Service Date April 25, 1978

BEFORE THE UTILITY DIVISION
DEPARTMENT OF PUBLIC SERVICE REGULATION
MONTANA PUBLIC SERVICE COMMISSION

IN THE MATTER OF the Petition of THE MONTANA POWER COMPANY for Increased Rates and Charges in Gas and Electric Service.	)	UTILITY DIVISION DOCKET NO. 6454 ORDER NO. 4350D

APPEARANCES

APPLICANT:

JOHN J. BURKE, Attorney at Law, 40 East Broadway, Butte, Montana, appearing on behalf of the Applicant.

MARK A CLARK, Attorney at Law, 40 East Broadway, Butte, Montana, appearing on behalf of the Applicant.

PROTESTANTS:

GEOFFREY L. BRAZIER, Montana Consumer Counsel, 34 West Sixth Avenue, Helena, Montana, appearing on behalf of the consuming public of the State of Montana.

WILLIAM E. O'LEARY, Attorney, at Law of the firm of O'Leary and Atkins, 631 Helena Avenue, Helena, Montana, appearing for the Montana Consumer Counsel.

JOHN DOUBEK, Staff Attorney, Montana Consumer Counsel, 34 West Sixth Avenue, Helena, Montana.

INTERVENORS:

WILLIAM G. STERNHAGEN, Attorney at Law, 1625 Eleventh Avenue, Helena, Montana, appearing on behalf of the Anaconda Company.

JAMES A. ROBISCHON, Attorney at Law of the firm of Poore, McKenzie, Roth, Robischon and Robinson, Suite 400, Silver Bow, Block, Butte, Montana, appearing on behalf of the Anaconda Company .

ALAN F. CAIN, Attorney at Law of the firm of Hughes, Bennett and Cain, P.O. Box 1166, Helena, Montana, appearing on behalf of Ideal Cement Division, Ideal Basic Industries.

RICHARD F. GALLAGHER, Attorney at Law, Church, Harris, Johnson & Williams, P.O. Box 1640, Great Falls, Montana, appearing on behalf of Great Falls Gas Company.

EDWARD C. ALEXANDER, Attorney at Law, Alexander, Kuenning, Miller & Ugrin, P.O. Box 1744, Great Falls, .Montana, appearing on behalf of the Montana Power Company Common Stockholders Committee.

FOR THE COMMISSION:

DENNIS R. LOPACH, Counsel
WILLIAM J. OPITZ, Executive Director
FRANK E. BUCKLEY, Administrator, Utility Division

BEFORE:

P. J. GILFEATHER, Commissioner & Presiding Officer
GORDON E. BOLLINGER, Chairman
THOMAS J. SCHNEIDER, Commissioner
JAMES R. SHEA, Commissioner
GEORGE TURMAN, Commissioner

FINDINGS OF FACT

PART A

GENERAL

1. The Montana Power Company (Applicant, MPC, or Company) is a public utility furnishing water, electric and natural gas service to consumers in the State of Montana.

2. This Commission has jurisdiction ever the rates and charges for, and the conditions under which, utility service is rendered in Montana.

3. Pending in Docket No. 6454 is the Applicant's Petition requesting approval of rate schedules and contract rates and certain service conditions, filed September 30, 1976, amended April 12, 1977, and further amended August 26, 1977.

4. Applicant's amended Petition requests Commission approval of rates for electric utility service which are designed to produce an increase in annual gross operating revenues of $45,391,564 during test year 1977.

5. Applicant's amended Petition requests Commission approval of rates for natural gas service which are designed to produce an increase in annual gross operating revenues of approximately $34,500,000 during the test year. This request was contingent upon approval of a gas sale to Montana-Dakota Utilities Company. If the sale was not approved, the Petition sought an increase of as much as $44,000,000 annually.

6. The Montana Consumer Counsel (MCC) has participated on behalf of utility consumers in this Docket since the inception of these proceedings.

7. On December 16, 1976, pursuant to a published notice dated December 2, 1976, the Commission conducted a prehearing conference for the purpose of establishing a schedule for disposition of this case.

8. The conference was attended by interested parties who concurred in the schedule suggested by the Commission Staff. This schedule was published in the Commission's January 4, 1977, "Order for Procedure" which prescribed rules for participation in and the conduct of this case.

9. On June 7, 1977, a notice of public hearing was duly issued by this Commission scheduling public hearings in this Docket to commence on July 6, 1977. This notice was published in several newspapers of general circulation in the State of Montana.

10. Public hearings in this Docket were conducted by the Commission in the Senate Chambers, Capitol Building, Helena, Montana, from July G to July 13, 1977.

11. On July 12, 1977, during the course of the hearings in this Docket, the Commission ordered that Applicant file amend exhibits for the natural gas utility reflecting ". . . the September (1977) increase in natural gas costs," and ordering that further hearings be conducted within thirty days of the filing of the amended exhibits (6 Tr 727-729).

12. On August 26, 1977, Applicant filed supplemental natural gas exhibits reflecting gas cost changes known as of August 19, 1977.

13. On September 6, 1977, a notice of further public hearings on the natural gas portion of this Docket was issued by the Commission, scheduling such hearings to commence on September 28,1977. This notice was also published in several newspapers of general circulation in the State of Montana, and was served upon all parties of record in this Docket.

14. No objection has been made to the adequacy or form of either the June 7, 1977, notice or the September 6, 1977, notice; nor has objection been made to manner or times of their issuance, publication or service.

15. Further public hearings in the natural gas portion of this Docket were conducted by the Commission in the House Chambers of the Capitol Building on September 28, 1977.

16. On April 1, 1977, Applicant moved the Commission to approve a temporary increase in rate schedules and contract

rates, subject to refund pursuant to R.C.M. 1947, '70-113. The motion proposed approval of temporary rates designed to produce additional annual electric revenues of $27,011,200 and natural gas revenues of $20,877,747. The temporary rates requested were based on maintaining the rate of return found in Order 4220C on Applicant's year-end 1976 rate base.

17. On June 9, 1977, the Commission issued Order 4350, directing Applicant to submit temporary rate schedules which would generate a $13,090,000 electric revenue increase and an $11,862,000 increase in natural gas revenues, based on the average 1976 test year, conceded by the Montana Consumer Counsel in its "Statement of Position" filed in this case on May 4, 1977.

18. On July 13, 1977, the Commission approved the temporary rates submitted on June 30, 1977, in accordance with Commission Order No. 4350.

19. On September 21, 1977, Applicant filed a second motion for a temporary increase in natural gas rates, subject to refund pursuant to R.C.M. 1947, '70-113. The motion proposed approval of temporary rates designed to produce a total of additional annual natura1 gas revenues of up to $34,508,803, the full amount sought by Applicant in this Docket.

20. On September 30, 1977, in accordance with an order entered by the Commission during the September 28 hearings, the Applicant filed a memorandum in support of the Motion for Temporary Rate Increase detailing the bases Applicant asserted as grounds for granting the Motion.

21. On October 25, 1977, pursuant to notice to the parties, the Commission heard oral argument on Applicant's September

21,1977 Motion, and took the matter under advisement.

22. On November 1, 1977, the Commission issued Order No. 4350b, which granted Applicant a $6,340,000 annual increase in natural gas rates on a temporary basis. This amount was the gas supply cost increase conceded by MCC witness George Hess. (Order No. 4350a, issued September 14, 1977, related to Applicant's irrigation rates and is not pertinent here).

23. On December 5, 1977, the Commission issued Order No. 4350C, which granted Applicant no further revenue increases, but I which changed the method by which the Order No. 4350 revenues had I been allocated to the various classes of service. This change in the method of revenue allocation was done in order to comply with the intent of Judge Meloy's November 4, 1977, Order in Cause No. 41167, concerning Ideal Cement Co.'s Petition for Review of the volumetric revenue allocation adopted by the Commission in Order No. 4220C, Docket in. 6348. With the entry of the Court's Order holding the Order No. 4220C allocations illegal, the Commission believed that the Order No. 4220c allocations which rested on the premise adopted in the earlier Order, should be reversed as well.

PART B
TEST YEAR

24. Applicant advocated the use of a projected 1977 test year. This approach was opposed by witness Hess, who properly observed that a forecast test year imposes an almost impossible burden on intervenors and staff. Forecasts, of necessity, consist of the estimates of a broad group of company personnel. There is simply no effective means of

checking the accuracy of these judgments. The Commission further agrees with Mr. Hess that use of a forecast test year would have the effect of reducing management's incentive to control rising costs (Hess Direct, p. 7).

25. In view of the difficulties inherent in the use of a projected test year, the Commission accepts the historical 1976test year advanced by Mr. Hess. An historical 1976 test period, adjusted for known changes, provides a proper method of measuring Applicant's investment, revenues and expenses for the purpose of determining fair utility rate levels in this proceeding.

PART C
RATE OF RETURN

Capital Structure

26. The Applicant presented the following capital structures for its electric and gas utilities:

	Electric		Natural Gas	
	Amount	Percent	Amount	Percent
Long-term Debt	$235,931	53.0%	$ 61,296	51.1%
Preferred	36,319	8.1%	13,820	11.5%
Common	173,014	38.9%	44,844	37.4%
Total	$445,264	100.0%	$119,960	100.00

(Exhibit CWR-2).
These structures were the latest submitted by the company, and contained all known changes in capitalization as of June 14, 1977.

27. MCC rate of return witness Dr. John W. Wilson determined tile following capital structures:

Total Utility (12/31/76)

Common Stock	187,758<u>1</u>/	36.85
Preferred Stock	21,984	4.31
Long-Term Debt	299,816	58.84

Projected Total Utility (12/31/77)

Common Stock	225,151<u>2</u>/	35.63
Preferred Stock	51,984	8.23
Long-Term Debt	354,816<u>3</u>/	56.15

<u>1</u>/ Excludes $2,g22,286 of non-utility property (net), $50, 264, 367 of investment in subsidiary companies, $2,106,739 of other investments (primarily common stock in Big Sky and Pacific Gas Transmission Co.) and $116,429 in special funds. For details see 1976, Annual Report to the FPC, page 110, lines 13-19 and referenced sources (pages 201-203 and accounts 121, 122, 123, 123.1, 124, and 125-128).

<u>2</u>/ Assumes that $30 million of common stock would be issued in 1977 and retained earnings on common would be $7,393,000 for the year. The later assumption is based on an 11.25% rate of return on common equity of $187,758,000 of which 35% is retained.

<u>3</u>/ Assumes additions of $7 million pollution control issued in July, 1977 at 6.50% and $50 million first mortgage issued in 1977 at 8.75% (see data response $96); less $2 million note at 7% retired in 1977.

28. Mr. Raff testified on rebuttal that Dr.- Wilson's equity component resulted from an erroneous exclusion of at least $15,772,000. This figure is a total of funds represented by certain U.S. Treasury notes, and Applicant's utility investment in the rolled in gas subsidiaries of Canadian-Montana Gas and Canadian-Montana Pipeline (Raff Reb., p. 9). Dr. Wilson conceded on cross-examination that, assuming that the subsidiaries were allowed no profit for ratemaking purposes, the investment in these properties should be included in the utility capital structure (Tr. 565).

29. Since Applicant's capital structures contain the most accurate depiction of actual capitalization, they are

accepted subject to the following adjustments. Consistent with the Commission's approach in Order No. 4220C and with the rate base findings below, adjustments must be made to the equity component of Applicant's electric utility capital structure.

30. Applicant included in its electric utility equity component amounts related to the investment in the Milwaukee railroad transmission line ($3,025,000), electric utility plant acquisition adjustments ($5,939,000), and the F.P.C.'s fair value determination for the Mystic Lake property ($2,800,000) (See rate base findings). Accordingly, $11,764,000 must be removed from the electric utility equity component. This removal leaves the following structures, which are employed by the Commission for this proceeding:

Gas	($000)	%
Long-term debt	61,296	51.1
Preferred stock	13,820	11.5
Common stock	44,844	37.4
	119,960	100.

Electric		
Long-term debt	235,931	54.4
Preferred stock	36,319	8.4
Common stock	161,250	37.2
	433,500	100.

Cost of Debt

31. Applicant's calculation of its embedded cost of debt of 8.11% for the electric utility and 8.36% for the gas utility is accepted (Exhibit CWR-1, Sch. 8).

Cost of Preferred Stock

32. Applicant determined its cost of preferred stock as 7.5% which compares to a 7.49% determination by Dr. Wilson. The

difference in these two positions is negligible, and the company's asserted cost is accepted.

Cost of Equity

33. The Commission was privileged to have received an extensive discussion of the cost of equity and related issues in this case. Applicant presented Dr. Charles F. Phillips, a noted economist, who presented his views on the fair rate of return for MPC. Eugene W. Meyer of Kidder, Peabody and Company testified concerning the cost of capital to MPC, stressing the earnings required by investors. In addition, Colin W. Raff, a Senior Vice President with Applicant having financial responsibilities, and Applicant's President J. A. McElwain offered brief statements regarding MPC's equity earnings requirements.

34. Appearing for the first time in an MPC rate proceeding was a group of MPC common stock shareholders. Composed of thirteen individuals, the shareholders' committee (Shareholders) was I created by a resolution of the MPC Board of Directors on May 3, 1976 the committee was authorized to actively participate in this and future rate proceedings, with legal expenses and witness fees to be paid below the line for regulatory purposes. After considering MCC's opposition to the proposed intervention of the Shareholders, the Commission authorized a limited intervention confined to rate of return issues.

35. The Shareholders presented testimony from two witnesses, Dr. J. Holton Wilson and Ronald B. Paige. Dr. J.W. Wilson is a faculty member of the University of Montana, teaching economics courses in the University's MBA program at Malmstrom Air Force Base in Great Falls. Dr. Wilson offered a broad economic perspective on the importance and functions of

utility regulation for society. Mr. Paige, a Vice President of Merrill Lynch, Pierce, Fenner & Smith, testified, like Mr. Meyer regarding the cost of capital established by the market.

36. MCC presented Dr. John W. Wilson, an economist with outstanding-credentials and extensive regulatory experience. Dr. J. W. Wilson utilized his return methodology which, after numerous presentations in this state, has become familiar to the Commission. Wilson's exacting procedures produced a return on equity recommendation substantially below those advocated by the MPC and Shareholder witnesses, leaving the Commission a wide range of testimony regarding an appropriate equity return figure.

37. In arriving at a decision regarding the fair rate of return, the Commission must keep certain basic legal guidelines firmly in mind. A. a fundamental level, Montana statutory law dictates that the rate levels approved by the Commission in this proceeding be "reasonable and just." R.C.M. 1947, Sec. 70-105. The courts have recognized that the fixing of "just and reasonable" rates involves "a balancing of the investor and the consumer interests." F.P.C. v. Hope Natural Gas Co., 320 U. S. 591, 603 (1944).

38. Extracts from the two principle decisions on fair return shed further light on the Commission's responsibility in this Order.

> "The return should be reasonably sufficient to assure confidence in the financial soundness of the utility, and should be adequate, under efficient and economical management, to maintain and support its credit and enable it to raise the money necessary for the proper discharge of its public duties." Bluefield Water Works & Imp. Co. v. Public Service Comm. of West Virsini2, 262 U.S. 679, 692-93 (1923) .

> "...the return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks. That return, moreover, should be sufficient to assure confidence in the financial integrity of the enterprise, so as to maintain its credit and to attract capital." Hope Natural Gas Co., supra, at 603.

39. These cases establish three criteria which the Commission must focus on: 1.) The authorized return should permit. MPC the opportunity to earn a return comparable to that being earned on investments or similar risk; 2.) The return should be sufficient to maintain the company's credit-worthiness, and to support confidence in its financial integrity generally; and 3.) The return should allow the company to attract the capital it requires in order to continue its operations.

40. In the Commission's mind, the proper objective of this Order is to determine the lowest level of earnings which will satisfy the three tests outlined above. This level is the point at which investor and consumer interests are fairly balanced. With these three objectives firmly in mind, the Commission proceeds to a summary of the testimony.

41. MPC's Dr. Charles F. Phillips, Jr., a Professor of Economics at Washington and Lee University, presented a comparable earnings approach to the determination of fair return on equity capital. Following a discussion of the Hope and Bluefield criteria, he moved to a discussion of the economic environment affecting operations of MPC and utilities generally. He expressed his belief that the rate of inflation is the single most important factor affecting utility operations, with rate increases lagging constantly increasing operating costs. Inflation inevitably increases capital as well as operating costs, and Phillips stressed

that rising capital costs heightened the risk of the capital intensive utility industry.

42. Recently high inflation rates, Phillips argued, were accountable for the substantial drops in utility stock prices during the period 1965 through 1975. Schedule 19 of Exhibit CFP-1 compared the performance of MPC stock against that of representative groups of utility and industrial stocks. Using 1365 prices as an index at 100, MPC common sold in 1975 at 60.9. Standard and Poor's (S & P's) 55 Utilities were at 54.1, while S & P's 425 Industrials had risen slightly to 103.3.

43. On the immediate problem of determination of the cost of equity, Phillips noted the existence of two general approaches. These are the "market-determined" approach, which attempts to estimate investor earnings requirements, and the comparable earnings approach. Comparable earnings, the approach favored and employed by Phillips, is based on the "opportunity cost" theory-unless a particular stock earns a return equivalent to that available in other investments, investors will seek higher returns elsewhere.

44. The key to the comparable earnings approach, both in practice and as defined in the legal decisions, is the selection of companies whose risks are similar to those of the subject utility. Dr. Phillips maintained, as he did previously in Docket No. 6348, that the relevant standard for selection of a comparison group of companies is comparable risk to the equity holder. A1though utilities enjoy less overall business risk than industrial companies, due to their monopoly status within their service area and the relatively constant demand for utility services, the highly leveraged

capital structure of the average utility focuses the threat of insufficient earnings on the equity owner. Heightened business risks of utilities, due to factors such as inflation, rising capital costs and uncertain fuel supplies, coupled with high equity risks, lead Phillips to conclude that unregulated industrial companies were the groups actually comparable to MPC.
Accordingly, he studied the earnings of Moody's 125 Industrials and S & P's 425 Industrials, which constitute a broad spectrum of the unregulated sector of the economy.

45. Phillips maintained that the earnings of regulated companies should play a minimal part in the analysis. With the utility industry suffering, he argued, use of the returns earned by other utilities would heighten deteriorating financial trends. Phillips suggested a further problem of "circularity," in that past earnings o' other companies might bear no relationship to present investor expectations.

46. The return on average common stock equity for both Moody's 125 Industrials and S & P's 425 Industrials was 14.8% in 1974. Moody's 24 utilities, by comparison, earned 10.5%, while MPC earned 13.2% (Exhibit C.F.P.-1, Schedule 23) Phillips noted estimates that the industrial groups would earn approximately 15% in 1975, while l4PC's earnings trend had been steadily downward since 1969.

47. In arriving at his ultimate recommendation, Phillips attempted to demonstrate that the relative equity risk of MPC exceeded that of the industrial groups. Dr. Phillips acknowledged that relative risk is an "elusive" concept, and that lack of a universally accepted measurement tool meant that the assessment of risk must rely on subjective judgment however, in exhibit CPF1, Schedules 24 and 25, he compared

price-earnings and market to book ratios of MPC, Moody's 24 Utilities and Moody's 125 Industrials for the years 1960 through 1974. MPC was shown as enjoying higher ratios than the industrials until the middle to late 1960's, with consistently lower ratios thereafter. The 24 Utilities, on the other hand, began the period with only slightly higher ratios, and finished substantially below MPC's performance. From this information, and an analysis of six specific factors said to have increased MPC's equity risk, Phillips concluded that MPC is a riskier investment than were his comparison industrial companies. He recommended, as a result, that MPC earn 14.5-15% on its electric utility equity, with a .5% higher recommendation for the gas utility.

48. Phillips concluded his direct testimony by suggesting that the Commission choose some means of directly dealing with the attrition problem, the difficulty experienced by many utilities in actually earning the allowed rate of return. He listed as possible measures an "attrition allowance," or an added factor in the equity return, year-end rate base, interim rates, and the New Mexico approach of allowing automatic rate increases when the equity return falls below a designated level.

49. Eugene W. Meyer, whose job as an investment banker and securities broker keeps him in touch with the investing public, utilized what Dr. Phillips had called the "market-determined" or investor requirement approach to cost of equity.

50. Mr. Meyer observed that despite the improvement in the stock market, utility stocks in August of 1976 still had average prices below book value. He described the process of dilution of shareholder equity which occurs when new equity

sales bring prices below booing value. Simply expressed, dilution occurs because the existing investor's proportionate share of the company's assets is less after the new issue than it was before. Meyer argued that the interests of both the stockholders and ratepayers require regulators to allow returns sufficient to prevent-dilution, and that a utility's true cost of equity is the price at which net proceeds from new equity issues would at least equal book value.

51. New equity issues, .Meyer argued, are required so that utilities can undertake construction in order to meet the demands of existing and future ratepayers. Faced with construction demands, many utilities have proceeded with equity issues despite almost certain dilution. This dilemma, Meyer suggests, could be avoided only by foregoing all construction which could not be supported by means of internal cash generation, which course might lead to energy shortages.

52. Meyer estimated MPC's capital requirements over the 1976-1980 period at $618,231,000, and stated that internal cash generation could provide a maximum of 30% of that total. In order to meet these demands, he said MPC needs earnings adequate to hold a secure Aa/AA bond rating. Downrating might result in an inability to finance when necessary, and would almost certainly raise the required return on equity.

53. Avoidance of dilution, Meyer contended, is possible only if stock prices exceed book value in the time preceding announcement of a new equity issue. Since the announcement usually forces prices downward (market pressure), or a general break in market prices might occur between the announcement and the actual sale, he argued that a price in excess of book value is essential. Since underwriting and

legal costs also reduce the net proceeds of the issue, earnings sufficient to support a substantial premium over book value are required. He suggested that, at a minimum, a market price of 120% of book value was needed. This recommendation was based on average 1975 pressure and cost figures of 12.24%, with the highest such figure begins 22.9%.

54. Meyer also maintained that utility stockholders have historically required returns of 3-5% in excess of the same company's bond yields. He concluded that the recommended MPC return of 15%, besides satisfying the required bond yield--equity return differential, would produce a market to book ratio of approximately 121. 5%. A return of 15% or greater had been determined appropriate by at least six regulatory bodies, he said.

55. The direct testimony of the first Shareholders' witness, Dr. J. H. Wilson, was an attempt to describe the proper function of utility rates in terms of economic theory. He suggested that the seemingly contradictory interests of ratepayers and investors could be reconciled if his ratemaking criteria were allowed to guide regulatory policies.

56. A key point in Dr. J. H. Wilson's presentation was that utility rate levels must be sufficiently wish to allow and encourage the utilities to internalize all production costs. Other facets to be considered in ratemaking were encouragement of efficient production and resource utilization at minimal cost, encouragement of technical innovation, equitable treatment of all customer classes, and creation of a regulatory environment which would ensure adequate, continuous and stable service.

57. Dr. Wilson contended that utility rates are artificially low at the present time, and that rate levels must be sufficient to compensate the utility for all of its costs if future needs are to be met with reliable utility service. He said that earnings must support high bond ratings and must prevent dilution if long term goals were to be realized.

58. The second Shareholders' witness, Mr. Paige, echoed many of Mr. Meyer's concerns. Like Meyer, Paige stressed investor requirements in his testimony.

59. To the average investor, the nature of the investment represented by utility stocks has changed in recent years, Paige said. Investors formerly valued these stocks for their growth potential, and were confident about the prospects for regular dividend increases. The more recent viewpoint, however, is that utility stocks are yield investments, more like investments in bonds. As evidence of this shift, Paige pointed to a decline in the differential between the yields of A-rated utility bonds and utility common stocks (Exhibit RBP-l). From a differential of 275 basis points in 1970, the differential had dropped to 34 basis points in 1977. Paige's explanation for this drop had to do with a lack of confidence in future dividend increases, stemming from inadequate utility industry earnings. With investors increasingly focusing on dividend yields, a dividend reduction might have a serious impact on stock price.

60. Like the other witnesses for MPC and the Shareholders, Paige discussed the importance of avoiding dilution. He agreed with Mr. Meyer that a sufficient margin of safety would be afforded if a market to book ratio of 120% were maintained and suggested that earnings of 14-15% would achieve the target ratio. With MPC facing a substantial

construction program, Paige maintained that the return allowed in this proceeding must be sufficient to reverse the adverse financial trends of recent years.

61. The only witness who advocated a return of less than 14% was MCC's Dr. J. W. Wilson. As a result of his comparable earn ratings and discounted cash flow (DCF) studies, Wilson concluded that returns of 11% for the electric utility and 11.5% for the gas utility would satisfy investor requirements.

62. Dr. J. W. Wilson's equity cost analysis began with a comparable earnings approach which used both regulated and unregulated companies. Wilson cited several difficulties with exclusive reliance on regulated firms. Like Phillips he recognized a certain circularity in sole reliance on the earnings of other regulated firms. Also, he noted that earnings of firms in other jurisdictions might reflect outdated conditions, and might be either in adequate or excessive. To remedy these problems, Wilson looked to groups in both sectors.

63. Wilson first selected a group of 88 large electric utilities and a group of electric utility subsidiaries of holding companies (Exhibit JWW-2, Schedule JW-4). He found that the mean return for all of these companies ranged from a high of 12.5% in 1970 to a low of 1'.0% in 1974. The mean 1975 return was 11.7%.

64. Wilson explained that both regulated and unregulated firms' earrings should be examined, but that unregulated returns should be viewed as an outside limit in a utility rate proceeding. With the inherently lower risks of monopoly companies, and stable profits, utilities should receive lower

returns if regulation were to fulfill its purpose. In Schedule JW-6, Wilson drew from a Business Week article data on the equity returns of a wide range of industries in 1976. These returns ranged from 7.6% in the steel industry to 22.2% in the trucking industry, with an all-industry average of 14.0%. Utilities were found to have earned 11.9% in 1976. Wilson then selected a group of firms with average earnings in the 9-11% range for the 1972-1976 period. The point of this exercise, he said, was to demonstrate that many successful companies operating without regulatory restraints had earned far less than the MPC's requested levels.

65. In direct contrast to Dr. Phillips, Dr. Wilson concluded that utilities' risks are less than those of unregulated companies. In support of this conclusion he cited the stable earnings and dividend growth rates of the utility industry, and the general lack of competition in that sector. Also cited were the comparatively small number of dividend reductions and the absence of bankruptcies in the utility industry.

66. Dr. Wilson presented further evidence on the question of relative risk in the form of beta coefficient and capacity utilization information. The beta coefficient measures the movement of a stock's price relative to the-movement of the New York Stock Exchange Composite Average. A coefficient of less than 1 indicates a tendency to vary less than does the Average. In Schedule JW-9, Wilson listed the coefficients for the utilities on JW-4, and found a mean for all these companies of .73. MPC, at .70, was shown as slightly less volatile than was the utility group.

67. Wilson offered certain data on a factor called capacity utilization. This approach seeks to determine the stability

of an industry by examining the standard error of capacity utilization, a statistical measure of the variation in the use of an industry's productive plant over a given period. Examination of Schedule JW10 would lead one to conclude that public utilities are among the most stable of industrial groups.

68. In his final attempt to demonstrate the relatively low risk of the utility industry, Wilson looked to several indices of the Value Line investors' service in order to demonstrate the relatively low risk of the utility industry. Value Line in 1977 showed electric utility common stocks as among the safest investments available, with relatively high price stability and predictability of earnings. Wilson concluded that, judging from the various indicators of reduced utility risk, regulators should not allow earnings levels equal to or in excess of the all-industry average. He further concluded that, with many successful unregulated firms earning no more than 11%, a return no higher than 12% could be supported on a comparable earnings basis.

69. As a means of checking his comparable earnings conclusions, Wilson next undertook a DCF study. Wilson described the DCF as a means of estimating the opportunity cost of capital, or investor return requirement. The DCF theory maintains that the cost of capital is equivalent to the discount rate perceived by investors in viewing future dividend rates and stock prices upon resale.
The discount rate is found by dividing present dividends by the present price and adding a factor which represents the investors' expected rate of dividend growth. With dividends and price known quantities, the difficult portion of the method comes in the development of the growth factor.

70. Wilson's DCF methodology relied on dividend yield and growth information for two groups of utilities he had formerly examined in his comparable earnings analysis. He explained that use of the data for a group of comparable firms produced statistically better results than did use of the subject firm's data e' one. The single firm's stock might behave erratically for any number of reasons, and, therefore, reliance on a broader spectrum of companies yields more reliable data.

71. Wilson first determined current dividend yields for the utility groups by taking current annual dividends and dividing them by average stock prices, and found an average yield of 8.07%. To determine a single growth rate estimate, he determined growth rates for periods of from one to five years (1970-1975), and often years (1965-1975), and calculated a single weighted average as his best estimate of the proper growth rate for use in the DCF equation. In this manner he found equity costs of 11.03% for his 34 small electric utilities, and 10.94% for the 88 larger utilities.

72. In a further refinement of his technique, Wilson employed regression analysis to study the variations in his DCF results among the various utilities. In this manner he found an inverse relationship between the cost of equity and a particular utility's common equity ratio and effective income tax rate. He thus concluded that MPC's cost of equity was .49% lower than the 10.94% average cost of the 88 utilities.

73. Wilson concluded that MPC had a cost of equity approximating 11%. He moved then to a discussion of market pressure as a further factor to be considered by the Commission, and argued that the DCF application had taken account of pressure

conditions. Since some of the 88 utilities had issued stock during the study period, their dividend yields had reflected the effects of pressure. To further account for pressure, however, he calculated a factor of .15-35% of MPC's book equity to account for both pressure and issuance costs, and advocated adding this factor to the equity return requirement previously determined.

74. In conclusion, Dr. Wilson advocated a return of 11% for the electric utility and 11.5% for gas. He estimated coverage resulting from his overall return recommendation at 2.34 times on an after tax basis, with before tax coverage of 3.49 times. Coverage in this range, he argued, would be sufficient to maintain a high grade bond rating without being excessive.

75. The rebuttal presentations of the MPC and Shareholders witnesses took serious issue with Dr. J. W. Wilson on a broad range of points. The filing of rebuttal testimony occurred in June of 1977, and most of the rebuttal witnesses noted with concern the actions of the bond rating agencies in downgrading the quality ratings of MPC's bonds in early 1977. In January Moody's had dropped the rating from Aa to A noting declining coverage ratios. S & P's in March announced a drop from AA to A, citing "substandard" earnings protection and a "very poor rate order (Order No.4220C, Docket No. 6348)." Without substantial rate relief and a rejection of Dr. Wilson's testimony, the rebuttal witnesses argued, further downgradings might be in prospect.

76. Rather than discussing the rebuttal arguments at length here, the Commission chooses to address them in its analysis of the cost of equity evidence. The following list is intended to summarize the major assertions made in rebuttal on cost of equity issues:

--Mr. Raff argued that the coverage ratios Dr. Wilson claimed would result from his recommendation were erroneous, and the result of a formula financial analysts would reject.

--Mr. Raff noted that a Solomon Brothers' report, commenting on the allowed return on equity of 11. 25% on the electric utility in Order No. 4220C, states "We do not expect the Company to earn even 10% on common equity for 1977". (Rebuttal, p. 11)

--Mr. Meyer stated that Wilson mistakenly focused on business risk and not financial risk in his comparable earnings study.

--If earned returns of other utilities were used to establish the allowed return in this case, investors could expect to earn 2.5% less than the allowed figure.

--Wilson's recommendation would result in a market to book ratio of 80%, with dilution virtually certain to result when MPC undertook necessary new equity issues.

--Dr. Phillips shared Mr. Meyer's criticism of the use of earned returns of other regulated companies, and doubted that even allowed returns were useful since the utility industry's performance remained poor at existing earnings levels.

--Use of beta coefficients, capacity utilization and Value Line's indices to compare relative risk was so flawed that Wilson had really presented no risk analysis.

--The DCF methodology used erroneous assumptions of fixed earnings retention and dividend growth rates; the conclusion that investors rely on future growth rates may be in error; and the - determination of which past growth rates to use, or how to weight past growth rates is difficult at best.

--Use of growth in tangible book value per share for the DCF growth factor would have been preferable.

--Dr. J. H. Wilson criticized the use of data from unregulated firms, as did Mr. Paige.

--Paige stressed that the Commission should look to returns allowed in other jurisdictions, noting that the average return on equity allowed in the 46 original cost jurisdictions was 13.3%. Paige believed actual earnings would be 2.01-2.5% less than the allowed return.

Analysis of the Evidence

77. Having reviewed all of the record evidence on cost of equity issues, and having carefully studied the rebuttal testimony of the company and shareholders' witnesses, the Commission determines a fair rate of return to MPC's equity holders to be 12% for the electric utility and 12. 25% for the natural gas utility. In making this determination the Commission has independently assessed the company's earnings requirements in the light of the evidence presented, and has rejected the precise recommendations of all the witnesses. These equity returns, when combined with the weighted costs of debt and preferred stock, produce overall costs of capital of 9.50% for the electric utility and 9.71% for the gas utility.

78. A key dispute in this record regarding the cost of equity revolved around the relative risk of the utility and the unregulated sectors of the economy. Relative risk was a central consideration in Dr. Phillips' analysis, since he relied solely on a comparable earnings approach. Phillips' argument that utilities are higher risk investments than are the average unregulated stocks was based on his analysis of equity risk. Dr. J. W. Wilson's conclusion that utilities are less risky stressed stable earnings and the advantages of monopoly operations. On rebuttal, Wilson's conclusion was criticized by Mr. Meyer, who felt emphasis should be placed on financial rather than business risk.

79. The Commission agrees that the average utility has a

relatively high level of financial risk as a result of the high levels of debt employed in its capital structure. This risk arises as a result of the fact that the equity holder does not receive a share of the firm's earnings until all the fixed charges have been satisfied. The existence of this risk feature does not exclude the perception of other elements of risk, however. Nor does Dr. Wilson's exclusive emphasis on business risk provide a full explanation of relative risk. The Commission finds that the utility industry generally, and MPC in particular, is, on balance, a lower risk investment than is an investment in the unregulated sector. Investors weigh financial risk against such features as the stability of the demand for a utility's service and the lack of competition within the service area Phillips Dir p. 35. As result of the conclusion that utilities enjoy lower risk than the unregulated industries, the Commission finds that MPC's return, must be less than the industrial sector average, rather than higher as Phillips argued.

80. The foregoing conclusion concerning relative risk is based upon a balanced view of the risk factors emphasized by the parties. Dr. J. W. Wilson attempted to illustrate his risk conclusion with certain empirical evidence. This evidence concerned I beta coefficients of utility stocks, capacity utilization information and the evaluations of Value Line analysts as reflected in that organization's published indices. Of these factors, only the beta coefficient information is found to have substantial value in a risk conclusion. The beta coefficient represents a tool of risk analysis which is useful in assessing investors' judgements of the over-all risk of a stock, or the stocks of a particular group of companies. The fact that the mean beta coefficient of all the utility stocks is 0.73 is a valuable indicator that the utility industry in general is considered

stable, and a relatively low risk in the market place. The capacity utilization conclusions advanced by Wilson employed out-dated information. Wilson apparently selected only those Value Line indices which would support his conclusion. Accordingly, the Commission concludes that the risk of utility stocks, although less than that of industrial stocks, is not so slight as Dr. Wilson represented.

81. Having concluded that r1PC's equity return requirement is not as high as the average industrial firm's, the Commission must examine Dr. Wilson's methodology to determine if his 11-11.5% recommendation has merit. Wilson was the only witness who presented a DCF analysis, and the Commission finds that the DCF is a useful and widely-accepted method of estimating a utility's equity return requirement. Used jointly with Wilson's comparable earnings study, the DCF is a valuable guide in this case.

82. Dr. Wilson examined both regulated and unregulated firms in arriving at his conclusions concerning the earnings of comparable firms. This approach differed from Phillips' almost exclusive reliance on the unregulated sector. The Commission agrees with Wilson's examination of both regulated and unregulated earnings.

This method more closely adheres to the Hope dictate that allowed returns be commensurate with returns earned by firms having similar risks. Data from both sectors is valuable in a determination of MPC's fair return, since MPC competes with firms in both sectors for new capital.

83. The Commission cannot agree with Messrs. Paige and J. H. Wilson that financial information regarding unregulated firms is of no value in a comparable earnings analysis for a utility. With appropriate adjustments for risk differences, this data has a definite role. It is interesting to note, in

passing, that the position of the Shareholders' witnesses in this regard was directly opposed to that of MPC's Dr. Phillips.

84. Perhaps the most strenuous argument made against Dr. J.W. Wilson's comparable earnings study centered on his use of earned returns of other utilities as a basis for his allowed return recommendation. Dr, Phillips, on rebuttal, stressed that few utilities had actually earned their allowed returns. Schedule 1 of Phillips' rebuttal exhibit showed few utilities earning their allowed returns, but showed several firms exceeding their allowed return. Mr. Meyer concluded on rebuttal that the return earned by MPC following the institution of the rates approved herein would be 2. 5% less than that allowed. Mr. Raff's quote from a Solomon Brothers' report indicates an anticipated 1.25% differential be between the earned return and allowed return.

85. The Commission finds Dr. Phillips' rebuttal exhibit showing earned and allowed returns to be of little merit. Since income levels had apparently not been adjusted to show the impact of a full year's earnings at the higher rates allowed during the course of the year, the asserted showing of attrition cannot be accepted at face value. The use of earned rather than allowed returns is not in itself a flaw. Although attrition has become a fact of life for most utilities Phillips' exhibit shows that some utilities are today exceeding their allowed returns. The Commission cannot guarantee the company that it will earn the allowed return, nor can it guarantee ratepayers that the allowed return will not be exceeded. To the extent attrition appears likely, the timely use of interim rate increases affords, as it has in this Docket, an effective means of addressing the problem. The value of the interim increase in dealing with attrition

was recognized by Dr. Phillips.

86. The fact that utilities have generally been earning less than their allowed return is a serious problem. As a result, of this fact, and the fact Dr. J. W. Wilson has made no adjustment for attrition despite his use of earned returns, the Commission finds that Wilson's comparable earnings conclusions, which reached as low as 11%, represent less than a fair return level for MPC.

87. Dr. J. W. Wilson's comparable earnings conclusions were independently checked against his DCF studies. These studies occasioned numerous criticisms in the rebuttal case, although these criticisms were generally unpersuasive. For instance, company witnesses pointed out that Wilson's selection of past dividend growth rates for various periods and his manner of weighting those growth rates to obtain a single rate, relied heavily on his judgment regarding a proper method. The fact that any rate of return methodology uses judgment is hardly startling. Opposing witnesses might have been more effective had they directly challenged Wilson's judgment, rather than simply commenting on its use at various points.

88. Dr. Phillips observed that Wilson's use of dividend growth rates in his DCF model differed from the F.P.C.'s use of growth in tangible book value per share. He argued that use of the book value factor would have been equally logical, and would have produced higher results. The Commission sees merit in the argument that growth in book value might be an important factor in an investor's analysis of the future earnings he could reasonably expect. Accordingly, Wilson's study using dividend growth rates must be viewed as one factor, with a dcf approach using book value data also yielding valuable results.

89. With the foregoing analysis in mind, the Commission finds MPC's equity return requirements to be slightly in excess of Dr. J. W. Wilson's recommendations. Use of growth in tangible book value in Wilson's DCF analysis would have yielded somewhat higher returns. However, Applicant's coal-mining operations and its mine-mouth generation facilities substantially reduce the risk of its electric operations. The Commission further finds that the record supports equity returns of 12% for the electric utility, and 12.25% for the gas utility, and that higher return levels are not required. Wilson's studies, with the slightly adjusted results contained herein, constitute the strongest evidence on cost of equity matters in this record.

90. The Commission finds that MPC's natural gas operation is not substantially more risky than its electric business. In view of the prompt rate relief afforded Applicant upon increases in Canadian gas costs, and because Applicant's gas exploration and development funds are supplied by ratepayers, the risk differential is minimal. The record demonstrates that Applicant now enjoys a greater flexibility in its gas supply posture than was formerly true, due to the Trans-Canada and MDU sales contracts.
With these sales reducing the volume of high-cost Canadian gas which must be imported at Carway, MPC can meet its gas market at lower costs. This fact should help to maintain gas deliveries near their present levels. As a result of all these factors, a differential return of .25% is sufficient to compensate MPC's equity holders for this greater risk.

91. The record before the Commission contains an extensive discussion of the dilution issue. Various witnesses advocated an equity return sufficient to support a market to book ratio

of 120% as a hedge against dilution. A ratio of this magnitude, they argued, would fully provide for issuance costs and market pressure at the time of a new equity issue. With MPC's construction program apparently making new equity issues inevitable, these witnesses argued that Dr. Wilson's return recommendation would almost certainly result in dilution. In further support of such a ratio, Applicant cites with enthusiasm the case of New England Telephone and Telegraph Co. v. Mass. Department of Public Utilities, Mass. 354 N.E. 2d 860, 16 P.U.R. 4th 346 (1976), in which the Supreme Judicial Court of Massachusetts concluded that a minimum market to book ratio of 120% was required to compensate a utility for its issuance costs and for market pressure.

92. The Commission recognizes that dilution poses a dilemma for a utilities management. The interests of existing shareholders must be balanced against the utility's need for new plant and its statutory service obligation. The Commission cannot agree, however, that it can assure stockholders that a particular level of earnings will prevent dilution. Market prices respond to a great many conditions, many of which are completely beyond this Commission's control. Any attempt to establish a fixed market to book ratio, even if agreement could be obtained as to what a proper ratio would be, would seem destined to failure in view of the volatility of the market.

93. Dr. J. W. Wilson made a passing observation that issuance costs and costs associated with market pressure could be more inexpensively treated in the utility's cost of service than by means of an incremental equity return allowance. Despite his apparent preference for such a treatment, he then computed an allowance for these costs for inclusion in the

equity return. This approach; based on the anticipated size of a new equity issue, projected issuance costs and pressure; produced an allowance in the .15% to .35% range. The Commission finds this methodology reasonable. The return allowed herein, which exceeds Wilson's recommendation as adjusted for possible dilution, should protect existing stockholders. Applicant is encouraged to consider the cost of service approach to these costs in future applications.

94 The record contains a great deal of discussion of last year's downgrading of MPC's bonds. The Commission notes this discussion, and shares the concern of the various parties. This concern with bond ratings is not, however, an overriding concern in the determination of reasonable rates. The parties and the public should understand that high bond ratings are maintained through a high return on equity. When the costs of maintaining a high rating substantially exceed the increased interest costs associated with a lower rating, the Commission must consider the impact on ratepayers of the higher rating. In this light, the downgrading is unfortunate but not overly significant of itself.

95. The Commission finds that the coverage ratios likely to result from the rate levels established herein are within a satisfactory range to allow MPC to attract capital upon reasonable terms. The rates established herein will maintain Applicant's financial integrity while meeting the standard of comparability with the earnings of firms having similar risk characteristics.

PART D

ELECTRIC UTILITY

Rate Base

96. The Commission finds the following depreciated original cost electric utility rate base:

MONTANA POWER COMPANY
Electric Utility Rate Base
1976 Test Year
(000)

	1976 Actual (A)	Adjustments (B)	1976 Pro Forma (C)
1. Utility Plant in Service			
2. Electric	$446,543	$ 55,464	$502,007
3 Common	9,346	-	9,346
4. Total	$455 889	$ 55,464	$511 353
5. Accumulated Depreciation			
6. Electric	75,980	1,012	76,992
7. Common	1,670	-	1,670
8. Total	77,650	1,012	78,662
9. Total Net Plant	$378,239	$ 54,452	$432,691
10. Eliminate Amounts Recorded on Books in Excess of Original Cost			
11 Mystic Lake	(2,012)	-	(2,012)
12 Milwaukee Line	(3,025)	-	(3,025)
13. Total Adjustments	(5,037)	-	(5,037)
14. Less: Customer-Contributed Capital			
15. Accumlated Deferred Income Taxes			
16. Accelerated Amortization	2,027	-	2,027
17. Liberalized Depreciation	16,201	506	16,707
18. Accumlated Deferred Investment Tax Credits (Pre-1971)	1,565	-	1,565
19. Customer Advances for Construction	618	-	618
20. Total Customer-Contributed Capital	20,411	506	20,917
21. Plus: Working Capital			
22. Gross Cash Requirements	3,662	710	4,372
23. Credit for Accrued Taxes	(4,123)	(1,280)	(5,403)
24. Fuel	1,408	104	1,512
25. Materials and Supplies	4,789	-	4,789
26. Total Working Capital	5,736	(466)	5,270
27. Total Electric Utility Rate Base	$358,527	$ 53;480	$412,007

97. The Commission finds that an average rate base is appropriate in this proceeding. As explained by witness George F. Hess, a rate base which averages investment in plant in service achieves a proper matching of operating income with the investment that produced that income during a given test year period. Proper rate-making requires that the test year

revenues and expenses realistically reflect expected performance under the test year. Further, witness Hess pointed out that his recommended rate base contained adjustments for many known changes.

98. The company's proposed 1977 year-end rate base is rejected in view of the Commission's selection of a 1976 adjusted test period.

99. In Order No. 4220C, Docket No. 6348, the Commission rejected year-end rate base, pointing out that MPC had failed to restate revenues and expenses to year-end levels as is necessary to recognize and give effect to the matching principle. MPC's response in this Docket was to present in its rebuttal case, through .Messrs. Heidt and Harrington, year-end 1976 rate base and income statement data, normalized, annualized and adjusted for known changes. Although this presentation apparently meets the Order No. 4220C concern about mismatching, the Commission fears that rebuttal presentation or these adjustments has prevented an intensive review of the restatements by the parties. With the parties having had no opportunity to use discovery devices and make meaningful inquiry into the company's methodology, the Commission must consider these restatements speculative, and the year- end 1976 rate base with associated adjustments must be rejected.

100. The depreciated original cost values shown in lines 2 and 3 of the Finding No. 96 table do not include amounts recorded in Accounts 116 and 116 of the NARUC Uniform System of Accounts, by which Applicant maintains its books of account. The Commission's order in Re The Montana Power Co., 56 P.U.R. (n.s.) 193 (1944), directed that a total of $6,070,402 be placed in these two accounts. The present net amount in these accounts is $5,939,000. This amount is the difference between the cost to Applicant of various properties and the original cost of those properties when first dedicated to public use. The totals in these two accounts have been excluded from rate base because, by definition of the accounts, they represent an investment which exceeds original cost. In Order No. 4220C, Applicant was permitted to amortize these acquisition adjustments above the line over a twenty year period, commencing January 1, 1978, Applicant

now argues that the unamortized balances should remain in rate base. However, since these amounts clearly exceed original cost, the Commission denies the request for inclusion in rate base.

101. MPC attempted to include the fair value net investment of the Mystic Lake Project in the depreciated original cost of the property although the fair value net investment exceeded the depreciated original cost by $2,012,000. Consistent with the MPC's treatment and Mr. Hess' recommendation, the Commission finds that proposed rate base should also be reduced with respect to the Milwaukee Line property, as MPC's figures included an amount of $3,025,000 in excess of the original cost of such property when first dedicated to public service. This treatment of the Mystic Lake and Milwaukee Line properties is consistent with the Commission's treatment of these properties for purpose of capital structure (See Finding No. 30).

102. MPC sought to include certain amounts of customer-contributed capital in the rate base. All such capital must be excluded from the rate base because it is not the proper role of the ratepayer to advance portions o' the capital necessary to construct or maintain utility plant. The following are types of customer-contributed capital which must be excluded: accumulated deferred income taxes, accumulated deferred investment tax credits, and customer advances for construction. The deferred taxes arise as a result of MPC's normalization of the tax effects of accelerated amortization and liberalized depreciation the tax credits likewise arise from MPC's normalization of its income tax charges to eliminate the effect of current investment tax credits and their amortization over the life of the property to which they relate. Exclusion of customer advances is consistent with the notion that here must be a proper relationship between plant investment and the revenues which ordinarily such investment might be expected to generate.

103. Dr. Phillips treated tax deferrals as a zero cost component of his

capital structure, and Applicant argues that this approach is preferable to the Hess approach of treating tax deferrals as a rate base deduction. The Commission finds, however, that deduction of deferrals from rate base is an accepted regulatory approach. Because deferrals are used to acquire assets, the Commission finds that the approach which treats them in conjunction with rate base is more logical than the capital structure approach.

104. With respect to the determination of allowance for working capital, the Commission finds as follows:

A. The gross cash requirements may be calculated at 1/8th of the sum of operation and maintenance expenses excluding purchased power and fuel, plus property taxes. The reason for the exclusion of fuel is that, like purchased power, it is a major item of expense for which there is a substantial lag in the payment thereof by MPC. Property taxes must be included to reflect the postpayment of such taxes, and the availability of these funds to MPC for working cash purposes. The credit for accrued taxes is included because some of the revenues which MPC receives and uses to cover property taxes are collected long before the taxes are paid over to the taxing authorities. It is apparent that, since these taxes are postpaid, MPC has the use of such funds between the time they are received from the customer and the time they are paid. These property taxes are payable in November of the current year and in May of the following year and, with that payment schedule, MPC has available on the average more than 60 percent of the property tax accrual.

B. Consistent with the average rate base adopted in Finding No. 96, the calculation of the allowance for fuel and materials and supplies must be the average actual balance as shown on MPC's books for the test year 1976.

105. During 1976, MPC invested approximately $86 million in Colstrip and

related transmission facilities. However, on the average only $31 million was in service during the test year 1976. Specifically, the Colstrip #2 unit did not go into service until August 1976. This substantial addition increased the capability of MPC's facilities by approximately 142 mw. Although the unit was not fully required in the test year 1976 to meet MPC's retail loads, it will have a significant impact on MPC's future cost of service. With the foregoing in mind, the Commission determines that the proper manner in which to treat the problem posed by this investment is to annualize the 1976 additions. As explained below, certain revenue attributions counterbalance the rate base treatment of this excess capacity. However, it must be pointed out that proceeding in this manner does distort the relationship between loads and resources in such a way as to give the bleakest possible picture of MPC's earnings rate. Annualization of the Colstrip investment is accomplished as follows:

Montana Power Company
Electric Utility
Adjustments to Rate Base to Include Colstrip Units 1 and 2
and Related Transmission for Entire Year
(000)

	1976 Addition	Adjustment to Include for Entire Year
Plant in Service		
Colstrip - Jan. 1/13	$ (923)	$ (71)
Feb. 2/13	96	15
Mar. 3/13	1,017	235
Apr. 4/13	2,636	811
May 5/13	271	104
June 6/13	867	400
July 7/13	606	326
Aug. 8/13	41,800	25,723
Sept. 9/13	1,313	909
Oct. 10/13	10,523	8,095
Nov. 11/13	275	233
Dec. 12/13	4,267	3,939
Total	$ 62,748	$ 40,719
Related Transmission		
Jan. 1/13	$ -	$ -
Feb. 2/1	-	-
Mar. 3/13	142	33

Apr. 4/13	13	4
May 5/13	-	-
June 6/13	-	-
July 7/13	-	-
Aug. 8/13	21,937	13,500
Sept. 9/13	899	622
Oct. 10/13	180	138
Nov. 11/13	(33)	(28)
Dec. 12/13	516	476
Total	$ 23,654	$ 14,745

Total Plant in Service	$ 55,464
Accumulated Depreciation	
Colstrip	839
Related Transmission	173
Total Accumulated Depreciation	$ 1,012
Accumulated Deferred Taxes - Liberalized Depreciation	488
Fuel	104

106. The above adjustment to accumulated depreciation is 1/2 of the additional depreciation that would have been charged during 1976 if these facilities had been in service for the entire year. Likewise, the adjustment for accumulated deferred taxes - liberalized depreciation is 1/2 of the additional deferred taxes that would have been charged if the plant had been in service during the entire year. The adjustment for accumulated deferred taxes shown above is $488,000, whereas the adjustment on line 17 of the Finding No. 96 table is $506,000. The difference between the $488,000 and $506,000 is not related to the Colstrip additions, but rather arises because the 1976 final estimate of deferred taxes is used in the income tax calculations herein. The fuel stock adjustment is appropriate to bring them to the level which MPC estimated for the year 1977.

107. The Applicant's proposed electric rate base included certain amounts of construction work in progress (CWIP) which are non-revenue producing. The Applicant also proposed to include a portion of its continuing long-term CWIP in rate base and cease capitalizing the Allowance For Funds Used During Construction (AFUDC) on such plant. CWIP is not used and useful in rendering service to present customers and has, therefore, been

deleted.

108. The following table depicts the 1976 actual results of operations for MPC's electric utility and adjustments which are necessary for ratemaking purposes:

Revenues, Expenses, and Earned Return

Montana Power Company
Electric Utility
Operating Revenues, Operating Expenses and Rate of Return
Earned at Present Rates
1976 Test Year
(000)

	1976 Actual (A)	Adjustments (B)	1976 Pro Forma (C)
1. Operating Revenues	$ 92,573	$ 3,557	$ 96,130
2. Operating Expenses			
3. Operation and Maintenance			
4. Purchased Power	5,443	(3,171)	2,272
5. Fuel	6,900	2,548	9,448
6. Other	22,421	3,552	25,973
7. Total	$ 34,764	$ 2,929	$ 37,693
8. Depreciation	7,757	1,975	9,732
9. Amort. of Inv. Tax Cr.-Dr.	4,599	5,171	9,770
10.Amort. of Inv. Tax Cr.-Cr.	342	-	342
11 Provision for Fed. Income Taxes			
12 Deferred-Liberalized Depr.	4,178	1,013	5,191
13. Deferred - Kerr	(516)	-	(516)
14. Deferred - High Mtn. Sheep	(118)	43	(75)
15. Deferred in Prior Years	(77)	-	(77)
16. Current	(845)	(6,711)	(7,556)
17. Taxes OtherthanIncomeTaxes	8,530	2,725	11,255
18. Corporation License Tax	1,154	(820)	334
19. Total Operating Expenses	$ 59,084	$ 6,325	$ 65,409
20. Utility Operating Income	$ 33,489	$ (2,768)	$ 30,721
21. Amortization of Profit on Debt Reacquired at a Discount	124	-	124
22. Balance Available for Return	$ 33,613	$ (2,768)	$ 30,845
23. Electric utility Rate Base	$358,527	$ 53,480	$412,007
24. Rate of Return Earned at Present Rates	9.33%		7 49%

(The reference to "Rate of Return Earned at Present Rates" applies only to Column J C since the results shown in Column A reflect the actual rates in effect during the year before the increase allowed by Order No. 4220C.)

1O9. The following table details the adjustments to MPC's operating revenues shown in the foregoing Finding:

Montana Power Company
Electric Utility
Adjustments to Operating Revenues
1976 Test Year
(000)

1.	Adjustments to Operating Revenues		
2.	Montana Retail Rate Increase Allowed in Order 4220C		
3.	Actual 1976 Retail Revenues	$ 74,317	
4.	1976 Retail Revenues at Order 4220C Rates	76,528	
5.	Adjustment		$2,211
6.	Retroactive Revenue Collected in 1976, Non-recurring		(110)
7.	Revenue Deficiency from Non-Jurisdictional Sales		
8.	1977 Depreciated Original Cost Rate Base Allocated to Non-Jurisdictional Sales per Company	26,030	
9.	Minimum Return at 6.5%	1,692	
10.	Estimated 1977 Return at Present Rates	568	
11.	Income Deficiency at Present Rates	1,124	
12.	Revenue Deficiency at Present Rates	2,319	
13.	Estimated 1977 Revenue at Present Rates	1,595	
14.	Percent Deficiency	145.4%	
15.	1976 Actual Revenue	1,519	
16.	1976 Revenue Deficiency		2,209
17.	Adjustment to Out of State Sales		
18.	1976 Actual Revenue	13,283	
19.	Pro Forma Sales with Median Water and Colstrip #2 in Service for Entire Year		
20.	Utah K-1	3,835	
21.	Utah MU-1 and WWP, MU-2	2,159	
22.	Secondary	5,729	
23.	Total Pro Forma	11,723	
24.	Adjustment		(1,560)
25.	Adjustment to Miscellaneous Operations Revenues		
26.	1976 Actual	3,353	
27.	1976 Pro Forma per Company	4,151	
28.	Adjustment		798
29.	Total Adjustments to Revenues		$ 3,557

(A) The adjustment to operating revenues set or the on lines 2 to 5 of the foregoing table is necessary to reflect the retail rate increase allowed by this Commission in Order No. 4220C. The revenues at the new rates shown

on line 4 were calculated by MPC and adopted by Consumer Counsel. For reasons already mentioned, the above figures are the revenues based on 1976 sales rather than on sales as annualized by MPC to year-end levels.
(B) The adjustment on line 6 reflects a collection of $110,000 from Malmstrom and Glasgow Air Force Bases. This was a retroactive collection of revenues for a prior period under contractual arrangement and will not be collected again in the future.

(C) The adjustments reflected on lines 7 to 16 are essential to impute enough revenue to the non-jurisdictional sales to roughly cover their cost of service. This Commission has found on numerous occasions that where, as is here the case, sales to utilities not subject to our jurisdiction are not covering their fair share of costs, there is an unreasonable burden placed upon jurisdictional customers. The manner in which this adjustment was calculated was to use MPC's cost of service study for the limited purpose of estimating the differing returns on the jurisdictional and non-jurisdictional sales. The Commission recognizes that witness Hess utilized MPC's cost of service study in this calculation because, although that study contained certain shortcomings, it was the only study available, and it would have been impossible, considering the time constraints involved, to prepare a new study embracing sound regulatory principles.

(D) The adjustments derived on lines 17 through 24 are necessary to reflect a normal level of sales to out of state utilities assuming that median water conditions had been experienced and that Colstrip #2 had been in service for the entire 1976 test year. The firm contract sales to Utah Power and Light and Washington Water Power and Light shown on lines 20 and 21 are estimates by MPC.

(E) The Commission finds the secondary sales adjustment on line 22 proper. This secondary sales figure differs from that proposed by MPC. First, rejection of MPC's annualizing adjustments for year-end sales levels leaves additional surplus to be sold to out of state utilities. Second, MPC assumed that, because of transmission capacity limitations, generation at the Corette plant would have to be backed off to a level below that actually experienced in 1976. This assumption is unacceptable, because the record showed that MPC has sufficient transmission capacity, at least occasionally, to make sales of this magnitude (Tr. 80). In addition, acceptance of the excess Colstrip #2 plant in rate base mandates some offsetting adjustment to assure fair treatment of ratepayers. Therefore, it must instead be assumed that the Corette generation would be at the actual 1976 level except for an additional 9 days of maintenance. This makes available an additional 266 mw-months of energy for sale to out of state utilities Mr. Gregg agreed that it is impossible to accurately predict the volume of exports at any given time (Tr. 81). The Commission further finds that the 8 mills per kwh for secondary sales (assumed by MPC in Data Response 46) is most reasonable for MPC considering the high probability of an increase in the near future.

(F) The adjustment on lines 25 through 28 is necessary to reflect the transportation charges to Puget Sound Power & Light Company associated with the transportation or wheeling of Colstrip energy.

110. In accordance with MPC estimates in Data Response 46 and the secondary sales adjustment discussed above, the Commission finds the following adjustments to operation and maintenance expenses:

1. Adjustment to Operation and Maintenance Expenses (000)		
2. Adjustment to Purchased Power Expenses to Reflect Median Water and Colstrip #2 in Service for Entire Year		
3. 1976 Actual Purchased Power Expenses	$ 5,443	
4. 1976 Pro Forma	2,272	
5. Adjustment		$ (3,171)
6. Adjustment to Fuel Expenses to Reflect Median Water and Colstrip #2 in Service for Entire Year		
7. 1976 Actual Fuel Expenses	6,900	
8. 1976 Pro Forma Fuel Expenses		
9. Per Company	8,981	
10. Adjust Corette Generation to 1976 Actual	467	
11. 1976 Adjusted Pro Forma Fuel Expenses	9,448	

12.	Total Adjustments to Fuel Expenses	2,548	
13.	Adjustments to Other Operation and Maintenance Expenses to Reflect Colstrip #2 in Service for Entire Year and to Reflect Known Changes		
14.	Steam Operation (Excl. Fuel)	769	
15.	Steam Maintenance	1,042	
16.	Transmission Maintenance	293	
17.	Distribution Maintenance	224	
18.	Customer Accounts	43	
19.	Sales	(93)	
20.	Administrative and General	223	
21.	Cost of Labor Increase	1,051	
22.	Total Adjustments to Other Operation and Maintenance Expenses	$ 3,552	

1.	Adjustments to Taxes Other than Income Taxes (000)		
2.	Adjustments for Known Changes per Company		$ 3,273
	1976 Property Additions Not Included for Entire Year	$ 22,774	
4.	Taxable Value at 12%	2,733	
5.	Property Tax at 215 mills		(588)
6.	Gross Proceeds Tax on Additional Generation		
7.	Additional Generation	266 Mw.-Mos.	
8.	Additional Tax at $0.20 per mwh		39
9.	Consumer Counsel Tax on Additional Revenues		
10.	Pro Forma Revenues per Company	93,727	
11.	Pro Forma Revenues m is Order	96,340	
12.	Increase in Revenues	2,613	
13.	Tax at.0005		1
14.	Total Adjustments to Taxes Other than . Income Taxes		2,725

113. Also consistent with the above adjustments, the Commission adopts the following calculation of pro forma corporation license tax and federal income tax for MPC's electric utility:

Montana Power Company
Electric Utility

Calculation of Pro Forma Corporation License Tax
and Federal Income Tax 1976 Test Year
(000)

1.	Operating Revenues	$ 96,130
2.	Operating Expenses	37,693
3.	Subtotal	58,437
4.	Add: Adjustments for Taxable Income	1,408
5.	Deduct:	
6.	Employee Provident Reserve	250

7.	Depreciation Tax Basis	20,755
8.	Depreciation Tax Basis annualize Colstrip and Related Transmission	3,415
9.	Depletion	3
10.	Removal Costs	420
11.	Interest Expense	18,330
12.	Taxes Charged to Construction	250
13.	Taxes Other than Income	11,255
14.	Preferred Dividend Credit	220
15.	Subtotal	53,490
16.	Taxable Income - Corporation License	$ 4,947
17.	Corporation License Tax at 6.75%	334
18.	Taxable Income - Federal	4,613
19.	Federal Income Tax at 48%	2,214
20.	Investment Tax Credit	9,770
21.	Federal Income Tax - Current	(7,556)
22.	Investment Tax Credit - Dr.	9,770
23.	Provision for Deferred Income Taxes	
	Liberalized Depreciation - 1976 Final Est.	4,214
	Annualize Colstrip and Related Transmission	977
	Total	5,191

This calculation reflects the fact that tax losses can be utilized by carryback when it is recognized that the gas and electric utilities do not in fact file separate income tax returns.

114. MPC's operating revenue figures failed to include the profit which it realized upon the reacquisition of its debt at a discount. Nor was this amount taken into account by other witnesses in their computations of the cost of debt. Witness Hess included in income available for return an allowance for the amortization of profit on debt reacquired at a discount. Therefore, the Commission finds that electric operating revenues must be increased by $124,000 to reflect the amortization of this profit on debt reacquired at a discount.

PART E
NATURAL GAS UTILITY
Rate Base

115. Having examined the rate bases proposed by MPC and Consumer Counsel, the Commission finds the following natural gas

utility rate base appropriate in this case:

Montana Power Company
Gas Utility Rare Base
1976 Test Year
(000)

	1976 Actual (A)	Adjustments (B)	1976 Pro Forma (C)
1. Utility Plant in Service			
2. Gas	$134,157	$ 21,548	$155,705
3. Common	6,498	-	6,498
4. Total	$140,655	$ 21,548	$162,203
5. Accumulated Depr. & Depl.			
6. Gas	55,756	454	56,210
7. Common	1,107	-	1,107
8. Total	56,863	454	57,317
9. Total Net Plant	$83,792	$ 21,094	$104,886
10. Gas Stored Underground	12,125	2,480	14,605
11. Plant Held for Future Use	2,682	-	2,682
12. Less: Customer Contributed Capital			
13. Accumulated Deferred Income Taxes			
14. Liberalized Depreciation	1,080	109	1,189
15. Accumulated Deferred Investment Tax Credits (Pre-1971)	558	-	558
16. Customer advances for Construction	890	-	890
17. Total Customer Contributed Capital	2,528	109	2,637
18. Plus: Working Capital			
19. Gross Cash Requirements	2,360	268	2,628
20. Credit for Accrued Taxes	(1,081)	(227)	(1,308)
21. Prepayments	1,677	-	1,677
22. Materials and Supplies	2,132	-	2,182
23. Total Working Capital	5,138	41	5,179
24. Total Gas Utility Rate Base	$101,209	$ 23,505	$124,715

116. During 1976 MPC invested approximately $28 million in the South Bear Paw facilities. However, the majority of these facilities did not go into service until August of 1976. The adjustment to Utility Plant in Service in column B, line 2, of the foregoing table annualizes the South Bear Paw facilities as if they had been in service for the entire 1976 test year. .

117. An average rate base was utilized in Finding No. 115 for the reasons stated in Finding No. 97.

118. Depreciation reserve has been adjusted to reflect 1/2 of the additional depreciation that would have been charged during 1976 if the South Bear Paw facilities had been in service for the full year.

119. Customer-contributed capital has been eliminated from rate base for the reasons stated in Finding No. 102.

120. The computation of required working capital employs the same methodology as was utilized in Finding No. 104 in connection with electric utility rate base.

121. The adjustments in column B of the Finding No. 115 table for utility plant in service--gas, accumulated depreciation and depletion-gas, and accumulated deferred income taxes--liberalized depreciation are included to annualize the South Bear Paw facilities as if those facilities had been in service for the entire 1976 test year.

122. The adjustment to Gas Stored Underground in column B, - line 10 of the Finding No. 115 table reflects the fact that with the increase in the cost of Canadian gas, the value of the storage inventory will be higher since gas going into storage is priced at the average cost of Canadian purchased gas.

Revenues, Expenses and Earned Return

123. As summarized in Finding No. 3, Applicant's natural gas presentation in this proceeding was twice revised during the course of the case to reflect changing events. Applicant's original filing assumed that the company would be able to contract with Trans-Canada Pipeline Co. for the sale of approximately 13.5 bcf per year of gas from MPC's Alberta and Southern (A & S) supply. This sale would have been beneficial to Montana

ratepayers, in that it would have allowed MPC to use substantially less expensive Montana gas to meet its Montana market. When it became apparent in April of 1977 that this contract would not be executed prior to the July hearing, Applicant revised its exhibits to assume that the A & S purchases at Carway would be at the minimum take or pay level under the A & S contract of 25.980 bcf. This revision increased the gas rate request by a total of approximately $13 million.

124. Applicant was granted authority to again revise its gas case at the close of the July hearing. This revision was for the purpose of reflecting further known changes in gas supplies and costs, and a proposed sale of A & S gas to Montana-Dakota Utilities Co. (MDU). The principle known change related to an increase in the border price of Canadian gas to $2.16 per million btu's at 14.73 p.s.i.a.

125. The Commission has before it a wide variety of evidence depicting Applicant's sources of natural gas supply. The beginning point of the gas cost analysis, however, should be Applicant's actual 1976 gas mix. The following table shows the sources of supply, volumes and costs for 1976:

MPC 1976-Actual Gas Costs

	MMCF at 14.9	$ (000)
Carway Purchase Expense	25,449	$ 45,798
Aden Purchase Expense		
Related to Purchase Gas	4,262	5,821
Related to Produced Gas	5,589	2,718
Related to Fee Gas	321	159
Montana Purchase Gas Expense	5,334	2,668
Montana Storage (Net)	(1,439)	(4,482)
Other Non-Related Gas		
Supply Costs		32
Canadian Royalty Expense	5,589*	1,790
Montana Royalty Expense	9,865	673
	49,381	$ 55,177

Would be duplicative if used to arrive at total volumes.

126. In the interest of brevity, the Commission will not discuss all of MPC's presentations, but will concentrate on the normalized, annualized 1976 gas sources, as presented in the September, 1977 proceeding. These sources are consistent with the 1976 test year. (Other gas source information, as presented by the parties at various points in this proceeding, are shown in Appendix A to this Order.)

MPC Gas Supply--1976 Normalized/Annualized
(8-19-77)

	MMCF at 14.9	$ (000)
Carway Purchase Expense	25,980	$ 60,028
MDU Sale	(2,577)	(6,239)
Aden Purchase Expense		
Related to Purchase Gas	3,304	5,787
Related to Produced Gas	4,597	2,905
Related to Fee Gas	359	227
Montana Purchase Gas Expense	9,196	12,208
Montana Storage (Net)	(1,500)	(3,346)
Other Non-Related Gas Supply Costs		32
Canadian Royalty Expense	4,597*	2,224
Montana Royalty Expense	10,598	1,197
Company Use	(3,546)	
	46,411	$ 75,023

* Would be duplicative if used to arrive at total volumes.

127. MPC's August revision to its test year gas supply, as shown in the foregoing table, included what MPC asserted to be all known changes through August 19, 1977. While depicting its purchases from A & S at the full level of the minimum take or pay obligation, MPC reflected the sale of 2.577 bcf of A & S gas to MDU. The gas being sold to MDU was assumed to be replaced by increased volumes of Montana purchased and royalty gas.

128. MCC's George Hess presented revised testimony at the September hearing which challenged several of the MPC assumptions regarding sources of gas and prices. Hess' revised gas mix consisted of the following sources and costs:

Hess Revised Gas Costs

	MMCF at 14.9	$ (000)
Carway Purchase Expense	24,055	$ 55,581
MDU Sale	(2,834)	(6,862)
Aden Purchase Expense		
Related to Purchase Gas	3,304	5,787
Related to Produced Gas	4,597	2,905

Related to Fee Gas	359	227
Montana Purchase Gas Expense	8,926	10,260
Montana Storage (Net)	(1,500)	(3,334)
Other Non-Related Gas Supply Costs		
Canadian Royalty Expense	4,597*	2,224
Montana Royalty Expense	12,962	1,357
Company Use	(3,509)	
	46,360	68,145

* Would be duplicative if used to arrive at total volumes.

129. In his original prefiled testimony, Mr. Hess had accepted the company's projected gas supply with one major exception. Hess originally treated the "emergency" sale of 2.966 bcf of A & S gas to Panhandle Eastern Pipeline Co. and Northern Natural Gas Co. as a known change. In order to then replace this A & S gas with the gas required .o meet MPC's market, Hess relied on several MPC gas supply studies which indicated that Montana purchased and royalty gas would be available to replace the A & S gas sold (Hess Dir., pp. 43-44).

130. Mr. Hess' revised testimony, filed in response to MPC's revisions, followed the same general methodology as had the original testimony. However, Hess' revised gas source exhibit (Supplemental GPH-2), contains several significant differences from the company's August 19, 1977 revisions. Rather than beginning with the minimum take or pay level of the A & S contract, as did MPC and as Hess himself had originally done, Hess assumed a 24.055 bcf volume of A & S purchases. This volume, 1. 925 bcf less than the minimum take or pay provision of the A & S contract, represents the company's actual purchases under the contract for the year ended June 30, 1977. Hess then substituted the MDU sale for the "emergency" sale in his reduction of the A & S volumes, and proceeded to replace this gas with Montana supplies. In examining Montana supplies, Hess accepted all of the company's known changes with the exception of a substantial new purchase contract at Gypsy Basin. His rationale for this rejection was that the Gypsy Basin gas was not "needed" to balance his supply with the test year market.

131. MPC contends that adoption of Hess' assumed volume of A & S purchases would result in denial of actual costs. It argues that it would be forced by contract to pay for 1.925 bcf of gas without recovering those costs through its rates Mr. Hess acknowledged on cross-examination that the minimum take or pay provision of the A & S contract had not been waived (7 Tr. 107).

132. The Commission finds that adoption of Mr. Hess' recommended volume of A & S gas will not result in denial of actual costs to M.P.C. If the minimum take or pay provision is asserted by A & S, MPC will be allowed to capitalize the payment for gas not taken by placing the relevant amount in N.A.R.U.C. account number 166, in effect treating this amount as a prepayment and an appropriate rate base item. The Trans-Canada Pipeline, Ltd. contract with Canadian-Montana Pipeline Co., now executed, calls for deliveries of 9.6 bcf in the first contract year (commencing in November, 1978). The beginning of deliveries under this contract in 1978 greatly reduces the possibility of any problem with the A & S minimum take or pay provision, as does the five year contract with M.D.U. for delivery of A & S gas.

133. The company's revised supply exhibits utilized a volume of 2.577 bcf per year for the sale of A & S gas to MDU, with related transmission losses. Mr. Hess employed a 2.834 bcf volume for this sale, on the theory that the contract with M.D.U. obligated MPC to make 2.75 bcf available on a ''best efforts" basis if requested. Since M.D.U. in this Commission's Docket No. 6532, was allowed rates sufficient to cover a 2.75 bcf purchase, the Commission finds that the assumption that the company's best efforts will produce maximum sales is reasonable. MPC's gas supply costs should be established accordingly, with the retail market being met with less expensive gas sources than that represented by this portion of the A & S contract supply.

134. Mr. Hess' revised gas supply rejects the adjustments to year-end sales levels proposed by MPC, and the Commission finds this rejection

necessary for consistency with the average year rate base.

135. In estimating its total test year gas market, MPC accepted an estimated level of sales for Great Falls Gas which that company had employed in a pending rate case. Mr. Hess utilized a revised estimate of those sales which Great Falls 5as later accepted in its rate case, and the Commission finds the market represented by those increased sales appropriate.

136. As Mr. Hess explained on redirect examination, the problem before the Commission in determining MPC's test year sources of gas and associated costs is to balance the company's actual costs against those reasonably expectable under test year conditions. Accordingly, the actual 1977 gas supply must be examined. The calendar year 1977 sources of supply are shown in the following table:

MPC 1977 Actual Gas Costs

	MMCF at 14.9	$ (000)
Carway Purchase Expense	17,155	$ 36,184
Aden Purchase Expense		
Related to Purchase Gas	3,373	5,537
Related to Produced Gas	7,971	4,276
Related to Fee Gas	485	257
Montana Purchase Gas Expense	7,465	7,356
Montana Storage (Net)	(1,500)(a)	(3,046)
Other Non-Related Gas Supply Costs		
Canadian Royalty Expense	7,971 (b)	3,673
Montana Royalty Expense	13,281	1,207
	47,745	$ 55,444

a) uses Hess' volumes for net storage
b) would be duplicative if used to arrive at total volumes

137. As is readily apparent upon examination of the Finding No. 136 table, MPC's 1977 purchases at Carway under the A & S contract were substantially less than the volume Mr. Hess recommends for test year 1976. In explaining his rejection of the Gypsy

Basin-associated costs, Hess explained that this new purchased gas, with a minimum take or pay provision of 1.1 bcf and an annual cost of $2.412 million, is tied to the border price of Canadian gas. With the Gypsy Basin volumes not required to meet the test year market, Hess could either have reduced the Carway purchases by an additional 1.1 bcf and accepted the Gypsy Basin costs, or, as he ultimately did, simply rejected the Gypsy Basin costs. With the prices being identical, the result of either treatment would be the same.

138. Because actual 1977 purchases at Carway were substantially lower than Hess' assumed test year purchases from A & S, the Commission finds Hess' treatment of the Gypsy Basin gas to be reasonable and proper. Having reviewed all evidence in this record on gas supply costs, the Commission agrees with Mr. Hess that his Supplemental GFH-2 volumes, shown in Finding No. 12D, are a proper balancing of test year and actual gas sources and should be used in this proceeding.

139. The following table summarizes the actual operating results for MPC's gas utility for test year 1976, summarizes the necessary adjustments and shows the pro forma return earned following adjustments:

Gas Utility
Operating Revenues, Operating Expenses
and Rate of Return Earned at Present Rates
1976 Test Year
(000)

	1976 Actual (A)	Adjustments (B)	1976 Pro Forma (C)
1. Operating Revenues	$ 76,757	$ 17,293	$ 94,050
2. Operating Expenses			
3. Operation and Maintenance ,			
4. Other Gas Supply	52,713	18,745	71,453
5. Other	17,074	2,123	19,197

6. Total	69,787	20,868	90,655
7. Depreciation	3,085	908	3,393
8. Amort. of Inv. Tax Cr.-Net	(73)	1,574	1,501
9. Provision for Income Taxes			
10. Deferred-Liberalized Depr.	653	218	871
11. U.S.-Current	(5,833)	(3,659)	(9,492)
12. Canadian	625	-	625
13. Taxes Other than Income Taxes	2,793	481	3,274
14. Corporation License Tax	(526)	(668)	(1,194)
15. Amort. of Property Losses	73	-	73
16. Total Operating Expenses	$ 70,584	$ 19,722	$ 90,306
17. Utility Operating Income	6,173	(2,429)	3,744
18. Amortization of Profit on Debt Reacquired at a Discount	41	-	41
19. Balance Available for Return	$ 6,214	$ (2,429)	$ 3,785
20. Gas Utility Rate Base	101,209	23,506	124,715
21. Rate of Return Earned at Present Rates	6.14%	3.03%	

(The reference to "Rate of Return Earned at Present Rates" applies only to Column C since the results shown in Column reflect the actual rates in effect during the year before the increase allowed by Order No. 4220C.)

140. The following table details the adjustments to MPC's operating revenues and expenses shown in the foregoing table:

Montana Power Company
Gas Utility
Adjustments to Operating Revenues and Expenses
1976 Test Year
(000)

1. Adjustments to Operating Revenues		
2. Montana Retail Rate Increase Allowed in Order 4220-C and Normal Weather		
3. Actual 1976 Revenues	$ 76,757	
4. 1976 Revenue Normalized per Company	82,996	
5. Adjustment		$ 6,239
6. Known Changes in Industrial Contract Sales		
7. Normalized 1976 Contract Revenues including G.F. Gas	29,591	
8. Normalized 1976 Contract Revenues Adjusted including G.F. Gas for Known Changes	35,972	
9. Adjustment		6,381
10. Sale to MDU		6,862

11.	Revised Estimate of Sale to Great Falls Gas Company		
12.	Additional Residential and Non-Residential Sales		
13.	Total Adjustment		266
14.	Reduction in Purchased Gas and Royalty Adjustment Revenues including G.F. Gas		(2,455)
15.	Total Adjustments to Operating Revenues		17,293
16.	Adjustments to Operation and Maintenance Expenses		
17.	Other Gas Supply Expenses		
18.	Pro Forma Adjustment per Company		12,795
19.	Reflect Additional Gas Cost GFH-2		5,841
20.	Additional Purchased Gas to Reflect (1) Sale of Canadian Gas to MDU (2) Adjustment of Sales to Great Falls Gas Co. and (1) Elimination of Annualizing Adjustments		109
21.	Total Adjustments to Other Gas Supply Expenses		18,745
22.	Other Operation and Maintenance Expenses		
23.	Adjustment to Production Royalties per Company		$ 604
24.	Additional Royalty Gas to Reflect (1) Sale of Canadian Gas to MDU, (2) Adjustment of Sales to Great Falls Gas Company and (3) Elimination of Annualization Adjustments		164
25.	Reflect additional Royalty Cost GFH-2		349
26.	Adjustments to Reflect South Bear Paw Facilities in Service for Entire Year and to Reflect Known Changes		
27.	Production Operation (Excl. Royalties)		(20)
28.	Production Maintenance		13
29.	Transmission Operation		14
30.	Transmission Maintenance		13
31.	Customer Accounts		7
32.	Sales Expense		(73)
33.	Administrative and General		144
34.	Cost of Labor Increase		908
35.	Total Adjustments to Other Operation and Maintenance Expenses		2,123
36.	Adjustment to Depreciation Expense		
37.	To Reflect South Bear Paw Facilities in Service for Entire Year		908
38.	Adjustment to Taxes Other than Income Taxes		
39.	Adjustment for Known Changes per Company		645
40.	1976 Property Additions Not Included for Entire Year	$ 6,869	
41.	Taxable Value at 12%	824	
42.	Property Tax at 202 mills		(167)
43.	Consumer Counsel Tax on Additional Revenues		

44.	Pro Forma Revenues per Company	87,377	
45.	Pro Forma Revenues Herein	94,050	
46.	Increase in Revenues	6,673	
47.	Tax at.0005		3
48.	Total Adjustments to Taxes Other than Income Taxes		481

141. The adjustment to operation revenues set forth on lines 2 to 5 of the Finding No. 140 table is necessary to reflect the

retail rate increase allowed by this Commission in Order No. 4220C. The revenues at the new rates shown on line 4 were calculated by MPC and adopted by MCC. For reasons already mentioned, the above figures are the revenues based on 1976 sales rather than on sales annualized by 24PC to year-end levels.

142. The adjustments on lines 6 through 9 reflect pro forma changes in industrial contract sales as presented by Applicant.

143. The adjustment on line 10 reflects a sale of Canadian gas to Montana-Dakota Utilities, as approved by this Commission in Docket No. 6532.

144. The adjustment on line 11 reflects the increased sales from the upward revision of the Great Falls Gas Company market.

145. The adjustment on line 14 reflects the revision of the purchased gas and royalty adjustment rate that is applicable to industrial contracts with the revised volumes of purchases and production as calculated below:

Montana Power Company
Adjustment to PGA & RA Revenues
1976 Test Year
(000)

	Base (A)	Adjusted 1976 (B)	Increase (C)
1. Canadian Purchased Gas	23,306		
2. Unit Price	0.2393	2.2225	

3. Cost	5,577	51,793	$ 46,221
4. Storage Gas	(1,500)		
5. Unit Price	0.2393	2.2225	
6. Cost	(3.9)	(3,33)	(2,975)
7. Montana Purchased Gas	8,149		
8. Unit Price	0.13754	1.1495	
9. Cost	1,121	9,367	8,246
10. Canadian Produced Gas	4,200		
11. Unit Price	0.0402	1.1157	
12. Cost	169	4,606	4,517
13. Montana Produced Gas	11,630		
14. Unit Price	0.0208	0.1047	
15. Cost	242	1,218	976
IG. Fee Gas	328		
17. Unit Price	-	0.6320	
18. Cost		207	207
19. Total			57,192
20. Contract Customers	18,931	$.156738	(2,967)
21. Non-Residential	13,458	.1365	(1,837)
			52,388
22. Total Sales	46,113	1.1361	
23. Contract Customers Base		0.1567	
24.		$ 1.2928	
25. PGA & RA-Adj. in Exh. JWH-20		1.4225	
26. Increase		.1297	

27. Additional Revenues 18,931 x .1297 = $2,455

146. The adjustments on lines 18 to 22 reflect the revisions to purchased gas expenses necessary to meet the revised test year market.

147. The adjustments on lines 24 and 25 reflect the revisions to royalty gas expenses necessary to meet the revised test year market.

148. The adjustments on lines 26 to 37 reflect the revisions necessary to depict the South Bear Paw facilities in service for the entire test year.

149. The adjustment on line 38 to line 42 reflects the property tax adjustment related to those facilities which were assumed to be in service for the entire 1976 test year.

150. The adjustment on line 43 to line 47 reflects the additional Consumer Counsel tax on the pro forma revenues as found in Findings of Fact 141 to 145.

151. Also consistent with the above adjustments, the Commission adopts the following calculation of pro forma corporation license tax and federal income tax for MPC's gas utility:

Montana Power Company
Gas Utility
Calculation of Pro Forma Corporation License Tax
and Federal Income Tax
1976 Test Year
(000)

1. Operating Revenues	$ 94,024
2. Operating Expenses	94,388
3. Subtotal (364)	
4. Add: Adjustments for Taxable Income	634
5. Deduct:	
6. Lease W/O Charged to Retirement Reserve	439
7. Employee Provident Reserve	50
8. Depreciation Tax Basis	5,674
9. Depreciation Tax Basis - Annualize South Bear Paw Facilities	740
10. Depletion	148
11. Rentals	50
12. Development	2,387
13. Removal Costs	62
14. Interest Expense	5,341
15. Taxes Charged to Construction	65
16. Taxes Other than Income	2,999
17. Preferred Dividend Credit	55
13. Subtotal	18,010
19. Taxable Income - Corporation License	(17,690)
20. Corporation License Tax at 6.75%	(1,194)
21. Taxable Income Federal	(15,495)
22. Federal Income Tax at 43%	(7,918)
23. Investment Tax Credit	1,574
24. Federal Income Tax - Current	(9,499)
25. Investment Tax Credit - Dr.	1,574
26. Provision for Deferred Income Taxes .	
Liberalized Depreciation - 1976 Final Est.	$ 657
Annualize South Bear Paw Facilities	214
Total	871

Consistent with Finding No. 114, this calculation recognizes the fact that MPC files consolidated tax returns (Tr. 124-125).

PART F
REVENUE REQUIREMENTS
Electric Utility

152. The Commission finds that the additional revenues required in Applicant's electric operations are $17,118,000. This I amount is computed as follows:

	(000)	
Rate Base	$412,007(a)	
Required Rate of Return	9,50%(b)	
Required Return		$ 39,141
Pro Forma Return Earned		30,845
Return Deficiency		$ 8,296
Revenue Deficiency		$ 17,118
Consumer Counsel Tax at .05%		9
Subtotal		$ 17,109
Corporation License Tax at 6.75%		1,155
Subtotal		$ 15,954
Income Taxes - Current at 48%		7,658
Balance for Return		8,296

Natural Gas Utility

153. The Commission finds that the additional revenues required in Applicant's natural gas operations are $17,176,000.

This amount is computed as follows:

	(000)
Rate Base	$124,715(d)
Recommended Rate of Return	9.71%(e)
Recommended Return	$ 12,110
Pro Forma Return Earned	3,785(f)
Return Deficiency	$ 8,325
Revenue Deficiency	$ 17,176
Consumer Counsel Tax at .05%	8
Subtotal	17,168
Corporation License Tax at 6.75%	1,159
Subtotal	$ 16,009
Income Taxes - Current at 48%	7,684
Balance for Return	$ 8,325

a. Finding No. 96

b. Finding No. 77
c. Finding No. 108
d. Finding No. 115
e. Finding No. 77
f. Finding No. 139

PART G
RATE DESIGN
Chronology

154. Order No. 4220C in Docket No. 6348 rejected the Ebasco cost of service study as invalid and implemented G uniform price per unit of energy or volumetric increase.

155. Rate structure or rate design was not directly an issue and Applicant submitted no cost of service testimony on this subject in Docket No. 6454 until the Anaconda Company's Petition of April 19, 1977. Anaconda's Petition requested an extension of the deadline for filing intervenor testimony from April 25, 1977 to June 15, 1977, in order to perform and file a cost of service study. The scheduled hearing date was July 6, 1977. On April 26, 1977, Montana Power responded to Anaconda's Petition by supplying an updated cost of service study by Ebasco's Mr. Pierce, whereupon, Anaconda withdrew its Petition for continuance of the intervenor's filing deadline. This updated study was based on the methodology and synthesized load data rejected by the Commission in Order No. 4220C.

156. Consumer Counsel sponsored testimony on rate structure which was received by the Commission on June 15, 1977. Mr. Galligan's testimony generally related to proposed modifications to the rate structures and service conditions within the various customer classes. Mr. Galligan did not perform a cost of service study.

157. The Commission's temporary Order No. 4350, issued June 9, 1977 in this Docket, directed that the revenue deficiencies conceded by the MCC should be collected from all classes of electric and natural gas customers on a volumetric or uniform price per unit of energy basis.

This revenue allocation method was a continuation of the method first adopted in Order No. 4220C, Docket No. 6348. In June of 1977 Order No. 4220C was being reviewed by the District Court of the First Judicial District, Judge Peter B. Meloy, on the Petition of the Ideal Cement and Anaconda Companies.

158. Judge Meloy issued his opinion on the Order No. 4220C allocation method on November 4, 1977. This opinion remanded the proceeding to the Commission for either the receipt of additional evidence or the closing of the record with acceptance of M.P.C.'s proposed uniform percentage rate increases for electric service and the "inflationary portion" of the natural gas service. The basis of the opinion was the Judge's determination that the Docket No. 6348 record was deficient of evidence which would support the volumetric increases.

159. The Commission's response to Judge Meloy's decision came in the form of Orders No. 4220D and 4350C. These Orders generally reversed the former volumetric revenue allocations and adopted uniform percentage increases as directed by the court.
However, the Commission determines, as provided in subsequent findings of fact, that the uniform percentage increase proposed by Applicant is not an appropriate or equitable method for deriving all the increased revenues from the various customer classes based upon the evidence on the entire record in Docket No. 6454. The Commission accepts the proposed uniform percentage increase method for increased revenues which are no attributable to test year investment in generating plant. The Commission will in its findings of fact, demonstrate from the evidence on the entire record in Docket No. 6454 that a volumetric allocation technique is necessary to equitably spread increased revenues which are attributable to investment in baseload generating plant. Provided hereafter is the legal authority and rationale upon which the Commission's analysis of the entire record proceeded:
The Commission in addressing the rate design question in this case, recognizes the judicial standards which Sub section (7) of Section 82-

4216, R.C.M. 1947, requires ·he Commission to observe. Judicial interpretation of the Commission duties, limitations and powers, as set forth in the above referred statute, are discussed in various Montana cases. The Montana Court in Brurud v. Judge Moving & Storage Mont 563 P2d 558 at pg 559 (Pac.Rpt.) quoting from United States v. U. S. Gypsum Co. 333 US 364, holds:

> "A finding is 'clearly erroneous' when although there is evidence to support it, the reviewing court on the entire evidence is left with the definite and firm conviction that a mistake has been committed." (Emphasis ours)

In Pacific Power and Light v. Public Service Commission of Montana, (Mont. Dist. Ct., First Judicial Dist. of Mont., Jan. 31, 1977) Civil No. 40095 at page 4 states:

> "The Commission as an administrative agency of the legislature is designed to have and exercise expertise in the problems involved in rate setting procedures. That Commission is clothed with the privilege that the methods of exercising its expertise in arriving at conclusions is not subject to inquiry. (Public Service Commission of Montana v. District Court, 162 M. 225.

and the court further recites at page 4, a quote from the Montana case of Vita-Rich Dairy Inc. v. Montana Department of Business Regulation as follows:

> "The agency is a specialist in the substantive matter that the legislature delegated to it to regulate."

In Ideal Cement Company v. The Montana Public Service Com mission and Montana Power Company Civil No. 41167 (Dist. Ct. Mont., Nov. 4, 1977) at

p. 8, the Court provides the Commission further guidance on the "clearly erroneous" standard:

> "Numerous approaches and considerations can be examined and evaluated in developing a rate structure; however, there must be evidence in the record supporting any rate structure approved in the final decision." (Emphasis ours).

The Court remanded the Commission's Order No. 4220C in this case, because the record was deficient of evidence to support the volumetric allocation of the revenue responsibility for electric service and "inflationary portion" of the natural gas service. However, the Court recognized as appropriate the volumetric allocation of the cost of purchased gas (energy) by stating:

> "*No contention is made that the cost of purchased gas should not be allocated on a volumetric basis."

and at pages 3 and 9 that:

"It is to be noted here that no complaint is made to the volumetric allocation of the cost of the purchased gas. The cost of such gas in such increase is calculated to be the sum of $22,336,517."

The Commission must determine and implement rates which are just, reasonable, and not unjustly discriminatory. It is clear from case law and the Montana Administrative Procedures Act that the Commission "is designed to have and exercise expertise in the problems involved in a rate setting procedure" and to apply that expertise in its determinations based upon the entire record. (Emphasis ours).

Applicant has demonstrated a need for increased revenues of $17,118,000 for the electric utility. The Commission is acutely aware that it is Applicant's requirement for additional revenues which necessitates the determination of an equitable manner of spreading responsibility for those increased revenues to the various customer classes. It is, therefore, imperative that the causes of the increased revenue requirement weigh heavily in the Commission's review and analysis of the whole record. This cost causative perspective is essential for the Commission to fulfill its obligation to: (1) Establish a rate design which is consistent with and based upon the weight of the evidence on the whole record; and (2) Establish rates for the various classes which are just, reasonable, and not unjustly discriminatory.

Cost of Service Testimony--Electric Utility

160. Ebasco's cost of service testimony was provided by Mr. Pierce. Mr. Pierce (Direct Pg. 9, 17, 13) discusses Ebasco's reliance upon the Electric Utility Cost Allocation Manual published in 1973 by the National Association of Regulatory Utility Commissioners (NARUC) for the methodology used in the MPC study.

161. Mr. Pierce relied upon the-load study data from Pacific Power and Light for the residential and commercial classes to derive the synthesized MPC study for 1975 and then projected an update for 1977 (Tr. 629). Mr. Pierce did not perform a study based upon actual 1976 operations adjusted for known changes, which the Commission determined as the appropriate test year in this Order.

162. Ebasco's fully allocated cost study consisted of the conventional three-step procedure of functionalization, classification and allocation (Direct Pg. 10-14).

Functionalization is the arrangement of costs according to the major functions of the system such as production, transmission and distribution.

Classification is the assignment of functionalized costs to demand, energy or customer components of service. Demand-related costs are those which are considered to be a function of peak usage or the rate of electric consumption (Kilowatt-hours/hour or Kilowatt demand). Energy-related costs are a function of the annual kilowatt hour energy requirements. The customer component or cost varies with the number of customers.

Cost allocation is the process of assigning responsibility for the classified costs to the various customer classes based upon the load characteristics, energy consumption, and service requirements of the classes.

163. The Ebasco cost of service methodology classified all production power supply plant as demand-related (Pierce pp. 14 17). This meteorology is predicated on the assumption that all power supply plant is built to satisfy one maximum system peak (Pg. 20). Pursuant to this demand-related classification, Mr. Pierce allocated cost responsibility for all power supply plant in proportion to the coincidental peak demand of the various classes at the time of system peak (Pg. 14).

164. Mr. Pierce, (Pg. 17), while acknowledging that other allocation methods could have been used, stated "However, the object of cost analysis studies is to study the system and allocate costs according to their cause". (Emphasis added)

165. Mr. Pierce (Pg. 20) states "The use of any type of average peak for power supply facilities introduces a degree of irrationality. The system is built for one maximum peak...The introduction of averages for the costing of power supply plant tends to separate costs from cost causative occurrences." (Emphasis added)

166. Mr. Pierce (Pp. 20-21) rejected the use of the "average and excess" method of allocating power supply costs. The "average and excess" methodology was described by Mr. Pierce as applicable to power systems with very high load factors which he said would include the MPC system. This method is designed to recognize that average energy consumption as well as peak demand contributes to the plant requirements of a utility. Mr. Pierce rejected this methodology for the MPC system for pricing reasons that rested upon the possible removal or loss of one customer

class, presumably the industrial class. Mr. Pierce provided no evidence that use of the average and excess method would result in prices which exceeded the value of service level, "which the traffic will bear" (Tr. 645).

167. Mr. Pierce (Pg. 23) acknowledged that a variation in the relative rate of return between classes, determined in the cost of service study, is normal. In summary, Ebasco's cost of service study rests on the coincidental peak methodology for allocating cost responsibility for all production power supply. Ebasco relied upon load study data from Pacific Power and Light for the residential and commercial classes to derive the synthesized MPC study for 1975 and then projected an update for 1977 (Tr. 629).

168. Mr. Moke testified on behalf of the Anaconda Company. Mr. Moke compared the demand projections of Ebasco for a 1977 test year with the actual 1976 results and generally concluded that Ebasco's demand projections were reasonably accurate. Mr. Moke did not perform a cost of service study. Mr. Moke did describe the selection of an appropriate allocation method in this way: "There are some other methods, but again, in your choice of the method, you look at the operating characteristics--power supply characteristics--the mode characteristics of this particular company that you are analyzing, and there will be certain reasons why one or the other should be used, which-are more logical. Now your judgement comes from what you would consider the most logical and reasonable for the circumstances." (Tr. 688'

169. Mr. Galligan, Consumer Counsel witness, testified primarily in regard to proposed modifications to the rate structures and service conditions within the various customer classes. Mr. Galligan testified that the average embedded cost study performed by Ebasco was not an adequate basis for the determination of rate design. Mr. Galligan recommended that the Commission order a marginal cost study which should reflect the proper tracking of time-varying costs.

Rate Design or Pricing Testimony--Electric Utility

170. Montana Power's rate design testimony was provided by Mr. Heidt. Mr. Heidt (Rebuttal Pg. 6) described MPC's proposed revenue allocation method by stating, "I think it is important for the Commission to know that the Ebasco cost of service study, which has really been an ongoing process since 1973, is but one tool in my considerations in developing the revenue allocations which are reflected in the rate schedules which I sponsor...The rate structure necessarily must mold all of the consumption, usage, weather, system geography, historic, and many other considerations, and not merely reflect abstract economic and price theories which may bear no relationship to Montana utility consumers and their needs. It is important that the rate structure which is adopted by the Commission recognize all cost and use considerations."

171. Mr. Heidt (Rebuttal, Pg. 11) further emphasized his judgement on rate design stating, "I want to make clear again that I have not used the Ebasco fully allocated cost of service studies as the sole or exclusive tools in the design of rates I have proposed here. They are useful and valid tools. But they are not the sole consideration in determining our rate structure.

172. Mr. Heidt (Tr. 193) testified under cross examination by the Anaconda Company that, based upon the relative rate of return between the classes determined in the 1975 cost-of-service study, it was his opinion that the best way to allocate the increased revenue requirement was on a uniform percentage basis. His rationale was crystallized in the succeeding question and answer:

Q. What do you mean the best way?

A. I felt that this, in light of the history, in light of the proposed increase, the magnitude of the increase, was a reasonable and good way

to make the application.
(Tr. 193)

173. Mr. Pierce (Pg. 23) testified that "Rate pricing is a complex subject. Pricing necessarily involves consideration of cost of service, value of service, historical treatment, and many other rectors".

174. Mr. Pierce (Tr. 626 and 627) acknowledged that the ability of certain customer classes to deduct their utility expense for tax purposes was a valid pricing consideration with which he personally agreed. (Emphasis added)

175. Mr. Pierce (Tr. 627) described the rate design pricing process in this manner: "well, I believe I said in the testimony that cost of service is only the beginning point in rate design, and I strongly believe that. It's a beginning point of which you then depart based upon other considerations, and this is what Mr. Heidt said in his Rebuttal Testimony on page 11 that I read into the record."

176. Mr. Pierce (Tr. 636, and 637) testified that he has not made a study on the pricing criteria of the MPC system in enough detail to make a decision on the propriety of allocating a revenue increase in Docket No. 6454 on a volumetric basis.

177. Mr. Pierce (Tr. 635) describes the issue before the Commission on the allocation of a revenue increase as a pricing problem (emphasis added) Mr. Pierce (Tr. 644) describes the range between value of service and cost of service as open ground in which the rate engineer determines the pricing. Mr. Pierce (Tr. 624) defines value of service as the upper price limit beyond which the customer will discontinue service or obtain an alternative service (i.e. the price which the traffic will bear, Tr. 645).

Testimony on The Entire Record Which Bears

Directly Upon Rate Design

In order to establish rates which are fair and reasonable and not unjustly discriminatory, the Commission must review the entire record as prescribed by the Montana Administrative Procedures Act and the attendant standards of review. Provided below is a summary of the testimony concerning the fundamental cost causative factors which result in Applicant's increased revenue requirement and must bear heavily upon the establishment of an equitable rate design. Additionally, the testimony provides an operating analysis of generating planet utilization, which is necessary in order to evaluate the propriety of the cost of service testimony.

178. Mr. McElwain, MPC President, testified (Rebuttal Pg. 1) that the fundamental issue involved in the rate case is "the future supply of energy to meet the energy needs and requirements of a substantial portion of our state." Mr. McElwain (Direct Pg. 3-5) and Mr. Raff (Direct Pg. 4-6) testified extensively on Applicant's massive investment program since 1972, which amounted to $329,682,000 in new electric plants. Rate base additions of $100,168,000 occurred since the 1975 test year which was determined in Docket 2lo. 6348. These massive investments in electric plant were characterized as the fundamental reasons for the requested revenue increase. Furthermore, the .f air rate of return testimony relied upon the need for earnings adequate to attract the capital necessary to sustain the massive construction program that will consist mainly of Colstrip 3 and 4 and associated transmission plant. (For example, See Findings 51; 52; & 60).

179. During the 1976 test year, Applicant invested $62,748,000 in the Colstrip steam generating facilities (Finding 105). As described below the coal fired steam generating plants at Colstrip are baseload energy production facilities.

180. Mr. McElwain (Rebuttal Pg. 5) described the construction of

baseload energy generating units as the best solution to a progressive energy shortage. fir. McElwain stated that the construction of peaking units was considered and rejected by Applicant because the main problem during the 80's is energy rather than peak. Mr. Gregg (MPC Electrical Engineer; Manager of Power Contracts, Resources and Planning) reinforced Montana Power's conclusion of an energy deficiency problem by describing the Northwest, with which I4PC is inter-tied, as energy deficient not peak deficient. (Emphasis added) (Tr. 105)

181. Mr. Gregg (Tr. 92 and Ex. DBG-5) described the avail able generating resources and the utilization of those resources on the MPC system. Mr. Gregg (Tr. 92) testified that four hydroelectric plants: Kerr, Cochrane, Maroney, and Holter were the primary peaking units. The use of the Corette coal-fired thermal plant for peaking was described "as a last resort" (Tr. 92, 93). Mr. Gregg stated that most of the other hydro plants are "pretty well loaded around the clock in a median water year" and constitute a baseload capacity of 275-280 -5 during a critical water year (Tr. 92, 98). Exhibit DBG-5 indicates a baseload energy capacity of 333 MW during critical water and an additional 51 MW of energy capacity under median water conditions.

182. Mr. Gregg (Tr. 92) testified that the Bird Combustion

Plant is a reserve unit, used primarily for peaking if used at all. The Bird Plant has been used extensively during this dry year for other utilities in the Northwest, but it would not normally be used as an energy producer.

183. Mr. Gregg (Tr. 98) testified that the three coal fired thermal plants; Corette, Colstrip 1, and Colstrip 2 are baseload units, designed for and operated at capacity on a continuous basis to produce energy (kwh).

184. Applicant's Exhibit JAM-3 illustrates an inordinate growth in energy consumption during late 1976 and early 1977 the peak demand portion of JAM-3 remained on the established trend.
This reinforces the energy related problem of the MPC system. The monthly load factors of the MPC system as determined from JAM-3 have increased to about 0.80.

185. Mr. Pierce testified that energy costs vary as a function of time and decrease approaching the system peak because the MPC system uses hydroelectric plant for peaking purposes. (Tr. 630; 632).
186. Mr. Gregg (Tr. 602) testified that the duration of the system peak was 1-3 hours on a cold winter day.

Discussion Of Ebasco's Cost Of Service Methodology

The Ebasco methodology relied in part upon the premise that all power supply plant is built to satisfy one maximum peak demand. Consequently, all power supply plant is classified as demand - related, and cost responsibility for power supply plant is allocated in proportion to coincidental peak demand of the various customer classes at the time of system peak.
As previously described in the summary of Mr. Pierce's testimony, the cost of service study performed on the MPC system by Ebasco relied heavily upon the methodology contained in the Electric Utility Cost Allocation Manual published in 1973 by NARUC. It is, therefore, incumbent upon the Commission to examine this authority in its entirety in order to evaluate the rationale of Ebasco in selecting the coincidental peak responsibility method for allocating production power supply costs. The following excerpts from this NARUC Manual demonstrate the need to analyze the power system and not to rely exclusively upon a rigid approach to allocations:

> "In addition, although in general all investments and associated costs have a direct relationship with demand (KW), that relation is non-linear for most of these cost

elements.
Fixed costs are thus demand-related only to the extent that demand is determinative of necessary plant investment, and of necessary expenses to insure service availability."
(Pg. 32) (Emphasis added)

"A more obvious example is a so-called run-of-river hydroplant which has no depend able capacity. The investment costs, once incurred, are fixed and do not vary with the quantity of energy produced. Nevertheless, such costs were incurred solely for the purpose of meeting energy require ~ meets rather than for the purpose of meeting peak demands. This illustrates the proposition that fixed costs are not necessarily demand-related."(5)
(Pg. 33) (Emphasis added)

5. "These are, of course, unusual situations. Most hydro capacity - today is being used for peaking purposes, and its costs are there fore properly classified as demand related."

Reliance upon the peak demand based methodology used by Ebasco is not mandated by the NARUC Manual. Rather, the Manual recognizes the need to analyze the use of plant resources.

Commission Evaluation of Cost of Service Evidence

187. Mr. Pierce stresses that a cost of service study must analyze the utility system and allocate costs according to their cause (See Findings 164 & 165). Mr. Moke, Anaconda's witness, testified to the necessity of analyzing the operating characteristics and power supply characteristics of the system. Mr. Moke stressed the application of judgement to the analysis of the power system in order to determine a cost of service allocation which is the most logical and reasonable for the circumstances (See Finding 168) .

188. Mr. Gregg (MPC Electrical Engineer; Manager of Power Contracts, Resources and Planning) has provided the Commission with the engineering and operating analysis of the power supply plant on the MPC system.

189. The Commission finds that the peak demand based methodology used in the cost of service study performed by Ebasco and updated for this case is not entirely appropriate based upon the weight of the evidence in this record. This peak demand based cost of service methodology is not consistent with the results of the cost causative objectives and system analysis, which was stressed by Mr. Pierce and Mr. Moke and performed by Mr. Gregg.

190. The Commission finds that the weight of the evidence on the whole record does not support classification and allocation of test year investment in baseload power supply plant on a peak demand basis. (See Findings 178-186) The evidence demonstrates conclusively that:

(a) Applicant's additional revenue requirements are based primarily upon its massive investment program.

(b) Applicant invested $62,748,000 in baseload generating plant at Colstrip during the 1976 test year.

(c) All the baseload steam generation plants are designed for and operated at capacity on a continuous basis to produce energy, kwh.

(d) The construction of peaking facilities was specifically considered and rejected by MPC because energy deficiency and not peak deficiency was considered the primary problem during the 1980's. The Northwest, with which MPC is inter-tied, also has an energy and not peak deficiency problem.

(e) The MPC system is a hydropeaking system in which energy costs decrease approaching the system peak due to the use of inexpensive hydrogeneration.

(f) The system peak has a duration of only 1-3 hours per year, which occurs on a cold winter day.

191. The Commission finds that to assign cost responsibility for all power supply plant on the basis of coincidental peak demand is not logical, reasonable or equitable when: (1) Applicant is investing in

baseload thermal energy generation plant to solve a progressive energy deficiency; (2) System energy costs decrease approaching the system peak due to low cost hydropeaking plant; and (3) The system peak is short and the monthly load factors are high. To adopt Applicant's cost of service methodology or the identified test year investments in baseload energy plant, in spite of the weight of the evidence on the whole record to the contrary, would be "clearly erroneous" and reversible error pursuant to subparagraph (7), Section 82-4216, R.C.M. 1947.

192. Consequently, the Commission finds that the test year investment in baseload energy generation plant must logically be classified as energy-related. The allocation of these identified energy-related costs must logically be assigned in proportion to he energy consumption of the various customer classes. This allocation method is consistent with the allocation technique used by Ebasco for other energy-related costs in its electric cost of service study in this case. Furthermore, all parties accepted and the Court recognized the propriety of this volumetric allocation method for the increased costs of purchased gas (energy) in Order No. 4220C.

Commission Evaluation of the Rate Design or Pricing Evidence

The Commission from the perspective of Applicant's demonstrated need for additional revenues must determine and implement rates which are just, reasonable, and not unjustly discriminatory.

193. Applicant's rate design or pricing testimony was provided by Mr. Heidt. Mr. Heidt, having observed the relative rate of return by customer class determined by the Ebasco cost of service study in Docket 634B, proposed that the revenue increase be spread on a uniform percentage basis. A uniform percentage increase would maintain the status quo in the relative rates of return among the classes as determined by Ebasco's peak demand based methodology.

194. The Commission concurs with Mr. Heidt's testimony that: "It is important that the rate structure (design) which is adopted by the Commission recognize all cost and use considerations." However, the Commission determines that Mr. Heidt's proposed rate design, which effectively perpetuates the peak demand based cost of service methodology, is not consistent with the energy-related problems and identified energy cost pressures described by Mr. McElwain and Mr. Gregg. It is to be noted that while Mr. Heidt implores the Commission to recognize all cost and use considerations, Mr. Heidt provides no substantive or quantified basis for his departure from Ebasco's cost of service study. (See Finding 170).

195. The Commission finds that the revenue increase attributable to the Applicant's investment in energy-related baseload generating plant must logically and properly be assigned to all classes by a uniform price per unit of energy or volumetric increase. To find otherwise in view of the weight of the evidence whole record would be "clearly erroneous".

196. This pricing method is consistent with the Commission's cost of service adjustments (See Finding 192). This volumetric (or energy) price increase for the identified cost pressures of energy plant is analogous to the volumetric increase for identified purchased gas (energy) costs accepted by all parties and recognized by the Court in Docket No. 6348, Order 4220C.

197. The total increased revenue requirement, determined in Finding 152, is $17,118,000 for the electric utility. The increased revenue requirement directly attributable to the investment in baseload energy plant is calculated in the following manner:

OC-D	Allowed ROR	Return Attributable To Baseload Invest.	Tax Factor	Revenue Increase Attributable To Baseload Invest.
62,748,000(1)				
1,678,000(2)				
61,070,000	9.5%	5,801,650	2.0634(3)	11,971,000

1 Finding 105.
2 Response to Data Request 106. The Montana Power Company, Colstrip Generation, 1976 Plant Additions, Production Accounts only. `
3 Finding 152: Rev. Defic.) Ret. Defic. = $\frac{17,118}{8,296}$ = 2.0634

The $11,971,000 revenue increase attributable to baseload energy generation should be applied on a uniform price per unit of energy or volumetric basis.

198. The Commission finds that the remainder of the approved revenue increase, which is not attributable to identified energy cost pressures, is $5,147,000. This amount of the revenue increase must be applied to all classes on the basis of the uniform percentage increase proposed by Applicant.

199. The Commission's cost or service adjustments classified the investment in baseload facilities as energy-related and allocated cost responsibility for this identified energy cost pressure to the various classes in proportion to their energy consumption. (See Finding 192) The Commission, pursuant to these cost of service adjustments, applied a uniform increase per unit of energy to that portion of the revenue increase attributable to these energy related costs. (Findings 195;197) This consistent treatment in cost of service and rate design preserves the relative rate of return among the various classes.

200. It is important to realize that the Commission has not disturbed the cost of service methodology for costs incurred prior to the 1976 test year. The Court's decision in Docket No. 6348 was not altered by the rate design adopted herein. The net effect of the Commission's cost of service adjustment and rate design modification is that all the production power supply cost, except the test year investment in Colstrip generating plant E (primarily Colstrip No. 2), is allocated on the basis of coincidental peak demand responsibility.

201. The Commission does not elect to base its rate design on value of service concepts, based upon the limited record in this proceeding, although it concurs with fir. Pierce that the ability of certain customer classes to deduct the utility expense for tax purposes is a valid pricing consideration (Tr. 626, 627). The Commission concludes that a comprehensive evaluation dealing with the "net price of energy to the various customer classes on an after tax basis" should be performed as a part of future rate design hearings. This record does not contain the evidence necessary to establish the tax rates applicable to customers and classes that are able to deduct utility expense for income tax purposes.

COMMENT:

The Commission in this case analyzed the rate design issue in regard to the appropriate spreading of the increased revenues occasioned by test year investments. However, the findings and results concerning the operating characteristics and utilization of resources on the MPC power system, the energy deficiency conclusions of Applicant, and the massive investment program planned to solve this progressive energy shortage mandate a comprehensive review of the entire rate design issue.

The Commission, in order to comprehensively evaluate the propriety and equity of various rate designs in future proceedings must have the recognized alternatives competently sponsored and examined on the record. Applicant is encouraged to examine and carefully consider the recognized rate design alternatives for future filings.

The NARUC Manual identifies 16 demand allocation methods and National Economic Research Associates, Inc. (NERA) lists 29 methods. In its November 1977, summary report, the Electric Rate Design Study, sponsored in part by the Electric Power

Research Institute (EPRI) and the Edison Electric Institute (EPRI) described the full range of rate design alternatives and identified the following general approaches to costing: (1) non-time differentiated accounting costs; (2) time-differentiated accounting costs; and (3) time-differentiated marginal costs.

Furthermore, the Commission recognizes that the proposed Federal legislation, which requires examination of several key rate design questions by state Commissions in a limited timeframe, is imminent. Applicant is encouraged to address these issues at an early date.

Electric Utility--Residential Rate Structure Testimony

202. A certain amount of background is helpful in understanding MPC's proposed electric rate structure for the residential class. In Docket No. 6348, Applicant proposed a four-step declining block rate structure. This structure featured a $1.71 basic charge, which included the first 20 kwh per month. The following steps, with declining charges, included the next 80 kwh per month, and the second 100 kwh of consumption, with consumption in excess of 200 kwh per month all falling in the final block.

203. Order No. 4220C, as adopted by the Commission, determined minimum monthly charge equivalent to MPC's first block of service to be appropriate. A two-step energy charge was implemented, with a lower rate for consumption in excess of 200 kwh per month. The Commission also adopted Dr. John Wilson's concept of a modified "lifeline" form of increase, in that the actual increase in electric rates was applied to only the residential consumption which exceeded 200 kwh per month. This structure, along with the volumetric revenue allocation, was reversed by the District Court.

204. In this Docket, Applicant proposes to perpetuate the same four block residential electric rate structure which it proposed in Docket

No. 6348, and which is now in effect by order of the District Court. The only substantial difference in the proposed structures in these two Dockets is a proposed increase in the minimum charge in this case to $2.26.

205. MCC' s Richard Galligan presented the Commission with an alternative residential electric rate form. Galligan's proposed structure incorporated a customer charge of $2. 25 per month and a flat energy charge for all consumption. Galligan's rationale for his proposed revision dealt primarily with deficiencies in MPC's proposed rate design and the lack of evidence to support the MPC proposal. He argued that the declining block proposal would result in artificially low prices for higher volume residential customers, and that these artificial prices, or "false" economic signals, would encourage greater consumption. Galligan further argued that MPC had failed to show that its production costs decline with increases in consumption. In support of his proposal, Galligan contended that a customer charge-energy charge rate design would better track the company's actual costs, while transmitting to customers meaningful pricing signals. With accurate signals, customers might be expected to better understand the true cost their consumption imposes on the utility and on society.

206. Mr. Heidt, in rebuttal to Mr. Galligan, presented a graph which, drawing from certain data contained in the Ebasco cost of service studies performed by witness Pierce, purported to show that the rate of return earned by the utility on residential sales increased as the customer's consumption increased.

207. Mr. Heidt (Tr. 656; 657) did not explain the methodology used in arriving at his graph "...this information was part of some additional study work that we had Ebasco do for us." Mr. Pierce (Tr. 628) performed no study of the rate structure within the residential class. Mr. Heidt (Tr. 656) acknowledged that he relied upon the load study performed upon the residential and commercial classes of Pacific Power and Light's

service area. Mr. Heidt did not perform any statistical analysis on the load study or its applicability to MPC's customers.

208. The Commission finds that in order to justify a declining block rate structure, (in which the unit price of energy declines with the increasing consumption by blocks) Applicant must demonstrate that energy costs decrease as a function of increased energy consumption. It is apparent from the testimony that energy costs vary as a function of time and that energy costs decrease approaching system peak on the MPC hydropeaking system. (Pierce Tr. 630i 632) The Commission finds Mr. Galligan's suggestion (Pg. 7) that decreased energy costs are associated with off peak use is not consistent with the hydropeaking MPC system. Mr. Heidt, however, did not perform a time-of-use load study (the Commission recognizes that such study is in progress) in this case from which to conclude if, or to what extent, increased energy consumption within the residential class occurred at times of decreased energy costs. Furthermore, Mr. Heidt did not perform a time-of-use analysis of energy costs to determine the level of cost variation upon which to design cost based pricing. Consequently, there is no cost evidence of record to justify a declining block rate structure.

The Commission further finds that the weight of the evidence in this record demonstrates that the predominant cause of increased average energy costs is and will be the construction of baseload energy plant. Baseload energy plant was constructed during the test year and planned for the future in order to alleviate a progressive energy deficiency. Therefore, it is apparent that increased energy consumption necessitates construction of increasingly expensive baseload energy plant and results in substantially increased energy costs. There is no apparent economic cost basis on this record to justify declining block rate prices, when adequate energy supply is provided only at a substantially increased cost.

The Commission accepts the proposed residential rate structure of Mr.

Galligan as the most appropriate in this record. The separate customer service charge and flat energy rate provide the most realistic method of tracking increased energy costs. This rate structure is consistent with the energy-related cost of service adjustments by the Commission in this Order. This rate structure provides a consistent and meaningful price signal to consumers that increased energy consumption, viewed from the perspective of the test year and planned additions to baseload plant in order to-alleviate energy deficiencies, increases energy costs.

The residential structure so established does not affect the cost of service determinations or the increased revenue assignments to the various customer classes. ,his residential rate structure affects only those customers within the residential class.

Gas Utility--Rate Design

209. Mr. Heidt provided Applicant's rate design testimony for the natural gas utility. Mr. Heidt (Pg. 12) described the proposed natural gas rate spread in the following manner "...I followed the same basic rate levels established for the various customer classes in the Commission's 1972 Rate decision (Order No. 4068). In addition, to recover gas supply cost increases incurred since 1972, I have reflected the concept of passing through gas supply costs on an MCF basis so that each customer's actual usage will determine the share of the gas supply cost which that customer will bear."

The Commission, based upon the record in this case, accepts the Applicant's rate design proposal for natural gas.

Gas Utility--Residential Rate Structure

210. Applicant proposes a declining block rate structure for residential natural gas service. This rate structure consists of a minimum charge (which includes 1 MCF consumption), five gas consumption blocks, and declining block prices.

211. Mr. Galligan proposed a rate design which would include a monthly customer service charge and a flattened energy rate for natural gas consumption. Mr. Galligan (Pg. 14) correctly observed that Applicant has not demonstrated that natural gas costs decrease as a function of consumption by blocks.

212. The Commission finds that the respective positions of Applicant and Mr. Galligan on the appropriate rate structure for the residential natural gas service are virtually identical to those regarding electric rate structure. Absent conclusive evidence demonstrating a declining cost relationship with increased consumption, the Commission must reject Applicant's proposed residential rate structure.

213. As in the case of residential electric rate structure, the Commission finds that the rate design proposed by witness Galligan better tracks the increasing costs of natural gas. Separation of energy costs from the customer service charge and elimination of the declining block rate structure should provide consumers with appropriate price signals reflecting the real cost of energy consumption.

The level of the monthly customer service charge shall be determined in the following manner:

(a) Develop the declining block price values in the conventional manner based upon the approved residential class revenue responsibility. Calculate the revenues by block for the classes.

(b) Divide the total revenues anticipated from all blocks above the minimum charge block (0 - 1 MCF) by the total consumption in those blocks to obtain an average price per MCF.

(c) Multiply this average price per MCF by the consumption in the 0 - 1 MCF block. Subtract the resulting gas revenue from the total minimum charge revenue to determine the revenues that must be obtained through the customer service charge.

(d) Divide these necessary customer service revenues by the number of customer bills to determine the level of the monthly customer service charge.

214. The rate structure so established does not affect Applicant's proposed allocation of cost responsibility to the residential class or the level of increased revenues assigned to the residential class, which were accepted by the Commission in Finding 210. This intra-class rate structure change affects only the customers within the residential class.

Great Falls Gas

215. Applicant again proposes a monthly per customer charge to Great Falls Gas Company. The Commission found such a charge discriminatory in Findings 124 of Order No. 4220C. Great Falls Gas contended, MPC acknowledged, and the Commission finds that I there has been no change of circumstances to alter the discriminatory nature of the customer charge, which Applicant has proposed for GFG alone. Such proposed charge is, therefore, denied.

Other Matters

216. For purposes of the terminology of the irrigation schedules to be submitted pursuant to this Order, MPC shall follow the approach adopted by the Commission in Order No. 4350A.

217. Applicant's proposed rate schedules included tax and purchased gas adjustment clauses. The Commission finds that automatic rate adjustment procedures are prohibited by the terms o R.C.M. 1947, Sec. 70-113.

218. Applicant proposed to amend its Natural Gas Service Regulations to allow the institution of a $10.00 service charge for "non-emergency lighting and each non-emergency extinction of a pilot light during normal business hours," with the charge at other times to be the actual cost incurred by the company. Mr. Heidt stated on cross-examination

that the revenues to be derived from the institution of this charge had not been estimated. The Commission considers objectionable any action which may negate or deter attempts by the public to conserve natural gas, a valuable and non-renewable resource. Applicant, to institute such a deterrent to conservation, must demonstrate to the Commission that the greater public interest would be served by such charge.

219.- Applicant's casual evaluation of the proposed charge, in which- the resultant revenues were not estimated for purposes of test year revenue adjustments, is unpersuasive. Therefore, the Commission finds that the proposed charge must be denied.

CONCLUSIONS OF LAW

1. The rate bases determined in Finding of Fact No. 96 for the electric utility, and Finding of Fact No. 116 for the gas utility reflect original cost depreciated values. These values comply with the requirement of R.C.M. 1947, Section 70-106, that the value placed upon a utility's property for ratemaking purposes "shall not exceed the original cost of the property."

2. An average rate base is an appropriate means of measuring the value of Applicant's properties at risk during the test period. In addition, the use of average rate base values better match test year revenues and expenses to the properties which produced them than do end of test year values. Applicant's efforts to adjust its test year revenues and expenses to year-end levels, presented as a part of the rebuttal case, deprived the parties and the Commission of a full opportunity to examine the validity of these adjustments. Accordingly, adoption of the average rate bases with corresponding revenue and expense levels is appropriate.

3. Elimination of the fair value Mystic Lake valuation and of the excess cost of the Milwaukee transmission line is proper since the excess costs bear no relationship to the original cost

of these properties when first dedicated to public use.

4. The exclusion of customer-contributed capital from rate base is proper as ratepayers should not be forced to provide a return on funds which they have furnished a utility. The exclusion from rate base of pre-1971 accumulations of deferred investment tax credits will not result in loss to Applicant of the right to claim these credits.

5. The Commission's allowance for working capital is necessary to permit Applicant to meet its obligations before cash from ratepayers is available for this purpose. The amounts allowed in both the electric and gas rate bases are sufficient for this purpose.

6. The adjustment in Finding No. lO9 (c) to non-jurisdictional sales is necessary to prevent subsidization by jurisdictional ratepayers, and as an incentive to Applicant to seek compensatory rates on these transactions.

7. The adjustment discussed in Finding No. lO9 (e) for revenue from surplus sales of electric power to other utilities is proper in view of the acceptance of the full Colstrip No. 2 investment in rate base, and also in view of Applicant's failure to convincingly prove the existence of ' its assumed transmission constraints.

8. The allowance for Applicant's gas supply costs is sufficient to allow Applicant to prudently select its gas sources,
while at the same time balancing low and high price sources in such a way as to minimize the cost impact on ratepayers.

9. The rate of return allowed in this order meets the constitutional requirement that a public utility's return must be "commensurate with returns on investments in other enterprises having corresponding risks and sufficient to assure confidence in the financial integrity of the enterprise, so as to maintain its credit and to attract capital." Federal Power Commission v. Hope Natural Gas Company, 320 U.S. 591, 603

(1944).

10. R.C.M. 1947, Section 70-113, requires that the Commission conduct a hearing before it approves a rate increase in a schedule generally affecting consumers. Accordingly, the requested tax adjustment and purchased gas adjustment clauses must be denied because these clauses would result in automatic increases.

11. The rate structures authorized by the Commission, based upon analysis of the entire record, are just, reasonable, and not unjustly discriminatory.

ORDER

THE MONTANA PUBLIC SERVICE COMMISSION ORDERS THAT:

1. The Montana Power Company shall file rate schedules effective upon their approval, which reflect revenue increases of $17,118,000 on electric service, and $17,176,000 on gas service, which amounts include revenues already awarded as temporary increases in Orders 4350 and 4350B.

2. a) The increased electric revenues authorized herein shall be distributed to Applicant's classes of service in the following manner:

(1) The increased revenue of $11,971,000, attributable to test year investment in baseload energy plant, shall be applied to all customers of all classes by means of a uniform price per unit of energy (cents per kwh) or volumetric increase.

(2) The increased revenues of $5,147,000, attributable to other than investment in baseload plant, shall be assigned to all customers of all classes by a uniform percentage increase.

(3) Applicant shall file revised residential rate schedules incorporating a $2.25 monthly customer service charge and a flat energy {, charge to be developed by the company and reviewed by the Commission staff.

b) The increased natural gas revenues authorized herein shall be distributed to all customers of all classes in the following manner:

(1) That portion of the natural gas revenue increase attributable to the increased cost of gas supply shall be applied to all customers of all classes by means of a uniform increase per MCF.

(2) That portion of the increase not attributable to increased gas supply costs shall be applied to all customers of all classes by a uniform percentage increase to the basic rate levels established in the 1972 Order No. 4068.

(3) Applicant shall file revised schedules for residential gas service reflecting a customer service charge and a flat energy charge to be developed by the company, according to the method given in Finding 215, and reviewed by the Commission staff.

3. Applicant shall continue to file monthly reports of its sources of natural gas supply, and the prices at which this supply is obtained.

4. Applicant shall file revised schedules incorporating the requested changes in its service regulations which have not been specifically rejected herein.

5. All motions and objections not ruled upon at the hearing are denied.

6. Applicant shall remove the $3, 025,000 associated with the purchase of the Milwaukee line from its electric plant accounts and transfer it to N.A.R.U.C. Account 114, Utility Plant Acquisition Adjustment.

7. The $3, 025,000 net acquisition adjustment eliminated from electric

rate base in Finding No. 101 represents an actual outlay of funds by Applicant's shareholders. Because these funds were actually expended, Applicant should be permitted to recapture this investment. This sum shall be amortized over a twenty-nine year period and applicant shall file revised electric schedules which reflect a $105, 621 increase in revenues.

DONE IN OPEN SESSION at a meeting of the Montana Public

Service Commission held April 24, 1973, by a vote of 5 - 0.

BY ORDER OF THE PUBLIC SERVICE COMMISSION:

GORDON E. BOLLINGER, Chairman

P.J. GILFEATHER, Commissioner

THOMAS J. SCHNEIDER, Commissioner

GEORGE TURMAN, Commissioner
Voting to Concur

ATTEST:

Madeline L. Cottrill
Secretary

(Seal)

NOTICE: You are entitled to judicial review of this order. Judicial review may be obtained by filing within thirty (30) days from the service of this Order a petition for review pursuant to Section 82-4216, R.C.M. 1947.

APPENDIX A

	A		B		C		D		E		F		G		H		I	
	1976 Actual		MPC 1976 Normalized/ Annualized		MPC 1976 Normalized/ Annunlized 0-19-77		Hess Original		Hess Revised		MPC 1977 Original		MPC 1977 Revised 4-12-77		MPC 1977 Revised 8-19-77		1977 Actual	
	MMCF 14.9	$ (OOO)	MMCF 14.9	$ (000)	MMCF 14.9	$ (000)	MMCF 14.9	$ (OOO)	MMCF 14.9	$ (000)	MMCF 14.9	$ (OOO)	MMCF 14.9	$ (OOO)	MMCF 14.9	$ (OOO)	MMCF 14.9	$ (000)
Carway Purchased Gas	25449	45798	25900	53906	25900	60028	25980	53906	24055	55581	12529	25980	25980	53906	25900	60028	17155	36104
Emergency Sale							(2966)	(7012)										
MDU Sale			(2577)	(6239)					(2834)	(6862)			(2577)	(6239)				
Aden Purchased Gas																		
Related to Purchased	4262	5021	3304	5006	3304	5787	3304	5086	3304	5787	5139	8853	3304	5006	3304	5787	3373	5537
Related to Produced	5509	2718	*4597	2636	*4597	2905	*4597	2636	*4597	2905	*13221	7230	*4597	2636	*4597	2905	*7981	4276
Related to Fcc	321	159	359	206	359	227	359	206	359	227	710	392	359	206	359	227	485	257
Montana Purchased Gas	5334	2668	6775	6664	9196	12208	7285	6773	8926	10260	8718	8599	6367	6276	9112	12175	7465	7356
Canadian Royalty Gas	5589	1790	4597	1883	4597	2224	4597	1884	4597	2224	13221	6549	4597	1883	4597	2224	7981	3673
Montana Royalty Gas	9865	673	10128	1184	10598	1197	12180	1348	12962	1357	14609	1451	9374	1106	9492	1114	13281	1207
Storage (Net)	(1439)	(4482)	(l500)	(3022)	(l500)	(3346)	(1500)	(3022)	(1500)	(3334)	(461)	(2126)	(46l)	(l457)	(461)	(l851)	(a)l500)	(3046)
Other Non-related Gas Supply Costs		32				32						27						
Tota1 Gas Supply	49381	55177	49643		49957		49869		49069		54473		49520		49806		48240	55444
Company Use			(3228)		(3546)		(3509)		(3509)				(3129)		(3415)			
To Market	$55177	46415	$68543		46411	$75023	46360	$61805	4636O			$68145	$56955		46191	$69642	46391	555444

* Would be duplication if used to arrive at total volumes

(A) Uses Hess' volumes for net storage