 farmers and makes no provision for bad debt or other losses due to discontinuance of service.

12) Total taxes of all types paid by the company amount to \$3,073,533 representing 8% of gross revenues. In recent years taxes approximate 2.2% of the rate base. The incidence of tax has been irregular

in recent years; increased taxes imposed on income by the Dominion government supplanting provincial income, corporation and electric power tax.

Budget proposals for 1946 would enable the company to retain 60% of net income up to \$812,800 and 40% of all net income in excess thereof.

Section 7 CONSUMER RATES

- 1) The pertinent legislation in Alberta is found in Section 71 (a), (b) and (d) of the Public Utilities Act, which provide that "No proprietor of a public utility shall make, impose or exact any unjust or unreasonable, unjustly discriminatory or unduly preferential individual or joint rate..."
- 2) The rate of return on assets "used and useful" in Alberta having been supplied in Section 6, we are concerned in this section as to whether the rates for the various classes are fair and reasonable, and as to whether an even hand is being maintained within each class as between the rights of individual consumers.
- 3) Consumer rates should not necessarily be equal for all types and classes, but differentials should be reasonable having regard to differences in the cost of providing the service or considerations of social justice, public advantage or practicability.
- 4) An analysis of Calgary Power revenues for 1944 reveals the following average prices paid per K.W.H. by different classes of consumers:

	<u>¢ per K.W.H.</u>		<u>¢ per K.W.H.</u>
Towns - retail	5.28	Canada Cement	.56
Rural	6.64	Alberta Nitrogen	.31
Small industries and miscellaneous	1.34	Other electric utilities (mainly City of Calgary)	.74
Public authorities	<u>2.28</u>		
Average of above	<u>3.35</u>	Average of above	<u>.53</u>

The first group take less than 1/6 of total consumption but provide over 1/2 the revenue.

- 5) American experience of companies with revenues in excess of \$250,000 for 1943, indicates the following average prices paid per K.W.H. by different classes of consumers.

	<u>¢ per K.W.H.</u>
Residential or domestic	3.64
Street lighting	3.90
Rural	2.64
Commercial and industrial	1.32
Other electric utilities	.62
Miscellaneous	.77
Public authorities	1.06

- 6) The overall average rate per K.W.H. for the United States companies covered in the above summary for 1943 was 1.47 cents as compared with .96 cents for Calgary Power in 1944 including Alberta Nitrogen or 1.39 cents excluding Alberta Nitrogen.
- 7) The sale to Alberta Nitrogen of approximately 40% of Calgary Power's effective production at .31 cents per K.W.H. (as compared with other average rates set out in paragraph 4 above) raises the question of whether the substantial variance in rates can be justified on the grounds of cost differentials in the light of Alberta Nitrogen's high load factor and other cost considerations or whether it can be justified on other grounds. On the basis of cost considerations alone, the rate can only be justified if Alberta Nitrogen is presumed to use that portion of hydro production subject to very low increment cost; this concept however, leaves all higher priced power for other consumers who as a class largely predate this customer in point of service. A number of non-cost considerations are, however to be taken into account: the emergent circumstances

under which the agreement was entered into, the future indirect benefits from continued operation of the nitrogen plant, the provisions relating to reducing deliveries in emergency, the opportunity afforded for procuring access to an additional site, and on the other hand the disruptive effect of adding a large block of energy requirement without firm assurance of continued market.

- 8) The propriety of rate differentials between different consumers of the same class also raises questions of cost and non-cost considerations. Thus with regard to consumers in the "towns retail" classification, it would appear that rates are influenced not only by the quantity of energy consumed, but also by the size of the community and the particular type of schedule adopted by and for that community. Rate differentials occur not only as between different types of consumers, but also as between similar consumers located in different towns. For example consumers in Airdrie pay more than consumers in Millet, although both are located on the same transmission line and Airdrie is 140 miles closer to the main source of power. We recognize of course that historical and practical considerations of a present non-cost nature may have their influence on existing rate structures.
- 9) We suggest that the rate structure of the company is of sufficient public importance and the rate differentials (particularly between classes) are sufficiently impressive that in the interest of both the company and its consumers, the matter should be the subject of full enquiry.

Section 8. FINANCIAL POSITION

- 1) The revised financial position of the company is presented as

Exhibit 71.

- 2) The revised financial position classified on a basis comparative with American utilities Class A and B, brings out the following comparisons:

	<u>% to total assets</u>	
	<u>Calgary Power</u>	<u>American Utilities</u>
Utility plants	76.0	81.8
Investments	10.2	7.1
Capital stock discount and expense	7.0	.2
Common stock at par	12.6	23.2
Preferred stock at par	21.2	11.8
Bonds and long term debt	40.8	36.3
Depreciation reserve	21.6	15.8

The depreciation reserve of Calgary Power comprises 29% of its utility plant as compared with 17% in the United States.

Calgary Power has an investment of \$6.35 in utility plant for each dollar of revenue in 1944, whilst American utilities have an investment of \$4.28 for each dollar of revenue in 1943.

The foregoing percentage comparisons should be considered with due regard to the variation in conditions between western Canada and the United States, and the defects of an arithmetic average.

- 3) The surplus of assets over liabilities and capital reflected on the books and on the audited balance sheet of Calgary Power of \$461,543.98, compares with a deficit of \$265,690.30 as reflected on the revised balance sheet. The main differences comprise additional provision for depreciation of \$551,000, and the elimination of credits to income for interest on construction of \$428,000.
- 4) The revised net income of the company from October 20, 1909 to December 31, 1944 amounted to \$6,891,000 in relation to preferred and common stock dividends paid totalling \$7,000,000, and preferred

shares redeemed out of income of \$98,000.

On the basis of the accounting methods adopted in this report dividends paid exceeded net income for the years 1931 to 1935 inclusive, and contributed to a deficit of \$845,000 at December 31, 1935.

- 5) The investment in subsidiary companies at December 31, 1944 is made up of \$1,527,000 in Ottawa Valley Power Company, and \$1,201,000 in Prairie Power Co. Ltd., and \$100,000 in Calgary Water Power Co. Ltd.

Shares in Ottawa Valley Power were acquired from a director of the company, Mr. I. W. Killam in 1931, and the investment in Prairie Power was acquired from Montreal Engineering in July of 1930.

- 6) The net recorded cost of intangible assets of \$1,213,000 has been reduced to \$647,000 on the basis of the accounting methods adopted herein.

Intangible costs according to the company's books were increased by \$794,000 by virtue of book transfers made by the company from intangible to tangible assets, which had never however, apparently been included in intangible costs on Calgary Power's books.

Intangible costs according to the company's books have also been increased by our attributing franchise costs of town plants purchased in the amount of \$381,000. Intangible costs according to the company's books have been reduced by an imputed discount on common stock in the amount of \$1,508,000, and discount on bonds issued in 1910 in the amount of \$287,500.

Section 9. INVESTORS' POSITION

- 1) The individual investors' position entails a study of the share of

earnings ensuring to each group, the security behind the issue both from the aspects of earnings and safeguards as to capital, the voice in management both actual and contingent, and future prospects whether operations continue as a controlled utility, or in the event of recapture or expropriation.

- 2) The funded debt of \$9,873,500 and bank loans of \$1,500,000 represent 78% of tangible fixed assets (net) in Alberta, and 64% of net assets, exclusive of bond discount.
- 3) The legal security supporting the funded debt as described in the deed of trust and mortgage dated April 1, 1930 in favor of the Montreal Trust Company as trustee provides:
 - a) A mortgage or floating charge on all property of the company.
 - b) A sinking fund to be created by deposits of 1/2% per annum commencing March 31, 1934.

The sinking fund provisions would appear to have little present security value since it would require 200 years to bring the sinking fund to a parity with the bonds outstanding.

The security behind foreclosure possibilities would seem to rest in the advantage ensuring to the bondholders of continuing operations through their own management in the event of default.

- 4) The fundamental security behind the funded debt rests on the capacity of the company to operate successfully as a regulated utility, and to retire maturing issues by refunding operations. Bond and bank interest have been earned after income and excess profits taxes as follows:

Development phase	1.25 times
Expansion phase	1.54 times
Consolidation phase	1.69 times
War phase	2.05 times

5) 6% cumulative non-participating preferred shares issued in 1928, comprise 55% of funds provided by securities, and 31% of total securities outstanding as at December 31, 1944. They are redeemable at 105 and vote equally with common shareholders in the event of dividend default.

The preferred shares would not appear to be supported by a substantial equity investment by common shareholders, and in fact the ratio of net assets as applicable to preferred shares is as 1.08 to 1; excluding franchise and organization costs, the net assets to preferred shares reflect a ratio of .98 to 1.

The probability of preferred shares obtaining control of the company in the event of default is remote since they are widely held, whilst the common shares are closely held.

Since their issue in 1928 preferred share requirements have been earned annually except in the years 1931, 1935, 1936 and 1937.

6) Common shareholders have provided 13% of the total funds provided by securities, and the par value of the shares outstanding comprises 18% of the total securities outstanding at December 31, 1944.

Common shareholders have received dividends during the years 1927 to 1935 of \$1,496,000, as compared with total earnings enuring to common shareholders of \$1,329,000. On the basis of the accounting methods adopted in this report common shareholders have received \$167,000 in excess of the earnings enuring to them.

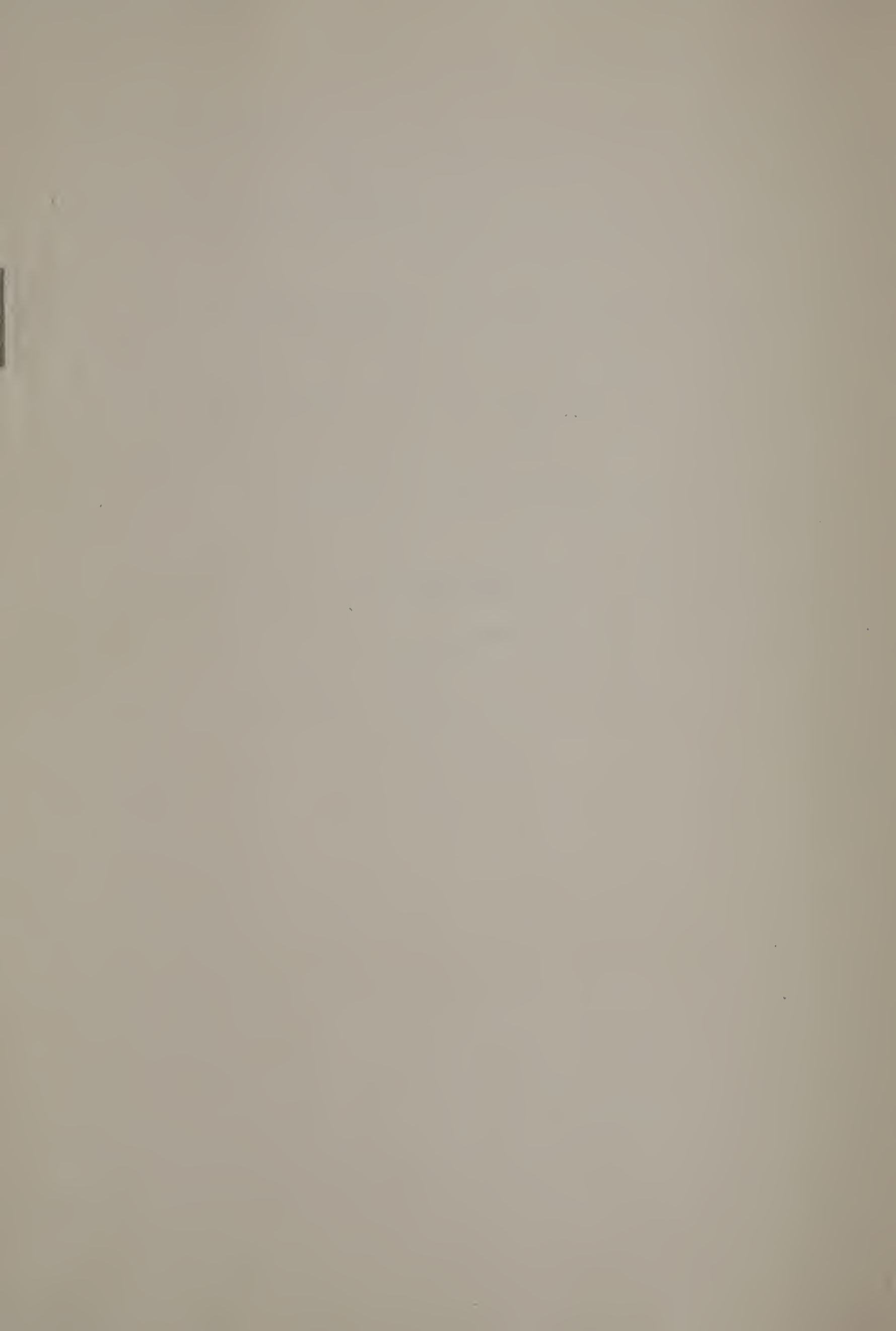
There is no net tangible equity in assets pertaining to common shareholders at December 31, 1944, and their equity in all assets excluding unamortized bond discount, would amount to \$14.37 per share. In the event of retirement of preferred shares at 105 their

equity would decline to \$5.94 per share.

In addition to their share of earnings, common shareholders would appear to have derived benefits through:

- a) The opportunity to purchase shares at par when the market price was around \$150 to \$165.
- b) Obtaining a market for the services of the affiliate organizations, Royal Securities and Montreal Engineering.

In the event of expropriation on an historical cost basis which would include water rights, franchises, and organization costs but which would exclude price level variation, going value and unamortized bond discount, common shareholders would receive approximately \$503,000, or \$14.37 per share, as compared with a computed original investment per common share of \$56 71.



SECTION I

INTRODUCTION AND SCOPE OF ENGAGEMENT

Winspear, Hamilton, Anderson & Company

Chartered Accountants

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Canada

November 5, 1945

G. WINSPEAR, C.A.
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J. HAMILTON, B.SC., B.COM., C.A.
R. ROACH, C.A.

The Honorable C. E. Catherwood,
Minister of Trade and Industry
of Alberta.

Sir:

INTRODUCTION AND SCOPE OF ENGAGEMENT

In accordance with your instructions we have examined the books of the Calgary Power Company Limited since the inception of its operations in 1909 to December 31, 1944 for the purpose of informing and advising you as to the existing financial position of the company, its operating history and the trend thereof, its capital structure, the rate of return which it is earning on its invested capital, and generally as to its financial and operating condition. Under arrangements made with the company's officials we were given access to the company's bookkeeping records and to its audited financial statements, and were supplied with such information and explanations as we required by officials and employees of the company. The company's books have been audited by the firm of Macintosh, Robertson and Paterson, Chartered Accountants or their predecessors, since its inception, and whereas it was necessary as subsequently described herein, to examine and verify certain of the records with

respect to capital expenditures and plant additions, we did not conduct a detailed audit and have generally relied on the correctness of the books and the audited statements ancillary thereto.

This report is presented in 10 chapters or sections as detailed in an index prefixed hereto.

Bound separately but constituting a part of this report are certain statements and exhibits which are referred to herein, and which are also indexed and cross referenced. For convenient reference a brief summary of our findings is also included, which is, however, subject to the comments and explanations contained herein.

SECTION II

CORPORATE STRUCTURE AND MANAGEMENT

CORPORATE STRUCTURE AND MANAGEMENT

Calgary Power Company Limited was incorporated by letters patent issued by the Dominion of Canada on the 20th day of October, 1909. Under its charter the company was empowered amongst other things "to carry on the business of an electric light, heat and power company in all its branches provided that the sale, transmission and distribution of electric and other power or force shall be subject to local or municipal regulations", furthermore, "to make, build, construct, erect, lay down and maintain and operate reservoirs, waterworks, cisterns, dams, canals, tunnels, culverts, flumes, conduits, main and other pipes and appliances and to execute and do all other works and things necessary or convenient for obtaining, storing, selling, delivering, measuring and distributing water for the creation, maintenance and development of hydraulic, electric or other mechanical power or for irrigating lands or for any other purpose of the company."

The chief place of business of the company is designated as the City of Montreal in the Province of Quebec.

Share Capital

The authorized capital stock was originally stated at \$3,000,000 divided into thirty thousand shares of \$100 each, but on October 20, 1928 supplementary letters patent were granted by the Secretary of State for Canada relative to a by-law of the company confirmed on October 18, 1928, increasing the authorized capital to \$10,000,000 by the issuance of fifty thousand 6% cumulative redeemable preferred shares of \$100 each, and twenty thousand common shares of \$100 each. By this amendment the holders of 6% preferred shares are entitled to receive dividends out of the profits of the company at the rate of

6% per annum (but no more) payable quarterly on the first days of February, May, August and November of each year. The letters patent provide that no dividends shall be declared or paid upon other stock of the company unless all accrued and cumulative dividends on the preferred shares have been declared and paid.

They further provide that the preferred shareholders will have no voting rights unless and until the company shall have failed to pay four quarterly dividend instalments upon the preferred shares, in which event the holders will, during the continuance of any such default, be entitled to one vote for each preferred share held. The rights of the common shareholders to vote do not lapse in the event of voting rights accruing to preferred shareholders as a result of default, so that in the event of default the preferred shareholders attain the right only to vote pari passu with holders of common shares. The supplementary letters patent and the by-laws governing the issuance of the preferred shares do not restrict the powers of the company to issue additional common shares from time to time before the preferred shares are redeemed and in fact, the supplementary letters patent provide that "the preferred stock and the common stock shall be subject to the right of the company at any time, and from time to time to increase the capital stock of the company, and to issue further preferred stock ranking pari passu with that now authorized to be issued upon compliance with the provisions of the said Act."

The letters patent also provide that the company may pay a commission on the sale of preferred stock to the amount of 15% on the shares subscribed.

The preferred shares of the company are preferred as to assets in the event of liquidation to the extent of the par value of the shares plus the premium on redemption and the cumulative dividends in arrears, whether earned or not and whether declared or not. The preferred shares are redeemable on thirty days notice to the shareholders at a price of \$105 per share plus unpaid dividends accrued to the date of redemption.

Pursuant to a by-law confirmed on April 22, 1930, the authorized capital of the company was further increased by 25,000 6% cumulative redeemable preferred shares subject to all the terms and conditions detailed in the supplementary letters patent of October 20, 1928. As of December 31, 1944, therefore, the authorized share capital of the company can be summarized as follows:

Preferred	75,000 shares of \$100 par value	\$ 7,500,000
Common	50,000 shares of \$100 par value	<u>5,000,000</u>
		<u>\$12,500,000</u>

Of this amount preferred shares of a par value of \$5,900,000 and common shares of a par value of \$3,500,000 had been issued and were outstanding as of December 31, 1944.

By-Laws

The by-laws of the company provide that one-quarter in value of the subscribed common stock represented in person or proxy shall constitute a quorum for the election of directors and the transaction of other business at a shareholders meeting. The shareholders are entitled to five days' notice before the holding of any meeting. The powers of the directors are of a general managerial nature and by-law #20 provides that no director shall be disqualified by his office from contracting

with the company either as a vendor, purchaser or otherwise, nor shall any director so contracting or being interested be liable to account to the company for any profit realized in any such contract or arrangement -- but the nature of the directors interest must be disclosed by him at the meeting of the board at which the contract or arrangement is determined on.

By by-law #55 directors of the company were empowered to make an issue of bonds aggregating \$3,000,000 bearing interest at 5%, and to hypothecate, mortgage and pledge the real and personal property of the company to secure the bonds. The first issue of bonds was dated January 1, 1910 to mature on January 1, 1940, with interest at 5% per annum payable semi-annually, principal and interest payable in Canadian, United States or Sterling funds. On March 31, 1930 by by-law #59 the directors were empowered "to create and issue or cause to be issued First Mortgage Bonds of the Company limited or unlimited in aggregate principal amount as the Directors shall determine." This by-law was confirmed by the shareholders on April 20, 1930. Subsequent bond issues were under authority of this by-law.

Management

The company is managed by a board of directors composed of seven common shareholders. The board elects the company's officers which presently comprise a chairman of the board and a president and treasurer from their own number, and a secretary and assistant not members of the board.

The local executive staff comprises a personnel of seven with total annual executive salaries of \$36,552. The local manager is Mr. H. B. Sherman whose assistants include a commercial superintendent,

a production superintendent, a "new business" manager, a chief accountant, an equipment and water engineer and an operating engineer.

The financing and security outlet of the company is Royal Securities Corporation Limited, a company with head office in eastern Canada engaged in the security and investment banking business. Royal Securities Corporation Limited is the controlling common shareholder of this company and we are informed that the affiliation is strengthened by virtue of interlocking directorates.

Montreal Engineering Company Limited, (which we understand is also controlled by Royal Securities Corporation Limited) is the technical and engineering consultant and manager of this company and also, we are informed, of certain other public utility companies operating in Canada and in South America. The head office of Montreal Engineering is in Montreal.

The secretarial, management, and engineering fees paid to Montreal Engineering throughout the whole period amounted to approximately \$963,000 as summarized on exhibit 1 appended hereto. Up to and including the year 1931 the company was paid secretarial and management fees ranging from \$500 in 1918 and 1919 to \$20,000 in 1931. It was also paid fees as consulting engineers ranging from \$2,000 to \$109,651 apparently based on a percentage of the amount of capital expenditures incurred ranging from 2% to 5%. In 1932 the scale of fees applicable from then on was confirmed in an agreement between the two companies as follows:

Management fee - 2% of first \$1,000,000 gross revenue and 1% of all gross revenue in excess thereof.

Construction supervision - 5% of the gross expenditure for property additions and replacement - Subsequently Montreal Engineering Co. Ltd. accepted a reduction to 2½% of the gross expenditures.

The management, operating, and supervisory services which Montreal Engineering Company Limited undertakes under the agreement may be summarized as follows:

1. To advise directors in planning the company's policy; supervise the management in the operation of the company; and to make available, men experienced in the public utility work to assist and advise the directorate and local management.
2. To supervise the management in the operation, maintenance, accounting and statistical work of the company.
3. To advise the company in connection with rates and schedules.
4. To purchase materials other than those which can be advantageously purchased by the local organization.
5. To keep available comparative data and other information.
6. To assist the company in negotiations regarding the acquisition of properties.
7. To assist the company in public relations and other matter of company policy.

The construction supervision agreed to be provided by the Montreal Engineering Company Limited may be summarized as follows:

1. To furnish the services of its executive officials together with travelling and living expenses and the services of the purchase department.

2. To maintain an organization available to the company for the supervision of surveys and field investigations of projects under construction, for the supervising of the preparation of plans and specifications for new construction, for assisting in the selection of personnel and contractors and directing their activities, and for organizing and providing general supervision of construction projects where work is of some magnitude.

Under the agreement the Montreal Engineering Company also undertakes other special duties and services, for which additional fees are charged, such as examining and reporting upon properties the purchase of which is under consideration, the making of efficiency tests of power plants, and the studying and remodelling of plants to secure greater operating efficiency. The cost of such additional services to Calgary Power is stated as the direct expenses incurred by Montreal Engineering plus 50% of salary elements to cover head office supervision and administration expenses.

The fees paid to the Montreal Engineering Company Limited for active and supervisory management and as engineering consultants have already been the subject of investigation and report to the Hon. Lucien Maynard by the auditor to the Board of Public Utilities (in 1939).

In section 5 of this report we supply information as to the percentage of tangible assets used and useful, which is represented by engineering and other fees. Whether the fees have exceeded, are equal to or are less than a fair and reasonable consideration for the market value of the services performed, is we consider a matter for decision by a regulatory body, which is in a position to hear evidence

as to proper charges by engineering consultants under similar circumstances in other instances, and as to the managerial costs of other companies operating under similar conditions. It does seem to us, however, that having regard to the nature of the services supplied, the remuneration paid as an annual managerial fee should be determined on some basis other than a percentage of gross revenue. The remuneration paid to the president and high officials of a large company is ordinarily regarded as an invariable or fixed cost within certain limits, rather than a variable cost based on gross revenue. Such officials will be concerned with matters of finance, the projection and development of capital assets, with the control of operating costs and expenses, and with many other matters which are not directly related to gross revenue. In a non-competitive industry subject to regulatory control, we question the overall desirability of determining remuneration to management in terms of revenue, whether it be gross revenue or net income, and we consider that these observations are particularly pertinent when the recipients of the remuneration are directly or indirectly interested in the residual net income of the company as the holders of junior securities.

We are not as accountants in a position to comment on the reasonableness or otherwise of the fees in relation to the services performed, particularly as this would seem to be a proper matter for the regulatory body to decide; nor do we wish to reflect on the sincerity of officers of the company who entered into the contract on its behalf.

SECTION III

PHYSICAL FACILITIES

PHYSICAL FACILITIES

A consideration of the financial and operating position of the company should be prefaced by a study of its physical facilities.

Dams and Generating Systems

The waterpower projects and generating developments of the company have been made west of Calgary on the Bow River and its tributaries. At present these developments are four in number -- the Ghost, Horseshoe and Kananaskis plants on the Bow River, and the Cascade plant on the Cascade River, a tributary to the Bow. In addition the company has a water storage development at the Upper Kananaskis Lakes and a river diversionary project on the Ghost River northeast of Lake Minnewanka. The purpose of this latter development is to divert the flow of the Ghost River into Lake Minnewanka, thereby providing for the flow of water through each of the four plants. At the present time the company has under construction a fifth hydro power plant on the Kananaskis River about seven miles south of Seebe. A general plan of the company's present and proposed developments is presented on Exhibit 2

Horseshoe Plant

The Horseshoe plant was constructed in 1910 and 1911 at a cost of approximately \$1,100,000, and commenced operations in 1911. It consists of a concrete dam, a gate house and a power plant with four generators having a generating capacity of approximately 19,000 horsepower. In 1944 in excess of 76,000,000 K.W.H. were generated at this plant.

Kananaskis Plant

This plant is situated at Seebe, about two miles west of the Horseshoe plant. It was constructed in 1913 and 1914 at a cost

of approximately \$1,000,000. It consists of a concrete dam, a gate house and a power house containing two generators, with a total generating capacity of approximately 14,000 horsepower. In 1944 in excess of 65,000,000 K.W.H. were generated.

Ghost Plant

The Ghost plant is situated at the confluence of the Ghost and Bow rivers. The plant was constructed in 1929 at a total cost of approximately \$4,800,000. The main dam is approximately one mile long and is partly of concrete and partly of earth-fill construction and the site was chosen with a view to obtaining pondage to meet lower load factor requirements. The power plant contains two 18,000 horsepower generators and one 1,200 horsepower station service unit. A control station which directs and coordinates the production of all the company's plants is operated from the Ghost plant, and there has been provision for the addition of another 18,000 horsepower unit. In 1944 a total of 127,000,000 K.W.H. were generated.

Cascade Plant

The Cascade plant was constructed in 1941 and 1942 at a total cost of approximately \$2,700,000. It consists of a main dam of earth-fill construction at the southwest corner of Lake Minnewanka, and a smaller concrete control dam at the south end of the lake. The power plant contains one 23,000 horsepower generating unit. In 1944 a total of 53,000,000 K.W.H. were generated.

Barrier Plant

This plant is at present under construction on the Kananaskis River about seven miles south of Seebe. The estimated cost of development is from \$1,200,000 to \$1,500,000. It is anticipated that

the plant will have a generating capacity of 13,500 horsepower with storage facilities of approximately 7,000 c.f.s. days, and that the kilowatt hour production will approximate 30,000,000 to 40,000,000 K.W.H. per year.

Summary of Hydro Plants

The following is a summary of the approximate cost, horsepower developed and kilowatt hour production of the four completed units and one uncompleted unit comprising the company's hydro plants:

	<u>Year Completed</u>	<u>Approximate Cost</u>	<u>Horse-power Developed</u>	<u>1944 K. W. H. Production</u>
Horseshoe	1911	\$ 1,100,000	19,000	76,000,000
Kananaskis	1914	1,000,000	14,000	66,000,000
Ghost	1929	4,800,000	36,000	127,000,000
Cascade	1942	<u>2,700,000</u>	<u>23,000</u>	<u>53,000,000</u>
		9,600,000	92,000	322,000,000
Barrier - under construction, all data estimated and K.W.H. production based on prospective production	1946	<u>1,500,000</u>	<u>13,500</u>	<u>35,000,000</u>
		<u>\$11,100,000</u>	<u>105,500</u>	<u>357,000,000</u>

It will be appreciated that the comparative relationship of capital cost to H.P. developed and K.W.H. production can be interpreted only in^{the} light of overall considerations.

Steam, Gas and Oil and Other Plants

The company has acquired at various times small steam, gas and oil and other plants, mainly in connection with the distribution systems in the towns in which they are situated. At the present time these units are operated almost wholly on a stand-by emergency basis, rather than with a view to increasing the total out-put of power of the system as a whole. In the last few years, however, the main steam plant

at Victoria Park, rented from the City of Calgary, has been operated to a greater extent than usual, in order to meet peak load requirements.

Production Facilities

The growth and development of the company's generating facilities (all types) may be observed by reference to Exhibit 3, which shows the total net power generated at all plants from 1911 to 1944. It will be observed that the production has increased from approximately 11,000,000 K.W.H. in 1911 to 341,000,000 K.W.H. in 1944. It will also be observed that the total production of all steam and other plants is small in relation to the production of the hydro plants.

Engineers of the company state that there are sufficient power sites available on the Bow River and its tributaries to meet the power requirements of the company for many years to come. They also point out that each new development on these rivers adds to the control now possessed over the waterflow of the rivers. Thus the latest development at Barrier will control and regulate the flow of the Kananaskis River to the advantage of the Kananaskis, Horseshoe and Ghost plants through which the water will subsequently flow.

The production capacity of the company's hydro plants depends to a considerable extent upon the flow of water, particularly during the winter months when power requirements are heavy, and the water flow is normally insufficient to maintain the operations of the plant at full capacity. Exhibit 4 demonstrates the variation in annual winter period natural waterflow of the Bow River through the three Bow plants, expressed in terms of equivalent K.W.H. production, for the period from 1912 to 1944. It will be observed that the value of the flow has ranged from a low of 64,111,000 kilowatt hours in 1936-

1937, to a high of 141,414,000 in 1927-1928. In this connection the upper Kananaskis Lake storage development and the Lake Minnewanka development enable the company to store water during the summer months when natural flow is high and power requirements low, and to increase the flow of the rivers during the winter months. Engineers of the company express the opinion that considering the natural flow of the Bow River, the total hydro production of the company in 1944 represents a high level of efficiency.

Several years ago the company entered into an interchange agreement with the City of Edmonton whereby the company receives from the City steam-generated power during periods of heavy requirements. During 1942 and 1944 for example, the requirements of the company were in excess of its production capacity, and the shortage was met by the receipt of power from the City of Edmonton under the provisions of this agreement. It is provided that when the company's production facilities have been sufficiently increased or its load requirements decreased, the energy will be returned to the City.

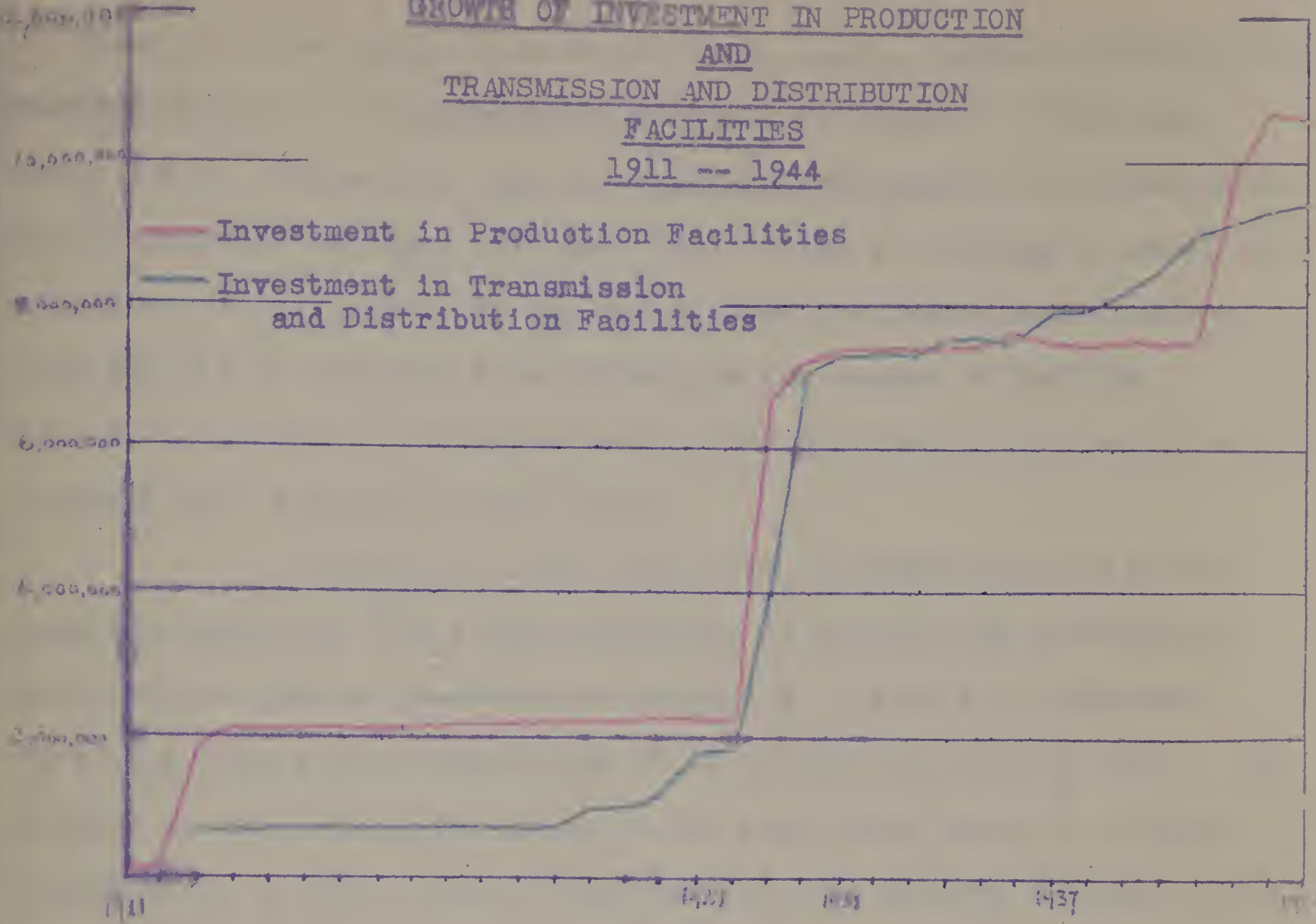
Transmission and Distribution Lines

A map of the existing transmission lines of the company is presented in Exhibit 5 attached hereto.

The gross cost of transmission and distribution systems at December 31, 1944 aggregates \$9,300,000 as compared with a cost of \$10,500,000 for generating plants and dams (including storage developments and steam plants).

The development of the company's capital investment in transmission and distribution systems comparative to the development of its dollar investment in production plants, is graphically presented as follows:

GROWTH OF INVESTMENT IN PRODUCTION
AND
TRANSMISSION AND DISTRIBUTION
FACILITIES
1911 -- 1944



The major development in the mileage of the transmission system took place during the period from 1928 to 1931, an operating period referred to in Section 6 of this report as the "expansion phase".

The first transmission lines built by the company from 1909 to 1911 connected the Kananaskis and Horseshoe plants to Exshaw and Calgary for the purpose of supplying Canada Cement at these points, and the City of Calgary. The second major transmission development took place from 1927 to 1930, when lines from Calgary to Lethbridge, Calgary to Beverly, the Ghost Plant to Edmonton, and Simons Valley to Rockyford were built. Supporting the development of the transmission system during this period and subsequent thereto, was the extension and purchase of numerous subsidiary distribution systems which supplied Calgary Power

to Beverly in the north, Milk River in the south, Brooks in central and eastern Alberta, and numerous intermediate settlements, towns and communities. Since that time the capital developments in transmission and distribution systems have been with a view to filling in local and ancillary requirements. By the end of 1944 the transmission system (see Exhibit 5) extended from Nordegg on the border of British Columbia, to Macklin in Saskatchewan; from Westlock in the north to the international boundary in the south.

A summary of K.W.H. generated, purchased and delivered with the resulting line losses expressed in amounts and percentages from 1931 to 1944 is presented on Exhibit 6. It will be observed that line losses have ranged from 15.4% in 1937 to 10.5% in 1943. The decline in line loss percentages in the past three years is probably attributable to the volume of deliveries to the Alberta Nitrogen Plant.

SECTION IV

SOURCE OF CAPITAL FUNDS

SOURCE OF CAPITAL FUNDS

The history of funds provided and their application in the development of capital projects is presented in exhibits appended hereto. These exhibits are condensed in the following summary of funds provided and applied:

Summary of Funds Provided and Applied

		<u>% of Total</u>
Funds Provided		
By profits	\$ 6,890,850	
Add: Expenses not requiring funds		
Amortization of bond discount	1,052,491	
Depreciation	<u>6,742,199</u>	\$14,685,540 46.12
By issue of stocks and bonds at par	26,315,813	
Deduct: Bonds and shares redeemed or reacquired	<u>7,042,313</u>	
	19,273,500	
Deduct: Bond and share discount and expenses, and premium on redemption - net	<u>3,882,035</u>	15,391,465 48.33
By bank loan		1,500,000 4.71
By contributions by customers for line extensions		154,291 .48
By working capital deficiency		<u>112,000 .36</u>
		<u>\$31,843,296 100.00</u>
Funds Applied		
To plant and property	21,901,246	68.77
To investments in subsidiary enterprises	2,831,426	8.89
To payment of dividends - preferred	5,562,070	17.47
- common	1,496,250	4.70
To refundable portion of excess profits tax	<u>52,304</u>	<u>.17</u>
		<u>\$31,843,296 100.00</u>

Of total funds provided exceeding thirty-one million dollars 46% have been provided by profits before depreciation, and 53% by the issuance of bonds, preferred and common shares, and bank loans. Of funds applied 69% have been invested in financing generating, transmission

and distribution systems and other capital projects, 9% in the investment in subsidiary and affiliated enterprises notably Ottawa Valley Power Company Limited and Prairie Power Company Limited (Saskatchewan) and 22% in the payment of preferred and common dividends.

A somewhat different view of the funds provided and applied is obtained if it is assumed that the net profits of the companies are firstly applied in the payment of dividends (in a sense analogous to the payment of bond interest before profits are ascertained) and that the company has looked to invested capital and depreciation funds for plant capital extensions. This is as follows:

Summary of Funds Provided and Applied

		<u>% of Total</u>
Funds Provided		
By profits before depreciation but excluding refundable excess profits tax (\$52,304)	\$14,633,236	
Deduct: Dividends paid on preferred and common shares	<u>7,058,320</u>	
	7,574,916	30.63
By issue of bonds and stocks	15,391,465	62.23
By bank loan and current borrowings	1,612,000	6.52
By customers contributions for line extensions	<u>154,291</u>	<u>.62</u>
Total funds provided	<u>\$24,732,672</u>	<u>100.00</u>
Funds Applied		
To plant and property	21,901,246	88.55
To investments in subsidiary enterprises	<u>2,831,426</u>	<u>11.45</u>
Total funds applied	<u>\$24,732,672</u>	<u>100.00</u>

From this aspect 68% of funds provided have been obtained from bank loans and securities issued, 27% from depreciation charged to revenue, and 3% from profits before amortization of bond discount and in excess of dividends. Funds provided were applied to the

extent of about 89% in the acquisition of capital assets and to about 11% in the investment of shares and debentures in affiliated companies.

Funds provided by bank loans and securities, amounting to 63% as above mentioned may be broken down as follows:

Bonds, debentures and bank loans	33%
Preferred shares	22
Common shares	<u>8</u>
	<u>63%</u>

Funds Provided by Security Issues

Section 6 of this report summarizes the operating history of the company, and the depreciation provision. The history and circumstances attendant on the raising of funds by the issuance of securities are summarized in the following statements and the subsequent comments with respect thereto.

Share Capital

Common stock

Issued from 1910 to 1930 for cash and other consideration subject to an imputed discount of \$1,515,000. No shares redeemed \$ 3,500,000.00

Preferred stock

Issued from 1928 to 1931 for cash, subject to commission and expenses of \$439,907.08 \$ 6,000,000.00

Redeemed in 1939 at a cost of \$98,220.58 100,000.00 5,900,000.00

Total share capital outstanding
December 31, 1944 - forward 9,400,000.00

Total share capital outstanding
December 31, 1944 - forward

\$ 9,400,000.00

Funded Debt

5% Sterling bonds

Issued from 1910 to 1913 for cash and
other consideration subject to dis-
counts and expenses of \$612,705.99

\$ 2,999,813.33

Redeemed from 1919 to 1930 at a
total cost of \$3,086,917.93

2,999,813.33

5% Bonds due 1960

Issued in 1930 and 1931 for cash
subject to discount and expenses
of \$1,088,214.93

10,060,000.00

Reacquired from 1934 to 1942 at a
total cost of \$1,966,088.89

1,888,500.00

8,171,500.00

5% Bonds due 1964

Issued in 1934 for cash subject to
discount and expenses of
\$154,421.50

2,000,000.00

Reacquired from 1934 to 1942 at a
cost of \$290,363.50

298,000.00

1,702,000.00

5% Secured Notes due 1944

Issued in 1941 for cash at a premium
of \$93,419.20 subject to expenses
of \$9,927.51

1,756,000.00

Redeemed in 1944 at par

1,756,000.00

-

Total securities outstanding
December 31, 1944

\$19,273,500.00

	<u>Total Issued</u>	<u>Reacquired</u>	<u>Outstanding</u>
Common Shares	\$ 3,500,000.00	\$ -	\$ 3,500,000.00
Preferred Shares	6,000,000.00	100,000.00	5,900,000.00
Bonds	<u>16,815,813.33</u>	<u>6,942,313.33</u>	<u>9,873,500.00</u>
	<u>\$26,315,813.33</u>	<u>\$7,042,313.33</u>	<u>\$19,273,500.00</u>

Cost of Financing - bond and stock
discount and expenses, and
premium on redemption

Common shares

\$1,515,000.00

Preferred shares

438,127.66

Bonds

1,928,907.72

\$3,882,035.38

22.

Common Stock

The dates of issue, the par value, the imputed discount, and the net consideration received with respect to the common stock is presented in exhibit 7. It will be observed that the stock has been issued on five occasions in 1910, in 1917, in 1928 (to the president of the company) and in 1928 and 1930 to holders of share warrants.

The first issue, and the most substantial, \$1,850,000, was made at the inception of the company in 1910, to Royal Securities Corporation Limited accompanying sterling bonds of an equivalent Canadian par value, for cash, water rights, franchises, engineering, organization and other services. For the purpose of considering the rate base, the existing financial position, and the source and application of funds, it has therefore been necessary to evaluate and apportion the consideration received for the joint issue of bonds and common shares then made. For reasons which will be fully described, we have recognized bookkeeping interpretations indicating that the total discount involved in the original joint issue was \$1,767,500, which should be divided between sterling bonds and common shares as follows:

Common stock	\$1,480,000
Sterling bonds	<u>287,500</u>
Total imputed discount	<u>\$1,767,500</u>

The calculation by which this discount was arrived at is as follows:

Securities Issued			
Common stock - 18,500 shares of par value \$100			\$1,850,000
Sterling bonds			<u>1,250,000</u>
			3,100,000
Consideration Received			
Cash		\$1,062,500	
Engineering services		60,000	
Organization and preliminary expenses		<u>210,000</u>	<u>1,332,500</u>
	Imputed discount		<u>\$1,767,500</u>

Our reasons for imputing a discount of \$1,480,000 to common stock, and \$287,500 to bonds may be summarized as follows:

- The company has maintained on its books an account described as "Miscellaneous Intangible Capital". The opening entry made as of January 1, 1910 is described as "Franchises, Rights, Concessions, etc." \$2,102,161.20. Subsequently and apparently sometime in 1926 entries were made and dated as of January 1, 1910 to transfer certain of these intangible costs to bond discount account, organization costs and tangible plant costs. The entries in this connection may be summarized as follows:

Opening Entry			
Total par value of common shares and sterling bonds issued at inception			\$3,100,000.00
Deduct: Cash raised from sale of bonds and shares			<u>1,062,500.00</u>
			2,037,500.00
Add: Liabilities to C. B. Smith interests assumed			<u>64,661.20</u>
	Opening value of franchises, rights, etc.		2,102,161.20
Deduct:			
Transferred to bond discount (account 131)		\$287,500.00	
Transferred to organization and preliminary expenses (account 301)		210,000.00	
Transferred to Horseshoe construction overhead distribution account		60,000.00	
Transferred to other tangible capital asset accounts		<u>64,661.20</u>	<u>622,161.20</u>
	Remainder in Intangible Fixed Capital (General)		<u>\$1,480,000.00</u>

The transfers to accounts 131 and 301 are accompanied by memoranda in the ledger which are quoted as follows:

Account 131 - "Unamortized Debt Discount and Expense"

In return for \$1,062,500 cash and services in organizing and financing the Calgary Power Company, Limited, Royal Securities Corporation received \$1,250,000 First Mortgage 5%, 30-year bonds and 12,500 shares of common stock, part of which in turn was sold with the bonds. Without common stock the bonds would only have been salable at a much lower price, so that in effect the bonds were being sold for \$1,062,500 less the value attached to the common stock distributed with them and the then value of the common stock is properly an additional charge against bond discount. From the nature of the transaction, the apportionment of the common stock between bond discount and organization and financing services must be a matter of estimate, as also its then value. It is, therefore, assumed that 5,000 shares represent bond discount and that their then value was \$20.00 each, the earliest transaction of record being at \$25.00 in the year following. On the basis of \$20.00 the value of the 5,000 shares would be \$100,000 leaving \$962,500 for the net receipts from the sale of bonds, making the bond discount \$287,500.00."

Account 301 - "Organization and Preliminary Expenses"

Calgary Power Company Limited, represents the consolidation of two groups of interests in the latter part of 1909: Calgary Power and Transmission Company, Limited, controlled by Mr. C. B. Smith, having under construction a plant at the Horseshoe Falls site on the Bow River, and the National Securities Corporation having applications on file for the Kananaskis and Radnor sites, land at Radnor and a valuable agreement for the supply of power to Alberta Portland Cement Company at Calgary, which has yielded substantial revenue to Calgary Power during the past fifteen years. Both groups of interests received payment in cash, presumably covering cash disbursements on construction account and for land, etc., and also 3,000 shares each of common stock in the new company representing services of their principals in organization and the working up of the respective projects. Had the compensation not been partly in common stock, much larger cash payments would have been required, so that the then value of the common stock is properly a charge to organization expense. As in the preceding account, the value has been fixed at \$20.00."

The effect of the foregoing is to impute a value of \$20 and a discount of \$80 for each share of common stock.

2. At the time of the fixation of costs in 1930 the President of the company submitted a memorandum to the Water Power accountants in

25

which he assigned a discount of \$187,500 to the sterling bonds, \$500,000 to the common stock and charged \$999,500 to organization costs and other intangibles. (The circumstances and conditions surrounding the 1930 fixation of costs are fully described in section 5 of this report). This interpretation of the opening transaction was given some weight in the 1930 fixation of costs and is summarized as follows:

Securities Issued

Sterling bonds at par	\$1,250,000	
Common stock at par	<u>1,850,000</u>	
		<u>\$3,100,000</u>

Consideration Received

From Smith, Kerry and Chase and Calgary Power and Transmission Co. for common shares of a par value \$300,000			
Engineering services	\$ 79,000		
Administration supervision, purchasing, etc.	61,500		
Horseshoe water power rights	<u>159,500</u>	300,000	
From National Securities Co. for common shares of a par value of \$300,000			
Engineering investigations, surveys reports, etc.	50,000		
Radnor and Kananaskis water rights	150,000		
Undertaking to procure a power contract from Canada Cement Mill	<u>100,000</u>	300,000	
From Royal Securities Corporation Ltd. for common stock of a par value of \$1,250,000 and sterling bonds of a par value of \$1,250,000			
Engineering services	128,000		
Administration, supervision and purchasing	32,000		
Organization expenses	590,000		
Cash	<u>1,062,500</u>		
	1,812,500		
Discount on bonds	187,500		
Discount on stock	<u>500,000</u>	<u>2,500,000</u>	
Total consideration			<u>\$3,100,000</u>

The effect of this interpretation is to impute a value of \$73 and a discount of \$27 for each share of common stock. The basis on which the president of the company came to this conclusion is summarized in the following extract from his memorandum:

"The opening transaction of the Power Company shows that in exchange for 18,500 shares of Common Stock of \$100 par value, and \$1,250,000 of 5% First Mortgage bonds, it received from the Royal Securities Corporation \$1,062,500 in cash, the property and rights of the Calgary Power and Transmission Company, including the partially completed Horseshoe Falls development, and the property and rights of the National Securities Corporation, including land at Radnor and the rights in regard to the applications for the Radnor and Kananaskis sites, and the undertaking of the National Securities Corporation to procure a power contract in respect to the Calgary Cement Mill. The Power Company also undertook to pay the C. B. Smith interests \$19,000 in cash for the retirement of \$20,000 of indebtedness of the Calgary Power and Transmission Company secured by thirty year bonds, and \$661.20 accrued interest thereon; \$45,000 representing indebtedness to C. B. Smith for advances to and payments made on behalf of the Calgary Power and Transmission Company by him and \$5,680.00 for indebtedness to the engineering firm of Smith, Kerry and Chase; and to the National Securities Corporation, \$30,000 in cash.

"From the records of the Royal Securities Corporation we know that of the Common shares it received, three thousand shares were turned over to the C. B. Smith interests, and three thousand shares were given to the National Securities Corporation, the Royal Securities Corporation receiving in effect for each \$85 in cash, \$100 of bonds and \$100 in Common stock. Of the Common stock so received a large part was delivered to the ultimate individual purchasers of the bonds. Owing to the transfer of the ownership of the Royal Securities Corporation, the record of sales at that time are no longer in existence so that it is impossible to determine exactly how much of the common stock was disposed of in that way. In this connection it should be pointed out that at that time the securities of water power companies were not held in the same high regard as at the present and that a Common Stock bonus was essential as an inducement for investors to interest themselves in the company. Assuming that an ultimate purchaser received on the average \$40 of Common stock with each \$100 of bonds, the Royal Securities Corporation was in effect receiving 6,250 shares for organizing and promoting the enterprise, for bringing the rival interests together, for engineering services provided by the Montreal Engineering Company, and for such legal and miscellaneous services as it rendered in connection with the enterprise.

At the time the Company was organized and in the early years of its operation, no reason existed for a careful segregation of accounts. In consequence the value of services rendered and properly includable in the "Actual Cost" have in many cases never been segregated in the initial set up. It would seem hopeless at this date to determine from the actual records of the Montreal Engineering Company, the Royal Securities Corporation, the Calgary Power and Transmission Company, and the National Securities Corporation what are the proper charges to the various classes of expenditures, particularly as many of the records are no longer in existence. The company should not be penalized on this account as the importance of including everything that could legitimately be included in the "Actual Cost" of the work could not then have been reasonably foreseen. We therefore suggest that the method of procedure be to determine what charges for engineering and other services would be reasonable, and adjust the tangible and intangible accounts accordingly. The value of the engineering services can be determined by the customary fees paid for such work. Stone & Webster Incorporated charge for the services of the division of Construction and Engineering - for designing, engineering and construction, a fee of 10% for the first \$500,000 expended and 7% on all excess. In the case of transmission lines the fees are 8% and 5% respectively. This fee is in addition to the direct engineering charges incurred on the work, the travelling expenses, salaries of employees in the Engineering Drafting and Expediting Departments in their Boston office for the time they are engaged on the work, etc.

Having regard to the foregoing, we have prepared a statement of what we consider a proper allocation of the amount involved in the opening transaction in the Company's history, and in this connection we might refer to the report of the Royal Commission to enquire into Railways and Transportation in Canada;-(Sessional papers, Dominion of Canada - Vol.12, Session 1917) where, under the heading of Overhead Charges, we find the following:-

"(a) Promotion, Organization and Administration:- The cost of promotion is certainly a proper charge against an undertaking. It is necessary for someone to take the initiative, and procure the necessary information, interest financiers and others, and so initiate the work. Next comes the cost of organization, which includes the incorporation and organization of the Company, the securing of franchises and similar steps, all of which costs money. After the organization of the project is its administration throughout the period of construction, including salaries for general officers, agents, accountants, clerks, and all other employees, not included in the engineering and legal departments and all administration expenses for material, stationery, printing, travelling etc."

"(Legal and engineering expenses are provided for...)

"(g) Commissions:- The cost of financing and securing the necessary capital with which to carry out the enterprise is a necessary cost.' "

"The initial entry in the Fixed Capital Accounts under the heading of PROPERTY, FRANCHISES, RIGHTS, CONCESSIONS, ETC. is \$2,102,161.20. This, however, includes \$19,000.00 paid to C. B. Smith interests for the refunding of \$20,000.00 of indebtedness of the Calgary Power and Transmission Company, \$661.20 accrued interest thereon, and \$45,000.00 representing indebtedness to C. B. Smith for advances to and payments on behalf of the Company made by him. The three items evidently represent expenditures which would unquestionably be included in the "actual cost" of the work:- The balance, viz. - \$2,037,500 we suggest allocating as per attached schedule."

3. We are therefore faced with two conflicting interpretations of the opening transaction, made by the company at different dates. We have accepted the interpretation attributing a discount of \$1,480,000 to the common shares for the following reasons:
- a) It would appear that the common stock did sell for \$25 per share in 1911 and it is therefore unlikely that it possessed a market value in excess of \$25 one year previously and before actual operations had commenced, (the second interpretation would place a value of \$73 per share in 1910).
 - b) A unit of 2 shares of common stock and 5 bonds, assumed by the president to have been issued for \$425, attributes a value of \$56 for each bond and \$73 for each share; an extraordinary relationship of the senior to the junior security.
 - c) The president's memorandum emphasises the difficulty of ascertaining the actual consideration behind the issue and comments to the effect that "at the time (1910) securities of water power companies were not held in the same high regard as at the present."

- d) The second interpretation recognizes a stock discount of \$500,000 in the case of stock retained by Royal Security Corporation Ltd. but concludes that a consideration equal to the par value was received for shares transferred to the Smith, Kerry Chase and National Security Co. Ltd. interests. Since all the stock was issued at the same time it seems reasonable to assume that the same discount should apply to all the stock issued.
- e) The president arrived at a total discount and intangible values of \$1,687,000 whereas the previous interpretations had placed a total of \$1,977,500. The main difference in the interpretations is the variation in values placed on intangible accounts such as water rights and organization costs, as distinct from stock and bond discounts.

It is to be noted that the president was, no doubt, viewing the transaction in the light of a fixation of costs under the Dominion Water Power Regulations. He was therefore concerned in distributing the consideration between values received, whether tangible or intangible on the one hand, and stock and bond discount on the other hand. To us this distinction does not carry the same weight or significance. We are more concerned in the light of section 71 (f) of the Public Utilities Act, in differentiating the fair value of assets used or useful, from intangible costs whether discounts on securities or franchise costs. Section 71 (f) reads in part as follows:

"No proprietor of a public utility shall, --

"capitalize its right to exist as a corporation; capitalize any right, franchise or privilege in excess of the amount,

exclusive of any tax or annual charge, actually paid to the Province or any municipality thereof as the consideration therefore; capitalize any contract for consolidation, merger, or lease; -----"

We do not imply that the sum of \$1,480,000 was other than discount on the common stock issue, but even if it were held in part to be water or corporation rights, the distinction would not seem to us to be as important as would otherwise appear.

The second issue of common stock was made in 1917 in the amount of \$50,000 to the then president of the company, Mr. R. B. Bennett, K.C. Minutes of the shareholders meeting of October 1, 1917 confirmed the action of the directors in allotting shares to its president for services during the five years from 1912 to 1917 at a par value of \$50,000. The minutes explain that Mr. Bennett had originally been offered shares to the par value of \$75,000 but declined to accept shares in excess of the amounts so allotted. This transaction was originally recorded on the books by a charge of \$40,000 to organization expenses and \$10,000 to surplus, presumably on the theory that value to the extent of \$40,000 should be properly included in the intangible assets of the company and that the sum of \$10,000 should have been included in operating expenses for the five years from 1912 to 1916 inclusive. Subsequently, the \$40,000 item was classified on the books as follows:

To the cost of the Horseshoe project - tangible	\$ 7,000.00
To the cost of the Kananaskis project - tangible	5,000.00
To miscellaneous intangible assets	28,000.00

A memorandum supporting this entry is as follows:

"Transfer from "organization"; balance of book value of 400 shares issued to R. B. Bennett on December 31, 1917 at \$70 per share, after charging their then estimated value of \$30 per share to accounts as follows:

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We have therefore assigned a discount of \$70.00 per share and have included the sum of \$12,000 in the tangible costs of dams and waterways and \$3,000 in administrative expenses.

The third issue of \$100,000 was made to Mr. G. A. Gaherty, present president of the company, for cash at par on October 18, 1928.

Also on October 18, 1928 the directors passed a resolution by which it issued share warrants permitting the then existing common shareholders to purchase at par one share for every four then held. All the common shareholders took advantage of the opportunity to purchase shares pursuant to this by-law, and shares of a par value of \$500,000 were issued in November and December, 1928. The market price of the common stock during 1928 ranged from a low of \$100 to a high of \$170 on the Montreal Stock Exchange and was quoted at a bid price of \$165 on the London Stock Exchange around November 27, 1928.

The fifth and final issue was made pursuant to a resolution by the board of directors passed on March 31, 1930 whereby the then existing shareholders were issued share warrants on April 25, 1930 enabling them to purchase at par two shares for every five then held. Pursuant to this resolution shares were issued during the months of May and June 1930 at a par value of \$1,000,000, being two-fifths of the \$2,500,000 par value previously outstanding. The price range of the company's stock on the Montreal Stock Exchange during 1930 ranged from a low of \$150 to a high of \$198 and the bid price recorded on May 30, 1930 was \$150.

In effect, therefore, a holder of four shares in 1928 received the privilege of purchasing at par three additional shares during the years 1928 to 1930.

The foregoing interpretations of the historical records reflects an actual investment by common shareholders of \$1,985,000 for 35,000 shares, an average of \$56.71 per share.

Preferred Shares

Preferred share issues have been made periodically during the years 1928, 1929, 1930 and 1931. All of the issues were underwritten by Royal Securities Corporation Limited subject to commissions of 7½% on the first issue of \$2,500,000 and to 7% on subsequent issues. Commissions paid to the underwriters amounted to \$432,500 and other expenses of \$7,407.08 were incurred.

Geographical Distribution of Preferred and Common Shares

Exhibits 8a and 8b summarize the geographical holdings of preferred and common shares as of June 8, 1945, which is condensed as follows:

	<u>No. of Shareholders</u>		<u>No. of Shares</u>	
	<u>Amount</u>	<u>% of Total</u>	<u>Amount</u>	<u>% of Total</u>
Preferred Shareholders				
Canadian				
Alberta	1,268	41.6	18,663	31.6
Other Provinces	1,566	51.3	29,386	49.8
Foreign	<u>216</u>	<u>7.1</u>	<u>10,951</u>	<u>18.6</u>
Total preferred	<u>3,050</u>	<u>100.0</u>	<u>59,000</u>	<u>100.0</u>
Common Shareholders				
Canadian				
Alberta	16	14.0	554	1.6
Other Provinces	63	55.3	31,953	91.3
Foreign	<u>35</u>	<u>30.7</u>	<u>2,493</u>	<u>7.1</u>
Total common	<u>114</u>	<u>100.0</u>	<u>35,000</u>	<u>100.0</u>

It will be observed that residents of Alberta hold 31.6% of the preferred shares as compared with 1.6% of the common shares of

the company.

One shareholder, the Royal Securities Corporation Limited holds 70% of the outstanding common shares and three shareholders including the Royal Securities Corporation Limited and two directors hold about 61% of the common shares.

Funded Debt

The funded debt of the company has comprised three issues of bonds, namely, the 5% sterling bonds maturing in 1940, 5% bonds due 1960 and the 5% bonds due 1964. In addition thereto the company has issued 3½ year 5% secured notes due in 1944.

The issue and subsequent reacquisition or redemption of the 5% sterling bonds is summarized on exhibit 9. Of a total issue of \$2,999,813.33, \$1,250,246.67 was issued in 1910 at the inception of the company subject to an imputed discount of \$287,500 as already explained on pages 22 to 30 of this report. In 1911 and 1912 bonds of a par value of \$750,440 were issued to Royal Securities Corporation Limited at a price of \$84 and in 1913 bonds of a par value of \$999,126.66 were sold to Royal Securities Corporation Limited at an average price of \$80.72. Published information is not available as to the price at which these issues were sold to the public but subsequent issues were offered at an advance of \$5 per bond over the issue price to the Royal Securities Corporation Limited. This issue was reacquired to the amount of approximately \$350,000 from 1919 to 1929 and the remainder in 1930 through a refunding scheme by which the 5% bonds due in 1960 were issued for the purpose of retiring this issue and providing funds for capital extensions.

The 5% bonds due 1960 were issued to the extent of

\$8,000,000 during 1930 to the Royal Securities Corporation Limited at a price of \$89, and to the extent of \$2,000,000 in 1930 at a price of \$92. These issues were offered publicly by Royal Securities Corporation Limited in Montreal, Toronto, New York and London, England, at a price of \$5 per bond in excess of the issuance price to them. From 1934 to 1942 bonds of a par value of \$1,888,500 were reacquired and bonds of a par value of \$3,171,500 were outstanding as of December 31, 1944. The bonds retired in 1941 involved over \$1,500,000 reacquired by virtue of the repatriation of British held Canadian securities. (See Exhibit 10).

The 5% 1964 issue was made during 1934 to Royal Securities Corporation Limited at a price of \$92.50 and was offered to the public in June 1934 at a price of \$97 and accrued interest. During the eight years from 1934 to 1942 bonds of a par value of \$298,000 were redeemed and \$1,702,000 were outstanding as of December 31, 1944 (See Exhibit 11).

The 5% Secured notes were issued to the Royal Bank of Canada during 1941 for a price of \$105.22 subject to a commission of $\frac{1}{2}$ of 1% to Royal Securities Corporation Limited. This issue was made mainly for the purpose of repatriating the 5% 1960 bonds. The notes were redeemed in 1944 at par on maturity dates. (See Exhibit 12).

The estimated and known commissions paid to Royal Securities Corporation Limited, the affiliated financing outlet of the company, is as follows:

Preferred Stock

7 1/2% on \$2,500,000	\$187,500	
7% on \$3,500,000	<u>245,000</u>	\$ 432,500

Bonds

Sterling issues Estimated 5% on \$2,999,813.35	149,390	
5% due 1960 5% on \$10,000,000	500,000	
5% due 1964 4 1/2% on \$2,500,000	112,500	
5% secured notes due 1944 1 1/2% on \$1,756,000	<u>8,780</u>	<u>771,270</u>
		<u>\$1,203,770</u>

The foregoing computations are based on published information as to the offering price of Calgary Power securities. We have, of course, no way of knowing if the offered price was received in all cases; any discount off the offered price would of course reduce the commissions estimated above.

RELATIVE HOLDINGS OF COMMON AND PREFERRED SHARES
AS AT JUNE 8, 1945



PAR VALUE OF PREFERRED SHARES HELD

PAR VALUE OF COMMON SHARES HELD

\$ 5,400,000

4,000,000

3,000,000

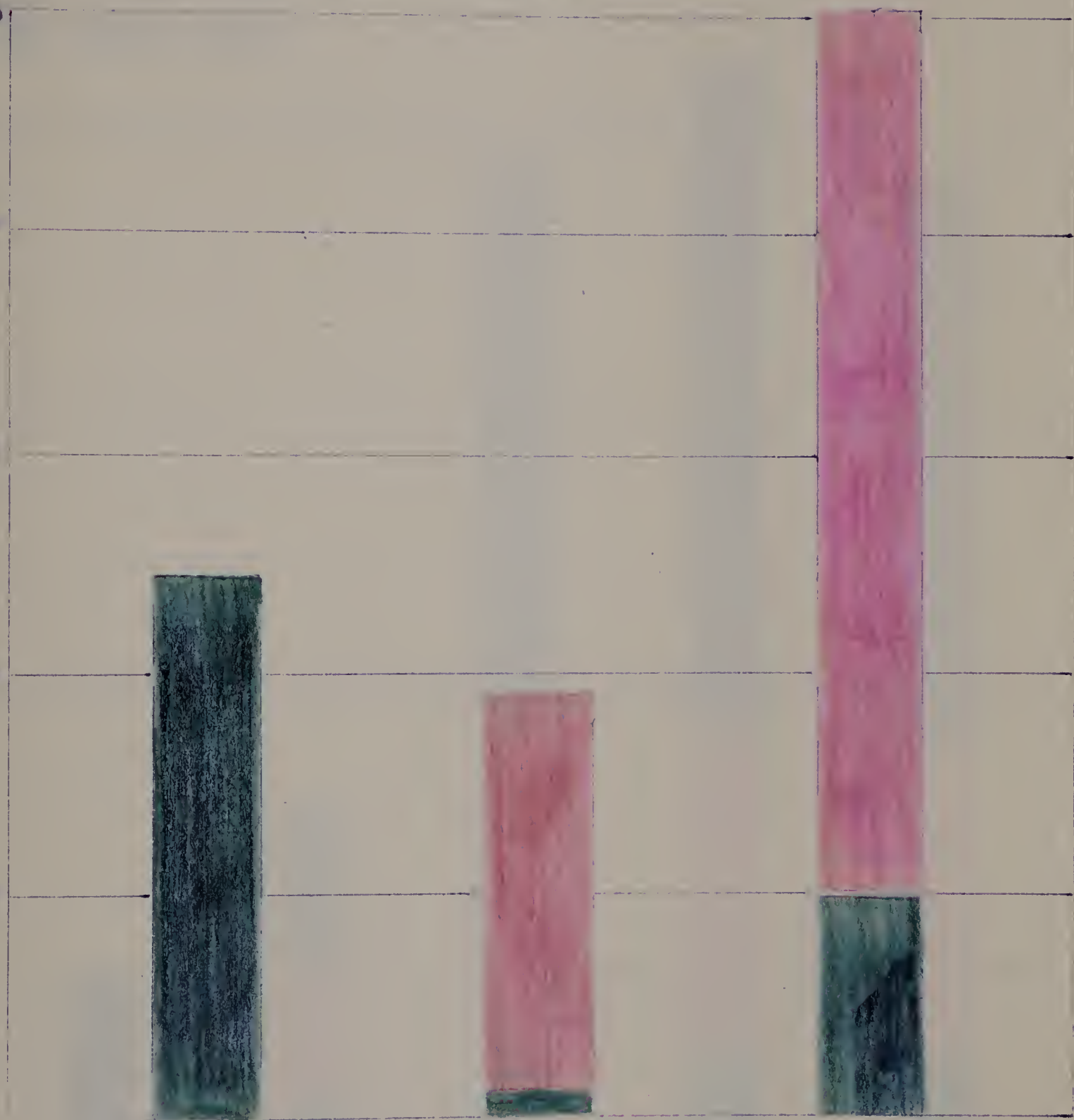
2,000,000

1,000,000

Royal Securities Corporation Ltd




Alberta Share holders

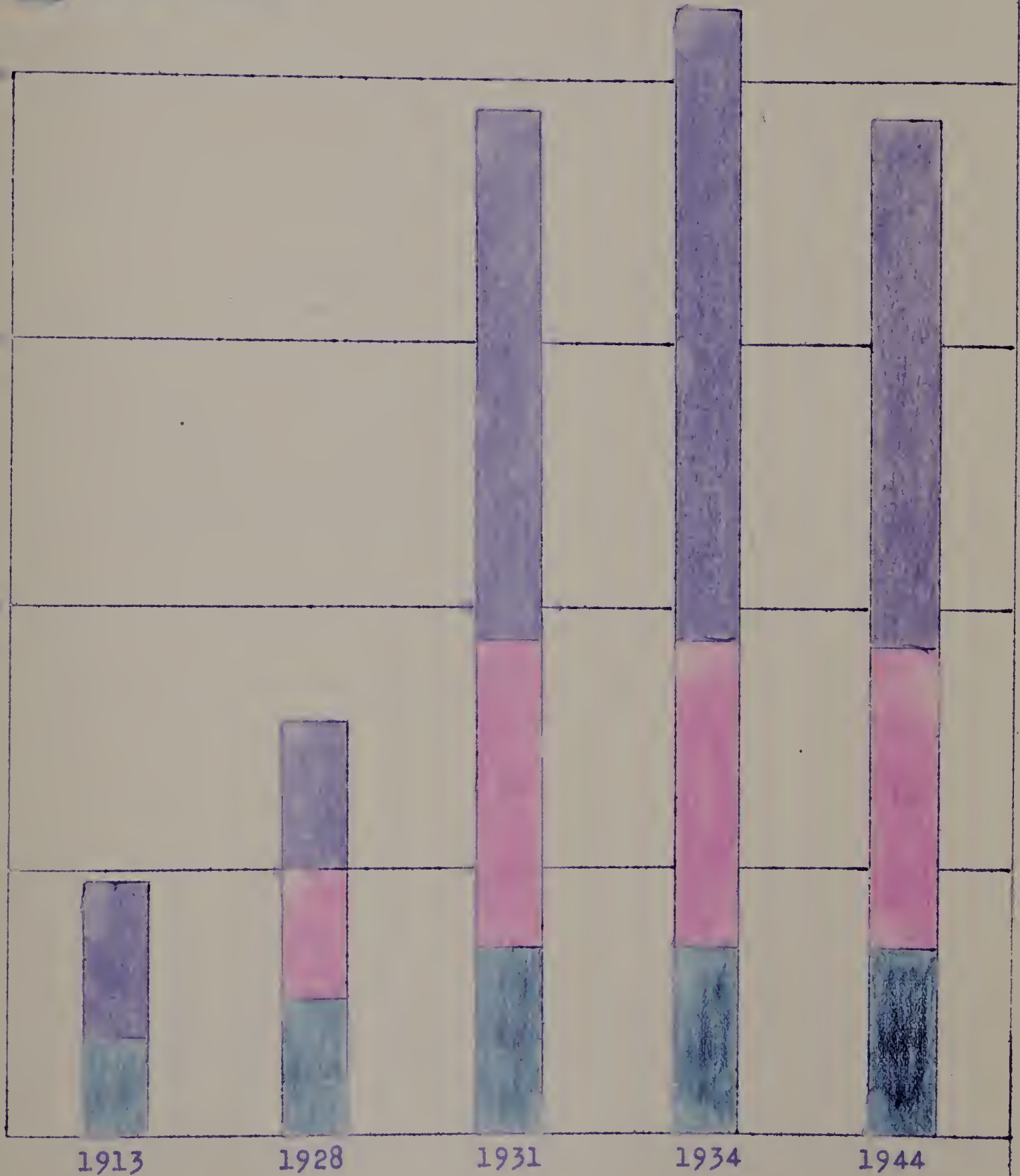
Other Share holders



PAR VALUE OF SECURITIES OUTSTANDING

AT VARIOUS DATES

-  BONDS
-  PREFERRED STOCK
-  COMMON STOCK





SECTION 7

RATE BASE, RECAPTURE AND EXPROPRIATION VALUES

RATE BASE, RECAPTURE AND EXPROPRIATION VALUES

Significance of Rate Base

The determination of the fair value of property devoted to the public service is important for a variety of considerations, of which in this case the following are the more important:

- a) To indicate whether net earnings of the company for the account of shareholders represents a fair rate of return on monies invested
- b) To arrive at the amount of compensation to be paid to the company (or its investors) in exchange for properties taken over in the event of expropriation or recapture proceedings.

It is well settled utility practice that service rates should be just and reasonable; that is that they should be high enough so as to be fair to the investor who makes the service available and on the other hand low enough as to be reasonable to the consumer of the service. Rates which are too low are tantamount to confiscation of private property; rates which are too high constitute exploitation of the consumer, made possible by unregulated monopoly. In the long run the deciding consideration will usually be the cost of service, meaning by cost of service, the operating cost plus reasonable compensation for the use of capital; anything more than this is excessive, anything less tends, apart altogether from fairness, to discourage the employment of capital.

It is the usual intent of the regulating body to fix rates for services performed that will result in gross revenues just sufficient to cover operating costs, depreciation, and a fair interest return on the property employed

Having determined the gross revenues required to attain

this end there remains for further consideration the construction of classified service rate schedules which will raise the required gross revenues overall and yet do so in a manner "fair" to different classes and groups of consumers. This final phase will be discussed in some detail in Section 7.

To determine what is a fair return to the investor for the use of property involves two considerations, namely, the determination of the "fair value" of the property and the assumption of a rate of return thereon adequate to cover the element of risk involved and the use of the funds provided. The term "rate base" is commonly used to connote the value, however determined, assigned to the property on which earnings are to be allowed by a regulatory body.

The determination of value is also important in case of expropriation - wherein it is the desire to allow the investors surrendering property, reasonable compensation therefor.

Considerations Respecting Rate Base Determination

We turn now to a consideration of what constitutes fair value of property employed on which the investor is entitled to earnings. The expression "fair value" of course is capable of a variety of interpretations and has been determined in different jurisdictions and at different times in a variety of ways.

It seems to be generally recognized that regard must, in each instance, be paid to all related factors to evolve the basis which achieves substantial equity from the viewpoint of both investors and consumers, whose interests are usually diametrically opposed. As an indication of the variety of methods suggested, and sometimes adopted, the following might be mentioned:

- a) The original cost of the property less depreciation that has been recorded by the company in respect thereto.
- b) The original cost of the property less depreciation calculated other than on the basis adopted by the company in its ordinary accounting records.
- c) Either (a) or (b) above, adjusted for higher or lower price levels deemed to obtain at the date of determination as compared with those prevailing at the time or during the period of construction.
- d) Appraisal value as determined by engineers after a detailed physical examination of the property. The usual approach here is for engineers to assemble the present-day cost of constructing the property (so-called "replacement" or "reproduction" cost) and to deduct therefrom depreciation according to the engineering estimate of the physical condition of the property (so-called "observed depreciation").
- e) Appraisal value less observed depreciation as determined by engineers adjusted for higher or lower price levels deemed to obtain at the date of determination as compared with those prevailing at some other arbitrarily selected date.

The application of these or other methods or formulas is conditioned by the directions contained in governing statutes. For example Section 208 (A) of the Federal Power Act (U.S.A.) provides as follows:

"The commission may investigate and ascertain the actual legitimate cost of the property of every public utility, the depreciation therein, and, when found necessary for rate making purposes, other facts which bear on the determination of such cost or depreciation, and the fair value of such property."

Section 6 (A) of the Federal Natural Gas Act (U.S.A.) reads identically, mutatis mutandis. The Federal Power Commission in recent cases has interpreted fair value under these sections to mean historical cost as shown by the company's books less depreciation re-computed where necessary, fairly to reflect the extent of service life consumed in prior operations. The views of the Federal Power Commission are succinctly stated in their opinion No. 86 respecting the Panhandle Eastern Pipeline Company:

" -- we conclude that the rate base is the actual legitimate cost of the property used and useful in furnishing the service, less the existing depreciation on such property, plus the working capital necessary to render such service."

With regard to rate regulation in the Province of Alberta the governing section of the Public Utilities Act (Alberta - R.S.A. Chap. 28, Section 65 (b) reads):

"The Board shall have power, --

(b) from time to time to appraise and value the property of any public utility whenever in the judgment of the Board it shall be necessary so to do, for the purpose of carrying out any of the provisions of this Act, and in making such valuation the Board may have access to and use any books, documents or records in the possession of any department or board of the Province or any municipality thereof; -----"

and Section 66 (a) provides

"The Board, either upon its own initiative or upon complaint in writing, shall have power by order in writing made, after notice to and hearing of the parties interested, -----

(a) to fix just and reasonable individual rates, joint rates, tolls, charges or schedules thereon, as well as commutation, mileage and other special rates which shall be imposed, observed and followed thereafter by any proprietor; -----"

It will be observed from the foregoing that no specific formula or method is prescribed by the Public Utilities Act for the determination of the rate base and the Board would therefore presumably

be obliged in a given case to find an appropriate rate base a priori, taking all factors and circumstances into account.

The pertinent Section 49 (1), (2) and (3) of the Dominion Water Power Regulations reads as follows:

"(1) When, under the authority of paragraph (m) of section 12 of the Water Power Act, a board or commission is designated, which, in a particular territory is to regulate the rates of licensees engaged in the sale, barter or exchange of hydro-electric energy, every such licensee shall immediately submit the schedules of rates under which he is then operating to such board or commission for adjustment and approval and shall thereafter before putting into effect any new schedule of rates and prices to be charged to consumers for power, submit the same for adjustment and approval, and no rates or prices for power shall thereafter be legal or enforceable until so submitted. Such board or commission may, on the complaint of any affected party or on its own initiative, require the submission or the resubmission at any time of existing schedules of rates and prices for adjustment and approval.

Provided that rates and prices, when once adjusted or approved in accordance with this section, shall thereafter not be again revised within a period of five years, except by mutual consent of the revising authority and the licensee.

Provided further that the rates charged by any licensee shall never be reduced by regulation under the authority of this section so as to make it impossible for such licensee to earn a cumulative fair net rate of return in accordance with the provisions of subsections (13) and (14) of section 48.

- (2) Every such licensee shall abide by and comply with such reasonable regulation and control of the service rendered and to be rendered by him to consumers of power furnished or transmitted in virtue of his license as may be prescribed from time to time by such board or commission, and shall also abide by and comply with any orders of such board or commission with respect to stock and bond issues.
- (3) Such board or commission may from time to time ascertain and determine and by order fix the proper and adequate rates of depreciation on the several classes of property used or useful in connection with the undertaking of any such licensee; and the said licensee shall set aside out of earnings and place in separately invested depreciation reserves such amounts as will conform to the rates so ascertained; determined and fixed.

Such board or commission may also specify the purpose for which and the manner in which such reserves and the income arising from the investment thereof are to be expended."

Considerations Respecting Value for Recapture or Expropriation

With regard to compensation upon expropriation the Power Commission Act, (Chap. 5, 1944 Alberta) after providing for expropriation in Section 8 (1) (b) (iii), provides in subsection (3) of the same section:

"Whenever the Commission acts under the authority to expropriate conferred by this section, compensation shall be made to the owners or persons interested, for the lands, works and other assets taken and for all damage necessarily resulting from the exercise of the powers granted to the Commission by this section, and in fixing such compensation regard shall in all cases be had to the value of the lands, works and other assets taken or to the nature and extent of the estate, right, privilege, easement or interest which the Commission decides to take and acquire in, over, upon or in respect of the lands, works or other assets and the compensation shall be based thereon."

The pertinent section of the Dominion Water Power Regulations (47) distinguishes between assets within and outside "the severance line", and reads in part as follows:

"1. Works and Lands Within the Severance Line

- (1) Upon the expiry of the final license or upon the expiry of the time fixed in the said notice of termination, as the case may be, the power development shall become the property of the Crown, and the Minister, or such person as he may designate in that behalf, may immediately and without further proceeding enter upon, possess, occupy, operate and control the same.
- (2) In the event that the Minister and the licensee are unable to agree upon the compensation to be paid for the said power development within one year after notice of termination has been given, either party may refer the matter to the Exchequer Court.
- (3) Compensation for the said power development shall be arrived at by first taking as a basis the figure previously fixed in accordance with section 36 as the actual cost of the said development, then adjusting this figure so as to make allowance for any variation in the purchasing power of a dollar as shown by the official trade index or other official Dominion statistics most applicable to the case in hand, and finally deducting an amount equivalent to the actual loss in value of the said works due to their physical or functional depreciation or to other causes.

II. Works and Lands Outside the Severance Line

- (4) If the Minister desires to take over further works and lands in addition to the power development (i.e. outside of the severance line), but within the power system, and cannot come to an agreement with the licensee concerning the extent thereof within one year after the notice of termination has been given by the Minister, the Minister may refer the matter to the Exchequer Court."

and again

- (8) "The Minister or the Court, as the case may be, in determining the compensation to be paid for the said works shall first fix a sum which represents, in their opinion, their then physical value, considering either first cost, replacement cost, or any other similar criteria which will enable them to arrive at the said physical value, but excluding good will, going concern, franchise value, severance damages and other intangible elements of a like nature; and the Minister or the Court may then add to the said sum so determined an amount not exceeding ten per centum thereof for the purpose of covering such severance damages as is deemed just.
- (9) The Minister or the Court, as the case may be, in determining the compensation to be paid for the said lands shall first take as the basis of such compensation the amount previously established as their actual cost in accordance with section 36, shall next make an allowance for the variation in the purchasing power of a dollar as provided in subsection (3) of this section, and may, in his or its discretion, add to the result so determined a bonus not exceeding ten per centum to cover such severance and other intangible values as is deemed proper to allow under the circumstances."

The term "severance line" is defined in the regulations

as follows:

"'Severance line' means the line within which, in the event that the license should ever be terminated either by the failure to renew it upon the expiry of the term, or by voidance, cancellation, or any other legal process, the lands, works, and properties used or useful in connection with the undertaking should be considered as essentially tributary to the power or storage development, and outside of which such lands, works, and properties should be subject to be taken over on a different basis."

The provisions governing expropriation under the Power Commission Act (Alberta) would appear to be generic, providing as it does that

"regard shall in all cases be had to the value of the lands, works and other assets taken over"

Assuming that depreciated historical cost is used for expropriation purposes (and depreciated historical cost is the only basis on which we as accountants are in a position to comment without engineering estimates as to present value and observed depreciation), fair value for recapture or expropriation purposes involves a number of other considerations, some of which are:

- 1) Whether historical cost should be influenced by changes in the price level.
- 2) Whether compensation should be allowed for franchises, other intangibles, or going value.
- 3) Whether compensation should be allowed for unamortized bond discount and expenses.

Price Level Variations

The extent to which historical costs in the event of recapture should be influenced by changes in the price level entails a number of problems, some of which are as follows:

- a) The proceeds of recapture or expropriation in the event of winding up, would be firstly applied in the liquidation of funded and long term indebtedness, secondly in the redemption of preferred shares and thirdly in a distribution to common shareholders. The first two distributions would be paid at par plus stated premiums irrespective of changes in the price level. The total adjustment for price level variations will therefore accrue to common shareholders. It is conceivable that at low price levels common stock equities would be destroyed.

- 44
- b) So long as compensation for recapture at depreciated cost is re-invested in a regulated utility the investor is assured a continuation of a rate of return which is fair to him and to the consumer. The case for adjustments respecting price level variations would seem to be strongest when the investor abandons the utility field for unregulated investments.
- c) Not the least of these problems is the necessity of arriving at that price index which, having regard to all the circumstances, might be considered to be most appropriate. This would seem to us to be a matter for decision by a judicial board after the hearing of evidence from all aspects. We have obtained, however, from Professor A. Stewart of the Department of Political Economy, University of Alberta, certain indices of wholesale prices, prices of producer equipment, producer materials, building construction and wage levels, and we submit them as Exhibits 13, 14 and 15 of this report so that they will be readily available in the event that they are deemed to be of significance in considerations with respect to the instant case.

Franchises, Intangibles and Going Value

A consideration as to whether compensation should be paid for intangibles in the event of expropriation, as we have previously indicated, is also debatable. On the one hand there would be grounds for contending that there is no more reason for valuing intangibles and franchises, which after all enure to the company by virtue of concessions given by the Crown, in the event of recapture or expropriation than there is in the event of continued operations.

In the latter case the company ultimately recovers its original investment from consumers by depreciation charges applied to assets "used and useful" (excluding intangibles under the provisions of the Public Utilities Act) whereas in the former the company recovers its investment at one time. We consider that there is reasonable grounds for contending that the same considerations should apply in both cases. On the other hand we can see that there are arguments to the contrary, some of which we might summarize as follows:

- a) The date of actual recapture rests with the expropriating or recapturing authority, rather than the company.
- b) The necessity of attracting capital and incurring organization and promotion costs in pioneer enterprises should be recognized.
- c) The purchase of franchises is an attendant cost on the development and extension of the transmission and distribution system to towns which already own their own steam or diesel plants, or who have previously granted the franchise elsewhere. Such extensions are desirable and in the public interest, and any necessary and reasonable expenditures on that behalf should therefore be recognized for recapture or expropriation purposes

Unamortized Bond Discount

The inclusion of unamortized bond discount entails a number of special considerations. It would seem that expropriation or recapture does not necessarily mean the winding up or discontinuance of a utility company's operations. The company changes the form of its assets from tangible assets -- dams, transmission systems and equipment to cash, which it may thereupon reinvest in other utility assets, or in such other investments as it may choose. Under such circumstances it

would seem that it may expect to continue to earn income, and be able to meet its bond interest requirements and to retire its funded indebtedness as it matures. On the other hand it may well be argued that the return on safe investments might be less than the effective rate of its funded indebtedness, and as such therefore it is reasonable that the company having entered into long term obligations should receive some consideration with respect thereto. As we have previously pointed out the date of recapture or expropriation is not controllable by the company, but on the other hand a company operating under the provisions of the Dominion Water Power Regulations must recognize its susceptibility to recapture proceedings. This too, would seem to us to be a matter for decision after the hearing of evidence and arguments from all sides.

Summary of Considerations Governing Rate Base and Recapture Values

Summarizing the foregoing it would seem that:

1. Rate base for rate regulation would seem to be determinable on general principles free from specific direction as to the formula to be adopted, subject to the provision excluding the capitalization of certain intangibles.
2. Value for expropriation purposes would seem to be determinable:
 - a) For Dominion purposes
 - (1) For assets within the severance line -
on actual cost adjusted for price level variation,
less actual depreciation, and
 - (2) For assets outside the severance line -
 - (i) as to "works" -
on physical value using first cost, replacement cost, or any other similar criteria to determine the true value, but excluding intangibles and going value, plus an amount up to 10% for severance damages, and
 - (ii) as to lands -
actual cost adjusted for price level variation plus an amount up to 10% for severance damages and intangibles.

- b) For Provincial purposes on the general principles above outlined.

It will be borne in mind that information is not presently available to us as to alternative appraisal values or going value, and our investigation has therefore necessarily been confined to the historical cost approach.

Apart from the sanction which would appear to have been given to the historical cost method by wide contemporary usage, the method would appear to adapt itself, from a common sense aspect, to the principles of public utility regulation, control and recapture. These principles seem to us to rest on the proposition that in return for the security afforded to the investor in a public utility and his protection from damaging competition, the consuming public should be protected from the extraction of excessive profits, whether these profits be a return on the original investment in excess of a fair and reasonable return, or whether from so called capital profits arising from expropriation. There would seem to be grounds to the contention that utility consumers should not be subjected to an increase in consumer rates after recapture or expropriation by virtue of increased capital values. Inasmuch as the rate of return is received consistently throughout an indefinite period of regulation it is probably unnecessary to give consideration to varying commodity price levels throughout the period of the usage of the assets, but in the event of recapture there would appear to be some justification for varying the original cost, less depreciation recovered by usage, by the increase or decrease in the price level since the date of the original investment, with a view to preserving the investors position from the aspect of ownership of physical assets. This concept is also recognized in provincial regulation of recapture in the

Dominion Water Power Regulations. Other aspects of this matter have been previously discussed.

Historical Cost of Calgary Power Assets - "Used and Useful"

With these considerations in mind it seemed to us to be essential to ascertain from the books and elsewhere, the actual historical amount of the company's investment in its property "used and useful" in serving the consumer.

Almost immediately, however, we encountered serious difficulties in ascertaining the actual historical costs of the company's investment in its physical assets. In the first place, the company commenced business in the year 1909 and a period of 36 years is involved. During that period bookkeeping methods had changed, records had been lost and destroyed, and in instances the human mind was unable to recall circumstances that were not the subject of record. Furthermore, in the early stages it was perhaps natural that the company failed to make a distinction which now appears to be essential under the provisions of section 71f of the Public Utilities Act, (Alberta) 1923, to differentiate between the intangible costs of corporation and franchise rights, and the tangible costs of property used and useful in the public service. In the early years too, composite accounts were maintained which included all of the company's investments in capital assets, or alternatively the company adopted a classification of accounts which subsequently became obsolete.

As of March 31, 1930 accountants from the Water Powers Branch of the Dominion Department of the Interior made an examination pursuant to Sections 36 and 47 of the Dominion Water Power regulations with a view to ascertaining the costs of assets and classifying them as these

- a) within the "severance line"
- b) outside the "severance line", and
- c) intangible

The company subsequently used this analysis in adopting a classification for bookkeeping purposes. We at first thought that this classification could be used to fix the historical cost of the assets to July 31, 1930, which would then have limited the extent of our examination of the plant accounts to the period from 1930 to the conclusion of 1944. This procedure, however, could not be followed. Firstly, we experienced serious difficulties in reconciling the Dominion Water Power's fixation of costs with the books, partly because the records between January 1 and July 31, 1930 were missing, and partly because certain of the working sheets and analyses upon which the fixation had been based, had been either lost or destroyed. Further, in the course of examining the company's classifications and comparing them with the books, we encountered certain obvious errors which inspired further and more detailed examination of the facts and data contained in the reports and related analyses. To a certain extent our incapacity to accept the classifications of costs as a starting point for present purposes may be attributable to the fact that the fixation reports were made for somewhat different purposes than the ascertainment of a rate base. In addition, however, the analytical data supplied to us were found to be unreliable as to classification and in particular the derivation of the cost of physical assets used and useful as distinct from intangible costs was in our view incorrect. Illustrative of the matters which came to our attention in this connection are the following:

1. In 1926 the company had made an entry purporting to distribute

over tangible and intangible assets the consideration for the issuance of bonds and common shares at its inception. Included in this entry was an item of \$60,000 which purported to represent the cost of engineering on the Horseshoe Dam made and incurred by the predecessor interests of Calgary Power. The analysis adopted by the company, however, arrived at a figure of \$83,711.95 covering the costs of engineering which was included in the value of tangible assets, apparently over-looking the fact that \$60,000 had already been included in the cost with respect thereto.

2. An item of \$11.71 which is referred to in the analysis sheets as an "unexplained difference" was found on examination, to involve adjustments of approximately thirty items including offsetting errors in classification of over \$33,000.
3. The analysis of the cost of the Kananaskis plant includes a sum of \$82,436.38 as engineering costs, which in turn includes a figure of \$76,020 which the company had previously recorded in intangibles. On examination of the books, it was discovered that the company had already included in the capitalized cost of the plant the sum of \$46,204.02 as the cost of engineering, of which amount only \$18,916.46 found its way into their analysis, (\$12,500.08 as supervision and \$6,416.38 as engineering). The balance of \$27,287.56 had been offset by other errors in classification.
4. In 1917 the company had issued common shares of a par value of \$50,000 to Mr. R. B. Bennett for services rendered as president of the company. Of this amount \$10,000 was written off to surplus,

\$28,000 was capitalized as intangibles and \$12,000 was charged in the tangible capital costs of the Horseshoe and Kananaskis plants. At the time of the fixation it was apparently overlooked that \$12,000 had already been capitalized, and an additional \$40,000 was added to the costs of Horseshoe and Kananaskis plants; thus duplicating the entries already made in the accounts, and capitalizing a figure in excess of the total consideration.

5. In spite of numerous errors in distribution the totals as ascertained in various classifications nevertheless balanced with corresponding totals obtained from the company's books. We were, therefore, lead to the conclusion that the analysis had in some instances been "forced" or arbitrarily ascertained.
6. To achieve our purpose it was necessary for us to make some hundreds of adjustments to the classifications based on the Fixation reports.

As a result we made arrangements with the company to make available to us certain of its accounting and engineering staff who assisted us in analyzing completely the records of the company with respect to its investments in land, waterways, dams and transmission and distribution equipment for the period from the inception of the company in 1909 to 1944. The results of this analysis are contained in exhibit 16

It will be observed that exhibit 16 constitutes a complete summary of the cost of the company's tangible fixed assets "used and useful", which is made up and supported by exhibits as follows:

Production plants - Exhibits 17 to 33	\$10,498,298.44
(Hydro plants - Exhibits 18 to 21	
(Steam plants - Exhibits 22 to 29	
(Miscellaneous assets - Exhibits 30 to 33	
Transmission lines - Exhibit 34	4,716,016.01
Main Sub-stations - Exhibits 35 and 36	1,718,537.09
Distribution system - Exhibit 37	2,844,453.11
Water utilities - Exhibit 38	498,861.46
Sundry land - Exhibit 39	9,013.74
Office equipment - Exhibit 40	34,332.56
General equipment - Exhibit 41	74,148.06
Construction work in progress - Exhibit 42	<u>118,705.27</u>
 Total cost of tangible fixed assets	 <u>\$20,512,365.74</u>

The total cost of tangible fixed assets as ascertained, is reconciled with the cost as recorded on the company's books and balance sheet at December 31, 1944 as follows:

Reconciliation of Cost of Tangible Fixed Assets

Cost of land, buildings and plant per audited balance sheet and books		\$24,077,443.18
Deduct: Assets in Saskatchewan (Prairie Power Co. Ltd.)	\$1,685,963.27	
Assets of Calgary Water Power Co. Ltd. - non-operative	<u>89,639.12</u>	<u>1,775,607.39</u>
Recorded cost of tangible operating plant in Alberta		22,301,835.79
Deduct:		
Interest during construction	1,032,554.71	
Bond discount, recorded as tangible plant in 1910 to 1913	14,269.00	
Capitalized costs unsupported by evidence of outlay		
Supervision	85,225.00	
Engineering	236,406.90	
Remuneration to company's president	40,000.00	
Attributed franchise costs - town plants purchased	<u>381,014.44</u>	<u>1,789,470.05</u>
Historical cost of tangible assets "used and useful"		<u>\$20,512,365.74</u>

With respect to the foregoing we have the following

comments and remarks to offer.

Interest on Capital

The inclusion or otherwise of interest on capital during the construction period is a debatable matter, which has been subject to a variety of opinions. The Federal Power Commission in contemporary opinions has allowed simple interest computed on the monthly balance of construction account at the beginning of the month, and on the additions during the month for half a month, until the actual commencement of operations. (On the other hand the Federal Power Commission does not recognize an element of profit for engineering services made by an affiliated service company, which is probably a substantial element in the cost of Calgary Power assets)

Two possible treatments of interest on construction in progress suggest themselves:

1. To allow interest during construction as an element of capital cost and to admit the asset to the rate base when finally completed.
2. To disallow interest as an element of capital cost, but to admit the expenditure to the rate base as incurred.

Interest is allowed to the utility on substantially the same basis in each case; the difference theoretically lies in the recouping of interest immediately in the second case, but over the period of useful service in the first.

In the present case we incline to the second treatment for the following reasons:

- a) Calgary Power has not been consistent in its own practice, and in fact with fluctuating income and excess profits tax structures and variations in financing costs over a period of years,

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry should be supported by a valid receipt or invoice. The second part outlines the procedures for handling discrepancies between the books and the actual cash on hand. It states that any variance must be investigated immediately and reported to the appropriate authority. The third part provides a detailed breakdown of the monthly financial statements, including the balance sheet and the income statement. It notes that the total assets are equal to the total liabilities and equity, indicating that the books are in balance. The final part of the document concludes with a statement of the preparer's responsibility to ensure the accuracy and integrity of the financial information presented.

The following table shows the details of the monthly financial statements for the month of January. The balance sheet shows that the total assets are \$100,000, which is equal to the total liabilities and equity of \$100,000. The income statement shows that the total revenue for the month is \$50,000, and the total expenses are \$30,000, resulting in a net income of \$20,000. The cash flow statement shows that the net change in cash for the month is \$15,000. The statement of retained earnings shows that the ending balance of retained earnings is \$85,000. The document also includes a list of the assets and liabilities, along with their respective values. It is important to note that the values are in US dollars. The document is prepared in accordance with the generally accepted accounting principles (GAAP). The preparer has reviewed the records and found them to be accurate and complete. There are no adjustments required. The document is signed and dated by the preparer.

The document is prepared in accordance with the generally accepted accounting principles (GAAP). The preparer has reviewed the records and found them to be accurate and complete. There are no adjustments required. The document is signed and dated by the preparer.

inconsistencies with respect to both rates and methods are not only understandable, but in our view are almost sure to occur. For a number of years from 1909 to 1942, the company adopted the procedure followed by the Federal Power Commission of charging interest on the previous monthly balance and one-half of the additions throughout the month. The rates vary from 8% from 1910 to 1926, 7% from 1927 to 1940 and 6% for 1941 and 1942. In 1943 the practice was discontinued, and since that time interest on construction has not been capitalized.

- b) The inclusion of interest in capital costs is most supportable when borrowed funds are used for construction purposes, before the company has earned revenue out of which to meet the current interest. This, we consider, is generally the situation with respect to concerns envisaged by the Federal Power Commission.

A substantial portion of the Calgary Power plant has been constructed during operating periods, and whilst the company is obtaining revenue from continued operations.

In considering the historical cost of assets "used and useful" one is concerned in actual outlays of monies made in the acquisition of such assets. Whereas the interest paid on borrowed money is actually such an outlay, capital supplied by common and preferred shareholders is a proprietary equity, and there is in effect no contractual outlay for interest. In our view the inclusion of interest during construction on funds provided by earnings or by shareholders, (preferred or common) is not in fact an historical cost to the company. An analysis of the source of funds for capital purposes is contained in Section 4. It also

seems to us that the value for utility purposes should be the same regardless of the source of funds, which after all is a matter over which the consumer has no control.

- c) The inclusion of interest on construction involves difficulties in arriving at a fair interest rate to be used. Whereas the nominal interest rate on Calgary Power bonds has for a number of years been 5%, the effective rate has been influenced from time to time by fluctuations in exchange rates and by the issuance of the bonds at a discount, and their repurchase at more or less than book values. The effective rate has therefore fluctuated considerably from year to year and even from month to month, and there would be serious practical difficulties involved in arriving at a rate which would be fair both to the company and its consumers.
- d) It would seem to be inconsistent with regulation and control for the utility to be permitted to earn income, which at rates of 3% and 7% may exceed the fair rate allowed on the rate base before the assets are actually placed in operation. Under such circumstances an anomaly may obtain, whereby a greater income would appear to be earned before the assets become useful, than after.
- e) It is sometimes difficult to decide the date on which construction has been completed, and the asset is deemed to be useful.
- f) In any event, and from an operating aspect, the exclusion of interest during construction but the allowance of a return from the date at which the expenditure is made (rather than from the date at which the asset commences to earn income) in theory permits the company to earn the fair rate set by the

regulatory body; whether the fair rate permitted has been earned or not on this basis is another matter.

In the fixed capital ledger of the company interest in the amount of \$1,032,554.71 has been included in the cost of tangible fixed assets. This figure is made up as follows:

1) Interest transferred from intangible values at the time of the fixation of costs in 1930	\$393,804.73	
Deduct: Interest transferred out of the cost of tangible assets on subsequent retirement	<u>52,407.76</u>	\$ 341,396.97
2) Interest charged to construction in various years from 1911 to 1940, and taken into income		428,109.08
3) Interest charged to construction in various years from 1925 to 1942, and credited to Construction Adjustment Reserve		256,683.28
4) Interest transferred from intangible to the tangible costs of Lake Minewanka project in 1925		<u>6,365.38</u>
Total interest charged construction		<u>\$1,032,554.71</u>

We have excluded this amount from the historical cost of assets "used and useful".

Amortization of Bond Discount

During the years 1910 to 1913 the company included in construction costs items totalling \$14,269.00, being a portion of the amortization of bond discount, presumably on the theory that bond discount constitutes an additional cost of financing. The item has been excluded for similar reasons.

Capitalized Cost Unsupported by Evidence of Outlay

In section 4 of this report we have referred to representations which were made by the president of the company to the Water Power accountants at the time of the fixation of costs in 1930,

to the effect that engineering observations would indicate that certain expenditures had been incurred with respect to supervision and engineering costs prior to the acquisition of assets from the C. B. Smith and other interests at the time of the incorporation of this company. We have also pointed out that a prior interpretation had placed a value of \$20 00 per share on the common shares then issued, and that we have adopted that interpretation for accounting purposes herein. A transfer from intangible costs for supervision in the amount of \$93,500 and engineering in the amount of \$232,000 to tangible costs at the time of the Water Power fixation of costs, was made pursuant to the president's representations as to the original value of common shares issued. Included in the values which were originally placed on the common stock, is a figure of \$60,000 for engineering and supervision. The additional supervision (\$93,500) and engineering (\$232,000) is not supported by evidence of actual outlays, and is not therefore included in historical cost.

The issue of common stock of a par value of \$50,000 to Mr. R. B. Bennett, the president of the company, has also been subject to comment previously. It was apparently the intention of the company to capitalize stock of a par value of \$40,000 at the then market value of \$12,000, charge \$10,000 to surplus, and to record the balance of \$28,000 as intangible costs. Through a duplication \$52,000 was capitalized as tangible costs. The sum of \$40,000 is therefore deducted from tangible costs, leaving \$12,000 remaining therein.

Attributed Franchise Costs

In our discussions with officials of the company they have agreed that the costs of acquiring steam and diesel plants in small towns, is based not only on the tangible value of the plants but

The text on this page is extremely faint and illegible. It appears to be a document with multiple paragraphs of text, but the characters are too light to be accurately transcribed. The layout suggests a standard page with a header, several lines of body text, and possibly a footer or signature area at the bottom.

also on franchise values in which regard is given to the number of services and their probable revenue. Accordingly it would seem proper that a portion of the costs to the company should be recognized as being intangible. Any conclusion arrived at in that connection must of necessity be an estimate of a pragmatic nature, and we have assumed that the inclusion of one-half as intangible costs is not unreasonable. The company's records are not wholly complete as to the cost of steam and diesel plants and transmission and distribution systems purchased in various towns, but from data we have been able to obtain it would appear that during the years 1926, 1927, 1929, 1930 and 1944 the stated cost of such plants would have approximated \$688,650. To one-half the cost thereof we have added a portion of the cost of the United Electric plant transmission and distribution system at Bassano, in the sum of \$36,689.44, comprising the excess of the purchase price over the book value thereof. To the total franchise costs originally capitalized as such by the company we have therefore now added the sum of \$381,014.44.

Percentage of Tangible Costs Represented by Engineering and Supervision

For the purpose of historical record, and also with a view to applying depreciation rates, we have analyzed the hydro and steam plants, and these analyses are presented on Exhibits 18 to 29. It will be observed that engineering and supervision comprises 6.27% of the total historical cost of hydro plants. In respect to transmission lines, the company's records for the years 1913 to 1930 were incomplete, and it was therefore not possible to make an accounting analysis under functional cost headings. The analysis was made, however, with respect to additions for the period from 1931 to 1944, and company engineers distributed the cost of the 1913 to 1930 period on an observed or estimated basis, and

the results of this analysis are contained on Exhibit 34. It will be observed that engineering and supervision comprises 10.8% of the total. A similar analysis is submitted with respect to main sub-stations on Exhibit 35, and engineering and supervision comprises 9.3% of the total.

We have not at the date of this report, even with the assistance of the company's accountants, been able to complete an analysis of the distribution system, but we are informed that this work will be continued by the company and will be made available at a later date.

In the absence of properly controlled and detailed plant records, the transference of plant and equipment between various localities tends to remain unrecorded. As a result the summaries of cost reflected on Exhibits 37 to 42 record the assets under the respective plants or systems at the time that they were originally purchased, whereas we believe that in some instances a portion of the assets have been transferred to other localities.

Depreciation

The second aspect of the ascertainment of a rate base entails a consideration of the problem of depreciation. The problem resolves itself firstly to the adoption of a depreciation method which is fair both to the investor and the consumer, and secondly to the adoption of adequate depreciation rates, bearing in mind the relationship of cost, to the probable physical and functional life of the properties.

The Alberta Public Utilities Act and the Dominion Water Power Regulations do not prescribe specific methods or rates of depreciation but both convey to respective Boards certain powers to so

prescribe.

Depreciation methods

Many different types of depreciation methods have been advocated from time to time by accountants, economists and engineers, but only two have received widespread use in the field of utility regulation.

These are:

- a) The straight-line method by which the cost of the asset is charged to operations in direct proportion to the expiration of the estimated service life of the property and in equal yearly amounts, and
- b) The sinking-fund method by which the depreciation charge is related to an amount actuarially computed, which if invested at an assumed rate of interest will equal the cost of the asset less salvage at the conclusion of its service life.

Both methods are in use by Alberta utility companies under the jurisdiction of the Public Utilities Board. We are informed that the Public Service Board of the Province of Quebec follows the straight-line method, and the Federal Power Commission of the United States has consistently used the straight-line method in recent opinions. On the other hand the Hydro-Electric Power Commission of Ontario utilizes the sinking fund method with an assumed rate of 4%, but even in that instance a provision for functional depreciation through the creation of reserves for obsolescence and contingencies is provided independently of depreciation sinking fund requirements.

In 1943 the National Association of Railroad and Utility Commissioners of United States received an authoritative report of its committee on depreciation which recommended the adoption of ^{the} straight-

line method for utility rate making purposes for reasons which may be summarized as follows:

- 1) It obviates the necessity of making arbitrary assumptions with respect to the earning power of money.
- 2) It is simple and easy to understand.
- 3) It is conservative in that it tends heavily to weight the charges to revenue in the early life of the utility.
- 4) It is less seriously affected by inaccuracies in estimates.
- 5) It is almost universally used in the business world (general acceptance in business weighed heavily with the committee in considering its merits).

A defect of the straight-line as compared with the sinking-fund method lies in the fact that it equates the depreciation charge over the life of the asset, early years and late years alike, and without regard to restricted revenues and a limited number of consumers in early operations. This objection, however, could be partially overcome by allowing the company to recover deficiencies in earnings below the fair rate of return in early years, from subsequent revenues.

Calgary Power's Depreciation Methods

Calgary Power has not followed a consistent depreciation policy either as to method or rates throughout its history. Prior to 1916 no depreciation was provided and in that year a provision of \$10,000 was made by a charge to surplus, rather than to operating expenses. From 1917 to 1923, amounts ranging from \$10,000 to \$50,000 were charged to surplus account. From 1924 to 1932 inclusive, amounts ranging from \$50,000 to \$165,000 were charged to operations. From

1933 to 1936 the company continued its procedure of appropriating annual amounts, ranging from \$114,000 to \$162,000 by charges to operations, but also apparently attempted to make good a deficiency in accrued depreciation by making additional charges to surplus totalling over \$1,000,000. The adjustments made in those years do not appear to have been devised to adjust accrued depreciation to requirements on the basis of specified rates or methods, but were apparently the result of arrangements made with the Dominion Income Tax Department. Of late years the company has provided depreciation on a straight-line basis at the rate of 3% on its entire investment, this procedure having been prompted by income tax regulations.

The annual depreciation charge has never been distributed to operations departmentally, nor has the resulting cumulative reserve been allocated to specific assets or groups of assets.

Accordingly we have considered it necessary to recompute the reserve requirement and to allocate departmentally the annual depreciation charge. For reasons previously outlined we have adopted the straight-line method.

In our opinion provision must be made not only for physical deterioration but also for loss in service value due to functional causes such as obsolescence, supercession and inadequacy; for example, although it might be argued that with adequate maintenance, such properties as dams and earthworks have an infinite life, it would seem that obsolescence and supercession cannot safely be ignored in the long run, and that current rates should protect the company against the inevitable progress of technology.

In the rates to be discussed in the next subsection no

distinction has been made between physical and functional factors, which bear with varying effect upon different classes of property, and the rates of depreciation applied are deemed to be inclusive of both elements of depreciation.

Depreciation Rates

Certain statistics prepared by the Federal Power Commission based on the physical and functional life of utility assets for a substantial number of reporting utilities in the United States have been applied on a straight-line basis, for reasons which we have already described. A table of these is provided as Exhibit 44. The depreciation rates on a straight-line basis ascertained by reference to this tabulation closely approximate those adopted by the Public Service Board of the Province of Quebec. Exhibit 44 does not include any rates or experience with respect to water utilities and those have been depreciated on an assumed life of 25 years at the rate of 4% per annum.

In interpreting the table we have provided for depreciation on transmission plants on an assumed life of thirty-seven years excluding land, easements, and other surface rights. With respect to distribution plant, depreciation was provided on an assumed life of thirty-two years. The functional classification used by the Federal Power Commission does not include a separate heading for engineering and supervision, this item having presumably been included in the respective cost headings, and we have therefore used the average rate in each instance. Depreciation for each year has been applied to the cost of the asset at the end of the preceding year, plus one half the additions during the year. The computations of depreciation are presented in Exhibits 45 to 61.

Renewals and Replacements

In practice the company endeavors to ascertain the original cost of assets retired and to reduce tangible asset accounts and the reserve for depreciation by the same amount. In many instances and in the absence of full and complete plant records, the original cost is not known and the existing replacement cost is utilized to reduce the asset account and the reserve. As a consequence no consideration is given to the capital gain or loss inherent in the retirement, which becomes absorbed in the reserve for depreciation. The amount involved being insubstantial, and the information necessary to adjust being difficult or impossible to obtain, we did not attempt to revise this treatment in our computations.

Working Capital

For rate base determination (but not for recapture) there is to be added to the value of property, an allowance for working capital required to be provided by the company for operating purposes.

It is customary utility regulatory practice to allow cash working capital to cover

- a) cash operating expenses for a reasonable waiting period between expenditure and recovery through revenue.
- b) necessary inventories of materials and supplies.
- c) normal prepayments.

The allowance for cash operating expenses is generally set at 1/8th of the annual cash operating expenses, the waiting period between expenditure and recovery being taken normally to approximate 45 days, (although slightly different periods are reflected in some regulatory decisions), and we have used this basis herein in determining

theoretical requirements.

Provision for necessary inventories of materials and supplies has been made on the basis of inventory values reflected on the annual balance sheets without regard to whether these inventories are more or less than sufficient and without regard to whether or not seasonal fluctuations are significant. In some cases inventories for Prairie Power Company Limited have not been segregated - but the amount involved is relatively small.

With regard to prepayments, it is the practice of the company to write off to expense at the time of disbursement the full amount of expenditures which in other circumstances are frequently prorated. We have therefore no practicable basis on which to provide specifically therefor but consider that the amount involved is unimportant.

On the foregoing basis, the working capital allowance applicable at selected illustrative dates may be summarized as follows:

	<u>Total</u>	For 1/8th year's cash Operating <u>Expense</u>	For Inventory of Material and <u>Supplies</u>
1925	\$ 40,268	\$ 14,162	\$ 26,106
1930	226,093	85,873	140,220
1935	151,211	80,652	70,559
1940	274,778	73,798	200,980
1944	378,778	162,087	216,691

For simplicity in subsequent calculations we have adopted a constant allowance of \$275,000 for each year since the inception of operations, although appreciating that this average figure is relatively high for early years and maybe low for later years. On the other hand no specific provision has been made for contingencies.

It is interesting to observe that at December 31, 1944 according to the company's balance sheet, there is an excess of current liabilities over current assets, from which it would appear that no working capital is in fact employed. There are however a number of circumstances which should be taken into account in this connection:

- 1) The company follows the practice of continuous billing and does not set up in its annual accounts accrued unbilled revenue. It is estimated that \$182,500.95 might be added to current assets in this regard, representing 20/365ths of 1944 gross revenue.
- 2) Current liabilities include customers deposits (and accrued interest thereon) of \$106,763.37 which are by nature permanently invested, and are moreover interest bearing. In other words these funds are a long term obligation analogous to funded debt.

Adjusting for these two items the excess of current assets over current liabilities would become \$287,658.95 as compared with the overall allowance of \$275,000 used herein.

The allowance provided by the Water Power accountants in 1930 was \$250,000.

Customers Contributions for Plant Extensions

In extending lines to rural users it has been the company's practice in certain instances to require a contribution from the prospective consumer for a portion of the cost of the extra distribution line to the consumer's property. The contribution is refundable only on certain conditions related to the number of consumers who may subsequently avail themselves of the service, and it does not bear interest. The average of such contributions during the year ended December 31, 1944, is therefore deducted from the rate base at that date.

and corresponding amounts are deducted in the earlier years.

Summarized Computation of Rate Base on Exhibit 62

The historical cost of tangible fixed assets, the depreciation reserve applicable thereto and the depreciated cost for rate base purposes, is summarized on Exhibit 62. The value for rate base purposes, as we have previously suggested, is based on the proposition that the company is entitled to earn a reasonable return from the actual date of making the investment, rather than from the date on which the assets come into use, and the value for rate base purposes therefore constitutes the depreciated cost at the end of the preceding year plus 50% of the additions, or minus 50% of the deductions, for each of the years under review. The rate base for the year 1944 is computed as follows:

<u>Rate Base for 1944</u>	
Depreciated cost for rate base purposes per Exhibit 62	\$14,642,601.31
Allowance for working capital	<u>275,000.00</u>
	14,917,601.31
Deduct: Average customers' contributions for plant extensions	<u>143,196.54</u>
Rate base 1944	<u>\$14,774,404.77</u>

This amount has been determined on historical cost, less depreciation, of physical properties, plus construction in progress, and working capital, but exclusive of any allowance for water rights, franchises, going value or other intangibles.

The rate base for each of the years 1910 to 1944 similarly computed is summarized on Exhibit 64, which takes into consideration an allowance for working capital, depreciated value of Calgary Water Power

Co. Ltd. tangible fixed assets when they were in use by this company, and the average contributions by customers for plant extensions

Recapture and Expropriation Values

Based on historical cost less depreciation of physical properties, plus construction in progress, but exclusive of any allowance for water rights, franchises, going value or other intangibles, and without adjusting for price level variations, recapture or expropriation value at December 31, 1944 may be summarized as follows:

Tangible property at cost	\$20,512,365.74
Deduct: Reserve for depreciation	<u>6,000,476.57</u>
	14,511,889.17
Deduct: Customers' contributions	<u>154,291.26</u>
Value December 31, 1944	<u>\$14,357,597.91</u>

This resultant may be reconciled with the rate base effective for 1944 computed above, as follows:

Rate base (average) for 1944, as above, exclusive of water rights, franchises, going value and other intangibles	\$14,774,404.77
Add: Remaining $\frac{1}{2}$ of 1944 additions	<u>77,381.91</u>
	14,851,786.74
Deduct:	
Remaining $\frac{1}{2}$ of 1944 depreciation (net)	\$208,094.11
Increase in customers deposits at December 31, 1944 over year's average	11,094.72
Working capital allowance	<u>275,000.00</u>
	<u>494,188.83</u>
Expropriation value, exclusive of water rights, franchises, going value and other intangibles, and before adjustment for price level variations - as above	<u>\$14,357,597.91</u>

We have discussed previously in this section the question of compensation for:

1. Water rights, franchises and other intangibles - excluding going value. These items, at cost, would increase the compensation payable by \$647,157.70.
2. Going value - no estimate is suggested as to the extent of the increased compensation, if any, to cover this item.
3. Unamortized bond discount - at December 31, 1944 this amounted to \$876,417.13.
4. Price level variations - in view of the variety of alternative indices that might be used to measure such an adjustment, we have made no computation on this point at this stage, but attention is directed to illustrative tables contained in Exhibits 13, 14, and 15.



SECTION VI

HISTORY OF OPERATING RESULTS

HISTORY OF OPERATING RESULTS

General Operating History

The operating history of the company since its inception on October 20, 1909 to December 31, 1944 is summarized as follows:

Statement of Profit and Loss

For the period from October 20, 1909 (date of incorporation)
to December 31, 1944

	<u>% of</u>	<u>Gross</u>	
		<u>Revenue</u>	
Gross Revenue	<u>100.00</u>		\$38,333,412.82
Operating Expenses			
Production	13.37	\$5,124,528.24	
Transmission and distribution	9.13	3,500,697.32	
Water utilities	1.16	446,310.49	
General and administrative	<u>9.00</u>	<u>3,450,477.23</u>	
	<u>32.66</u>		<u>12,522,013.28</u>
Net operating income	67.34		25,811,399.54
Depreciation provision	<u>17.59</u>		<u>6,742,198.85</u>
	49.75		19,069,200.69
Income and excess profits taxes	<u>5.94</u>		<u>2,276,543.11</u>
	43.81		16,792,657.58
Interest expense - net, including bond discount amortization less dividends received on investments	<u>25.83</u>		<u>9,901,807.41</u>
Net income	<u>17.98</u>		<u>\$ 6,390,850.17</u>

The foregoing data is detailed in Exhibits 65 to 68.

We have endeavored to relate the average operating percentages reflected above with information available as to average American experience. We find however that variances in summary classifications and operating conditions are such as to render comparisons of little value without extensive study.

Operating Phases

The operating history of the company may be divided for the purpose of study and ease in reference into four phases.

- a) During the first, or development phase, from 1910 to 1927 the company built the Horseshoe and Kananaskis plants and increased gross revenue from \$82,000 to \$495,000. During that period its sales were almost wholly to the City of Calgary and the Canada Cement Co. Ltd. at Calgary and Exshaw.
- b) The next phase, from 1928 to 1931, was one of outstanding growth and might be referred to as its expansion phase. During that period it increased its revenue from \$495,000 to \$1,747,000, built the Ghost dam, and extended transmission and distribution systems from a capital investment of \$1,797,000 to \$7,176,000; bringing retail consumers in substantially all sections of the province within the range of its facilities.
- c) During the third phase (a period of general economic depression) from 1932 to 1937 it consolidated its position, gross revenue at the end of 1937 being practically identical with that obtaining in 1931.
- d) During the fourth or war phase, commencing in 1938 and extending through 1944, the company again embarked on a programme of expansion and gross revenues were increased from \$1,746,000 in 1938 to \$3,330,000 in 1944. During this period the Cascade plant was built, plans were laid for its new plant at Barrier and its transmission and distribution systems were extended. It also entered into interchange agreements with the City of Edmonton, and delivered a substantial portion of its production to the Alberta

Nitrogen plant south of Calgary and to airports and other war time necessities.

These four stages of development, which we consider are of importance in considering the operating history of the company, are graphically presented in the following chart in which the upper line reflects the gross revenue, the red bar operating expenses, and the green bar the net operating income before depreciation.

TREND OF GROSS REVENUE, OPERATING EXPENSES & NET OPERATING INCOME
1931 - 1944



It will be observed that the graphs of gross revenue and operating expenses moved in harmony until the year 1944 when net operating income fell despite a rise in gross revenue; in that connection, however, certain comments will be made in this section, particularly with respect to the income from and power delivered to Alberta Nitrogen, and with respect to the accounting methods adopted under its interchange agreement with the City of Edmonton.

Rate of Return

It will be observed by reference to Exhibit 67 that since the inception of the company, the total net operating income before income and excess profits taxes but after depreciation (as computed in accordance with Section 5 of this report) has amounted to \$19,861,891. This represents a return of 7.56% on the average historical rate base. After providing for income tax, but before providing for excess profits tax, the company has earned 7.00% and after providing for both income and excess profits taxes the company has earned 6.66% on its average rate base. The following summarizes the rate of return on the average rate base before income and excess profits taxes, after income tax but before excess profits taxes, and after both income and excess profits taxes for the four phases herein described.

Average Return on Rate Base

	<u>Before Income and Excess Profits Taxes</u>	<u>After Income but before Excess Profits Taxes</u>	<u>After Income and Excess Profits Taxes</u>
	<u>A</u>	<u>B</u>	<u>C</u>
1st Phase 1910 to 1927	6.63	6.48	6.48
2nd Phase 1928 to 1931	6.66	6.42	6.42
3rd Phase 1932 to 1937	6.12	5.73	5.73
4th Phase 1938 to 1944	9.54	8.59	7.63
Entire history 1910 to 1944	7.56	7.00	6.66

During the years 1928 to 1938 inclusive the income of Calgary Water Power has been consolidated with that of the parent company and the assets used and useful have been included in the rate base of the parent, as the subsidiary was operated in a manner analagous to an operating department. Commencing in 1939 Calgary Water Power's revenue has been derived from the ownership and rental of cottages and its income has not therefore been so consolidated.

The conditions and circumstances under which the company has raised its funds is a matter of internal concern which need not enter into a consideration of the rate of return earned on the rate base; interest paid therefore, whether to bond holders or the bank, has been excluded in making these computations. Out of the earnings on the total investment, interest will be paid at contractual rates on that part represented by borrowed funds, the remainder constituting the net earnings accruing to shareholders.

The rates are presented on the basis of income before and after Income and Excess Profits taxes in the light of current discussions as to whether such taxes should be included or excluded from income in calculating the rate of return. Some years ago it was general utility practice to view income tax as an operating expense of public utility companies, and to allow the investor a rate of return after provision therefor. The levying of high income and excess profits taxes during war years has brought this procedure into strong relief for three reasons:

- 1) It has been recognized by regulatory authorities that the allowance of a rate of return after provision for exceptional income and excess profits taxes during wartime tends to transform

a system of direct taxation into a system of indirect taxation, and to thereby defeat the anti-inflationary purpose for which such taxes are levied. This point of view is recognized in Opinion No. 80 of the Federal Power Commission respecting the Panhandle case:

"Thus it appears that the doctrine of unjust enrichment as well as equity and good conscience compel the conclusion that a utility should not be permitted to thwart the purpose and spirit of the war price control legislation and the revenue laws by passing such abnormal tax requirements along to its consumers as an operating expense to be collected in increased rates. Indeed, we feel increased rates on such a basis would be unjustifiable. To allow them would in effect impose upon the consumers a sales tax."

2) It would seem that the fixing of a rate of return after the allowance of exceptional wartime direct taxation would discourage the utility from endeavouring to so arrange its tax structure (a privilege of all taxpayers) in such a way that it takes the best possible advantage of existing tax regulations. On the contrary it may well be in the interests of the utility, wartime taxes being of a temporary nature and consumer rates being effective for a longer term, to pay larger war income and excess profits taxes than it would otherwise pay, rather than risk circumstances which might result in a reduction of consumer rates.

3) During 1944 excess profits taxes have reached a level of 80% (100% less 20% refund) for all income in excess of 116 2/3% of "standard profits". Under such conditions if the standard profits for excess profits tax purposes equals the income prescribed for rate making purposes, the utility would need to earn 2 2/3 times its standard profits in order to earn its regulatory income after taxes and even so 30% thereof is paid in to the Receiver General subject to refund

as provided under the act. Once a schedule of rates provides annual income equivalent to standard profits, every additional dollar of income, other things being equal, involves 80 cents additional tax, leaving only 20 cents for shareholders, and even this is recoverable only in the form of post war refunds.

On the other hand it is sometimes contended on behalf of utility companies that the necessity they face of attracting long term money, subject to fixed rates of interest, and maintaining investors' confidence justifies the inclusion of excess profits taxes as an operating cost. Furthermore it may be unfair to describe existing excess profit tax rates as wholly abnormal.

In view of recent opinions of the Federal Power Commission, and of the Board of Public Utilities in this province we consider that the results detailed in column B should be viewed with particular interest.

Exhibit 67 supplies details of the rate of return each year in the company's history. It will be noted that the return on the rate base before income and excess profits taxes, averaged 6.6% from the inception of the company until the end of 1931. During the depression period from 1932 to 1937 the rate of return declined to 6.1%, but attained an average of 9.6% during the war period. In 1943 and 1944 the rate of return amounted to 11.5% and 10.7% respectively before provision for taxes on income.

With respect to the year 1943, however, the company made donations of over \$48,000, compared with \$2,400 in each of the years 1942 and 1944, and \$2,100 and \$1,500 in the years 1941 and 1940 respectively. Before providing for possibly non-recurring donations the return on the rate base would amount to 11.8% for 1943.

In 1944 power costs included the sum of \$186,883.50, for the amount of power taken under the interchange agreement with the City of Edmonton; under the agreement the company can return the power in future years. There is no provision which applies a dollar value thereto, but the company set up the cost of returnable power at 0.5¢ per K.W.H., whereas the cost of power generated by the company in its hydro plants in 1944 (after provision for depreciation and all operating expenses) amounted to only 0.12¢ per K.W.H.. If, as is reasonable to expect, the company incurs corresponding operating costs during the period in which the interchange power is returned, the ultimate cost of the power will amount to approximately \$50,000 (after allowing 10% for line losses) as compared with \$186,883.50 above. The rate of return for 1944 excluding the excess cost of interchange power amounted to 11.4%.

The composite average return after providing for income and excess profits taxes during the entire history of the company of 6.66% has exceeded the preferred share dividend requirements of 6%, and long term debt effective interest requirements of approximately 6½% (nominally 5%). Since bonds and long term debt comprise approximately 51% of the total par value of outstanding securities (this computation ignoring the imputed discount applicable to common stock), it is apparent that the company's failure to earn a return on its common stock at least equal to its preferred, may not be attributed to its inability to earn the rate on its tangible assets used and useful in Alberta, but is rather attributable to a combination of other circumstances, as follows:

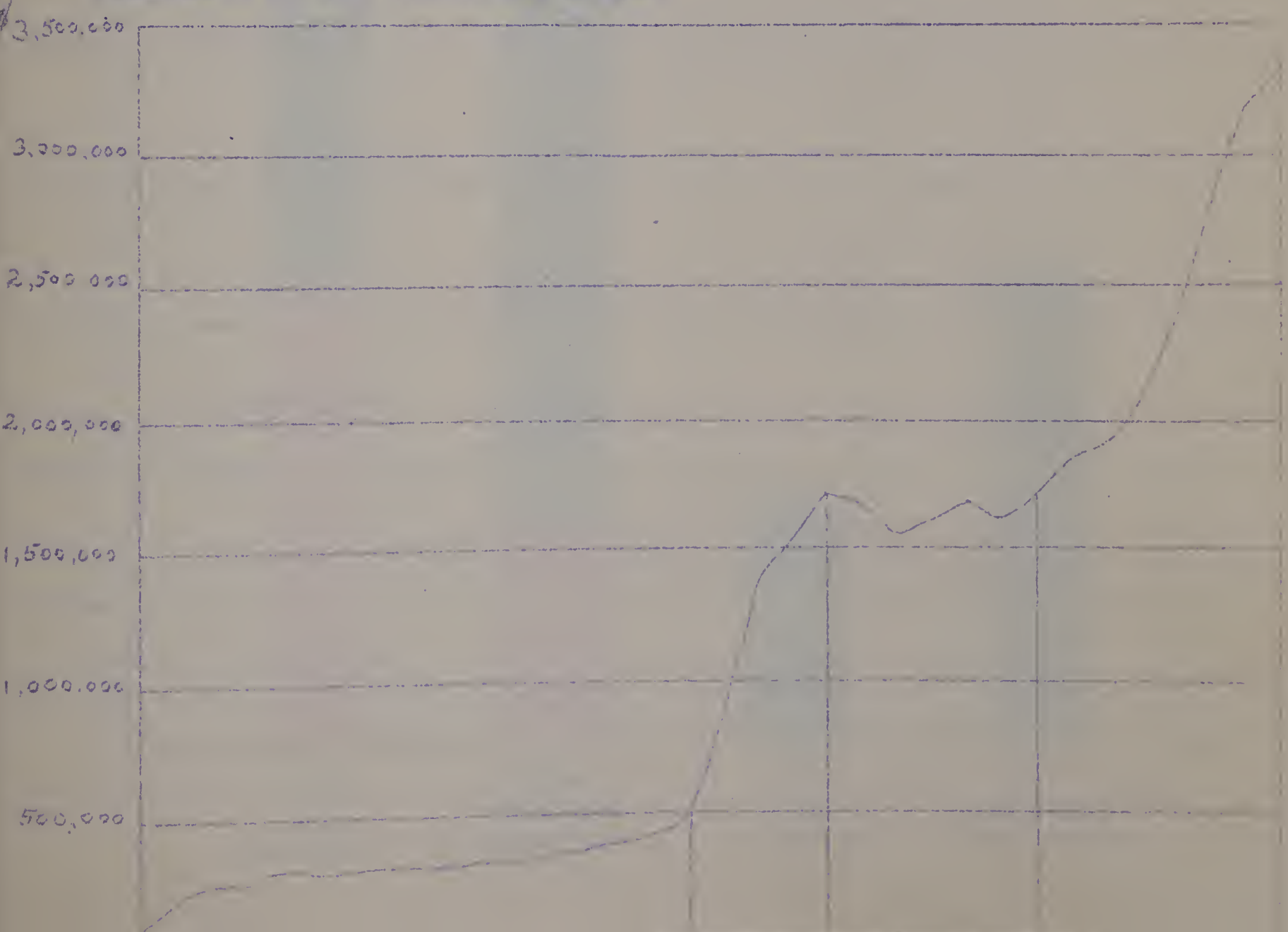
- 1) The company has an investment in intangible assets including franchises and water rights, which has been computed at \$647,157.70,

and is not included in the rate base.

- 2) Discount of \$1,515,000 has been imputed with respect to common share capital, and the company incurred commission and expenses in issuing its preferred shares in the amount of almost \$440,000, which have also been excluded from the rate base.
- 3) The company's investments in subsidiary companies outside the Province of Alberta have returned a lower rate than its tangible assets used and useful in this province. (It earned approximately 4% on its average investment in Prairie Power from 1930 to 1944 and approximately 6.5% on its investment in Ottawa Valley from 1932 to 1944; an average of approximately 5.3%).

Gross Revenue

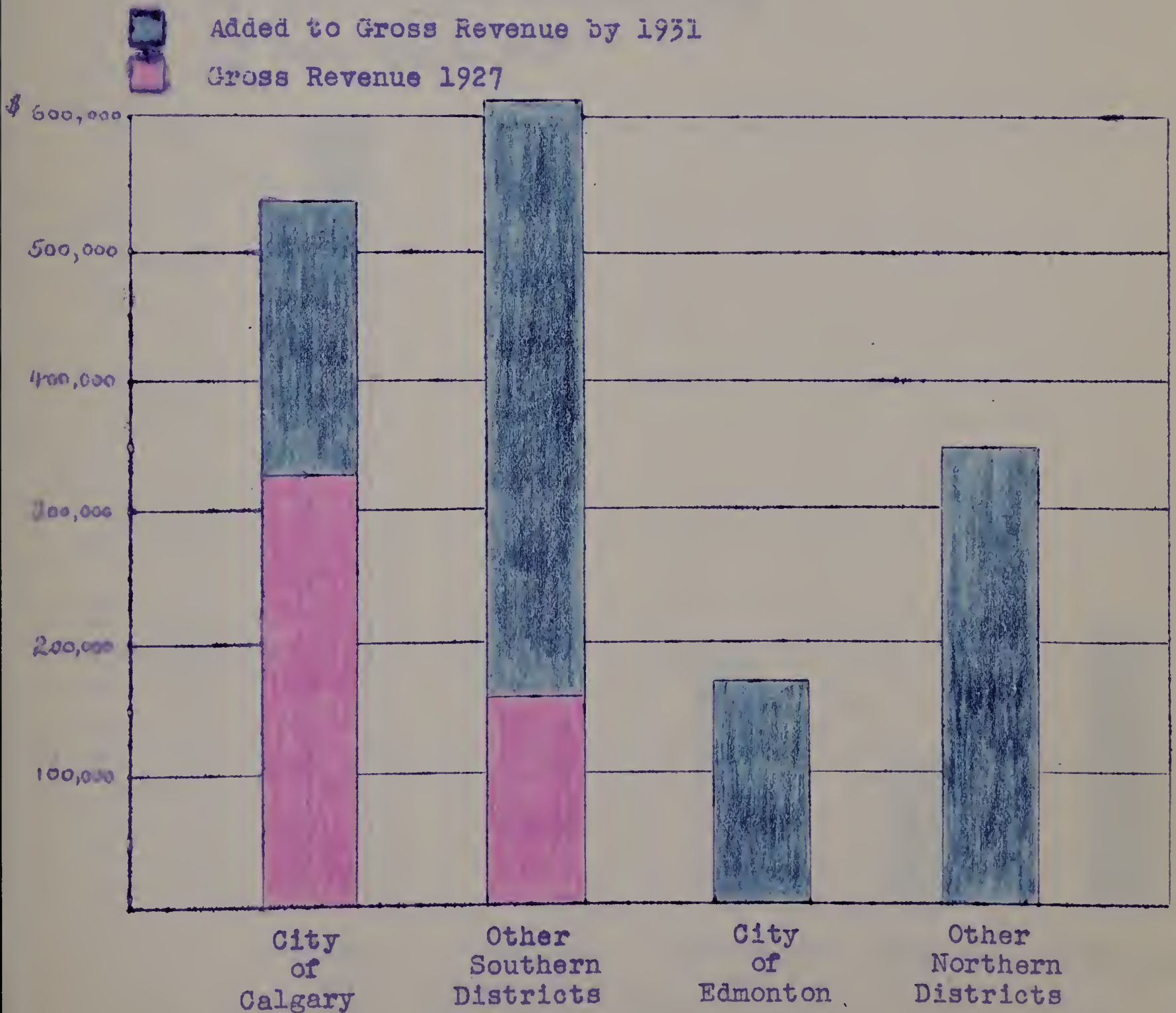
The growth of gross income over the company's history is indicated in the following graph:



It will be observed that gross revenue showed a gradual upward trend for the 17 year period to 1927 whereupon a sharp upward swing occurred for the 4 years to 1931. This growth was attributable not so much to an increase in sales to the City of Calgary or Canada Cement as to other retail users throughout the province. This is illustrated in the following chart in which green sections represent additional revenue in 1931 as compared with 1927.

EXPANSION OF GROSS REVENUE

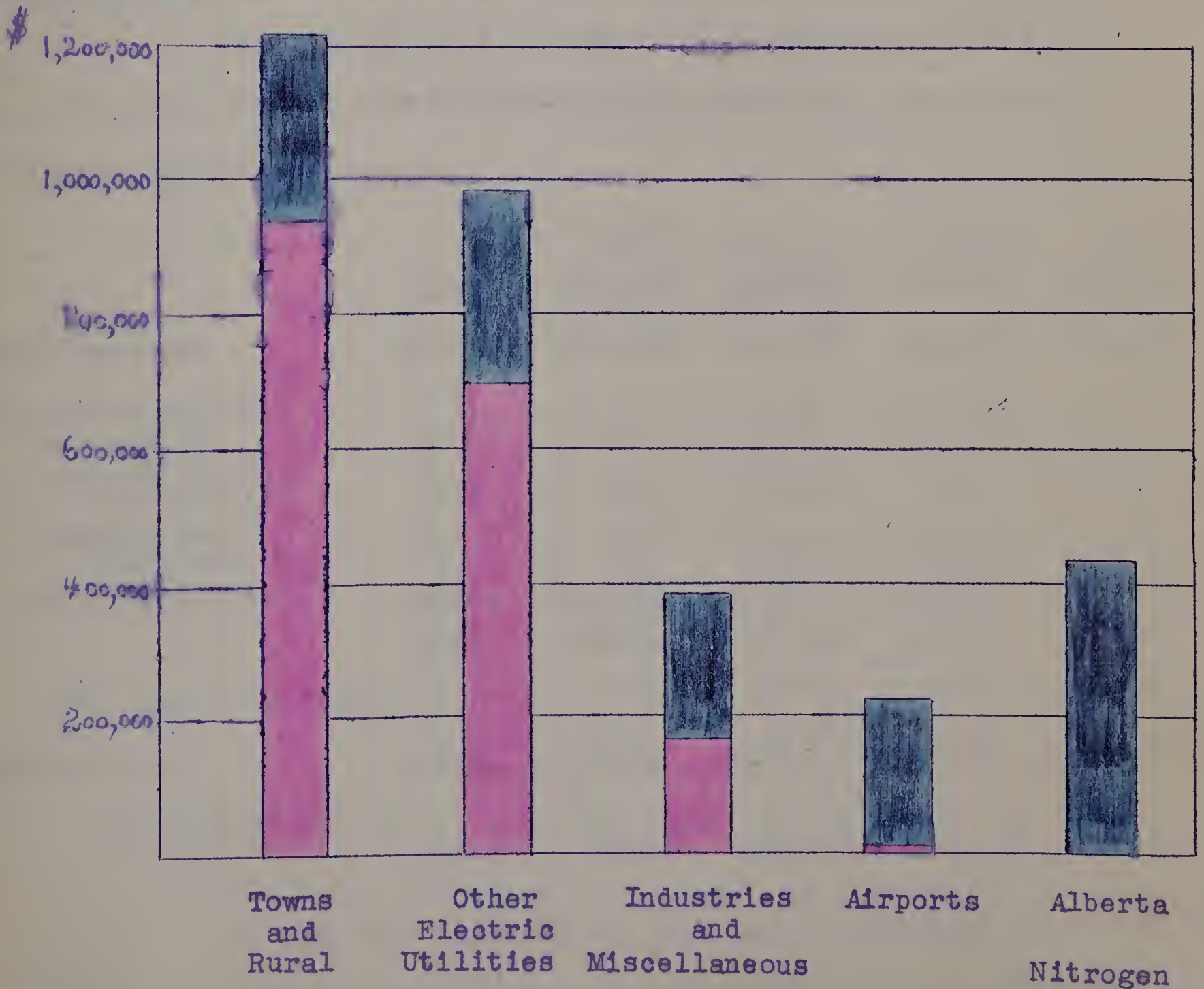
1927 -- 1931



Gross revenues remained fairly constant from 1932 to 1937, the second significant growth coming in the war period. In addition to deliveries to Alberta Nitrogen, to airports and to industry a general growth was noticeable with respect to power delivered to all users. This is illustrated in the following chart, in which green sections again represent additional revenue in each of the various classifications

EXPANSION OF GROSS REVENUE
1938 -- 1944

■ Added to Gross Revenue by 1944
■ Gross Revenue 1938



The growth during 1939 to 1944 has to a considerable extent, been due to the delivery of power to war industries. Whether gross revenue will be maintained or increased in the future will depend on the extent to which rural electrification and the development of permanent industries in the province will absorb the probable recession from existing war time consumption. General economic conditions have influenced the gross revenues in the past, and will no doubt continue to be a factor in the future. That the company expects no serious impairment in gross revenues is evidenced by its projection of the Barrier hydro development.

Operating Costs

The following is a summary on a percentage basis of operating expenses to gross revenue during the four phases of the company's history:

	<u>Total</u>	<u>Develop- ment 1911-27</u>	<u>Expansion 1928-31</u>	<u>Consoli- dation 1932-37</u>	<u>War 1938-44</u>
Gross Revenue	<u>100.00%</u>	<u>100.00%</u>	<u>100.00%</u>	<u>100.00%</u>	<u>100.00%</u>
Operating Expenses					
Production	13.4	10.9	21.8	11.8	12.2
Transmission and distribution	9.1	6.2	10.9	9.9	9.0
General and administrative	9.0	5.6	7.8	10.2	9.7
Water utilities	<u>1.2</u>	<u>-</u>	<u>0.9</u>	<u>1.6</u>	<u>1.3</u>
	<u>32.7</u>	<u>22.7</u>	<u>41.4</u>	<u>33.5</u>	<u>32.2</u>
Net operating income	67.3	77.3	58.6	66.5	67.8
Depreciation	<u>17.6</u>	<u>17.4</u>	<u>15.8</u>	<u>21.2</u>	<u>16.2</u>
Net income before interest	<u>49.7%</u>	<u>59.9%</u>	<u>42.8%</u>	<u>45.3%</u>	<u>51.6%</u>

In the first phase production costs exclusive of depreciation amounted to approximately 11% of revenue, increased to

21.8% during the expansion period, and declined again to 11.8% and 12.2% in the last two phases. In the first phase when the company had only two important customers transmission and distribution costs amounted to only 6.2%, but in the last two phases transmission and distribution costs amounted to 9.9% and 9% respectively. General and administrative costs reflect a substantial increase in percentages to total revenue, from 5.6% in the first phase to 9.7% during the war years. This is probably attributable to two considerations:

- a) As the number and variety of the company's consumers increased, billing, collection and administrative costs increased.
- b) In the early phase managerial fees to Montreal Engineering based on a yearly fixed amount, were relatively lower than the fees of late years expressed as a percentage of gross revenue. As a result the managerial costs in this respect have increased from .7% in the first phase to 1.3% in the final phase.

The charges for depreciation as based on the straight line method described elsewhere in this report, have averaged 17.6% of gross revenue during the entire history of the company, and have varied between a high of 21.2% for the third phase, to a low of 15.8% during the second phase. The high depreciation charges during the third phase are obviously attributable to an expansion program both with respect to generating facilities and transmission and distribution systems in anticipation of future requirements. This we consider is a characteristic of the industry in that production and transmission facilities must often anticipate consumer requirements.

The following summary expressing expenses as a percentage of total costs, is presented with a view to showing the relationship

between the three main classifications of costs incurred namely production, transmission and distribution and general and administrative:

	<u>Total</u>	<u>Develop- ment 1911-27</u>	<u>Expansion 1928-31</u>	<u>Consoli- dation 1932-37</u>	<u>War 1938-44</u>
Production	40.92%	48.27%	52.80%	35.16%	38.05%
Transmission and distribution	27.96	27.11	26.26	29.48	27.92
General and administrative	27.56	24.62	18.73	30.42	30.03
Water utilities	<u>3.56</u>	<u>-</u>	<u>2.21</u>	<u>4.94</u>	<u>4.00</u>
Total operating expenses	<u>100.00%</u>	<u>100.00%</u>	<u>100.00%</u>	<u>100.00%</u>	<u>100.00%</u>

In deriving this information from the company's books it was necessary to make certain adjustments and assumptions as its classification of costs was not maintained on a consistent basis throughout its history.

It will be observed that in the first two phases of the company's history production costs approximated 50% of total operating costs, but that in the last two phases production costs amounted to only 35% and 38% respectively. The proportionate reduction in production costs has not, however, been offset by a corresponding increase in transmission and distribution costs, but general and administrative costs do reflect a significant proportionate increase from 19% in the second phase to 30% in the third.

As part of our analysis of operating costs we studied the production, transmission and distribution costs for the years 1942, 1943 and 1944, and the results thereof in total and on a K.W.H. basis are presented on Exhibit 68 and are summarized on a kilowatt hour basis as follows:

Revenue and Costs per K.W.H.

	<u>1942</u>	<u>1943</u>	<u>1944</u>
Gross electrical revenue	1.05¢	0.98¢	0.96¢
Operating expenses			
Production			
Hydro plants	0.11	0.13	0.12
Steam and other plants	0.93	0.88	0.90
Power purchased	<u>0.50</u>	<u>0.34</u>	<u>0.56</u>
Production costs subject to line losses etc.	<u>0.22</u>	<u>0.16</u>	<u>0.21</u>
Production costs converted to basis of power sold	0.24	0.18	0.24
Transmission and distribution	0.18	0.16	0.16
General and administrative	<u>0.08</u>	<u>0.10</u>	<u>0.10</u>
Total operating expenses	<u>0.50</u>	<u>0.44</u>	<u>0.50</u>
Net operating income from sale of power	<u>0.55¢</u>	<u>0.54¢</u>	<u>0.46¢</u>

The foregoing costs include depreciation and all charges, exclusive of interest on capital and income tax. It will be observed that hydro production costs have varied only slightly, from .11¢ per K.W.H. in 1942 to .13¢ in 1943, and .12¢ per K.W.H. in 1944. The costs per K.W.H. of steam and diesel production exceeded hydro production costs in the ratios of seven or eight to one and ranged from .88¢ per K.W.H. in 1943 to .93¢ per K.W.H. in 1942. In that connection, however, it should be pointed out that steam and other plants supply only a small portion of the company's production, that the plants operated are generally old or probably inefficient, and that they are utilized by the company mainly for stand-by purposes. On the other hand kilowatt hour costs of steam plant production do not include depreciation on the Victoria Park plant which is rented from the City of Calgary at no cost to the company.

Transmission and distribution costs have varied from 0.18¢ per K.W.H. in 1942 to .16¢ per K.W.H. in 1943, whereas general and administrative costs have increased from .08¢ per K.W.H. in 1942 to .10¢ in 1944. It will also be observed that the total operating expenses of .50¢ per K.W.H. in 1942 and 1944 were identical, but that during 1943 total operating costs amounted to only .44¢. The reduction of costs in 1943 was attributable to a higher proportionate production of hydro power, due probably to a higher natural flow in the Bow River during the winter months of that year.

The cost of producing hydro power ranging from .11¢ to .13¢ per K.W.H. during the 1942 - 1944 period as indicated on the table presented on the previous page compares closely with the average cost for the previous 12 years both before and after depreciation.

The cost of energy produced by standby steam and other plants remained fairly steady during the 1942 - 1944 period. In the previous 12 year period the cost of operating these plants might more fairly be considered a cost of maintaining standby facilities rather than a cost applicable to power produced therefrom.

A study of the costs as between hydro plants indicates that in 1944 the production in the Cascade plant was the most costly, due partly to the inclusion in the operating costs of the Cascade plant of the recurring annual cost of diverting the Ghost River into Lake Minnewanka. It might be argued that the annual expenditures for water diversion and storage although treated in the company's accounts (and in computations in this report) as current operating costs, ought more reasonably to be treated as deferred charges against the following year's revenue.

The K.W.H. cost for the four hydro units before depreciation may be summarized as follows:

	<u>1942</u>	<u>1943</u>	<u>1944</u>
Before depreciation			
Horseshoe	.048¢	.050¢	.041¢
Kananaskis	.044	.063	.051
Ghost	.023	.032	.027
Cascade	.156	.127	.135
Average of all four plants	.045¢	.060¢	.053¢

Rural Electrification

Because of its significance in relation to future operations of the company we have considered the findings in the Report on Rural Electrification to the Research Council of Alberta by Professor Andrew Stewart, of March 1944, in relation to certain accounting data adduced from the books of Calgary Power.

The report summarizes estimates obtained with respect to the operations of Calgary Power and Canadian Utilities Ltd., whereas it is now being considered in relation to the operating history of Calgary Power. Furthermore the report emphasizes that adequate information on which to base estimates of probable revenues and operating costs was difficult to obtain and that such estimates as were made are tentative and subject to revision in the light of actual experience. Subject to these qualifications, certain of the estimates in the report may be expressed in the form of a statement of revenue and expenditure as follows:

Estimated Annual Revenue and Expenditures - Rural Electrification Program
at the conclusion of ten years

Gross revenue		\$2,106,000
Operating expenses		
Repairs and maintenance of lines	\$ 320,400	
Billing and collection	126,000	
Education and promotion	36,000	
Administration	234,000	
Depreciation	495,000	
Energy cost at 1.65¢ per K.W.H.	<u>371,250</u>	<u>1,582,650</u>
Estimated net operating income		\$ <u>523,350</u>

- The foregoing summary is subject to the following comments and conditions which we wish to emphasize:
- a) It is assumed that over a ten-year program 30,000 farmers would take advantage of the service and that at the end of that period the average annual consumption would amount to 750 K.W.H. per farm.
 - b) Gross revenue is computed at existing consumers' rates charged to rural users by Calgary Power of a \$5.00 minimum for the first 20 K.W.H. and 2¢ per K.W.H. for all power consumed in excess thereof and assumes that all consumers paying the minimum will use 20 K.W.H. per month.
 - c) Operating expenses do not include a provision for any contribution toward existing transmission costs.

In the event that the sinking fund depreciation method suggested in the Rural Electrification report were changed to the straight line basis used in this report, the depreciation charge would be increased from \$495,000 per year to \$720,000 and the net operating income would be reduced from \$523,350 to \$298,350 (before Income and Excess Profits taxes). We have previously pointed out that at the present time Calgary Power requires a contribution of approximately

\$100 00 per farm installation, and since it is estimated in the report that each farm installation would cost approximately \$600, Calgary Power would be required to invest initially \$15,000,000 for 30,000 farmers at an average of \$500 per farm. Both Professor Stewart's sinking fund depreciation estimate and our alternative straight line estimate relate to the total cost of \$600 per farm, treating the \$100 contribution as a liability in perpetuity. An alternative treatment might be suggested, that is, of depreciating only the net \$500 per farm actually invested.

In any case we are of the view that the customers' contribution is deductible from the rate base on which return is to be allowed.

On a straight line basis the average rate based over a twenty-five year period would be \$200 per farm, representing an average rate base of \$6,000,000. The estimated average income of \$298,350 on this average rate base would represent an average return of 4.97%, although at the outset the return would approximate 2% because of the higher initial rate base. The initial outlay of \$15,000,000 would approximately double the existing rate base of Calgary Power.

In addition to the reservations already expressed these computations are subject to the following comments in the light of our examination of the books of Calgary Power:

- a) Energy costs were estimated in the Rural Electrification report at 1.65¢ per K.W.H. (or 1¢ at the plant before line losses). The report comments to the effect that Manitoba Hydro Commission estimates an energy cost of .75¢ per K.W.H. before line losses. The foregoing cost would apparently include interest on capital, but exclusive of interest on capital. Calgary Power's average hydro

electrical cost in 1944 amounted to .12¢ per K.W.H. before line losses. To that should be added an allowance for line losses (40%) resulting in an ultimate average cost per K.W.H. of .20¢, at the farm, before interest on capital. This of course, is an average hydro production cost and gives no consideration to variations in joint costs by virtue of low as compared with a high load factor; nor does it give consideration to concepts of increment cost.

- b) The allowance for billing and collection costs of \$126,000 as estimated in the Rural Electrification report would appear to be generous if modern machine bookkeeping methods are adopted, and a programme of self meter reading used.
- c) The allowances for billing and collection, education, and general administrative expense totaling \$396,000 represent 122% of general and administrative costs incurred for the year 1944. The overall allowances in this respect would appear to us to be generous.

The foregoing computations assume a continuous loyalty to the program by the 30,000 farmers and make no provision for losses due to bad debts and discontinuance of the service. Since the cash income received by the farmers is irregular, losses of this nature constitute the particular hazard attendant upon an extensive program of rural electrification. Officials of the company consider that an aggressive sales and educational program designed to encourage and develop the use of power for agricultural as distinct from domestic purposes would be essential to the maintenance of revenue during periods of depression.

Taxes

Exhibit 69 presents a classified summary of taxes paid by the company over its entire history. The total of all types of taxes paid amounts to \$3,073,533 which represents 8% of gross revenue for the same period. Taxes paid during the period from 1941 to 1944 amounted to 2.2% on the rate base. The incidence of tax has been irregular in recent years; increased taxes imposed on income by the Dominion Government taking the place of Provincial income tax, corporation tax and electric power tax.

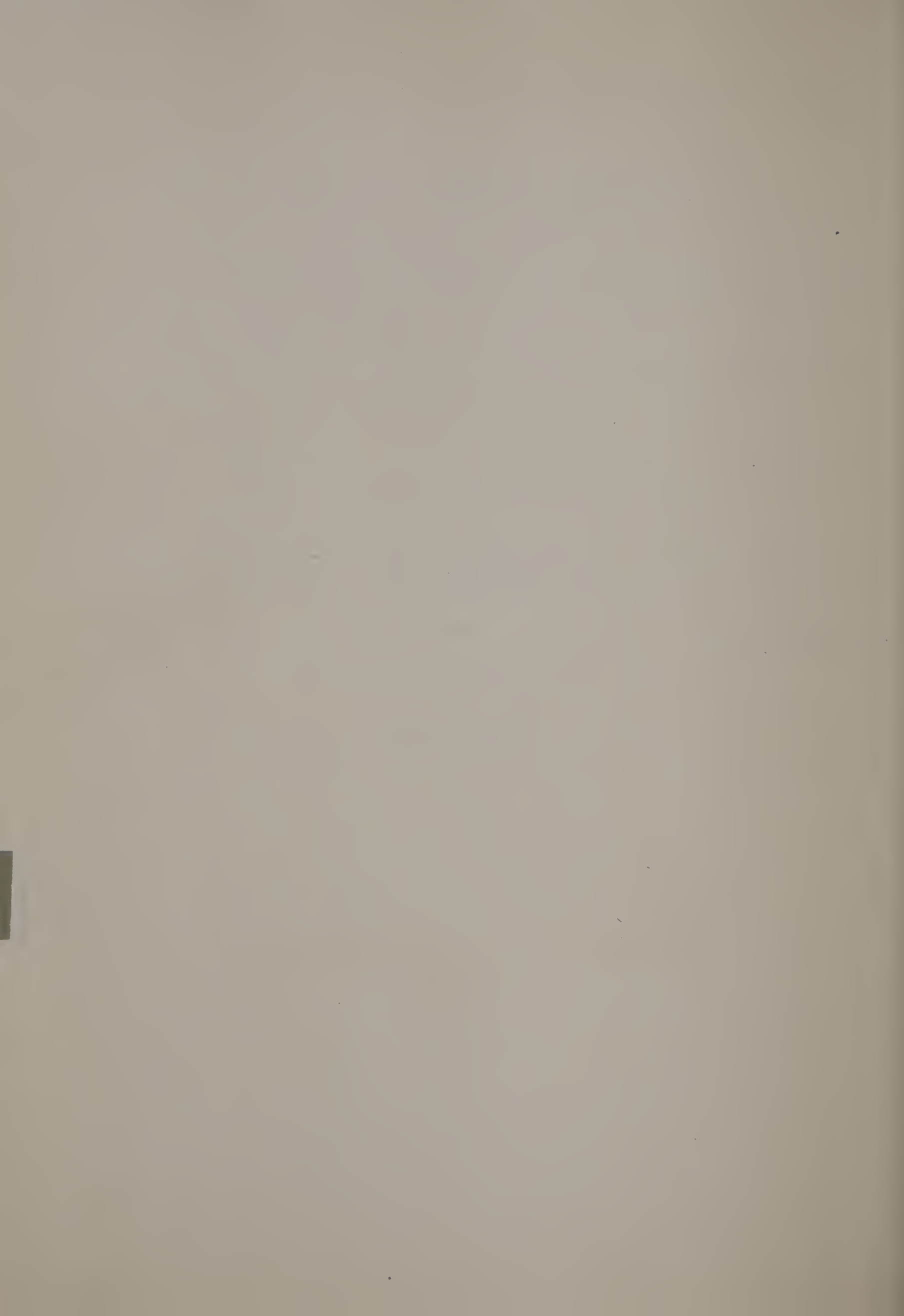
In considering income and excess profits taxes it is to be borne in mind that income and excess profits taxes are largely influenced by the particular mode of providing capital funds; if the company raised a larger portion of capital by funded debt taxes would be lower, and vice versa for the reason that interest is a deductible expense for tax purposes but dividends are not. Calgary Power's existing standard profits for excess profits tax purposes is \$696,665.36 and under income and excess profits tax rates as applicable to the year 1944 the company could not therefore retain (exclusive of refundable portion) more than 70% thereof, or \$487,665.75. Excess profits tax has totalled in excess of \$907,000 and has reduced the return on the rate base during 1940 to 1944 as follows:

	<u>Return on Rate Base</u>	
	<u>Before</u> <u>Excess</u> <u>Profits</u> <u>Tax</u>	<u>After</u> <u>Excess</u> <u>Profits</u> <u>Tax</u>
1940	8.00%	7.34%
1941	8.40	7.29
1942	9.20	8.03
1943	10.36	8.38
1944	9.61	8.17

Net excess profits taxes have represented 1.3% of the rate base from 1940 to 1944.

On October 19, 1945 the Minister of Finance of Canada in the budget speech recommended a reduction in rates applicable to the year 1946 which would enable the company to retain 60% of all income up to \$812,776.26, and 40% of all income in excess thereof. If these rates had been in effect for the year 1944 the company would have been permitted to earn, after income and excess profits taxes, \$11,412 more than it earned under the rates then obtaining, and its rate of return would have increased approximately from 8.17% to 8.24%. If the proposed new rates had been in effect during the year 1943, the return on the rate base after income and excess profits taxes would have been increased from 8.38% to 8.65%.





SECTION VII



CONSUMER RATES



CONSUMER RATES

Governing Regulations

Legislation in Alberta relating to the incidence of consumer rates is found in Section 71 (a), (b) and (d) of the Public Utilities Act, as follows:

"No proprietor of a public utility shall, -----

- (a) make, impose or exact any unjust or unreasonable, unjustly discriminatory or unduly preferential individual or joint rate, commutation rate, mileage or other special rate, toll, fare, charge or schedule for any product or service supplied or rendered by it within this Province;
- (b) adopt or impose any unjust or unreasonable classification in the making or as the basis of any individual or joint rate, toll, fare, charge or schedule for any product or service rendered by it within this Province;
- (d) make, or give, directly or indirectly, any undue or unreasonable preference or advantage to any person or corporation or to any locality or to any particular description of traffic in any respect whatsoever, or subject any particular person or corporation or locality or any particular description of traffic to any prejudice or disadvantage in any respect whatsoever;"

A study as to what constitutes the imposition of unreasonable, unjustly discriminatory, or unduly preferential rates may be considered from three aspects:

- 1) As to whether the rates charged by the utility result in the earning of gross revenues more than sufficient to cover operating costs, depreciation and a reasonable interest return on the capital employed.
- 2) As to whether the rates as between various classes, such as urban as opposed to rural consumers, or industrial as opposed to domestic consumers, are fair and reasonable as between themselves.

3) As to whether an even hand is being maintained within each class as between the rights of individual consumers.

The first of the above considerations, (that is to say the overall rates in so far as they affect the capacity of the company to meet its operating expenses, provide for the retirement of its capital investment, and earn a return on its invested capital) has already been subject to study and comment in Section 6 of this report. We are now concerned with the second two aspects, that is to say whether or not the rates as between the various classifications would appear to be fair and reasonable, or alternatively, as to whether any particular group is bearing an unreasonably high proportion of the burden; furthermore, as to whether certain individuals within each class are bearing an unreasonably high proportion of the cost as compared with other individuals in that class.

In setting consumer rates, it is recognized utility practice that the rates should not necessarily be equal for all types and classes of consumers, but rather that the rates should be rational in the sense that differentials are based, firstly on a recognition of the difference in present or future cost of providing service to the respective groups, or secondly on considerations of social justice, public advantage or practicability

Rate Classification by Classes or Groups

With respect to the classification of rates within classes or groups, we submit the following statement which summarizes K.W.H. consumption with the respective revenue for the calendar year 1944:

1944 K.W.H. Consumption and Revenue

	<u>K.W.H. Consumption</u>		<u>Revenue Provided</u>		<u>Average Price per K.W.H.</u>
	<u>Amount</u>	<u>% of Total</u>	<u>Amount</u>	<u>% of Total</u>	
Towns - retail	22,490,120	6.65	\$1,187,811.34	36.49	5.280
Rural	623,425	1.8	41,404.77	1.27	3.66
Small industries and miscellaneous	25,663,831	4.62	210,305.43	6.46	1.34
Public authorities	<u>13,125,948</u>	<u>3.86</u>	<u>299,089.95</u>	<u>9.19</u>	<u>2.28</u>
Subtotal	<u>51,903,324</u>	<u>15.29</u>	<u>1,738,611.54</u>	<u>53.41</u>	<u>3.35</u>
Canada Cement Co. Limited	18,184,400	5.55	105,846.50	3.25	0.56
Alberta Nitrogen Co. Limited	136,630,700	40.26	427,028.26	13.12	0.31
Other electric utilities - mainly the City of Calgary	<u>132,093,209</u>	<u>38.92</u>	<u>984,019.01</u>	<u>30.22</u>	<u>0.74</u>
Subtotal	<u>287,508,309</u>	<u>84.71</u>	<u>1,516,893.57</u>	<u>46.59</u>	<u>0.53</u>
Total	<u>339,411,633</u>	<u>100.00</u>	<u>\$3,255,505.11</u>	<u>100.00</u>	<u>0.96</u>

An examination of the above statement would suggest the following comments:

- 1) A significant disparity exists between the percentage of consumption of certain classifications, and the dollar revenue provided. Retail deliveries to towns, for instance, consumed 6.6% of the total K.W.H. but provided 36.5% of the total dollar revenue. On the other hand, an industrial enterprise, the Alberta Nitrogen Company Limited consumed 40% of the total K.W.H. used, but provided only 13% of the revenue.
- 2) Four classifications, namely towns, rural, small industries and miscellaneous, and public authorities, provided a greater percentage of dollar revenue than the percentage of kilowatt hours consumed, and in fact these four groups in the aggregate consumed only

15% of the total kilowatt hours, but provided 53% of the company's revenue. On the other hand, three other classifications, the Canada Cement Company, Alberta Nitrogen, and other electrical utilities (mainly the City of Calgary) consumed 85% of the total kilowatt hours, but provided only 47% of the dollar revenue.

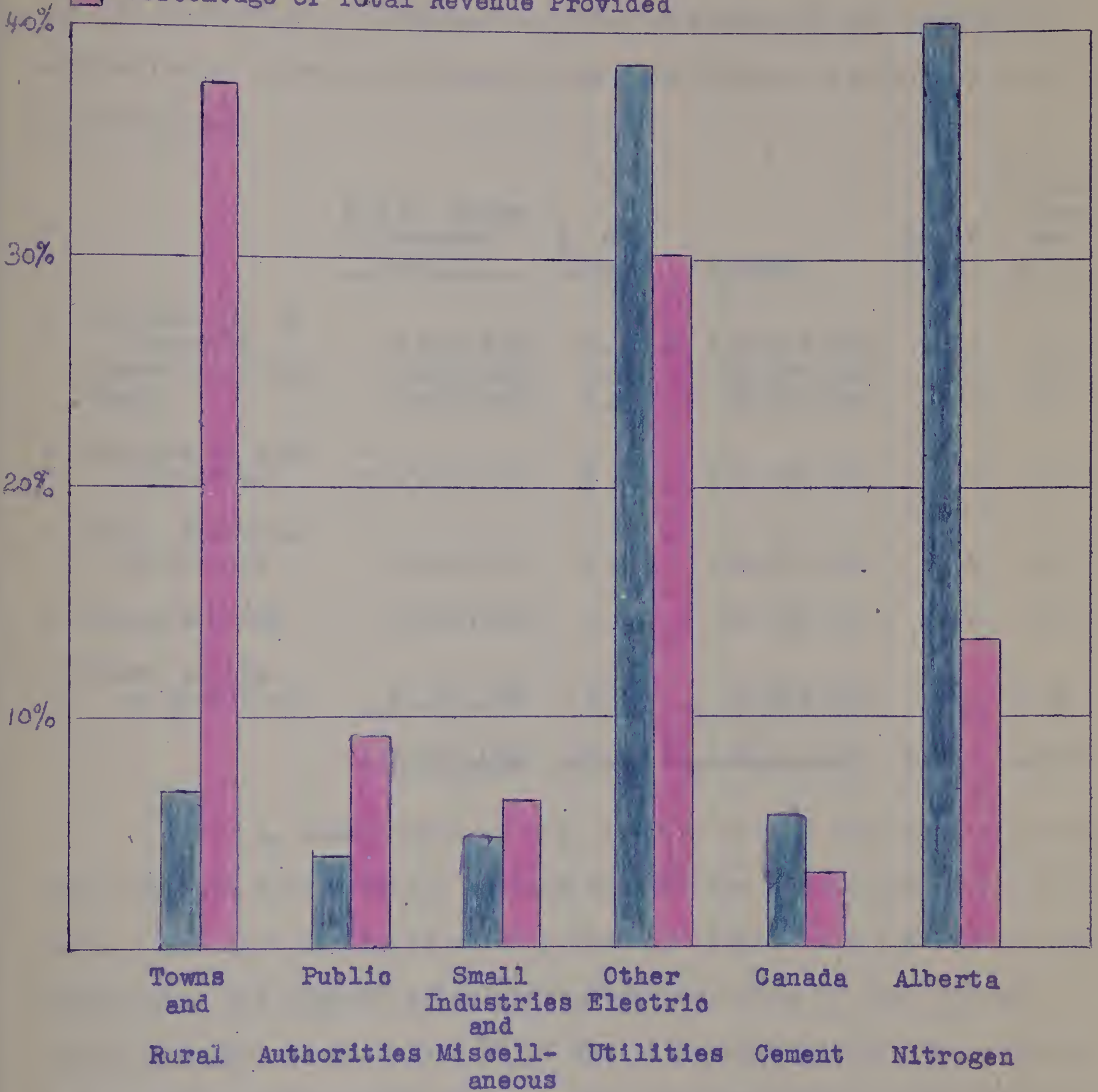
- 3) The first four classifications as a group paid an average price of 3.35¢ per kilowatt hour, and the second three as a group paid an average price of .53¢ per kilowatt hour. In effect, therefore, the first group contributed approximately 6.3 times as much for its power per K.W.H. as the second group.
- 4) The disparity between groups is even more apparent when a comparison is made between the average rates of classifications within the groups. Rural users, for instance, pay 21 times as much for their power per K.W.H. as Alberta Nitrogen, and almost 12 times as much as Canada Cement. Retail users in towns pay 17 times as much as Alberta Nitrogen and almost 10 times as much as Canada Cement. A significant comparison lies between the users on a wholesale basis including the City of Calgary and other electrical utilities, as compared with retail sales in the first group. The first four classifications pay $4\frac{1}{2}$ times as much for their power as the City of Calgary and other utilities, and rural users pay 9 times as much as the wholesale users.

The variances which exist are graphically presented in the following chart, in which the red bar reflects the revenue provided, and the green bar the kilowatt hours consumed:

1944

Percentage of Total KWH Consumed

Percentage of Total Revenue Provided



Comparison with American Experience

We have compared the rate differentials for Calgary Power with those obtaining in United States as indicated in the report of the Federal Power Commission of the composite activities of Class A and B privately-owned electric utility companies (those whose annual electric

revenues are \$250,000 or more) in the United States in the year 1943.

The classification of revenues utilized in obtaining the composite statistics is somewhat different from that followed by Calgary Power and is as follows:

	<u>K.W.H. Sales (thousand K.W.H.)</u>	<u>% of Total</u>	<u>Revenue</u>	<u>% of Total</u>	<u>Selling Price per K.W.H.</u>
1. Residential or Domestic	23,259,362	11.7	\$ 846,079,873	28.9	3.64¢
Street lighting	1,639,717	0.8	63,877,448	2.2	3.90
Rural	3,420,046	1.7	90,399,074	3.1	2.64
2. Commercial and Industrial	116,417,016	58.4	1,537,789,259	52.5	1.32
3. Other electric utilities	38,138,803	19.1	236,364,796	8.1	.62
4. Miscellaneous	8,011,690	4.0	61,425,677	2.1	.77
5. Other public authorities	<u>8,537,388</u>	<u>4.3</u>	<u>90,084,970</u>	<u>3.1</u>	<u>1.06</u>
	<u>199,424,022</u>	<u>100.0</u>	<u>\$2,926,021,097</u>	<u>100.0</u>	<u>1.47¢</u>

An examination of this summary will convey the impression that the rate differentials between the various classes of users do not reflect the wide variances which presently obtain in the Calgary Power schedules. The highest price classification, that is for street lighting purposes, consumes .8% of the total production, and provides 2.2% of the total revenue. It is only about two and one-half times the average selling price for the total kilowatt hours. Residential or domestic users consume 12% of the total power and provide 29% of the revenue. Other electric utilities consume 19% of the power and provide 8% of the revenue. The widest disparity between rates exists between street lighting and other electric utilities, but the variance reflects a ratio of only six to one as compared with a variance of twenty-one

to one between Alberta Nitrogen and rural consumers in this province. On the other hand, there are considerations which lead us to believe that the two schedules are not altogether comparable.

- 1) In the first place the classifications are not identical, and a change in classification might well make a significant variation in the percentages ascertained.
- 2) The American schedule, being a composite schedule, reflects averages within each group in which of course extremes are eliminated.
- 3) United States, being a more heavily populated country, probably possesses a higher percentage of urban to rural users than obtains in Alberta, and in general, transmission and distribution costs will be relatively lower.

For purposes of further comparison we have redrafted the Calgary Power schedule removing the figures applicable to Alberta Nitrogen as follows:

1944 K.W.H. Consumption and Revenue
(excluding Alberta Nitrogen)

	<u>K W.H. Consumption</u>		<u>Revenue Provided</u>		Average Price per K.W.H.
	<u>Amount</u>	<u>%</u>	<u>Amount</u>	<u>%</u>	
Towns - retail	22,490,120	11.09	\$1,187,811.34	42.00	5.28¢
Rural	623,425	.31	41,404.77	1.46	6.64
Small industries and miscellaneous	15,663,831	7.73	210,305.48	7.44	1.34
Public authorities	<u>13,125,948</u>	<u>6.47</u>	<u>299,089.95</u>	<u>10.57</u>	<u>2.28</u>
	<u>51,903,324</u>	<u>25.60</u>	<u>1,738,611.54</u>	<u>61.47</u>	<u>3.35</u>
Canada Cement	18,784,400	9.26	105,846.30	3.74	0.56
Other Electric Utilities - mainly					
City of Calgary	<u>132,093,209</u>	<u>65.14</u>	<u>984,019.01</u>	<u>34.79</u>	<u>0.74</u>
	<u>150,877,609</u>	<u>74.40</u>	<u>1,089,865.31</u>	<u>38.53</u>	<u>0.72</u>
Total - excluding Alberta Nitrogen	<u>202,780,933</u>	<u>100.00</u>	<u>\$2,828,476.85</u>	<u>100.00</u>	<u>1.39¢</u>

An examination and comparison of the foregoing with the classification in United States brings out the following:

- 1) The average selling price for Calgary Power is almost equal to that obtaining in United States.
- 2) A wider disparity would appear to exist between the classifications and groups of Calgary Power consumers, than would appear to obtain in the United States. After eliminating deliveries to Alberta Nitrogen, the average rates charged rural consumers is approximately 5 times the average, as compared with a corresponding ratio of $2\frac{1}{2}$ to 1 in the United States.

In the light of these significant variances in the rate structure, it remains to be considered whether or not the differentials are reasonable or unreasonable, firstly from the aspect of cost, and secondly from the aspect of other attendant circumstances.

Rate Variations from a Cost Aspect

The total costs of operating an electric utility include a high percentage of fixed costs, that is to say those which remain static within wide ranges of production and consumption, as compared with the variable costs, or those which vary in direct proportion to production and consumption. Having attained a particular level of production it is therefore argued that it is in the company's interest, and ultimately in the consumers' interest, to encourage increased consumption of power, even at low rates, until existing facilities are fully utilized. For example, having constructed production and transmission facilities in anticipation of future requirements and having thus reached a fixed level of costs, a company might well give a new customer a lower rate than it otherwise could if additional facilities were required to supply him. Under such circumstances contractual rates

fairly set in the first instance might, with changing conditions, become highly discriminatory. Where additional power can be sold at a price in excess of the increment cost (that is the exact additional cost incurred in producing the additional supply) the immediate effect is an overall gain which may be passed on to consumers. Where the price is less than the increment cost, the immediate effect is adverse, but the long-range effect may be favorable.

Operating costs may also be classified roughly into three functional divisions, generating expenses, distribution and transmission expenses, and general and administrative expenses. Over the entire history of the company generating costs have comprised 41%, transmission and distribution costs 28% and general and administrative costs 28% of total costs excluding depreciation. (Water utility expenses accounting for the remaining 3%). Whereas it is true, as we have pointed out elsewhere in this report, that the cost of generating power at the various hydro units shows some variation, and whereas there is a very substantial variation between the cost of generating hydro as distinct from steam power, no consumer or group of consumers may choose which particular type of power he or they use. All the power produced is delivered to the company's transmission and distribution system and is used interchangeably according to requirements. It is in fact not possible to know whether the town of Leduc uses power from the City of Edmonton plant, or whether it uses hydro power generated at the Ghost hydro plant. Even if it were possible to know, consumers in that town are not in a position to choose which power they will use, it being a matter of chance which power is actually consumed at that particular point. As a result, therefore, it would appear that in considering

long-range consumer rates, variations in generating costs as between the various units should not result in geographical rate differentials. On the other hand, and as is pointed out subsequently herein, there are variations in costs for generating power requirements under different demand conditions, which would justify rate differentials, as for example between a consumer taking a steady flow of energy as compared with a consumer taking an equal daily total quantity but all in a few short hours. This proposition is one justification for higher domestic rates.

Peak loads occur not only over the daily period but also seasonally, and it would seem unreasonable that additional overall costs occasioned by the necessity to provide for peak loads should be charged to consumers who are not responsible for peak conditions. This concept was presented by company officials, and we concur.

With respect to the costs of transmission and distribution one is faced with the difficulties attendant on the ascertainment of additional costs in any system of transportation. The main transmission lines must of necessity be constructed for the purpose of transmitting power to and from the main distribution centers, such as, for instance, transmission line 28 which extends from the Town of Airdrie to the Town of Beverly. (See Exhibit 5). At various stations it is tapped by other transmission lines, such as line 46 to Nordegg, line 53 to Thorsby and line 34 to Chipman and Lamont. It is also utilized to supply power to various towns along the line. Even more important, it becomes part of the transmission and distribution system as a whole, and may transmit energy which ultimately finds its way into other sections of the transmission system. Assuming therefore, that a group of consumers in

the vicinity of Rocky Mountain House, not now supplied, desire to obtain energy, it is reasonable that they should assist in relieving all the other consumers on the existing transmission system from a portion of the existing costs. Otherwise the pioneer users would bear all the original transmission costs, and would be precluded from expecting a reduction in rates by virtue of the development of generating and transmission facilities, and prospective consumers would be discouraged from the purchase of power in the pioneer stage of development. From the other aspect it would of course be equally unreasonable to expect the new users at Rocky Mountain House to pay the entire costs of transmitting and distributing power from the hydro plant to their locality, when in fact the facilities are also being used by numerous consumers en route; such a procedure would tend to discourage subsequent usage as distinct from pioneer usage. It is true that all present consumers will benefit from new business provided it pays more than the increment cost; for example if Rocky Mountain House consumers pay the cost of the new lines required and make any contribution at all to the operation of existing lines, all consumers benefit thereby. On the other hand, it would seem obvious that a rate structure developed solely on the increment cost principle is unfair to existing consumers in every stage of expansion. It is moreover unworkable in the long run because it results in an erratic scale of rates possessing no consistency except from the point of view of increment cost.

General and administrative costs also possess elements of fixed and variable costs. Certain of the company's activities such as billing and collection involve costs which vary with the number of customers for example, rather than with the dollar revenue therefrom. In this respect therefore there is some justification from the cost

aspect for lower charges to industrial than to domestic consumers.

To substantiate a variance in rates from a "joint" cost aspect only it would be necessary to demonstrate that power delivered to rural users for instance, costs twenty-one times as much as that delivered to Alberta Nitrogen, or that power delivered to rural consumers is twelve times as costly as power delivered to Canada Cement. It is of course extremely difficult to determine what portions of overall costs (particularly of production) are assessable against the various classifications of consumers. Joint costs are not only difficult, but in some cases impossible to segregate, one reason being the fact that consumer demands are sometimes complementary to each other. Any allocation of specific items of cost must be predicated upon some assumption as to the source of power going to each.

Thus in endeavoring to determine the adequacy of the Alberta Nitrogen rate, entirely different conclusions flow from alternative assumptions, of which the following are indicative:

- a) Assuming that Alberta Nitrogen shares proportionately in all power generated or purchased, the rate would be very unsatisfactory
- b) Assuming that Alberta Nitrogen with its high load factor takes the cheapest adequate independent supply of power (namely the entire output of the Horseshoe and Kananaskis plants which together approximate its requirements) leaving more costly power for other consumers, the rate would approximately meet costs and a fair return.
- c) Assuming Alberta Nitrogen to take some of the production of all hydro plants, being that portion which is subject to very low increment cost, making up the deficiency from higher cost hydro or other sources, then the rate would probably provide a margin over increment cost

- 3) Alberta Nitrogen has represented an important contribution to war-tims, and probably peacetime industrial development, to the advantage of the community and its people from which an indirect benefit will accrue to Calgary Power.
- 4) It represented an opportunity to obtain a favorable site for hydro development in the Banff National Park, which would have been more difficult to obtain under other circumstances.
- 5) The contract with Alberta Nitrogen provides for shutting down energy deliveries in the event of emergency which constitutes standby protection for other consumers; while on the other hand,
- 6) The Alberta Nitrogen load represents a large block of energy requirement (40%) on which there is no guarantee of permanence. It has necessitated heavy investment in additional hydro developments, and transmission facilities but there is no assurance that Alberta Nitrogen will continue to operate. As a consequence the company may well find itself with facilities in excess of normal requirements for other customers who would nevertheless be required to meet carrying charges thereon.

Rate Variations within Classes or Groups

It is to submit a study of the third aspect of rates, that is those charged to various consumers within the respective groups. For this purpose we have given some consideration to the rates charged to consumers specifically in certain towns within the general classification "towns - retail". We submit as Exhibit 70 a schedule showing the service and minimum charges under standard and special rates presently in force as related to annual revenue received. The variation of domestic rate schedules in effect is illustrated in the following summary which

also shows the number of towns where the various schedules are in effect

Standard Rate Schedule

All are subject to the same schedule of energy charges (as below) but subject to variable service charges as follows:

<u>Service Charge</u>	<u>No of Towns</u>
\$ 30 - 50	5
80 - 1 10	6
1 20 - 1 40	8
1 50 - 1 70	7
1 80 - 2 00	<u>27</u>
	<u>53</u>

Energy charge for all towns:

For first 30 K.W.H.	10.00¢ per K.W.H.
next 20 K.W.H.	5.00 per K.W.H.
next 150 K.W.H.	2.25 per K.W.H.
All over 200 K.W.H.	1.67 per K.W.H.

All are subject to 10% discount if paid within 10 days of billing - minimum discount 30¢.

Special Rate Schedule

<u>Net Minimum Charge for 20 K.W.H.</u>	<u>Charge per K.W.H. for next 180 K W H</u>	<u>Charge per K.W.H. for all over 200 K.W.H</u>	<u>Number of Towns</u>
\$ 2 30	1 0¢	1 0¢	6
2 40	1 0	1 0	7
2 50	1 0	1 0	2
2 60	1 0	1 0	5
2 60	1 5	1 5	1
2 70	1 5	1 5	5
2 80	1 5	1 5	10
2 90	1 5	1 5	15
3 00	2 0	1 5	<u>42</u>
			<u>100</u>

All are subject to 30¢ discount if paid within 10 days of billing.

The standard rate schedule was formerly in effect throughout the classification, but some years ago as rates were renegotiated on franchise expiration dates towns were given an opportunity to take advantage of the new or special rate schedule. It will be observed that at present 100 out of 153 towns (excluding 7 towns on individual schedules) enjoying Calgary Power service have accepted the advantages of the special rate, which has a heavier minimum charge, and is devised to encourage increased consumption of power. The relative costs to the consumer at varying levels of consumption at maximum rates (which apply to 33% and 49% of towns respectively) are summarized as follows:

	<u>Special</u> <u>Rate Schedule</u>	<u>Standard</u> <u>Rate Schedule</u>
5 K.W.H. per month	\$ 3.00	\$ 2.50
10 "	3.00	2.70
20 "	3.00	3.60
50 "	3.60	5.40
100 "	4.60	6.41
150 "	5.60	7.43
200 "	6.60	8.43

To exemplify the effect of this structure on the towns located on a particular transmission line, we have studied the effect of the structure on line 28 from Calgary to Edmonton. (See Exhibit 5)

Standard Rate Schedules

Order of Distance from Calgary	Service Charge	Energy Charge				
		For 1st 500 watts (per month)	1st 30 K.W.H. (per K.W.H.)	Next 20 K.W.H. (per K.W.H.)	Next 150 (per K.W.H.)	All over 200 K.W.H. (per K.W.H.)
4 Didsbury	\$1.50	\$0.50	10.0¢	5.0¢	2.25¢	1.67¢
6 Bowden	2.00	1.40	10.0	5.0	2.25	1.67
7 Innisfail	1.50	0.30	10.0	5.0	2.25	1.67
9 Blackfalds	2.50	1.80	10.0	5.0	2.25	1.67
11 Hobbema	2.50	1.90	10.0	5.0	2.25	1.67
12 Wetaskiwin	1.25	0.60	6.0	6.0	2.00	1.50
14 Leduc	1.50	0.50	10.0	5.0	2.25	1.67

All standard rates subject to a 10% discount with a minimum discount of 30 cents.

Special Rate Schedules

Order of Distance from Calgary	Net Minimum for 20 K.W.H. (per month)	Next 180 K.W.H. (per K.W.H.)	All over 200 K.W.H. (per K.W.H.)
1 Airdrie	\$3.00	2.0¢	1.5¢
2 Crossfield	2.80	1.5	1.5
3 Garstairs	2.70	1.5	1.5
5 Olds	2.50	1.0	1.0
8 Penhold	3.00	2.0	1.5
13 Millet	2.90	1.5	1.5
10 Laconbe	Net minimum for 15 K.W.H. - \$1.50		
	Next 35 K.W.H. at 6¢ per K.W.H.		
	Next 150 K.W.H. at 2¢ per K.W.H.		
	All over 200 K.W.H. at 1.5¢ per K.W.H.		

All subject to a discount of 30%.

With respect to the foregoing we submit the following

comments:

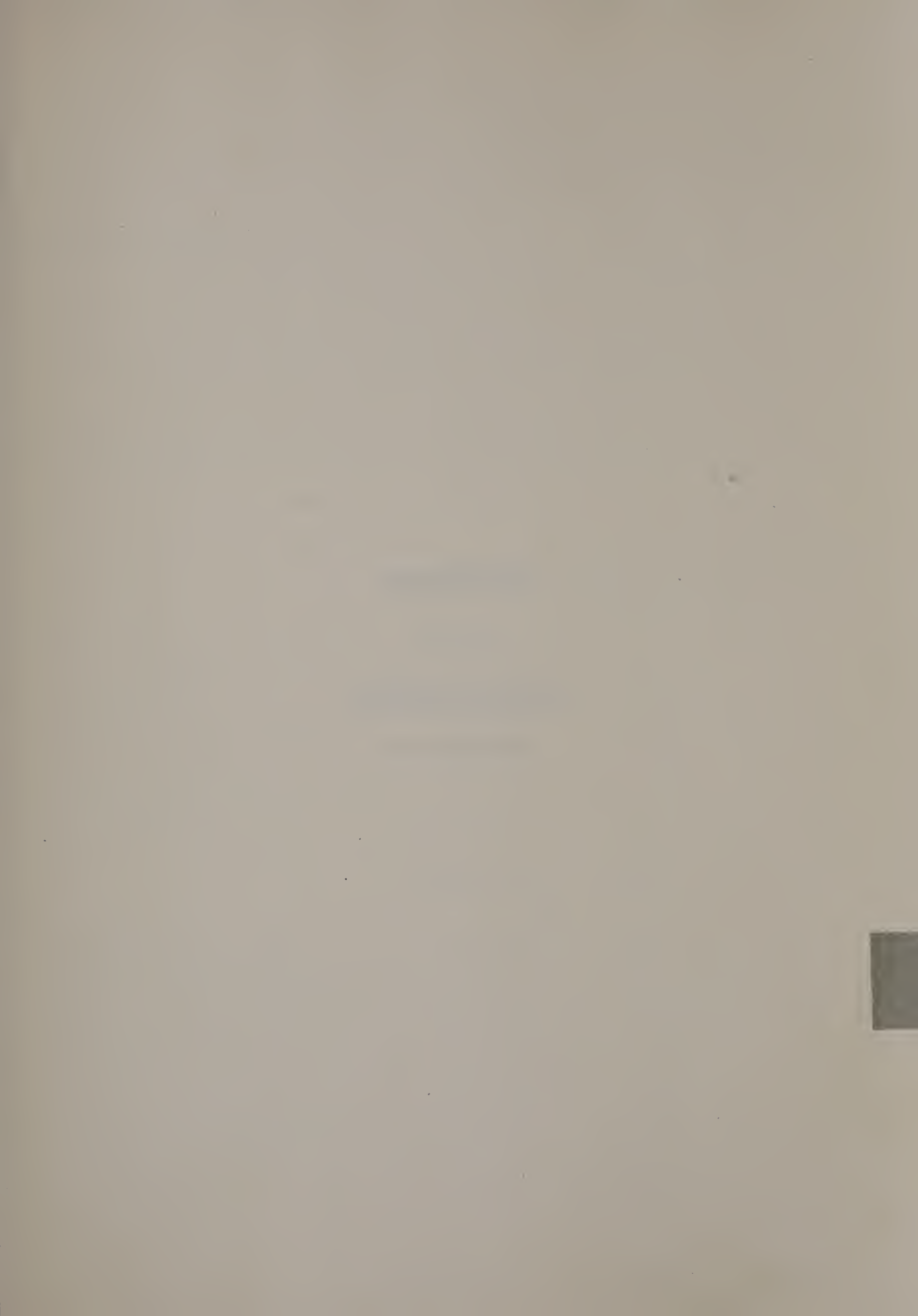
- a) Geographical location has little or no bearing on rate schedules as between towns. Of two towns both on the special rate schedule Airdrie pays higher rates than Millet, although 140 miles closer to the generating plants.

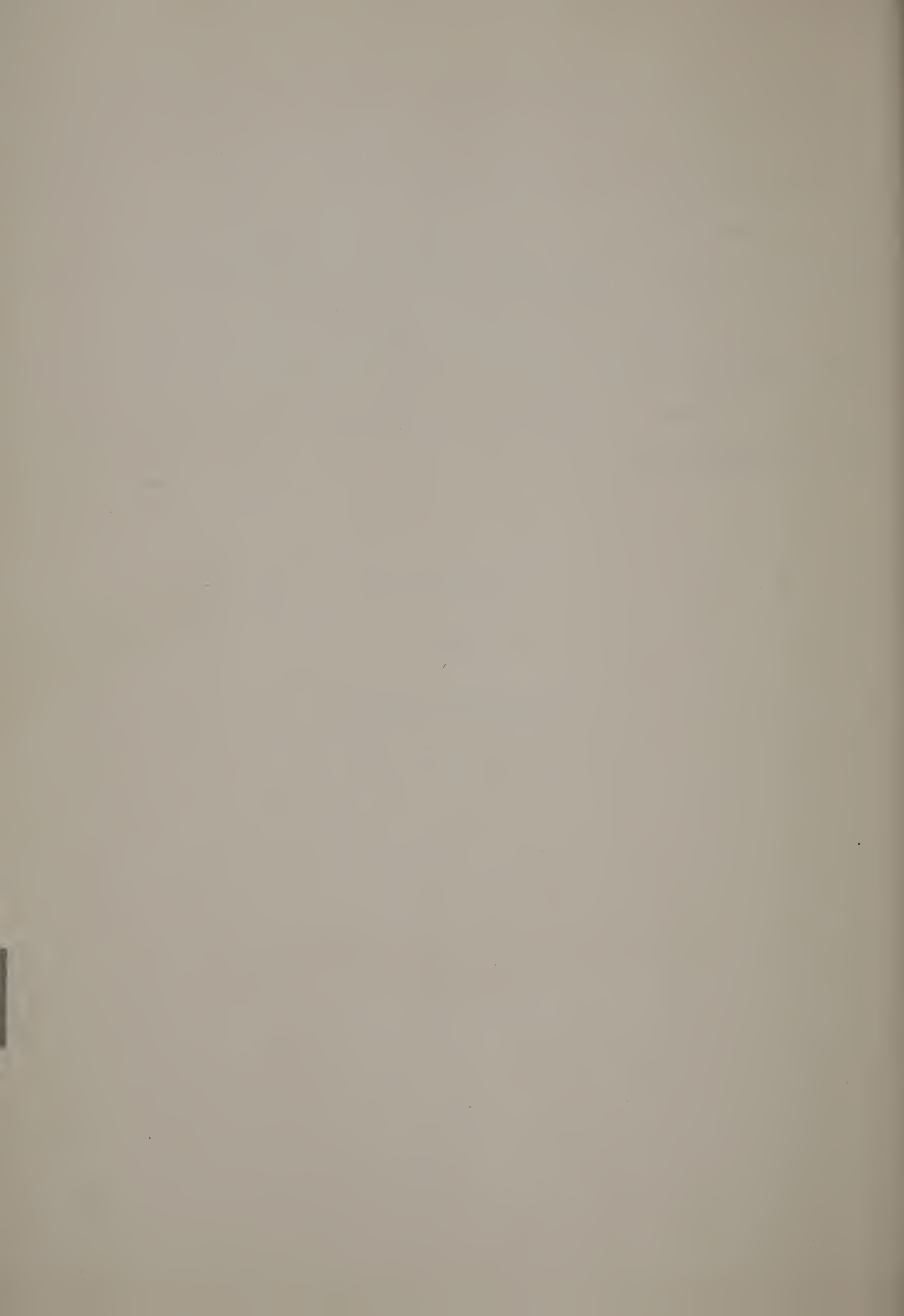
- b) The selection of schedule (that is between Standard and Special) is not a matter of individual choice to the consumer.
- c) Within each schedule, the charge to individual consumers depends largely on the total gross revenues to the company from the community in which he happens to live. Generally speaking the larger the town the lower the rates. This applies within each schedule not only to service or minimum charges but also in the case of the special schedule to energy charges.
- d) To the extent that differentials in minimum charge may be assumed to offset differences in cost of furnished local installations, it is difficult to see the justification for charging more per additional K.W.H. in one place than in another.
- e) On the other hand there may be practical and psychological grounds for keeping the service or minimum charge low, endeavoring to make up the local deficiency by setting the charge for additional energy at rates higher than in other places. It seems however not altogether reasonable that the larger consumer in such a locality not only makes up the deficiency applicable to his own service but also for his neighbors; it would seem more reasonable that such deficiencies should be spread over all consumers rather than over those in the particular locality. In other words it is our view that having set service or minimum charges on a cost basis, subject to practical and psychological considerations, the energy charges should be the same in all localities.

General

The question as to whether the existing rate structure of the company is in some instances unjustly discriminatory or unduly

preferential to individuals or groups may only be decided after enquiry involving the hearing of submissions not only of company officials, but also on behalf of conflicting consumer groups. Since our examination has been fundamentally of an accounting and financial nature, we hesitate to express a definite opinion, but we do suggest the matter is of sufficient public importance and the rate differentials are sufficiently impressive, that it is in the interests of both the company and the consumers, for the matter to be the subject of full enquiry by the regulatory board.





SECTION VIII

FINANCIAL POSITION

FINANCIAL POSITION

The financial position of the company is reflected in a revised balance sheet presented as Exhibit 71.

Comparison of Percentages

The following is a condensed balance sheet of the company prepared to conform with the classification of assets and liabilities used by the Federal Power Commission and with percentages comparative to those applicable to the composite balance sheets of three hundred and forty-seven Class A and B American utility companies as at December 31, 1943:

	Calgary Power	American
	<u>Amount</u>	<u>% of Total</u>
		Utilities
		Class A & B
		<u>% of Total</u>
Assets		
Utility plant - tangible and intangible	\$21,159,523	76.0
Investments	2,831,426	10.2
Current and accrued assets	722,903	2.6
Unamortized debt discount	906,562	3.3
Deferred refunds	248,831	.9
Capital stock discount and expense	1,954,907	7.0
Reacquired securities	<u> </u>	<u> </u>
	<u>\$27,824,152</u>	<u>100.0</u>
Liabilities		
Common capital stock	3,500,000	12.6
Preferred capital stock	5,900,000	21.2
Premiums, assessments, etc.	-	-
Bonds and long term debt	11,373,500	40.8
Current and accrued liabilities	724,508	2.6
Deferred liabilities and credits	337,066	1.2
Reserves for depreciation and amortization	6,000,477	21.6
Contributions in aid of construction	154,291	.6
Capital surplus	-	-
Earned surplus	<u>105,000</u>	<u>.6</u>
	<u>\$27,824,152</u>	<u>100.0</u>

A comparison of the foregoing percentages should be made guardedly and with due regard to a variance in conditions between western Canada and the United States, and it should be remembered that the composite percentages applicable to American utilities will be influenced by the usual defects of an arithmetic average, which tends to be influenced by extremes. However, the comparison does indicate one or two significant points. The percentage of utility plants to total assets of 76 for Calgary Power compares with 81.8 for the American utilities, whereas Calgary Power has a higher percentage of its assets in investments of subsidiary companies -- 10.2 as compared with 7.1. Capital stock discount and expenses is higher in the case of Calgary Power, 7% as compared with 0.2%. The most significant comparisons, however, we consider are contained in the liability and capital section of the balance sheet. Only 12.6% of the total assets of Calgary Power is represented by common stock, (which is of course stated at par value), as compared with 23.2% in the United States; 21.2% is represented by preferred capital stock, as compared with 11.8% for the American utilities. Bonds and long term debt represent 40.8% of the total assets, as compared with 36.3% in the United States. The depreciation reserve of Calgary Power comprises 21.6% of the total assets, as compared with 15.8% in the United States, and in fact Calgary Power's reserve for depreciation as computed in accordance with Section 5 of this report now comprises 29.2% of the cost of its utility plant, as compared with 17.2% for the American utilities.

An additional comparison of statistics of Calgary Power as compared with American utilities indicates that this company has an investment of \$6.35 in utility plant for each dollar of revenue in

1944, whereas the American utilities had an investment of only \$4.28 for each dollar of revenue. Elsewhere in this report, however, it has been pointed out that the average consumer rates for Calgary Power exclusive of Alberta Nitrogen are almost identical with those obtaining in United States. The bonds and long term debt of Calgary Power represent 55.6% of the cost of its utility plant, as compared with 41.9% for American utilities.

Reconciliation of Surplus

After making adjustments for additional depreciation, amortization of bond discount, and interest on construction credited to revenue, we arrive at an operating deficit as at December 31, 1944 of \$265,690.30. The following is a reconciliation of the surplus account per the books and the audited balance sheet of Messrs. Macintosh, Robertson & Paterson as at December 31, 1944, and the operating deficit as reflected on the revised balance sheet, Exhibit 71:

Reconciliation of Revised Operating Deficit with Surplus as shown by the Books

Surplus as shown by the books as at December 31, 1944		\$ 461,543.98
Add:		
Refundable portion of excess profits tax	\$ 52,303.91	
Reserve for contingencies	175,000.00	
Commissions and expenses on preferred stock, written off now reinstated	17,276.53	
Bond expense written off to operations now reinstated	2,284.00	
Miscellaneous gains credited to construction adjustment reserve now taken into revenue	1,275.65	
Items written off to operations now capitalized as tangible or intangible fixed capital	<u>67,599.18</u>	<u>315,739.27</u>
Forward		777,283.25

Forward

\$ 777,283.25

Deduct:

Additional depreciation provided		
Depreciation per revised		
statement	\$6,742,198.85	
Less: Depreciation		
per books	<u>6,191,246.78</u>	\$550,952.07
Additional bond discount amortized		
Amortization per revised		
statements	1,052,490.59	
Less: Amortization per		
books	<u>988,981.19</u>	63,509.40
Interest on construction credited to		
operations - now reversed		428,109.08
Sundry expense capitalized - now		
reversed		<u>403.00</u>
		<u>1,042,973.55</u>
Revised operating deficit as at December		
31, 1944		\$ <u>265,690.30</u>

The following is a statement of the operating deficit since the inception of the company:

Statement of Operating Deficit (As Revised)

For the period from October 20, 1909 (Date of Incorporation)
to December 31, 1944

Net income for the period from October 20, 1909 to		
December 31, 1944, per Exhibit 65		\$6,890,850.17
Deduct:		
Dividends paid		
Common	\$1,496,250.00	
Preferred	<u>5,562,069.89</u>	
		7,058,319.89
Transfer to appropriated surplus		
Far value of preferred		
shares redeemed	\$100,000.00	
Less: Gain on redemption	<u>1,779.42</u>	<u>98,220.58</u>
		<u>7,156,540.47</u>
Operating deficit as at December 31, 1944		\$ <u>265,690.30</u>

Common share dividends were declared and paid during the

years 1927 to 1935 inclusive. The following is a summary of the net

income and dividends paid during this period, and the resulting operating surplus or deficit at December 31st of each year. This computation is subject, of course, to the accounting methods adopted for the purpose of this report, and in particular the rates and methods followed in calculating depreciation provisions:

	<u>Net Income for the year</u>	<u>Common and Preferred Dividends Paid</u>	<u>Revised Surplus (or Deficit) at End of year</u>
1927	\$ 83,441	\$ 23,750	\$ 239,390
1928	163,660	127,500	275,550
1929	363,034	362,146	276,438
1930	379,804	496,004	160,238
1931	343,323	561,420	57,354
1932	403,460	570,000	224,394
1933	386,844	570,000	407,550
1934	460,509	570,000	517,042
1935	241,707	570,000	645,334

Sundry Assets and Liabilities

We have referred elsewhere in this report (Sections 5 and 6) to two other matters which may be regarded as having understated the financial position at December 31, 1944:

- a) Due to a procedure of continuous billing an asset for accrued and unbilled revenue in an estimated amount of \$182,500 is not included in the assets.
- b) An estimated liability to the City of Edmonton for interchange power \$337,065 is approximately \$240,000 in excess of the 1944 cost of generating hydro power.

Unamortized bond discount and expense is reflected on Exhibit 72 presented herewith as \$876,417.13 which compares with a figure of \$653,516.17 (less an offsetting sinking fund reserve of \$13,539.30) on the audited balance sheet as at December 31, 1944.

There are a variety of methods which may be adopted for the amortization of the discount and premium on bonds, which would conform to correct accounting principles. It has been the company's practice to amortize bond discount on the straight line method; we agree that this method has many practical advantages, and we have utilized it in ascertaining the financial position at December 31, 1944, and the operating results for each of the years 1910 to 1944 inclusive. We observed, however, that gains or losses arising from the reacquisition of bonds were transferred to the sinking fund reserve, whereas in our view consistency would require that such gains or losses should also be amortized on the straight line basis over the remaining life of the bonds. Furthermore the unamortized portion of the sterling issue which was refunded in 1930 was written off to surplus account, whereas in our opinion the unamortized portion should be regarded as an additional interest cost of the new issue, and amortized over the life thereof. Since, as we have already pointed out, the return on the rate base is ascertained without regard to whether funds have been obtained from long term debt or by the issuance of share capital, these adjustments have been made with a view to presenting a consistent view of the company's operating results during the period of its operations, and its financial position as at December 31, 1944. (See Exhibit (5) and 71).

The investment in subsidiary companies is made up as follows:

Ottawa Valley Power Company	
42,500 shares of no par value, comprising	
85% of the company's capital stock	\$ 494,893.54
41% of the outstanding debentures	<u>1,032,500.00</u>
Total investment in Ottawa Valley Power Co.	1,527,393.54
Prairie Power Company Limited	
Total outstanding share capital	25,000.00
Note receivable and accrued interest	1,176,032.66
Calgary Water Power Company Limited	
Total outstanding share capital	<u>100,000.00</u>
	<u>\$2,828,426.20</u>

The shares in Ottawa Valley Power were acquired from a director of the company, Mr. I. W. Killam in 1931. The company originally owned 85% of the outstanding 6% gold debentures, as well as 85% of the no par value stock, for which it paid \$3,222,946. Subsequently debentures were redeemed by Ottawa Valley Power until Calgary Power now owns 41% of the debentures and 85% of the stock.

As of July 31, 1930 Calgary Power entered into an agreement with its managerial affiliate, Montreal Engineering whereby this company acquired the assets of Montreal Engineering in the nature of generating plants and transmission and distribution systems in the Province of Saskatchewan, and in consideration therefor assumed the liabilities of Montreal Engineering in that province, and paid a cash consideration of \$1,710,000. Subsequently, in 1931, Prairie Power Co. Ltd. was incorporated with an authorized capital of 5,000 shares of no par value for the purpose of acquiring all the company's assets in the Province of Saskatchewan and assuming its liabilities. At December 31, 1944 Calgary Power controlled all the share capital of Prairie Power valued on its books at \$25,000, and in addition Prairie Power was indebted to this company in the amount of \$1,176,032.66.

As of March 31, 1928 the company acquired 1,000 shares of Calgary Water Power Co. Ltd. at \$500 per share. In addition it incurred certain small costs attendant on the transaction, amounting to \$6,003.77. In 1937 Calgary Water Power declared to Calgary Power a dividend out of its surplus as at the date of acquisition in the amount of \$116,893.79 and subsequently it disposed of its distribution system to the City of Calgary, and a further \$389,109.98 was realized by Calgary Power on the investment. At the present time, therefore, the 1,000 shares are valued on the company's books at the amount of \$100,000, and the investment in fact comprises lands and cottages, out of which Calgary Water Power derives a rental income. The acquisition of the shares of Calgary Water Power enabled Calgary Power to eliminate a franchisee in the City of Calgary, extend its distribution system and acquire a stand-by steam plant.

The income from investments is discussed in Section 6 of this report

Cost of tangible property, plant and equipment and the depreciation reserve with respect thereto has already been explained and reconciled in Section 5 of this report. The following is a reconciliation of intangible franchises, leases and organization costs according to the company's books and audited balance sheet, and according to the revised balance sheet now presented:

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Reconciliation of Intangible Fixed Assets

As at December 31, 1944

Balances per books and audited balance sheet			
Water rights		\$	383,355.00
Franchises, contracts, licenses and organization expenses			<u>830,317.62</u>
			1,213,672.62
Deduct: Portion thereof applicable to Prairie Power Co. Ltd., Saskatchewan			<u>750.25</u>
Net recorded cost of intangible assets			1,212,922.37
Add:			
1) Book transfers from intangible to tangible asset accounts not originally charged by the company to intangible asset accounts - now reversed			
Interest during construction - transferred in 1930	\$	393,804.73	
Interest during construction - transferred in 1925		6,365.38	
Supervision		93,500.00	
Engineering		257,096.90	
Remuneration to company's president		40,000.00	
Losses on log contracts 1915 and 1919		3,366.05	
2) Intangible costs written off by the company to revenue or surplus - now capitalized			
Organization expense 1915		10,328.28	
Preliminary power investigations 1913 to 1923		5,095.73	
Water rights 1915		20,000.00	
Calgary Water Power Co. Ltd franchises 1915		2,161.20	
Saskatchewan negotiations 1943		9,482.26	
3) Bond discount recorded as tangible plant - 1910 to 1913		14,269.00	
4) Imputed franchise costs of town plants purchased - now transferred from tangible plant		<u>381,014.44</u>	<u>1,236,483.97</u>
			2,449,406.34
Deduct:			
5) Option on land site written off		403.00	
6) Discount on common stock			
Imputed discount on original issue	\$	1,480,000	
Imputed discount on 1917 issue		<u>35,000</u>	
Total common stock discount		1,515,000	
Less: Portion charged to surplus		<u>7,000</u>	<u>1,508,000.00</u>
Forward		1,508,403.00	<u>2,449,406.34</u>

Forward	\$1,508,403.00	\$2,449,406.34
7) Imputed discount on bonds issued in 1910	287,500.00	
8) Property abandoned and transferred by company from tangible to intangible in 1925	<u>6,345.64</u>	<u>1,802,248.64</u>
Intangible fixed assets per revised balance sheet, Exhibits 71 and 73		<u>\$ 647,157.70</u>

The foregoing adjustments to intangible assets are subject to the following comments and explanations:

- 1) On several occasions the company set up as tangible plant the items detailed with corresponding credits to intangible fixed assets. The items had not previously been included in the cost of intangibles and we have therefore reversed their subsequent transfer out. Any variation between these amounts and the corresponding descriptions appearing in the reconciliation of tangible assets on page 52 hereof is attributable to transfers out on subsequent retirement of the assets.
- 2) Certain intangible assets have been written off by the company to operating expenses or to surplus. These are now reversed.
- 3) to 8) These adjustments are either self explanatory or have been explained elsewhere in this report.

Customers' contributions for plant extensions comprise contributions made by farmers and rural users for direct line extensions and are refundable only on certain conditions relating to the possible future usage of the lines.

The company's liabilities with respect to funded and other non-current debt, and its position with respect to preferred and common shareholders are discussed in Section 9 of this report.



THE INVESTORS' POSITION

SECTION IX

THE INVESTORS' POSITION

A study of the investors' position entails a consideration of the share of earnings enuring to the group of which each investor is a constituent, the security behind the issue both from the aspects of earnings and safeguards as to capital, the voice in management both actual and contingent, and the future prospects whether operations continue as a controlled utility, or in the event of recapture or expropriation.

This section is concerned with a study of the relationship of the investors in the respective types of securities with the company, and as between themselves.

Funded Debt

The funded debt of the company comprises an issue of first mortgage 5% bonds due 1960, of which \$8,171,500 was outstanding, and an issue of first mortgage 5% bonds due 1964, of which \$1,702,000 was outstanding at December 31, 1944. For the purpose of financial study the funded debt should be increased by bank loans of \$1,500,000, which were secured by unissued first mortgage 5% bonds due 1960. The ratio of the par value of funded debt and bank loans to the par value of preferred and common shares (which in total amounted to \$9,400,000 as of December 31, 1944) is 1.2 to 1 as at that date, as compared with a composite ratio of 1 to 1.04 for privately owned public utilities in the United States in 1943. Funded debt and bank loans represent 78% of tangible fixed assets - net, in Alberta, and 64% of net assets, exclusive of bond discount. Computed as follows:

Tangible fixed assets (net)	\$14,511,889
Franchises, leases, and organization costs	647,158
Current assets	722,903
Investments	2,831,426
Miscellaneous deferred charges	30,144
Deferred refunds	<u>248,830</u>

Total assets 18,992,350

Deduct: Current and deferred liabilities 1,215,865

Net assets \$17,776,485

Percentage of funded debt and bank loans to net assets 64%

The legal security supporting the funded debt is described in the deed of trust and mortgage dated April 1, 1930 in favor of the Montreal Trust Company as trustee. Under the trust deed the underlying security may be considered from three main aspects:

a) A mortgage and floating charge on all the property of the company.

Article 8 of the trust deed, clause 35, provides in part:

"The Company doth hereby grant, bargain, sell, convey assign, demise transfer, set over, mortgage, pledge and charge as and by way of first, fixed and specific mortgage, pledge and charge to and in favour of Montreal Trust Company, Party hereto of the Second part, and its successors in the trust, as Trustee, for the benefit of the holders of the Bonds secured hereunder, for and with the payment of the principal amount of the bonds issued and certified under any provision hereof at any time outstanding according to their tenor and interest thereon, and the premiums thereon (if any) and for and with the payment of all other sums from time to time due hereunder to the bondholders or the Trustee, its successors or assigns

ALL AND SINGULAR its present real and immoveable properties and rights, freehold and leasehold lands (excluding, however, the last day of the term of any lease thereof as hereinafter provided) and all such future real and immoveable properties and rights as may hereafter be specifically made the basis of the certification and delivery of additional bonds hereunder. including its lands, rights in lands, water powers, dams, power houses, buildings, plants, poles, transmission lines, distribution systems, wheresoever situate, including but without in any way limiting the generality of the foregoing description the immoveable properties and rights

described in the Second Schedule hereof and any and all servitudes, easements, riparian and other rights connected therewith or appertaining thereto, and all fixed and loose machinery, equipment, tools, implements, engines and other appliances and fixtures of every kind used in connection therewith and all shares, stock, bonds, debentures and other securities hereafter specifically pledged by the Company or required hereafter to be specifically pledged under any provisions of this Deed. . "

Further:

"And for the same consideration and for the same purposes and pursuant to the same powers, the Company hereby mortgages, pledges and charges (subject to the exceptions hereinafter contained) as and by way of a first floating charge to and in favour of the Trustee and its successors in the Trust for and with the payment of the principal amount of the Bonds issued and certified under any provision hereof at any time outstanding according to their tenor and interest thereon and the premium thereon (if any). . ."

It would therefore appear that the trust deed provides a first mortgage and floating charge on all the assets of the company, subject, however, to the power of the directors to borrow money for current financing purposes.

- b) A sinking fund for the redemption or retirement of the bonds in the amount of $\frac{1}{2}\%$ per annum commencing on the 31st day of March 1934. In this connection Article 11, Clause 53, provides in part:

"(1) The company covenants and agrees that it will create and maintain a sinking fund for the benefit of the bonds hereby secured by paying to the Trustee annually at the end of each period of one year, accounting from the first day of April, 1933, so that the first payment shall be made on or before the thirty-first day of March, 1934, a sum equal to one-half of one per cent. ($1/2\%$) of the greatest aggregate principal amount of bonds at any time outstanding hereunder during such period of one year."

The Article further provides that:

"(2) Instead of making sinking fund payments in money, the Company may deliver to the Trustee, in satisfaction in whole or in part of any sinking fund payment due

on any sinking fund payment date, any bonds which have been previously issued hereunder and previously sold by the Company, and the Company shall receive credit for the bonds so delivered equal to the amount thereof at the then prevailing redemption price of such bonds."

And further:

"(4) If the Company does not so deliver bonds as aforesaid in full payment of the amounts payable in respect of the sinking fund, as and when the same are due and payable, then the moneys paid to the Trustee by the Company for the purpose of the sinking fund shall be employed by the Trustee in the following manner. The Trustee shall draw by lot for redemption upon the next interest payment date (in the manner provided in Sub-clause (1) of Clause 54 hereof, for partial redemption of bonds of any series) the bonds of any one or more series which the Company will designate if there be more than one series outstanding. Bonds shall be drawn in an aggregate principal amount, which shall equal, as nearly as may be, the amount of bonds which can, out of the Sinking Fund moneys available therefore, be redeemed on the next ensuing interest payment date and at the particular redemption price applicable in such case."

c) Management in the event of default, Article 16 provides:

"In case the security hereby constituted shall have become enforceable as herein provided, and the Company shall have failed to pay to the Trustee on demand the principal and interest due upon all the bonds outstanding, together with all other sums due or payable hereunder, the trustee may in his discretion, and upon the request in writing of the holders of twenty-five per centum (25%) in principal amount of the Bonds then outstanding shall enter into and upon and take possession of, collect and get in, all or any part of the mortgaged premises, and for the purpose may take any proceedings in the name of the Company or otherwise and thenceforth have, hold, possess and use and grant, renew and cancel leases of the said properties, rights, privileges, franchises and revenues comprised in the mortgaged premises, and each and every part thereof, subject to the lien on these premises, with full power to carry on, manage and conduct or occur or co-operate in carrying on, managing and conducting the business and operations of the Company."

Since the asset value of dams, waterways and capital assets "used and useful" lies in their working power rather than in their resale or realizable value, the said security residing in the

funded debt would appear to be the privilege of the bondholders, through their trustees, to take possession of the assets and conduct the operations of the company in the event of default. In such an event the advantages of seizure and management would seem to rest in the protection of the interests of bondholders, through the utilization of earnings which would otherwise have been available for distribution to the holders of junior securities.

The provisions with respect to sinking fund and retirements would seem to provide some security value to the issue. However the trust deed provides for deposits at the rate of 1/2% per year, so that a period of two hundred years would be required to bring the sinking fund to a parity with the bonds outstanding. Furthermore the redemption provisions contain some of the defects of a serial as compared with a sinking fund issue from a security aspect, in the sense that sinking fund accumulations are not proportionately available as security for the total of the outstanding issue; and in fact it has been the practice of the trustee to use sinking funds for bond redemption purposes. The fundamental security behind the funded debt must therefore be the capacity of the company to operate successfully as a regulated utility, to earn bond interest requirements, in the expectation that public confidence will be maintained and maturing issues retired by refunding operations. It would seem that in the past the company has enjoyed sufficient investor confidence as has enabled it to retire maturing issues and there is no indication of a change in this respect.

By reference to Exhibit 57 it will be observed that bond and bank interest after provision for income tax (and after applying

investment income against interest expense) has been earned 2.3 times in 1943 and 1944. In the United States in 1947 all interest, including debt amortization, was earned 2.6 times, and interest on long term debt was earned 3.3 times. The number of times which bond and bank interest (net) has been earned after income and excess profits taxes during the four phases of the operations as described in Section 6 is summarized as follows:

1911 to 1927	Development phase	1.25 times
1928 to 1931	Expansion phase	1.54 times
1932 to 1937	Consolidation phase	1.69 times
1938 to 1944	War phase	2.09 times

In a regulated utility assuming that the rate of return is fixed at no lower than the approximate interest requirements of securities issued, the ratio of total earnings to bond interest requirements should at least equal the ratio of total assets "used and useful" to the amount of the security outstanding. We have previously indicated that the ratio of assets "used and useful" to the funded debt is 1.2 to 1, and if the rate of return at least equals the nominal interest requirements on funded debt, the bondholders would appear to enjoy a ratio of earnings in excess of interest requirements of at least that margin. A rate not in excess of the nominal interest rate on funded debt would constitute an additional measure of income security to the bondholders. This computation excludes the earnings of subsidiary companies outside Alberta.

6% Cumulative Redeemable Preferred Stock

Preferred stock was issued by virtue of amendments to the letters patent in 1928, as described in Section 2 of this report, and the exhibits referred to therein. Preferred shares have provided 35.5%

of total funds provided by securities, and they comprise 30.6% of the total securities outstanding as at December 31, 1944. The main security residing behind preferred shares is as follows:

- a) They rank senior to common shares, both with respect to assets in the event of liquidation, and as to dividend requirements.
- b) They are redeemable at 105 on call by the company.
- c) They may vote with common shareholders in the event of a dividend default

It is a principle of corporation finance, that an important aspect of the security pertaining to an issue is found in the nature and extent of the investment in junior securities. We therefore consider that the first issuance of preferred shares in 1928 of \$2,500,000 comprised an important measure of support to the funded debt and bank loans, which at that time amounted to \$3,500,000. Without the support of a substantial common share investment the holder of preferred shares suffers the disadvantages of a common shareholder without its advantages; in Calgary Power the ratio of net assets as applicable to the preferred shares (because a substantial portion of the common shares has been issued for imputed discounts not included in the historical rate base or as an asset on the revised balance sheet) is as 1.08 to 1.00. Excluding franchise and organization costs, net assets to preferred shares reflect a ratio of .98 to 1.00. We have already suggested in Section 2 that the probability of the preferred shareholders obtaining effective control of the company in the event of default is remote; the preferred shares are widely held whilst the common are closely held, and no restrictions are placed on the directors as to the issuance of additional common or preferred shares should it become in the interests of the common shareholders to do so. On the other hand preferred share dividends have been

conscientiously paid during the sixteen years of their history, and there has been no apparent tendency for the holders of the junior issue to use their relative rights and powers oppressively

Since the preferred shares were first issued in 1928, the number of times that dividend requirements have been earned after income and excess profits taxes is as follows:

1929	1.53	1937	1.76
1930	1.26	1938	1.05
1931	.96	1939	1.21
1932	1.12	1940	1.01
1933	1.07	1941	1.20
1934	1.28	1942	1.65
1935	.67	1943	1.87
1936	.34	1944	1.83

Common Shares

Common shareholders have provided 12.9% of the total funds provided by securities and the par value of the shares outstanding comprises 18.2% of the total securities outstanding at December 31, 1944. The common shares, being junior to both the funded debt and preferred shares, are unsecured as to principal but as has already been pointed out they alone hold the privilege of voting of electing the board of directors, and of managing the affairs of the company so long as interest requirements on funded debt and dividend requirements on preferred shares are duly met. The dividend record on common shares is as follows:

<u>Year</u>	<u>Amount</u>	<u>%</u>
1927	\$ 23,750	5 for one-quarter year
1928	102,500	5
1929	125,000	5
1930	195,000	6
1931	210,000	6
1932	210,000	6
1933	210,000	6
1934	210,000	6
1935	210,000	6
Total	<u>\$1,496,250</u>	

Since 1935 no dividends have been paid

Dividends paid to common shareholders have exceeded by about \$167,000 the earnings enuring thereto on the basis of the accounting methods followed in this report. The earnings accruing to common shareholders after provision for income and excess profits taxes and dividends to preferred shareholders, expressed in total and as a percentage of share capital are summarized as follows:

<u>Phase</u>	<u>Total Earnings enuring to Common Shareholders</u>	<u>Average Par Value of Common Shares</u>	<u>Return on Par Value of Common Shares Per Annum</u>	<u>Return on Par Value Minus Discount per Annum</u>
1911-27 Development	\$ 263,140	\$1,879,500	8.2%	4.09%
1928-31 Expansion	335,256	2,850,000	2.94	6.28
1932-37 Consolidation	269,398	3,500,000	1.28	2.26
1938-44 War	<u>999,782</u>	3,500,000	<u>4.08</u>	<u>7.2</u>
Total and Average	<u>\$1,328,780</u>		<u>1.5%</u>	<u>3.54%</u>

On the basis of the accounting methods herein adopted, there is no net tangible equity in assets pertaining to common shareholders as at December 31, 1944, and their equity is represented wholly by unamortized bond discount, franchises, leases and organizational costs, in fact excluding only unamortized bond discount, the common share equity in net assets would amount to \$14.37 per share, and in the event of the retirement of preferred shares at 105, their equity

would decline to \$5 94 per share. These computations should however, be considered in conjunction with the context of the report as a whole, and particularly with respect to the following:

- 1) In the accounting methods adopted depreciation has been provided on a straight line basis in accordance with classifications and rates reported by the Federal Power Commission as being generally in use in the United States. The depreciation computed exceeds by over \$550,000 that provided by the company.
- 2) The accounting methods adopted in this report exclude over \$428,000 for interest during the construction period, credited to surplus or revenue by the company.
- 3) Elsewhere in this report we have indicated the possibility that the company is entitled to compensation for unamortized bond discount, or other allowances, in the event of recapture or expropriation.

Apart from their earning record the following advantages would appear to have enured to common shareholders:

- 1) During 1928 and 1930 common shareholders received the privilege of buying from the company at par three shares for each four shares held. As we have already pointed out in Section 2 herein, the first of these shares was issued when the bid price on the London Stock Exchange was around \$165.00, and the other two were issued when the bid price on the Montreal Stock Exchange was around \$150.00. Whether the common shareholders took advantage of this opportunity to make a capital gain, and whether the bid price could have been sustained in the face of a general acceptance of the opportunity is of course uncertain, but the fact remains that common shareholders did obtain the opportunity during

that period of making a capital gain at a maximum of approximately \$41.25 per share.

2) We have previously referred elsewhere in this report to the close association which obtains between the common shareholders of the company Montreal Engineering Co. Ltd. its consulting engineers, and Royal Securities Corporation Ltd. its security outlet. We have also pointed out that Montreal Engineering and Royal Securities have received total fees for engineering services and underwriting commissions estimated at \$2,160,000 as outlined in Section 2. We do not suggest that these fees or commissions have been excessive (this being a matter for the regulatory body to decide after hearing evidence from all aspects), nor do we suggest that this privilege has been exploited to the detriment of the company, its consumer customers or its senior investors. We do however consider that an advantage lies to the common shareholders in having available a controlled market for their professional or underwriting services.

The position of common shareholders in the event of expropriation of the company's assets at a figure corresponding to the historical rate base, including water rights, franchises and organization costs but excluding price level variations, going value and unamortized bond discount as computed in Section 5, is as follows:

Net assets per page 122		\$ 17,776,485
Deduct: Funded debt and bank loans	\$ 11,373,500	
Preferred shares	<u>5,900,000</u>	<u>17,273,500</u>
Recapture or expropriation value of common stock		\$ <u>502,985</u>

The liquidation value of each common share in such an eventuality would amount to \$14.37 as compared with a computed average original investment by each common shareholder of \$56.71 per share. This computation makes no allowance for a return to the common shareholder of unamortized bond discount, but the considerations with respect thereto are fully discussed in Section 5 of this report.

SECTION X

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CONCLUSION

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CONCLUSION

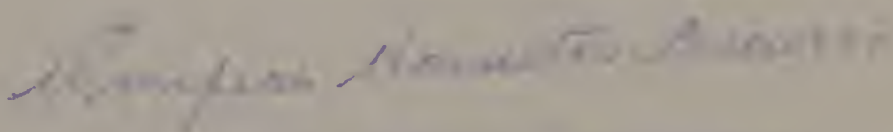
Throughout this report we have endeavored to emphasize that our investigation was confined in scope to matters of a financial and accounting review. We have no doubt engineering and other technical advice will be available in the consideration of the special problems surrounding the subject matter of the enquiry.

Even with regard to matters of accounting treatment it has been necessary for us from time to time, as indicated herein, to select one of several alternatives in order that subsequent calculations might be proceeded with. Our so doing was not intended so much to indicate the decision ultimately to be reached by others, but rather to make possible an overall consideration of the many complex and perhaps contentious phases of the subject.

We desire to express our appreciation of the courteous assistance and cooperation extended to us throughout, and of the time and care devoted by executives of the company in discussing with us the many matters which arose in the course of the examination.

We have the honor to be, Sir,

Your obedient servants,



Chartered Accountants

