

PUBLIC SERVICE COMMISSION OF WISCONSIN

BIENNIAL REPORT

July 1, 1979 to June 30, 1981

F O R E W O R D

This biennial report covers the program, scope, objectives and accomplishments of the Public Service Commission for the period from July 1, 1979, to June 30, 1981, and contains information with respect to matters under the commission's jurisdiction which it deems proper to submit in compliance with section 15.04(4), Wisconsin Statutes, as to biennial reports.

The following individuals served as commissioners during this biennium.

Stanley York, chairman, June 28, 1979, to present

Willie J. Nunnery, commissioner, April 23, 1980, to present

Branko Terzic, commissioner, April 3, 1981, to present

Edward M. Parsons, Jr., commissioner, November 4, 1977, to
April 3, 1981

Charles J. Cicchetti, commissioner, May 4, 1977, to February 22,
1980.
(chairman, May 12, 1977, to June 28, 1979)

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I. MANAGEMENT PERSONNEL

PUBLIC SERVICE COMMISSION OF WISCONSIN

STANLEY YORK, CHAIRMAN

Executive Assistant--Phyllis Dube

WILLIE J. NUNNERY, COMMISSIONER

BRANKO TERZIC, COMMISSIONER

Chief Counsel - Steven M. Schur

Chief Economist - J. Robert Malko

Accounts and Finance Division--Vacant (Frederick C. Huebner, administrator,
retired July, 1981)

Accounting Bureau - Norman C. Young

Audits Bureau - David A. Darwin

Reports Bureau - Frederick A. Halverson

Administrative Services--James McKinnon, administrator, appointed
August, 1981

Consumer Information Bureau - Al Guyant

Financial Operations Bureau - Gordon O. Grant

Data Processing Bureau - Eugene Masshardt

Personnel Services Bureau - Carla W. Lent

Records Management Unit - Patricia Brinkman

Word Processing Center - Patricia Luchsinger

Engineering Division--William Sayles, administrator

Communications Bureau - William J. Green

Construction Review & Field Surveillance Bureau -
David L. O'Connell

Electric & Water Bureau - Clarence F. Riederer

Gas Bureau - William A. Slagg

Examining Division--Clarence B. Sorensen, administrator

Systems Planning, Environmental Review

& Consumer Analysis--Jerry Mendl, administrator

Systems Analysis Bureau - David Schoengold

Environmental Analysis Bureau - Roy Christianson

Utility Rates Division--Victor W. Mayer, administrator

Communications Bureau - Gary A. Evenson

Electric Bureau - Terrance B. Nicolai

Gas Bureau - Harold A. Meyer

Operations Bureau - Thor R. Soderholm

Water and Sewer Bureau - Robert S. Cullen

II. JURISDICTION, FUNCTIONS AND ORGANIZATION of the PUBLIC SERVICE COMMISSION

The Public Service Commission is an independent regulatory commission whose jurisdiction, powers, and duties are delegated to it by the Wisconsin Legislature. According to Wisconsin Statutes, it is the duty of the Public Service Commission to "supervise and regulate every public utility in this state" so that "reasonably adequate service and facilities" are available at "rates that are reasonable and just."

The Public Service Commission is composed of three full-time commissioners appointed by the Governor and confirmed by the Senate for staggered six-year terms. The commission has a staff of 159 positions.

As of June 30, 1981, its regulatory powers and duties included the rates and services of:

- 15 radio common carriers
- 102 electric utilities (85 are municipal)
- 16 gas distribution utilities (1 is municipal)
- 3 heating utilities (1 is municipal)
- 144 sewer utilities (1 private)
- 109 telephone utilities
- 556 water utilities (539 are municipal)
- 1 telegraph company
- 946 utilities

The commission staff is organized into six divisions as well as the chief counsel's office and the chief economist's office. Each has the following program assignment:

Office of Chief Counsel

The Chief Counsel advises the commission and staff on legal matters, represents the commission in litigation in state and federal courts and before state and federal administrative agencies. The Office of Chief Counsel also reviews proposed commission actions for legal correctness and represents commission staff at hearings.

Office of Chief Economist

The Chief Economist consults with commission and staff on economic factors and issues relating to public utility activities, and develops and presents expert testimony in rate and rule-making proceedings.

Accounts and Finance Division

The Accounts and Finance Division is responsible for the financial, accounting and reporting aspects of public utility regulation including the development of special studies and recommendations to the commission concerning cost of capital, rate of return and public utility revenue requirement. The Bureau of Audits performs routine audits of the accounts and records of public utilities as well as special investigations and field work involving rate proceedings, transactions with affiliated interests, establishment of new accounting systems and procedures, utility plant construction costs and the proposals by public utilities to merge, consolidate or purchase or sell utility plant. The Bureau of Utility Accounting develops, revises and interprets the uniform systems of accounts for public utilities as required; develops, revises and distributes public utility annual report forms; performs audits of public utility annual reports; investigates utility applications for authority to issue stocks, bonds and all other forms of securities; and reviews depreciation rates, practices and procedures of all utilities. The Bureau of Accounting and Financial Reports collects, compiles and analyzes financial, economic and other data relevant to public utility regulation and prepares and distributes statistical and information bulletins and reports for use by staff and general public.

Utility Rates Division

The Utility Rates Division is comprised of five bureaus - Communications, Electric, Gas, Water and Sewer, and Operations and Federal Intervention.

The Communications Bureau participates in formal cases involving telephone and telegraph utilities and regulated radio common carriers. Case participation involves preparation and presentation of testimony and exhibits, cross-examination of witnesses, preparation of cost studies, rates designs, policy and rule proposals, and preparation of orders for the commission. This bureau also processes certain complaints and inquiries, prepares rate impact estimates of construction approvals and administers and reviews utility tariffs required by s. 196.20, Wis. Stats.

The Electric Bureau participates in formal rate and rule cases involving private and municipal electric utilities and steam heat utilities. Case participation involves preparation and presentation of testimony and exhibits, cross-examination of witnesses, preparation of cost studies, rate designs, extension rules, consumer analyses, rate portions of environmental impact screenings, policy and rule proposals and preparation of orders for the commission. This bureau also monitors applications of electric utility fuel and purchased power cost adjustment clauses, processes certain complaints

and inquires, prepares rate impact estimates of construction approval, administers and reviews utility tariffs required by s. 196.20, Wis. Stats., and takes a major role in preparing reviews of proposed state and federal energy legislation and compliances with the National Energy Act.

The Gas Bureau participates in formal rate, rule, and gas supply (involving priority-of-service, curtailment, and conservation) cases, involving natural gas utilities. Case participation involves preparation and presentation of testimony and exhibits, cross-examination of witnesses, preparation of cost studies, rate designs, consumer analyses, rate portions of environmental impact screenings, policy and rule proposals and preparation of orders for the commission. This bureau has primary responsibility for implementation and review of gas conservation programs and the preparation of Wisconsin's conservation plan in compliance with federal RCS guidelines. This bureau also processes certain complaints, inquiries, and waiver requests, reviews and administers utility tariffs required by s. 196.20, Wis. Stats., takes a major role in preparing reviews of proposed state and federal energy legislation and compliances with the National Energy Act, represents the commission on state and national committees and maintains liaison with federal and other state agencies on matters of gas supply and conservation.

The Water and Sewer Bureau participates in formal rate cases involving municipal and private water utilities and regulated sewer utilities. Case participation involves preparation and presentation of testimony and exhibits, cross-examination of witnesses, preparation of cost studies, rate designs, consumer analyses, policy and rule proposals, and preparation of orders for the commission. This bureau also processes certain complaints and inquiries, prepares rate impact estimates of construction approvals, and administers and reviews utility tariffs required by s. 196.20, Wis. Stats.

The Operations and Federal Intervention Bureau participates in formal rate, refund rule and wholesale gas adjustment clause cases involving gas utilities. Case participation involves preparation and presentation of testimony and exhibits, cross examination of witnesses, preparation of cost studies, rate design, consumer analyses, refund policy, adjustment clause analysis and preparation of orders for the commission. This bureau has primary responsibility for federal interventions, refund and gas adjustment clause policies and coordination of commission staff response to federal energy rule-making and legislative proposals affecting Wisconsin utilities and customers. The bureau also processes certain complaints and inquiries, maintains federal rule-making files, reviews gas adjustment clause accuracy annually through annual "true up"

adjustments for all utilities, and maintains liaison with federal, state and other agencies on matters involving energy rules and wholesale rate changes.

Engineering Division

The Electric and Water Bureau reviews and makes recommendations on plans for plant additions filed pursuant to ss. 196.49 and 196.491(3), Wis. Stats., participates in the review and evaluation of utility advance plans filed in accordance with s. 196.491(2), and reviews and enforces service and safety standards. It conducts continuing studies of the adequacy of electric energy supply, represents the commission on state and national engineering and standards committees, maintains liaison with federal and other state agencies with concurrent jurisdiction, administers Volume 1 of the State Electrical Code, and administers the specific laws relating to the Wisconsin Valley Improvement Company and the Chippewa and Flambeau Improvement Company.

The Gas Bureau processes complaints concerning natural gas utility service, operation, and facilities; reviews and makes recommendations on plans for plant additions; reviews and enforces service and safety standards; represents the commission on state and national committees; cooperates with other state agencies on technical matters relating to relocation of natural gas facilities; and administers the Gas Safety Standards of the state and the federal government as an agent of the Federal Department of Transportation.

The Communications Bureau processes complaints concerning telephone utility service, operation, and facilities; reviews and makes recommendations on plans for plant additions; reviews and enforces service and safety standards; and represents the commission on state and national committees.

The Construction Review and Field Surveillance Bureau monitors utility construction projects for prudence of investment, and associated costs relating to investment in, or retirement of, utility plant; maintains price indices of material and labor and a familiarity with construction standards; reviews methods and procedures in property record work and book entries of utilities acquiring transferred property; and represents the commission on state and national committees.

Examining Division

The Examining Division schedules and gives notice of public hearings, making certain to set each hearing at a time and place most convenient to the parties and the public, and consistent with efficient use of staff time and travel expense; conducts public hearings with a hearing examiner presiding; records verbatim

testimony by a stenographic reporter and prepares typewritten transcripts of public hearings; issues proposed decisions on all class 2 and 3 proceedings, and class 1 when specified by the commission, as set forth in s. 227.09, Wis. Stats.

Systems Planning, Environmental Review and Consumer Analysis Division

The Systems Planning, Environmental Review and Consumer Analysis Division is responsible for the implementation of Section 1.11, Wis. Stats., and Section 196.491, Wis. Stats., the Power Plant Siting Law. Two bureaus have been established to accomplish this.

The Bureau of Systems Analysis is responsible for providing economic and technical (need, reliability, efficiency) analysis of utility proposals, expansion plans, and alternatives; reviewing and evaluating forecasts; preparing portions of environmental screenings, impact statements, and assessments; and reviewing the impact of rate policies on customers and the utility system.

The Bureau of Environmental Analysis is responsible for providing environmental and consumer impact analyses of utility proposals, expansion plans, and alternatives; reviewing and recommending environmental policy and actions; preparing portions of environmental screenings, impact statements, and assessments; and assessing the consumer and environmental impacts of rate policies.

The Wisconsin Environmental Policy Act (WEPA) Coordinator is located in the SPERCA Division. The responsibilities of this position include determining if there will be significant environmental impact from utility programs subject to s. 1.11, Wis. Stats., and PSC 2.90-2.95; and advising the commission of its responsibilities under WEPA.

Administrative Services

This division provides internal administrative services such as budget analysis and control, data processing and systems analysis, personnel, records management, and word processing services. The division's Consumer Information Bureau mediates consumer complaints, responds to inquiries from the news media and the consumers, and edits final commission notices, orders, information papers, and brochures.

III. REPORT ON ALTERNATIVE EMPLOYEE WORK PATTERNS

Although the PSC is currently revising its policy and guidelines for all alternative work schedules (flextime, compressed work weeks, and permanent part-time), such options are still available to all employees.

At the end of fiscal year 1980-81, 8.11% (12 of 148) employees were working on a less than full time basis. Of the 12 permanent part-time employees, seven are in clerical classifications and five are in professional classifications. The 12 employees are dispersed throughout three divisions.

Approximately 35% of all PSC employees regularly or intermittently exercise flextime options. There are two employees (one professional, one paraprofessional) working a compressed (four-day) work week, on a trial basis.

Overall, the agency's experience has been positive in regard to nonstandard work schedules and it will continue to offer such opportunities.

IV. ISSUES BEFORE THE COMMISSION

A. ADVANCE PLANNING

The Public Service Commission under the Power Plant Siting Law Chapter 68, Laws of 1975 (principally Section 196.491, Wis. Stats.) is required to review each electric utility's anticipated energy and demand requirements and plans for construction of generation and transmission facilities. These plans, which cover a 20 year planning period, are filed by the utilities every two years. The intent of this siting law is to standardize the procedure for review and evaluation of proposed power plant construction and to eliminate expensive delays in processing specific construction applications. As a practical effect, the Advance Plan encompasses many programs and policies which affect electricity requirements and utility planning.

The commission made determinations on the utilities' first Advance Plans (filed July 1, 1976) and issued its order on August 17, 1978. Among the determinations in the Advance Plan I proceeding the commission ordered: (1) That no nuclear generation be planned or applied for with the exception of Haven Unit I and Tyrone Unit I until reasonable progress is made in resolving waste disposal, fuel supply and decommissioning issues, (2) That all electric utilities are to promote the use of alternative sources of energy by proposing rate structures in future rate cases and other appropriate means, (3) That utilities are to develop incentive rate structures for the sale of electric energy to and the purchase of electrical energy from customers who cogenerate, (4) That all utilities are to implement load management as soon as practicable.

The Public Service Commission made determinations on the second Advance Plan in an order issued December 4, 1980. Included in this order were the following determinations: 1) Eastern Wisconsin utilities were permitted to plan on the basis of a coincident demand growth of between 2.4% and 3.2% per year. Utilities in western Wisconsin were directed to plan on a growth rate of between 2.4% and 4.0% per year. 2) The utilities were required to submit an analysis of the sensitivity of their forecasts to important variables and to develop generation and transmission plans based on the above growth rates. 3) The utilities must submit evidence showing why part of the need for a proposed conventional generating facility cannot be met by generation based on alternative nondepletable sources of energy or technologically improved or advanced methods of coal-fired generation. 4) All major utilities were required to actively pursue and implement where feasible alternative sources of energy as well as new technologies for cleaner or more efficient use of fossil fuels. All major utilities were directed to commence a pilot project on wind generation including

data collection and installation of wind generators and to report on their progress each six months. 5) The major utilities were required to make prefeasibility study appraisals of existing hydroelectric generating plants to review the potential for increased capacity at these plants and to review existing nonelectric dams and existing Mississippi River navigational dams to determine if there is reasonable potential for adding generation capacity. 6) All the major Wisconsin utilities were required to encourage customers to pursue alternative sources of energy by gathering and providing relevant, reliable information to customers and to continue to encourage conservation efforts by their customers. 7) The major electric utilities were required to develop a program for the purpose of determining the significance of acid deposition in Wisconsin. The program was to begin in 1981 in coordination with the Department of Natural Resources and the PSC. 8) The utilities were directed to implement load management programs as soon as practical.

Wisconsin Electric Power Company is in the process of purchasing and installing 150,000 load control devices for electric water heaters on its system pursuant to the commission's June 29, 1978, authorization. As of May 15, 1981, 56,400 control devices had been installed on customer electric water heaters representing 35 megawatts of system load. Wisconsin Power and Light Company has been installing a combination time-of-day meter with time clock control over the customer's water heater for its direct load control program. The commission has also ordered municipally owned electric utilities to investigate load management systems.

Wisconsin Power and Light Company, Wisconsin Public Service Corporation, and Wisconsin Electric Power Company have special experimental tariffs to accommodate electric utility backup service to customers who have installed alternative energy systems such as those powered by solar or wind. WP&L and WEPCO also have programs underway to assist customers in the purchase and installation of solar water heaters.

PSC and utility progress on several other Advance Plan issues are addressed later in this report.

B. ELECTRIC ENERGY ISSUES

1. Generating Plants and Transmission Lines

- a. Dairyland Power Cooperative Project 87 has been indefinitely deferred due to revised demand projections. Deferral is expected to be at least into the early 1990's.

- b. Alternative Energy Study - The commission staff is carrying out a study aimed at developing a plan to provide for the electric supply through 2000 by means solely of renewable resources and conservation.
- c. Prairie Island-Eau Claire 345 kV Transmission Line - The commission denied the NSP application for this line on the grounds that reconductoring lower voltage lines would provide adequate near term system support at a lower cost.
- d. Wisconsin Public Service Corporation-Wisconsin Electric Power 345 kV Northern Loop - The commission has decided to review this whole set of Northeastern Wisconsin transmission reinforcements as a package in Advance Plan 3.
- e. Cogeneration and Small Power Production - The commission is considering appropriate roles, conditions, and rates for the interconnection of customer-owned generating facilities to utility lines. Decisions are expected by the end of 1981.
- f. Wisconsin Public Service Corporation Generating Plant - This plant is proposed for the early 1990's. Application has not yet been received. Expected size is 400 MW.
- g. Point Beach Unit 1 Steam Generator Replacement. Due to continuing and worsening problems with steam generator tube degradation at Point Beach Unit 1, the commission opened an investigation on its own motion into this matter on October 25, 1979. The problem resulted in a decision to purchase spare steam generators for eventual replacement and an application was filed by Wisconsin Electric on March 3, 1980. In a related action with an associated Wisconsin Electric rate case, the commission hired an outside consultant in water chemistry and corrosion to assist in its investigation with regard to the prudence of the company's actions related to the cause of the problem and its actions and response to the problem after it was discovered. At the close of the biennium, the commission has made a tentative decision approving the company's proposal to make repairs to the existing steam generator tubes by a newly-developed sleeving process and to purchase two spare steam generators to store on site for the expected eventual replacement of the existing steam generators of Unit 1. The

commission's formal order in this and related cases was not issued prior to the end of the biennium.

2. Electric Rates and Service Rules Approved and Under Consideration.

a. Master metering and service extension rules. The PSC completed a two-year case investigating the service extension rules of Wisconsin's seven largest electric utilities in November, 1979. As a result of that case, the commission now requires individual metering for all residential units on which construction started after March 1, 1980.

PSC staff completed a generic environmental impact statement (EIS) addressing the economic and social impacts of revising electric extension rules in early 1980. The commission issued new extension rule guidelines for the largest electric utilities in mid-1981 based on individual utility hearings which included the EIS. The new extension rules basically require all customers requesting an extension of service to pay the full distribution-related cost of such construction less the average embedded distribution costs collected through monthly rates for that type of service. These new rules will go into effect in early 1982.

b) Major Rate Cases During this period, Wisconsin's seven largest electric utilities were authorized rate increases as indicated below:

	<u>Docket No.</u>	<u>\$ Increase</u>	<u>% Increase</u>	<u>Authorized return on Equity</u>
(1) LSDP	3020-ER-13	\$ 3,511,000	12.82%	14.0%
(2) MG&E	3270-UR-9	\$ 6,000,000	9.0%	14.0%
(3) NSP	4220-ER-14	\$20,559,000	20.5%	14.0%
(4) SWL&P	5820-UR-4	\$ 457,000	2.8%	13.25%
	5820-UR-10(Interim)	\$ 351,600	1.97%	13.25%
(5) WEPCo	6630-ER-10	\$70,999,000	11.6%	13.25%
	6630-ER-12(Interim)	\$25,946,000	10.3%	13.25%

(continued)

(6) WP&L

6680-UR-5	\$ 2,330,000	1.2%	13.50%
6680-UR-11	\$57,405,000	24.8%	14.75%

(7) WPSC

6690-UR-17	\$31,073,000	13.2%	14.0%
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c. Expanded Billing Information. The commission, on June 24, 1980, issued a final order adopting revised administrative rules which became effective November 1, 1980, requiring the seven largest Class A electric and ten largest Class A natural gas investor-owned utilities in the state to provide more information on their customers' monthly bills. The commission's objectives in revising the utility billing information content were to provide the customer with sufficient information to easily calculate a bill, evaluate personal consumption patterns and conservation efforts, and to become more aware of the bill components. The administrative rules require these utilities to itemize each of the rate components on the bill and to provide the data necessary to allow the customer to compare this year's energy consumption with last year's energy consumption. Because of the additional computer capability necessary and the need to revise the billing formats, it will take some of the utilities approximately two years to fully implement.

d. Lifeline Rates. The commission was required under section 114 of the Public Utility Regulatory Policies Act of 1978 to make a determination, after an evidentiary hearing, whether or not lifeline rates should be implemented for the Wisconsin electric utilities covered by PURPA. The commission by order dated March 3, 1981, found that lifeline rates for electric and natural gas service are an appropriate issue to be considered in individual rate proceedings where the actual impacts of rates can be properly evaluated. This decision was rendered after evidentiary hearings were held. The commission received extensive testimony from commission staff and customer groups representing residential and industrial interests. The commission staff prepared an environmental impact statement that evaluated the potential economic, environmental and social impacts of lifeline rates and alternatives to lifeline rates. The commission staff conducted a survey of approximately 1,600 residential customers on such characteristics as income, energy use, appliances, housing type and numerous other demographic data to prepare the environmental impact statement. This data will also be available for the commission's use in other electric rate increase applications.

The commission by order in February, 1981, approved experimental natural gas and electric lifeline rates for Madison Gas and Electric Company. These rates provide a discounted rate for utility service up to a designated amount. To qualify, a customer's income must be not greater than 150% of the federal poverty level. As of August

1981, approximately 500 residential customers were served under Madison Gas and Electric's lifeline rates.

e. Cogeneration. The commission is required by Federal Energy Regulatory Commission rules pursuant to Sections 201 and 210 of the Public Utility Regulatory Policies Act of 1978 to place in effect utility rates and service rules which encourage cogeneration and small power production. The commission is conducting a general investigation into the implementation of the required program for cogeneration and small power production. The commission has retained a private consultant to assist in determining an appropriate method or methods to calculate avoided cost and the associated buyback rate levels. Further, a technical advisory committee has been appointed by the commission to study the technical aspects of interconnection of cogenerators and small parallel power producers with utility systems and to submit recommendations. The commission staff is also preparing an environmental impact statement to consider the environmental, economic, and social impact of various alternatives. It is expected that the commission will complete this proceeding and render a final decision before the end of 1981.

g. Fuel Adjustment Clause. The commission has undertaken proceedings to determine if it is appropriate to adopt the PURPA automatic adjustment clause standard. This standard requires the automatic adjustment clause to provide incentives for efficient use of resources, including incentives for economical purchase and use of fuel and electric energy. The optional forms or types of incentives which might be provided through the operation of an automatic adjustment clause are being investigated, and review of the clauses presently authorized for use is being made to determine if they conform to the requirements of PURPA. The record is closed in this proceeding and the commission is in the process of making a decision as of this writing.

h. Implementation of Time-of-Day (TOD) Rates. Volume discount electricity pricing has been eliminated in Wisconsin. The PSC has actively pursued the implementation of marginal cost pricing and time-of-day tariff reform in individual rate proceedings since 1975. The commission continues to authorize more TOD tariffs for the large investor-owned electric utilities, allowing all types of customers the opportunity to take advantage of these rates.

On November 11, 1976, the commission authorized the Wisconsin Power & Light Company (WP&L) to implement the first comprehensive application of mandatory TOD tariffs in Wisconsin. WP&L now has 480 customers, mostly the larger commercial and industrial, on TOD tariffs. In addition, in June, 1981, the commission ordered WP&L to place its largest use residential customers on a TOD rate and to offer an

optional TOD rate to small commercial and residential customers. WP&L's TOD customers now account for 37% of the system's total energy, and the 304 mW peak demand of these customers represents 33% of the coincident peak demand.

Madison, Gas & Electric Company requires all customers with monthly demands exceeding 200 kilowatts to be on a TOD tariff. In August, 1980, the largest residential customers were also mandated for a TOD rate. TOD rates are also available to all other customers on an optional basis. MG&E has 417 TOD customers who consume 41% of MG&E's total energy, and their combined demand of 132 mW accounts for 36% of MG&E's peak demand.

Wisconsin Public Service Corporation (WPS) was authorized to place all commercial and industrial customers with monthly demands in excess of 500 kW under a TOD tariff. An optional TOD tariff is available to residential customers. In addition, WPS recently completed a comprehensive three-year study of the effects of time differentiated rates on residential customers, and is preparing to offer such a rate in its next formal rate case. At the present time, 99 TOD customers account for 41% of all retail energy sales, and the 344 mW coincident peak demand of these customers is 32% of the system total. Beginning January, 1982, the industrial TOD rate will apply to all such customers in excess of 200 kW a month.

Wisconsin Electric Power Company requires all primary voltage customers, all secondary voltage customers consuming over 30,000 kWh/month, and all residential customers with annual use in excess of 30,000 kWh to be billed under TOD tariffs. Also, in October, 1980, a voluntary TOD rate for an additional 10,000 residential customers was authorized. Fifty-five percent of all retail energy sales is represented by these 19,400 customers and their combined coincident peak demand of 1,536 mW is 51% of the retail system total. In November, 1980, the commission authorized Superior Water, Light and Power Company to place all industrial and commercial customers with demands in excess of 1,000 kW in any month under TOD rates. These 16 customers account for 59% of all retail energy sales, and their 45 mW of coincident peak demand is 61% of the SWLP retail system. In July, 1981, Lake Superior District Power Company (LSDP) was similarly ordered by the commission to bill all customers with monthly demands of 1,000 kW or more under a TOD rate. This affected seven industrial customers representing 39% of energy sales, and their 27 mW of coincident peak demand is 29% of the LSDP system total.

Northern States Power Company (NSP) was ordered by the commission in April of 1981, to place all customers with demands over 200/kW/month, and the 1,500 largest residential customers, on TOD rates. This TOD rate is also optional for the other residential customers. Completion of the transfer to TOD rates will not be completed until

early in 1982. The 463 customers presently billed TOD rates represent 37% of NSP's energy sales, and their combined 304 mW contribution for system coincident peak is 25% of the retail system total.

i. Seasonal Rates. Rates that vary from summer to winter are another type of time-of-use pricing authorized for three of the state's largest electric utilities. Two of these utilities experience a summer peak during which greater demand is placed on power plants for short periods of time resulting in higher cost to the utility. Air conditioning loads are a significant contribution to the summer peak. The third utility, located in the Northern portion of the state, experiences a winter peak. Higher rates during the peak season encourage customers to reduce their use of electricity, which reduces the need for constructing and operating expensive power plants or purchasing additional high cost energy.

In response to seasonal rates, increased electric space heating, and saturation of air conditioning, utilities which have been peaking in the summer are forecast to switch over to winter peaking status in the future. To reflect these forecasts the summer/winter differential is being reduced, and in one case in mid-1981, completely eliminated.

j. Interruptible and Curtailable Tariffs: In addition to the widespread implementation of time-of-day tariff reform, this commission has vigorously pursued its commitment to peak load pricing through other reform measures. Interruptible and curtailable tariffs are also approaches initiated by the commission to accomplish this goal. Interruptible service is defined as electric service of lower reliability than firm service. Interruptible service may be interrupted during system emergencies in order to maintain a high degree of supply reliability to firm power users. A lower rate is offered to those customers who are willing to allow the utility to interrupt a portion or all of their electric service without advance notice. Curtailable tariffs are similar to interruptible tariffs but provide customers with advance notice of service interruptions. Several utilities are involved in these tariffs, including the Wisconsin Electric Power Company, Northern States Power Company, Wisconsin Power & Light Company, Wisconsin Public Service Corporation, MG&E, SWL&P and LSDP.

k. PURPA Grants Projects. The 1978 National Energy Act section entitled Public Utility Regulatory Policies Act (PURPA) provided for funding of state utility regulatory agencies to, 1) assist them in considering whether or not to implement the rate and service standards contained in the act and, 2) assist the review and experimentation with innovative rate structures. For the federal fiscal year of 1979 to 1980 the commission received a federal grant

of \$196,000 to assist the commission in its consideration of the rate and rule standards to pursue the three general purposes of the act which are as follows:

- 1) Conservation of energy supply by electric utilities, and
- 2) The optimum efficient use of facilities and resources by electric utilities, and,
- 3) Equitable rates to electric consumers.

The commission is using or has used this federal grant money to:

- 1) Develop the computer capability to analyze the time differentiated cost and reliability of generation systems, and impact of direct load control and alternative energy systems on utility generating systems, and the environmental and financial implications of various utility investment and operating decisions.
- 2) Develop and implement a computer model which will enable the commission to evaluate the alternative investment decisions on future utility revenue requirements.
- 3) Develop computer models to be used to predict the response of customers relative to various types and levels of buyback rates to encourage installation of customer-owned cogeneration and small power production systems.
- 4) Develop and implement models and methods to evaluate the performance of utilities' transmission systems and for evaluating the costs and benefits of future changes to that system.
- 5) Develop detailed survey information on the electric use patterns of residential and commercial customers.

The information from computer models developed under each of these projects is or will be used by the commission in its advance plan proceedings, generation and transmission line construction proceedings, and in the electric rate increase proceedings of the Class A investor-owned electric utilities.

The commission received a grant of \$134,000 for the federal fiscal year of 1980-81 to assist it in considering the PURPA rate and service standards. The commission has or is using this funding for the following purposes:

- 1) To assist the commission in its generic proceeding to evaluate the present uses of electric utility automatic adjustment clauses, investigate alternatives to these clauses, and to recommend policy guideline changes. The commission retained a consultant and hired a project employee to assist in this proceeding.
- 2) To summarize the commission's historical progress in implementing the PURPA rate and service standards. The report is intended to provide information to the public and assist in training new commissioners and commission staff.
- 3) To develop and analyze alternative rate structures and guidelines to comply with the FERC rules relating to the encouragement of cogeneration and small power production (sections 201 and 210 of PURPA), to evaluate consumer and utility implications of different rate structures and alternative energy sources. The commission has retained a private consulting company to assist in developing the hearing record for the generic proceeding underway to consider these issues.

1. PURPA Innovative Rates Projects. The commission for the federal fiscal year of 1980-81 and into the federal fiscal year of 1981-82 received a total of \$349,400 to conduct two innovative rate structure projects. The first project, funded at a level of \$227,000 over a 21-month period is to refine, consider and, if appropriate, implement a flexible pricing demonstration tariff for large industrial and commercial users. Flexible pricing is an advanced form of marginal cost-based pricing to replace fixed period time-of-use rates. The flexible pricing tariff would have some degree of flexibility to vary according to the marginal cost of the utility's current operating conditions. The commission has retained a consultant to conduct and manage this project with a number of subcontractors and a part-time commission project employee.

The second innovative rates program is an 18-month project to conduct an analysis of the cost and benefits of various residential direct load control strategies compared to residential time-of-day rates; \$122,400 has been allocated to this project. The commission has retained two consultants to coordinate the work on this project. Data from the extensive four-year residential time-of-day pricing experiment of the Wisconsin Public Service Corporation is being used in this project. The results of this project are expected to assist the commission in making decisions relative to the monthly consumption level of residential customers above which time-of-day rates should be implemented and the degree to which time-of-day rates should be implemented in conjunction with direct load control programs. (See III. A. Advance Plans.)

C. NATURAL GAS ISSUES

1. Gas Supply, gas prices, and conservation

As the last biennium ended, there were indications that both major Wisconsin pipeline suppliers would soon be able to increase peak-day gas supplies to their distribution utilities. A peak-day supply expansion was approved for the Michigan Wisconsin Pipe Line Company, and several utilities in Wisconsin received additional peak-day supplies. However, the amount of the additional supply was extremely limited. Conservation continues to be the major source of gas supply for the attachment of new and additional gas service. By the end of the biennium, residential spaceheating customers had conserved almost 25% since 1973. During this biennium, the price of No. 2 fuel oil increased at an incredible rate and large numbers of fuel oil heating customers requested and were converted to natural gas space heating service. In calendar year 1980, more residential space heating customers were attached than ever before.

Because of the gradual deregulation of natural gas in accordance with the Natural Gas Policy Act of 1978 (NGPA), both of Wisconsin's two major pipeline suppliers indicated that they expect to deliver enough gas to meet the requirements of all customers through the 1980's. However, the new supplies of natural gas will continue to be more and more expensive and rates for natural gas service will continue to rise rapidly.

During this biennium, the annual heating cost of an average residential spaceheating customer of Madison Gas and Electric Company increased from \$514 to \$758, an increase of 48%. The largest portion of this increase is due to a 63% increase in the cost of purchased gas. Of the \$244 increase in the average customer's bill, over 90% or \$220 was caused by the increased cost of gas. However, the same average customer was able to reduce consumption by 15% during the biennium so that the actual annual bill only increased to \$650. The relative rate levels and cost increases are representative for gas distribution utilities in Wisconsin.

At the end of the last biennium, the commission had held hearings on the comprehensive energy conservation plans of each Class A utility. These plans included conservation standards which would be required before existing residences could be converted to natural gas spaceheating service as well as programs for furnace modification in residences and conservation in rental living units. The commission had also held hearings regarding the Class A private electric utilities relative to similar types of conservation programs already required for gas utilities.

In a series of orders in November and December of 1979, the commission directed each Class A gas utility to require that certain energy conservation standards be met before gas service was rendered to existing buildings for space heating. These standards include such things as insulation, weatherstripping and caulking, storm windows and storm doors, ventilation, and electronic ignition and automatic vent damper. The order also required the utilities to establish a continuing education program for energy auditors and also established an inter-utility committee to work with commission staff in monitoring the progress of the overall conservation program.

These orders also require the utilities and the commission staff to form a technical working committee on furnace modification to determine those furnace modifications which were cost-effective, safe and energy-conservation justified for implementation by the commission. By the end of this biennium, the technical working committee on furnace modifications had completed its work and had developed a furnace modification brochure for distribution to customers. The brochure will be sponsored by the commission and distributed by utilities to customers upon request. It is expected that the brochure will be available in late fall of 1981.

In an order in docket 05-EI-1, dated November 20, 1979, the commission required that the Class A private electric utilities provide similar conservation services to those already being provided by the Class A gas utilities. With the passage of this order, energy audits became available to over 90% of the total residences in Wisconsin. The orders in docket 05-GV-2 and 05-EI-1 served to lay the groundwork for the development of Wisconsin's Residential Conservation Service Program (RCS).

In an order issued by the commission in December 1980, the commission indefinitely suspended its previous requirement for mandatory conservation standards and established a voluntary program of energy conservation for rental living units. The highlight of the program is the promotion by the utilities of an energy conservation seal and certificate which can be achieved by those rental living units which comply with the commission's conservation standards. An extensive advertising campaign will be undertaken by the utilities to promote consumer awareness of the energy conservation seal and certificate and what they mean. The order directed utilities to provide energy audits to landlords upon request in order to certify that properties meet the conservation standards established by the commission. The utilities were also directed to provide "life-style" audits for tenants to enable them to take low and no-cost energy conservation actions.

The commission directed the utilities to establish advisory groups in various communities in their service territories to assist the utilities in accomplishing the goal of energy conservation in the rental living unit sector. The advisory groups were to consist of representatives of the utility, landlord associations, tenant unions, lending institutions, realtors, city planners, community action agencies, and other groups with an interest in promoting energy conservation in the rental living unit area. As of the end of the biennium, the utilities were working to implement the commission's order.

2. Residential Conservation Service Program (RCS)

At the beginning of this biennium, rules were developed by the Department of Energy (DOE) to administer the RCS program in accordance with the National Energy Conservation Policy Act (NECPA) of 1978. In Wisconsin, the Division of State Energy (DOSE) was appointed by the Governor as the lead agency to develop the state plan for the RCS program, and PSC staff worked closely with the DOSE staff in the development of the state plan. Work began on the formulation of the state plan in January 1980, and the first draft of the plan was published in April 1980. The commission and the Division of State Energy held hearings on the plan in May of 1980, and the final state plan was submitted to DOE for approval in June of 1980. After a great deal of negotiation between the Division of State Energy, the PSC and the DOE, the Wisconsin State Plan for implementing the RCS program was approved effective June 1, 1981. Implementation of the program was scheduled to begin on July 1, 1981.

The RCS program will expand the requirements placed on utilities for providing assistance to customers who desire to take conservation action. In addition to providing a complete, computerized energy audit service, the utility auditor will also help the customer with arranging services for both installation and financing of conservation measures upon request of the customer. As of the end of the calendar year 1980, utilities in Wisconsin had already performed more than 127,000 home energy audits for their residential customers.

3. New investigations into conservation and utility financing

One of the major areas of investigation in the commission's earlier docket 05-GV-2 was the need for utility financing of home weatherization measures. It was determined at that time that adequate financing was available from Wisconsin's financial institutions. Beginning in the fall of 1980, considerable interest was expressed by legislators, energy planners, the federal government and other individuals regarding utility financing programs for

purposes of further encouraging customer conservation. In light of this interest, the commission, on its own motion, initiated an investigation in docket 05-UI-12 to reconsider the need for and the merits of broader utility programs for financing weatherization and conservation.

An initial phase of hearings in docket 05-UI-12 was held during May of 1981. After reviewing the record in those hearings, the commission determined that further information was required relative to the impact of various utility financing proposals on the utility and its ratepayers. Additional data and information were requested from the utilities in June 1981, and at the end of the biennium it was expected that further hearings would be held after the receipt of such information.

4. Implementation of seasonal rates and removal of inverted and benchmark rates.

During the last biennium, the Public Service Commission took major steps to move away from declining-block rate designs for natural gas toward those rate designs which it considers to give the proper price signals and which promote conservation. In the last biennium, inverted rate designs were placed into effect for Wisconsin Power & Light Company and Wisconsin Public Service Corporation, and early during this biennium inverted rates were also placed into effect for Madison Gas & Electric Company, Superior Water, Light & Power Company, and Wisconsin Fuel & Light Company. After implementation of such a rate design for these companies, it came to the commission's attention that there were several problems associated with the implementation of inverted rates, including:

- (a) alleged discrimination against larger customers simply because of higher usage;
- (b) revenue instability for the utility;
- (c) rate fluctuations dependent on the weather and the economy which were not subject to a customer's control;
- (d) lack of understanding of price signals by smaller customers.

During this biennium the commission has moved away from inverted rates towards flat and, in many cases, seasonal rates which charge more for usage in the winter than in the summer. At the end of this biennium, seasonal rates were in effect for Madison Gas & Electric Company, Wisconsin Fuel & Light Company, Wisconsin Power & Light Company, Northern States Power Company, and Wisconsin Public Service

Corporation. Seasonal natural gas rates reflect the cost differential between winter and summer service similar to seasonal and time-of-day rates for electricity and telephone service. In addition to reflecting cost, the higher winter rate unit cost of a seasonal rate provides greater incentive to those customers who can reduce their winter usage by undertaking conservation measures. The seasonal winter period generally begins with the first scheduled meter reading on and after November 1 and continues for six billing cycles (to approximately April 30).

During this biennium, the commission has also moved towards the elimination of benchmark rates which were developed by the commission during the last biennium to promote conservation and efficient use of resources. As with inverted rates, various arguments were presented to the commission against benchmark rates.

During this biennium, benchmark rates were eliminated for Wisconsin Power & Light Company and Wisconsin Gas Company. Benchmark rates are still in effect for Madison Gas & Electric Company.

5. Incremental gas pricing

Beginning on January 1, 1980, the Federal Energy Regulatory Commission (FERC) began its implementation of rules developed in accordance with the Natural Gas Policy Act of 1978 (NGPA) to price natural gas service to certain nonexempt industrial boiler fuel users at the equivalent cost of alternate fuels. Under the rules, additional revenues collected from such customers were to be used to offset the tremendous increases in the costs of new natural gas supplies which were being obtained by interstate pipeline companies. In Wisconsin, the Public Service Commission issued an order in November, 1979, which set the price of natural gas to all nonexempt customers equal to the cost of No. 6 fuel oil. By taking this action, the excess revenues collected from these large industrial customers were retained in the state by the utilities and refunded to all other customers, instead of flowing out of the state to pipeline companies and then to the producers. However, because many of the industrial customers who potentially were subject to incremental pricing were found to be exempt by the FERC, the impact of the refunding of excess revenues to all other customers was minimal during this biennium. It is expected that this situation will continue.

6. Gas Lights

In the Power Plant and Industrial Fuel Use Act of 1978, Congress inserted a provision which prohibited the use of natural gas for outdoor decorative lighting after November 9, 1979, for commercial

and industrial uses and after January 1, 1981, for residential uses. In this biennium, the Public Service Commission adopted the federal rules as state rules; however, the PSC advanced the date of the ban on natural gas outdoor lighting for residential uses to January 1, 1981. Prior to the passage of the law and the promulgation of the commission rule, it is believed that approximately 30,000 gas lights existed in Wisconsin. Although it received nearly 700 requests for exemption from residential customers, as of the end of the biennium, the commission had not granted any requests for permanent exemption from the ban for residential uses. As of the end of the biennium it is believed that fewer than 200 gas lights are yet to be disconnected.

7. PGAC True-up Refunds

a. Purchased Gas Adjustment Clause. The commission on its own motion instituted an investigation into the Purchased Gas Adjustment Clause and Refund Provisions of all Wisconsin natural gas distribution utilities. The commission found that the clause used by many utilities did not properly reflect the gas costs being incurred. Consequently, the commission mandated new clauses for all gas utilities, designed to enable them to recover no more or less than the cost of gas each year. To insure this result the new clauses require an annual reconciliation or "true-up."

b. True-up. The annual reconciliation or true-up compares the actual cost of gas incurred with the cost of gas actually recovered to insure no over or undercollection of allowable cost. The true-ups completed have generally had discrepancies of less than one percent, indicating that the new PGAC's are tracking costs very precisely.

c. Refunds. As a part of the PGAC investigation the commission examined the equitability of gas distribution utilities refund procedures.

As a result, the commission ordered new refund provisions which require that monies be refunded to the consumer from whom the money was initially collected on the basis of actual consumption and that the refunds be in the form of a one-time credit. The new provisions also allow past customers to collect cash refunds for the periods they were customers. In addition, the companies are required to pay interest equal to the Federal Reserve Discount Rate (at this writing 14%) on the average daily balance in their refund accounts pending refunding.

D. Telephone Issues

1. Service

Even though all telephone utilities within the state met the commission's standard of providing no more than four parties on any one line, some utilities have provided service with no more than one party on a line. This was done after public hearings and a showing that it was economically feasible. The continued conversion of exchanges to all one-party service is shown in the following table:

	Biennium					
	<u>June</u> <u>1971</u>	<u>June</u> <u>1973</u>	<u>June</u> <u>1975</u>	<u>June</u> <u>1977</u>	<u>June</u> <u>1979</u>	<u>June</u> <u>1981</u>
Utilities	40	61	76	81	89	94
Exchanges in Service	57	101	150	212	220	242

In spite of cyclic dips in the economy the telephone utilities in the state have continued to commit large amounts of capital to plant. This is evidenced by the expenditures that have been approved or accepted for filing by the commission in each of the years shown in the following table:

1973 - \$105,173,388	1977 - \$151,078,972
1974 - 131,400,986	1978 - 116,634,916
1975 - 122,353,037	1979 - 175,285,373
1976 - 175,017,081	1980 - 193,256,706

There is every indication that telephone service in Wisconsin meets the statutory test of being reasonably adequate. This conclusion is drawn from the low number of service-related complaints to the commission shown, by years, in the following table plus review of other service indices:

1973 - 514	1977 - 398
1974 - 477	1978 - 456
1975 - 437	1979 - 488
1976 - 292	1980 - 446

In the biennium, the commission acted on 97 formal and informal cases involving expenditures and service of telephone utilities. There has been a sharp increase in the number of digital central offices being installed and there are two locations where optical fiber cables are to be installed for transmission of voice and data on light waves. In addition, some telephone utilities, having obtained waivers from the Federal Communications Commission, are installing Community Antenna Television (CATV) in their serving areas.

2. Communication Rate Cases and Rate Design

During this period Wisconsin's two largest telephone utilities were authorized rate increases as indicated below:

1. Wisconsin Telephone Company \$ 67,235,000
 (2 separate cases)
2. General Telephone Company 1,134,000
 of Wisconsin

Changes were made to the rates for many services in order to better reflect service costs. In this manner, responsibility for a cost imposed on the utility system is properly and equitably assigned to the customer who benefits from the service.

Rate changes were also made in order to give many consumers a clear and unrestrained choice in the provision of simple telephones. Wisconsin Telephone Company and General Telephone Company customers now pay separate rates for network access and for telephones. This unbundling has also been authorized for other telephone utilities. In all cases, customers who choose to use their own telephones receive some rate recognition for this service option.

In this biennium the commission also authorized a major revision to the pricing of network access for many business customers. Wisconsin Telephone Company business customers outside of Milwaukee were converted to mandatory measured local service in 1980, with service being measured and billed for on a per call basis. Milwaukee-area business customers of Wisconsin Telephone Company were not affected because they have been subject to mandatory measured service for decades. Residential customers across the state were not affected by this change.

3. Communication Investigations:

a. Services for the deaf

Several investigations were conducted by the commission during this biennium. The availability and adequacy of telecommunications services for the deaf and hearing impaired were investigated in a proceeding completed in this biennium. Several measures were taken to better meet the telecommunications needs of such citizens. Guidelines were established for the pricing of telecommunications devices for the deaf (TDD); these included a maximum monthly rate of \$20 for a teletypewriter for certified deaf persons and a one-time payment option. The commission also authorized discounted long distance rates for calls within Wisconsin

made from a teletypewriter by a certified deaf person. The commission also ordered that rates for equipment used primarily by the hard-of-hearing (e.g. volume controlled handsets) be set at direct costs only with no charge for contributions to general overheads. In many instances this resulted in lower rates for these services.

b. Extended area service

The commission's investigation into extended-area service (EAS) and local measured service (LMS) issues was continued during the biennium (docket 05-TV-7). EAS expands the local calling area of an exchange. Issues that are being investigated relate to the appropriateness of such service expansion, the pricing of EAS and whether new, statewide EAS policies or guidelines should be established. The need for reasonableness of and impacts of LMS are also central issues in this on-going investigation. The commission contracted for a study of the sociological and demographic impacts of LMS during this period. A study was submitted and is part of the record in docket 05-TV-7 for the commission's consideration.

c. Merchandising

Rapidly changing conditions in the industry required the commission to actively investigate the issue of telephone utility merchandising action in a competitive marketplace for terminal equipment. This issue arose in the Mid-Plains Telephone, Inc. case in docket 3650-TI-1. Corollary investigations and orders have emanated from the FCC which in general could lift all barriers to competition in terminal equipment in both federal and state jurisdictions. In view of the realities of the current terminal equipment marketplace, the commission, in Mid-Plains, determined that the provision of terminal equipment services may not require traditional tariff procedures, and in fact may be merchandised as nonutility undertakings. Protection of the monopoly rate payer from inappropriate cross-subsidization will be ensured by continued commission supervision of such nonutility activities which would include revised accounting procedures and commission approval of merchandising activity via an application process.

Several revised accounting procedures were authorized by the commission during the biennium. As referenced immediately above, the Uniform System of Accounts was revised in order to accommodate nonutility merchandising activities by telephone public utilities. In conjunction with certain FCC actions, the Uniform System of Accounts was also revised to require expensing rather than capitalization of station connection costs. Station connection refers to certain of the costs associated with the installation of internal premises wiring and terminating jacks. This change was made with the objective that the costs of station connection should be

borne by the immediate customer causing the cost rather than other current and future rate payers, and that the extraordinary rate of growth in investment in the station connections account (Account 232) should be checked.

E. Water and Sewer Issues

The commission issued 195 water and 36 sewer rate orders in the biennium. Five of these orders established rates for newly created water utilities.

During the biennium, the commission has continued use and refinement of a water utility cost analysis method that it began to use for a majority of water rate cases in the previous biennium. The typical result of using this analysis method for a water utility for the first time is a partial levelling of the declining-block volume rates. As a result, large-volume water users are generally receiving greater percentage bill increases than smaller-volume users.

Inflation and the rapidly increasing cost of money has impacted on municipal water and sewer public utilities that have required debt financing of major construction projects during the biennium. Whereas these utilities in the past have been able to use general obligation and mortgage revenue bonds as a source of financing at interest rates of 5% to 6%, they are now faced with interest rates of up to 12% or higher. As a result, to provide for financial integrity these utilities have required rates of return on rate base and on municipal equity much higher than the levels required in the previous biennium.

During the biennium, the commission completed a study on marginal cost pricing of water service. The study contains computer models that calculate (1) the marginal cost of providing water service, (2) the cost/benefit of using marginal cost pricing in water rates, and (3) the relationship between the price and the associated demand for water. Inasmuch as the study was completed late in the biennium, marginal cost pricing was not used in water rate proceedings during this period. During the next biennium, the commission intends to consider the results of the study to determine the appropriateness of implementing water rates based on marginal cost principles and to implement such rates for utilities when appropriate.

During the biennium, several combined water and sewer public utilities began and completed construction of major sewage treatment plant improvements in conjunction with the federal Clean Water Act. Many of these utilities received financing for the projects through grants from the federal Environmental Protection Agency or the state Department of Natural Resources. The grant programs administered by these agencies require the municipalities to adopt user charge systems following specified guidelines. This rate regulation by EPA

and DNR overlaps with the commission's utility regulation. The commission had coordinated its efforts to insure that its regulation is consistent with the grant program requirements while maintaining public utility regulatory principles.

Many sewer utilities have implemented sewer user charges based on water use for the first time during the biennium. The related rate impact is a substantially greater percentage bill increase to high-volume users. As a result of this impact, water use in many of these communities has declined significantly. This water use reduction is beneficial in terms of conservation and may allow delays in the need for future capital expenditures to expand plant capacity. However, it impacts negatively on the water and sewer utility's revenues, resulting in the need for higher rates to cover the utility's operating costs, much of which is incurred regardless of the volume of water supplied or volume of sewage treated.

During the biennium the commission authorized water utilities to undertake 73 construction projects at an estimated total cost of \$51,775,000. Included in this amount were authorizations to three municipalities and three sanitary districts to establish new water public utilities at an estimated cost of \$5,471,000. The commission also authorized sewer utilities to undertake 20 construction projects at an estimated total cost of \$42,374,000. The availability of state- and federally-funded grants and loans was an important source of financing for water and sewer projects.

F. National Activities

The Legislature has authorized the PSC to retain legal counsel in Washington, D.C. to represent the interests of Wisconsin utility customers. Through legal counsel, the commission can participate directly in federal rule-making and court decisions which significantly impact the rates of gas and electricity in Wisconsin.

1. Northern Natural Gas Company's Expansion Case. Northern applied for increased peak day deliveries in Wisconsin. The PSC intervened in support of the application which would increase gas available to Wisconsin customers. PSC counsel participated in the case and filed a statement in support of a temporary certificate. A Federal Energy Regulatory Commission law judge issued an initial decision on January 9, 1981, favorable to the PSC. The case is now pending FERC final decision. The PSC has filed requests for a prompt decision.

2. Tyrone Nuclear Plant Cancellation Expenses. Northern States Power Company of Minnesota and its subsidiary, Northern States Power Company of Wisconsin, applied to the FERC for approval to pass the costs of the cancelled Tyrone Nuclear Power Plant project through under their wholesale cost sharing agreement. The utility commissions of Minnesota, North Dakota and South Dakota appeared in

opposition to the pass-through. Their opposition was based on the theory that the Wisconsin PSC, in denying a permit for construction of the Tyrone plant, had improperly considered only Wisconsin needs, and that therefore Wisconsin consumers should bear the entire loss. The Wisconsin PSC intervened to show that its decision did in fact consider system-wide needs, including Minnesota, North and South Dakota, that subsequent events have shown the Wisconsin Commission's lower system-wide growth projections to be correct, and that cancellation losses had previously been shared under the coordinating agreement so that Wisconsin consumers paid for their share of losses which occurred in Minnesota. The PSCW staff also presented its same proposal presented to the Wisconsin commission for amortization of the loss, which contained significant reductions from the company's proposed amount to be amortized. The FERC administrative law judge has ruled in favor of the Wisconsin commission and NSP company's position. This ruling, if sustained, means that the Wisconsin consumers' share of the amortized loss will be equal to its percent share of the entire NSP system demand (approximately 13 or 14% of total demand) instead of the entire amount.

3. Michigan Wisconsin Pipe Line Company applied to FERC to allow increased gas deliveries in Wisconsin. FERC granted the application and General Motors, a Michigan Wisconsin customer, appealed to the courts. The PSC supported the pipeline company application. The Federal Circuit Court decided that the FERC did not adequately explain its denial of GM's rehearing request and remanded the case to the FERC for reconsideration on 6-10-81.

4. Wyoming and Montana Coal Severance Tax. The PSC supports legislation reducing and limiting the tax, which affects the cost of substantial coal consumption by Wisconsin electric utilities. Counsel is following proposed bills to accomplish this. No hearings have been scheduled as yet. Letters of support for two bills in the current session limiting state severance taxes have been sent to the respective House and Senate Committee members and the Wisconsin delegation.

5. The Louisiana First Use Tax. This is a 7¢/Mcf 1979 Louisiana State tax on all gas from Federal Gulf off-shore leases that is first purchased or transported through Louisiana, mainly interstate pipelines. Louisiana allowed various exemptions for its consumers which offset the tax in Louisiana. The pipelines passed the tax on to distributor utilities, and customers eventually paid it. The PSC opposed the tax from the start and on April 30, 1979, ordered all Wisconsin gas utilities affected to set up a segregated refund account for all tax money to be refunded to individual customers in the event legal challenge to the tax was successful. Legal offices of eight states, including Wisconsin, challenged the tax. On June 15, 1981, the U.S. Supreme Court ruled the tax unconstitutional and ordered refunds, with interest, totalling approximately \$700

million to consumers in 30 states. When all refunds are completed to distributors, probably in June of 1982, the tax will be refunded to Wisconsin customers.

G. Security Issues and Other Financial Matters

Wisconsin Statutes require that a privately-owned utility obtain commission authorization before it can issue securities.

Securities Authorized
July 1, 1979 - June 30, 1981

<u>Type of Security</u>	<u>Par Value</u>	<u>Net Proceed</u>	<u>Percent</u>
Common Stock	\$76,805,246	\$159,547,012	28.06%
Preferred Stock	28,000,000	28,000,000	4.92
Bonds & Other Debt	286,746,900	284,572,850	50.05
Pollution Control Revenue Bonds	97,655,000	96,478,337	16.97
Total	\$489,207,146	\$568,598,199	100.00%

Short-term indebtedness, maturing less than one year from issue in total amounts not exceeding \$264,200,000, at any one time, was authorized by the commission during the 1979-1981 biennium.

The types of securities each utility may issue must bear a reasonable proportion to each other. Before authorizing the issuance of securities, the commission must find that the financial condition, plan of operation and proposed undertaking of the utility are such as to afford reasonable protection to purchasers of the securities to be issued. Attention is also paid to times interest coverage. These considerations significantly affect a utility's investment rating, its cost of capital, and ultimately rates paid by customers for utility service.

An important function of the Accounts and Finance Division is to present evidence in rate cases in regard to total cost of service. This includes evidence with respect to overall operating revenues, operating expenses and evidence with respect to cost of capital for consideration by the commission in determining rates of return. Continuous studies are made of financial data relating to securities of public utilities and money-market conditions in general so as to furnish current information and data for use in presenting cost of capital studies to the commission. The commission, through its Accounts and Finance Division, has presented testimony in various proceedings before the Federal Power Commission (now the Federal Energy Regulatory Commission) establishing wholesale rates for electric power sold to municipalities.

Contracts and arrangements between public utilities and affiliated interests, as defined by statutes, are reviewed for the reasonableness of such transactions and to determine the cost to the affiliated interest of rendering service to the public utility.

The commission prescribes Uniform System of Accounts to be used by public utilities in maintaining their financial records. For electric, gas and water utilities the commission has adopted, with modifications appropriate for Wisconsin, Uniform System of Accounts as adopted by the National Association of Regulatory Utility Commissioners. For Class A and B telephone utilities, this commission has adopted, with modifications, the Uniform System of Accounts for Class A and B telephone utilities prescribed by the Federal Communications Commission.

Under the authority of s. 196.09, Wis. Stats., the commission is empowered to certify depreciation rates for utilities. Depreciation expense recorded in the utilities' accounts and allowance for depreciation expense in proceedings establishing rates for service must be computed on the basis of certified rates. The commission certifies depreciation rates for the larger Wisconsin utilities. Generally, depreciation rates for electric, gas, water and sewer utilities are certified at 5- to 10-year intervals and for telephone utilities at 4- to 5-year intervals. Depreciation rates for smaller utilities are reviewed routinely in connection with review of utility annual reports filed with the commission and recommendations for changes are made, if appropriate.

H. Diversification

FORMATION OF HOLDING COMPANIES BY WISCONSIN ENERGY UTILITIES

On April 30, 1980, Wisconsin Gas Company became a wholly-owned subsidiary of WICOR, a utility holding company exempted by the Securities and Exchange Commission (SEC) from regulation under the Public Utility Holding Company Act of 1935. WICOR and Wisconsin Gas have essentially the same officers and directors. WICOR's other subsidiary is WEXCO which is engaged in exploration for and development of oil and gas.

The commission has approved an affiliated interest agreement between Wisconsin Gas and WICOR and WEXCO.

Wisconsin Power & Light and Wisconsin Electric Power have announced plans to form holding companies in 1982. Both have applications pending at the SEC for exemption from the 1935 Act. The commission is considering how to deal with these Wisconsin energy utility holding companies.

I. Legislation Affecting the PSC

Two laws passed in the 1979-81 Wisconsin legislative session have impact on the commission.

First, the legislature created the Citizens Utility Board (CUB) via ch. 199 of the statutes. CUB is a private organization whose purpose is to represent the "residential utility consumers" in proceedings which affect their utility rate. CUB is empowered to solicit funds and provide information to the public in mailings made by utilities to customers.

The legislature also (ch. 350, Laws of 1979) passed a law requiring the PSC to devise a plan for electric supply in Wisconsin for the next 20 years emphasizing nonconventional sources of electricity. The plan was due to be completed sometime in fall, 1981.