

NINTH ANNUAL REPORT  
OF  
THE NATIONAL REGULATORY RESEARCH INSTITUTE  
(For Fiscal Year 1986)

The National Regulatory Research Institute  
1080 Carmack Road  
Columbus, Ohio 43210

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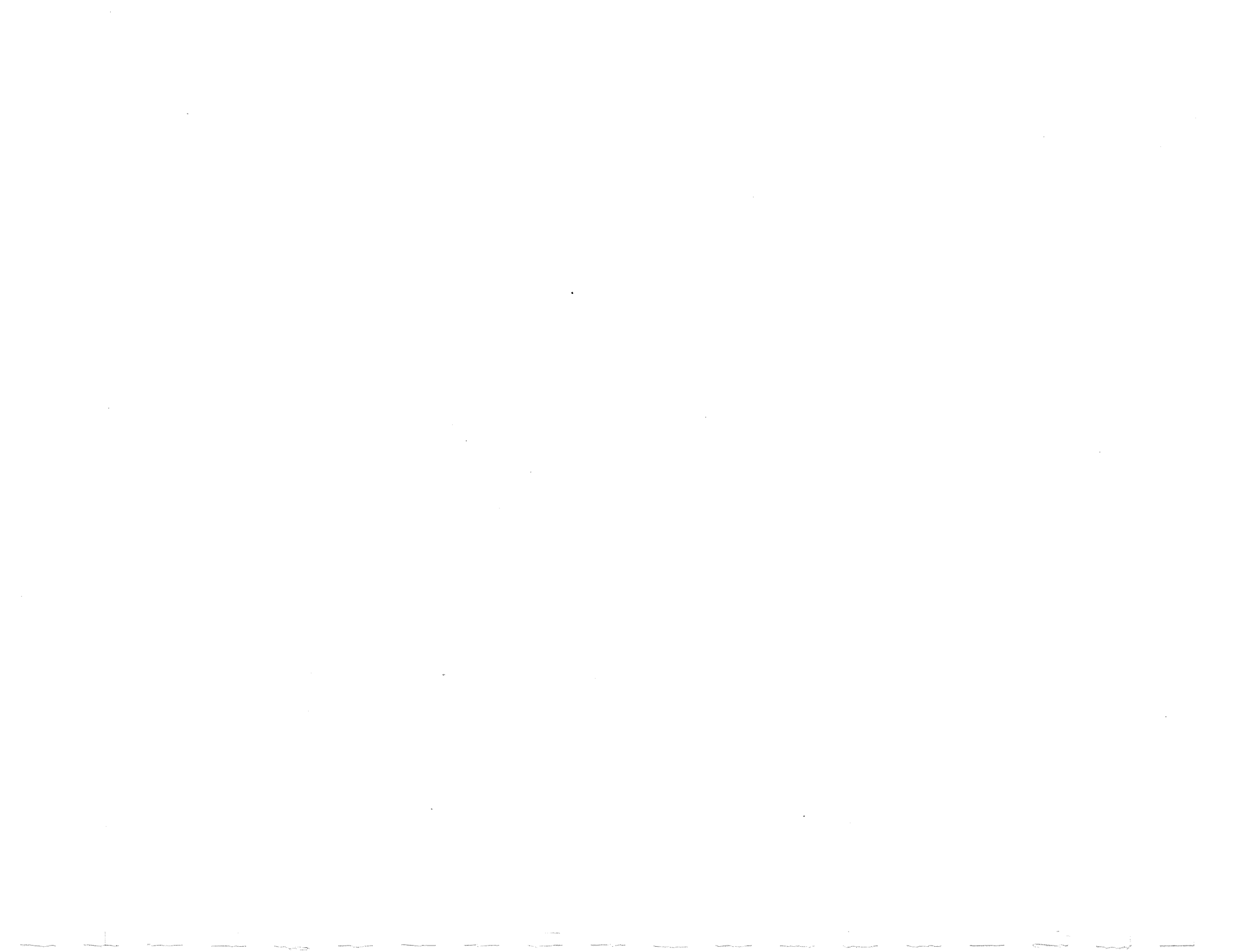


TABLE OF CONTENTS

| <u>Part</u> |  | <u>Page</u> |
|-------------|--|-------------|
|             | Preface.....                                       | ii          |
| 1.          | Summary and Overview.....                          | 1           |
| 2.          | Research and Assistance Provided To Commissions... | 4           |
|             | A. Electric Utility Related Activities.....        | 8           |
|             | B. Natural Gas Related Activities.....             | 14          |
|             | C. Telecommunications Related Activities.....      | 17          |
|             | D. Water Utilities Related Activities.....         | 25          |
|             | E. Multi-Utilities.....                            | 26          |
|             | F. Quick Response.....                             | 28          |
| 3.          | Governance and Structure.....                      | 30          |
| 4.          | Institution Building.....                          | 41          |
| 5.          | Consolidating State-Provided Regularized Funding.. | 44          |
| 6.          | Spending and Financial Reporting.....              | 47          |
| 7.          | Financial Statements.....                          | 49          |
| 8.          | Appendices.....                                    | 58          |

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

## PREFACE

An annual report for The National Regulatory Research Institute is required to be submitted to both the National Association of Regulatory Utility Commissioners and The Ohio State University. Our individual sponsoring commissions and the regulatory community at large are, we believe, also owed such reporting. Finally, the preparation of an annual report is a useful business practice internally.

This Ninth Annual Report describes the main activities of NRRI for FY1986 just completed, its governance and organization, its income and expenditures. It was a year of continued forward motion toward achieving additional credibility, financial stability, and useful service as the research arm of the NARUC.

Douglas N. Jones  
Director  
August 1986



## PART 1

### SUMMARY AND OVERVIEW

The Ninth Annual Report of The National Regulatory Research Institute (NRRI) describes a year with two major goals (1) catch up in finances and consolidation in funding sources, and (2) catch up in the completion of research projects comprising our publications agenda. We fully achieved the first and partially achieved the second. Other notable activities of NRRI included a move to excellent permanent quarters in the research park area of the University campus and the equipping of NRRI with a computer system for both word processing and analysis. Finally, a recruitment effort for both senior and junior analysts was initiated and will be intensified in FY87.

With respect to funding, 5 more state PSCs have joined in Institute support, bringing the total to 45 PSCs. Also, three Canadian commissions responded favorably to our subscription fee initiative. The Board of Directors acted to cease the complimentary distribution of Institute publications and computer models to non-funding state commissions as well as free access to Institute technical workshops and conferences.

NARUC revenues were forecast to be \$1,383,297 in our Business Plan and turned out to be \$1,283,482, with receipts of \$91,532 additional coming in during July, 1986, the first month of FY87, but attributable to FY86. Thus the forecast and actual amounts were within \$8,283 of each other. Total revenues from all sources were estimated to be \$2,181,948 in our Business Plan and in fact were \$1,926,425 when FY86 July receipts are included. The difference of \$255,523 is due to the slow rate of spending contract monies: \$135,350 was carried forward to FY87 and two forecasted contracts did not materialize during FY86.

Our financial plan is revised quarterly to ensure that our goals are being achieved throughout the year. Based on our last revision, expenditures were planned at \$1,878,009 and in fact were \$1,657,596. The goal of at least \$100,000 less than income for the year in order to meet our announced goal of reducing the cash flow deficit was achieved and indeed an additional available balance of \$77,000 resulted.

The NRRI again conducted research, educational, and technical assistance activities in the regulation of the fixed utilities--electricity, natural gas, telecommunications, and water. These were done under the Board-approved program categories of rate design, cost control, utility finances, market structure, regulatory information, and quick response that give continuity over time to our overall effort of helping strengthen commission regulation. As before, Institute products included research reports, policy studies, surveys, computer models, and a substantial amount of "free" telephone and mailing assistance. Sales of Institute publications reached a new high of some \$45,000 in revenue. Computer tape sales of NRRI models added \$1,000 to the total. Overall we disseminated 10,000 copies of Institute publications this year.

Product and service is the heart of the Institute. Over the twelve-month period we brought to publication 6 studies from 1985, undertook 11 research and assistance projects for 1986, plus a "Quick Response" report on Block Billing in natural gas, (and began two other Quick Response studies), and worked on 5 contracts. Of our NARUC sponsored research 3 of these were telecommunications projects, 2 electric projects, 3 natural gas, and 3 multi-utility projects. Of the current research agenda, 3 were telephone studies, 4 were electric, and 1 was water. We also brought out 4 issues of the Quarterly Bulletin and Occasional Papers Nos. 10 and 11 (in the energy assistance field).

As to institution building and staff development, relations with The Ohio State University continue to be excellent. The host university's direct and indirect financial support increased this year. Professional staff participated in the academic life of the campus, were able to travel to a number of professional meetings in the field, gave papers at some of these, and published several papers in technical and trade journals. This kind of activity is, of course, crucial to any research center of repute.

This annual report is organized in the following fashion. Part 2 reports in some detail on the individual research and assistance activities brought out or undertaken in FY86 arranged by the utility sector. Part 3 sets out the governance and structure of NRRI. Part 4 contains aspects of institution building and institutional relations. Part 5 indicates the elaboration and consolidation of financial support for NRRI over the year.



In part 6 we detail the spending and financial reporting for NRRI. Part 7 contains the actual financial statements for FY86 from the three entities required to file these statements. The Appendix contains Board of Directors meeting agendas for the September 1985, January 1986, and May 1986 meetings, proposed new bylaws for NRRI, and certain other informational material.



## PART 2

### RESEARCH AND ASSISTANCE PROVIDED COMMISSIONS

NRRI'S reason for being is, of course, the research and assistance it provides its regulatory clients. At the September 1985 Board meeting the Board of Directors, approved a proposed Business Plan and Research and Assistance Agenda for FY86. The research projects put forward came out of the collaborative efforts of Institute staff and the Research Advisory Committee working intensively toward a consensus proposal over the spring and summer of 1985. The list of NARUC-funded projects and their associated budgets appears in Table 1.

Again in 1985-1986 we had eleven major research and assistance projects. Also, several projects that were planned for FY85 in fact came in during 1986. Some of these were major studies that were very well received, widely cited, and for which the Institute gained substantial recognition. These projects are reported on along with our FY86 projects later in this chapter. (One FY85 project in telecommunications is unfinished at this writing with two of the three components completed.)

Another element of our overall research and assistance effort for FY86 was our contract work. In the course of the year telecommunications assistance was provided to regulatory commissions in Ohio, Texas, and Nova Scotia. Contract assistance in the electric power sector was also provided the Ohio Public Utilities Commission. The value of these contracts totaled \$169,000. In addition an invited contract proposal was resubmitted to the New Jersey PUB, and this remains outstanding at this date. As always, a large amount of "free assistance" was provided by all Institute professional staff to the regulatory community at large through telephone calls and mailings.

TABLE 1

PROPOSED FY86 NRRI ANNUAL RESEARCH  
AGENDA AND BUDGETS

| (1)<br><u>Activities</u>                                 | (2)<br><u>Proposed Budgets</u> |
|--|--------------------------------|
| 1. Telephone Cost-of-Service Pilot                       | \$ 84,000                      |
| 2. Intra-LATA Pricing                                    | 120,000                        |
| 3. Long-Run Incremental Cost Study for Telephone Service | 121,000                        |
| 4. Innovative Administrative Procedures                  | 15,000                         |
| 5. Computer Model Dissemination                          | 13,000                         |
| 6. Gas Industry Restructuring                            | 82,000                         |
| 7. Pricing Wheeled Power                                 | 190,000                        |
| 8. Small Water Utility Acquisition                       | 77,000                         |
| 9. Co-sponsorship of BRIC-5                              | 33,000                         |
| 10. Quarterly Bulletin                                   | 145,000                        |
| 11. Quick Response                                       | 8,000                          |
| 12. Research Common Costs                                | 30,000                         |
| 13. Research Sub-Total                                   | 918,000                        |
| 14. NRRI Administration                                  | 158,000                        |
| 15. NRRI Board of Directors                              | 141,000                        |
| 16. Research Advisory Committee                          | 114,000                        |
| 17. Marketing  | 153,000                        |
| 18. TOTAL  | \$ 1,484,000                   |

Source: NRRI Administration Division, Business Plan for FY86.

The following pages contain brief descriptions of the products of the Institute that came out during FY86 and the progress toward bringing out other projects during program year 1986. They are grouped by utility sector. The Board terminated the providing of Institute products and services to non-funding state commissions in complimentary fashion as of end FY86. In the interest of wider dissemination of Institute publications we increased the number of commission staff persons on our mailing list. The totals for each are shown in Table 2.

TABLE 2

## MAILINGS OF NRRI REPORTS TO COMMISSION STAFF

|                      |   |                |    |
|----------------------|---|----------------|----|
| Alabama              | 2 | Montana        | 4  |
| Alaska               | 2 | Nebraska       | 3  |
| Arizona              | 0 | Nevada         | 6  |
| Arkansas             | 4 | New Hampshire  | 7  |
| California           | 7 | New Jersey     | 6  |
| Colorado             | 5 | New Mexico PSC | 9  |
| Connecticut          | 5 | New Mexico CC  | 4  |
| Delaware             | 1 | New York       | 12 |
| District of Columbia | 2 | North Carolina | 6  |
| Florida              | 9 | North Dakota   | 4  |
| Georgia              | 6 | Ohio           | 4  |
| Hawaii               | 2 | Oklahoma       | 6  |
| Idaho                | 5 | Oregon         | 2  |
| Illinois             | 4 | Pennsylvania   | 4  |
| Indiana              | 4 | Rhode Island   | 3  |
| Iowa                 | 4 | South Carolina | 6  |
| Kansas               | 3 | South Dakota   | 3  |
| Kentucky             | 3 | Tennessee      | 4  |
| Louisiana            | 3 | Texas PSC      | 7  |
| Maine                | 4 | Utah           | 7  |
| Maryland             | 4 | Vermont        | 5  |
| Massachusetts        | 4 | Virginia       | 5  |
| Michigan             | 7 | Washington     | 5  |
| Minnesota            | 5 | West Virginia  | 4  |
| Mississippi          | 3 | Wisconsin      | 6  |
| Missouri             | 8 | Wyoming        | 4  |

TOTAL 243

## A. ELECTRIC

### 1. Regulating Electric Utilities with Subsidiaries

During fiscal year 1986, the NRRI completed and published a study that compiled current information on the various regulatory treatments that state commissions use or could use when addressing problems associated with electric utilities with subsidiaries and affiliate companies. The report is intended to help state commissions to isolate and control better possible cross-subsidization or transfer pricing abuses.

The published report contains a literature review covering the regulatory issues relating to electric utilities with subsidiaries, the results of a survey of commission staffs on the current regulatory treatment by their commissions of electric utilities with subsidiaries, and the authors' analysis of the appropriateness, effectiveness, and improvement of various economic, accounting, and legal regulatory treatments. The authors' analysis covers (1) possible sources of commission authority for regulating electric utilities with subsidiaries, (2) various regulatory methods for identifying and monitoring the joint and common costs of a diversified electric utility, (3) problems involved in estimating a diversified utility's cost of capital, and (4) the various regulatory treatments that are available to a commission faced with transfer prices of an affiliate transaction.

The report was published in January 1986. The authors were Robert E. Burns, Peter A. Nagler, Kaye Pfister, and J. Stephen Henderson.

### 2. Some Economic Principles for Pricing Wheeled Power

The purpose of this study is to provide state commissions with an independent view of some principles that ought to apply to the determination of rates for wheeled electric power. Wheeling refers to the transportation service provided by one or more utilities whose transmission lines link a wholesale power buyer to a seller.

The primary effort is to identify wheeling costs and cost-based wheeling rate structures, and to develop a method for determining wheeling rates. These zero-economic-profit rates can be imposed if the regulatory authority (probably the FERC) can and will order wheeling. If wheeling is not ordered, rates must yield some profit to provide an incentive to wheel. A secondary effort of the study is to examine principles for setting rates appropriately higher than wheeling costs.

The study began in September 1985 and was well underway by June 30, 1986 --the end of fiscal year 1986. During these months, the staff collected information on electric transmission capital costs and operating expenses; this effort included a survey of state commissions to determine the construction costs of transmission lines recently added to service. Regularly published sources of data were found to be inadequate. The technical aspects of transmission that affect costs were studied in detail in the early months. Efforts to characterize current wheeling arrangements and current wheeling price-setting procedures were in progress as the fiscal year ended, as were efforts to examine wheeling ratemaking proposals by some state regulatory commissions and by academics. Several ideas for cost-based rates have been examined by the staff. In addition, investigations of rates higher than costs have proceeded, with the economic theory of competition and cooperation ("game theory") suggesting several useful approaches.

### 3. Innovative Administrative Procedures

During the 1986 fiscal year, Robert Burns of the NRRI staff, continued to work on the three-year project on innovative administrative procedures. During the first year of the project (fiscal year 1985), Mr. Burns made contacts with several key members of the regulatory community in order to find and develop selected examples of innovative procedures currently used by state and federal utility commissions, and to become exposed to recent developments in alternative dispute resolution techniques.



During fiscal year 1986, Mr. Burns continued to collect and compile examples of innovative administrative procedures employed by state and federal commissions. A review and analysis of the relevant legal literature was in progress when the 1986 fiscal year ended.

During the summer of 1986, an interim report consisting of certain draft chapters of the final report is due. These chapters will include the review and analysis of the legal literature, a discussion of selected innovative administrative procedures currently used by state and federal utility commissions, and an analysis of procedures used by the legislative and executive branches at various levels of government that might be available to state commissions. The final report is planned for 1987.

#### 4. Time-of-Use Electricity Pricing Project for the PUCO

The NRRI has a contract with the Public Utilities Commission of Ohio (PUCO) to analyze time-of-use pricing issues for Ohio electric companies. The project began in August 1985 and was continuing on June 30, 1986. The final report is expected to be delivered to the PUCO at the end of August 1986.

The report will address the issues of time-of-use pricing in three parts. In the first, an overview of the economic principles regarding such pricing will be presented. In addition to the customary discussion of marginal cost pricing, such matters as the effect of excess generation capacity and system-wide dispatching on peak and off-peak marginal costs will be covered.

The second portion of the report will present a review and critique of the analysis made by four Ohio electric companies of residential time-of-day pricing experiments conducted by each company in its own service area. Two problems appear to prevent these studies from providing much insight into the desirability of time-of-day pricing. One is the nonrandom nature of the sampling used to select the households that participated in the experiment, and the other is the lack of attention paid to the estimation of the price elasticity of demand--a critical parameter in assessing the benefits of time-of-use pricing.

The final part of the report will address the questions that the PUCO staff should ask an electric utility if it should submit a time-of-use rate structure in the future. Such questions include supplemental data requests as well as inquiries about the method used to determine the proposed rates.

5. The Narragansett Doctrine Update

During its May 1986 meeting, the NRRI Board approved a motion directing the Institute to undertake a study with a quick turn-around, to update a previous NRRI study, entitled The Narragansett Doctrine: An Emerging Issue in Federal-State Electricity Regulation. The sense of the Board was that an update of the previous report would be useful because various U.S. District Court and Court of Appeals cases had been decided since the earlier report's publication and because the Nantahala case was at that time pending before the U.S. Supreme Court.

To fulfill the wishes of the Board, the NRRI, using discretionary research funds from the University, contracted with Pfeffer, Lindsay & Associates, authors of the earlier study, to prepare the update. The consultants began their work in June 1986. A draft of the final report should be completed by August 4, 1986.

6. Integrated Software Systems for Electric Load and Cost Analysis

The NRRI completed the development of an integration procedure that links together the capabilities of individual microcomputer programs. The following tasks were completed between July and October, 1985 for this FY85 project: (1) The procedure was applied to three NRRI microcomputer programs, namely, LOAD, PROC and COST, and (2) a report describing the integration procedure was written.

7. Commission Modeling Needs Assessment

Based on a survey of state commission computer modeling needs completed in May, 1985, eight computer models were acquired from the Florida, Illinois and

California Commissions. Five of these models were acquired during July and August, 1985. An update of all computer models available at the NRRI for state commission use was prepared for inclusion in the October, 1985 issue of the NRRI Quarterly Bulletin. The NRRI computer models PROC, LOAD and COST were supplied to the West Virginia Public Service Commission at its request on August 30, 1985.

#### 8. NRRI Computer Model Dissemination

The availability of NRRI-associated computer programs for state commission use was announced in the October, 1985 issue of the NRRI Quarterly Bulletin. The programs included those developed at the NRRI and eight others acquired from state commissions on the basis of the Commission Modeling Needs Assessment Survey completed in May 1985. As a result of this announcement as well as earlier communications with state commission staff, the NRRI received and responded to a large number of requests for these programs. Since September 1, 1985, NRRI-associated computer programs and technical documentation were sent to 22 state commissions, the FERC, and 4 Canadian commissions.

A revised version of the NRRI integrated software package was developed to make it more useful to state commissions and sent to all recipients of the original version (completed in October 1985). Telephone assistance on the use of all NRRI-associated programs was provided throughout the period.

#### 9. Management Audits Contract

The Public Utilities Commission of Ohio (PUCO) in 1984 ordered Ohio utilities to submit pertinent management information as part of the regular routine of the rate case process. To assist the PUCO in assessing management information, the NRRI undertook to develop a diagnostic method that the PUCO could use in evaluating the management information submitted by Ohio utilities. The project aimed to provide PUCO with a means of obtaining sufficient information to determine the need for an audit focusing on a specific area of utility management.

The NRRI and PUCO agreed to focus on seven functional areas: the utility executive management process, construction project management and control, internal auditing, the rate program analytical process, customer service and information, management information systems, and work force productivity. For each functional area, the NRRI identified management performance indicators contained in recent, published management audits. Indicators were found and grouped for the generic management activities of planning, organizing and controlling. "Planning" activities were further subdivided to include policy and philosophy, planning and forecasts, scope of function, priorities, and roles and responsibilities. "Organizing" activities were defined to include resource capabilities, resource allocation, program planning, and implementation. "Controlling" included program and project control, reports and reviews of progress, output evaluation, and impact evaluation. Each of the hundreds of performance indicators gleaned from the management audit reports was also rated for its potential usefulness to PUCO, and categorized by scope of the management function, the audit report from which it was extracted, and by whether it was a positive or negative indicator.

For each utility functional area, the NRRI used the identified performance indicators to develop diagnostic guidelines that could be used by PUCO to assess management practices and policies.

A letter report was prepared for PUCO that included performance indicators, diagnostic guidelines and an illustrative example of the use PUCO staff might make of the diagnostic guidelines. The 308-page report is entitled A Qualitative Indicator System for Assessing Utility Management Practices and Performance. Authors of the report are Vivian Witkind Davis, Raymond W. Lawton, Raymond J. Krasniewski, Robert W. Backoff, and Margaret C. Allen.

B. GAS

1. Natural Gas Rate Design and Transportation Policy under Deregulation and Market Uncertainty.

During the 1986 fiscal year, the NRRRI completed and published the report Natural Gas Rate Design and Transportation Policy under Deregulation and Market Uncertainty.

The report briefly outlines the current gas market condition which can be characterized as a disequilibrium with spot market prices significantly below those of long-term contracts. Such a condition can not persist, and eventually will be eliminated. The process of reaching a new balance in the gas market is being facilitated by FERC rules that promote contract carriage of gas. The restructuring of the transportation portion of the industry in particular is not yet complete which means that the final configuration of the industry is still uncertain. In the long-term, the newly-evolved spot market seems likely to endure, along with significant contract carriage activity by the interstate pipelines. Even so, the spot market is likely to become somewhat less important in the future after the market has regained its equilibrium. Interstate pipeline companies will continue to have an important role in the marketing and brokering of gas and long-term gas purchase contracts will be commonplace, although both of these features will not be quite so exclusive as they have been in the past.

The report contains a discussion of the limits to price discrimination that draws a parallel between several concepts that had not been related in the literature before. A natural limit to price discrimination, as a way of recovering fixed costs for example, is the price that an unregulated monopolist would charge. The report points out that no-loser price discrimination, in which it is possible to lower the price of one customer group while holding constant the prices paid by all other groups as well as the company's profits, is possible only in the case that at least one of the prices initially was above that which would be charged by the unregulated monopolist. Such a price seems excessive on first principles. A regulator is not likely to need the notion of 'no-loser price discrimination' in order

to eliminate it. In addition, it turns out that such a price is inherently unstable, in the sense that an attempt to charge such a price using a traditional regulatory formula, one that allocates a fraction of the fixed costs to a particular customer class, will induce a so-called 'death spiral'. That is, an attempt to recover a fraction of fixed costs so large that the intended price exceeds that of the unregulated monopolist (or alternatively, the intended price is so large that from such a position no-loser price discrimination is possible) will be futile. The price would serve only to reduce demand, requiring a price increase in an attempt to recover the allocated fixed costs, which leads in turn to ever increasing prices. Such a death spiral in a single market can be avoided by the simple expedient of reducing the target amount of fixed costs to be recovered from the group of users.

The report contains an analysis of local distributor pricing policies and gas purchase practices based on a simulation model that incorporates demand uncertainty and service reliability targets. This model can be used to find the optimal mix of gas supply contracts from alternatives with various contract demand prices, commodity prices, minimum purchase requirements, and availability restrictions. The Natural Gas Staff Subcommittee of NARUC has expressed some interest in the model, which has been sent to two state commissions (Wisconsin and New York) for review.

## 2. Topical Study on Gas Industry Restructuring

The NRRI initiated a project to conduct research on topics regarding the current restructuring occurring in the natural gas industry. The intent of the project was to leave the specification of the topics as a matter to be decided as events unfolded during the research year.

The project will deal with restructuring issues in two major reports. The first, An Economic Analysis of Block Billing for Natural Gas, was completed in March 1986 at the direction of the NRRI board. The report concludes, among other things, that the question of whether or not state prorationing laws or multi-vintage contracts interfere with proper sequencing of natural gas production is mostly unimportant in assessing the

effect that block billing is likely to have on the efficiency of wholesale gas markets. The reason is that distributors are small in relation to their pipeline suppliers. In such circumstances, the distributor's fixed proportional allocation of block 1 supplies creates a perception on the part of the distributor that the block 2 price is the marginal price of any increases or decreases in the supplies taken from the pipeline. Such a perception is precisely that which is needed in order to convey correct price signals in the wholesale market. The report goes on to caution that block billing does not necessarily promote pricing efficiency in retail markets since these are regulated by state commissions. State PUCs, however, can not institute block billing at the retail level in its absence at the wholesale level. In this sense, the FERC block billing proposal must logically precede any similar policy initiative at the state level.

The second major part of the research project is the publication of a compendium of papers on various aspects of the current restructuring problems in the industry. The compendium should be ready for the printer at the end of August 1986, with a likely publication date of October. The board-directed inquiry into ways of distinguishing those large users of gas that truly may bypass the local distributor from those that might only claim, falsely, to be able to do so will be included in the compendium. In addition, the volume will include contributions from Robert Burns of the NRRI and from three other outside researchers. The block-billing report may be included as well, depending on space.

## C. TELECOMMUNICATIONS

### 1. A Study of Telephone Usage in Ohio

In March 1986, a study was funded by the PUCO to examine the uses of the telecommunications network (both quantity and type) in the state of Ohio. The purposes of the study are 1) to develop baseline data on usage and 2) to discover relationships among the various usage measures and demographic or other variables. Three telephone companies have been selected to participate in the study (one large company, a medium size company, and a small company). Also, an advisory group has been formed that consists of one person from each of the three telephone companies in the study, two people from the Ohio Consumers Counsel, two people from the PUCO, one large business user, and one at-large member. The data gathering methods to be used are telephone surveys of various groups of subscribers, compilation of existing company records, and the measurement of actual usage on the lines of the surveyed subscribers. Subscriber groups of special and separate interest are residential subscribers, single-line business subscribers, larger business subscribers, low income subscribers, elderly subscribers, rural subscribers, and subscribers that have regraded down or dropped their service. Thus far in the study several questionnaires have been drafted from a compilation of questions from similar studies in Indiana, Iowa, and Washington, and from questions of our own making.



## 2. Research and Technical Assistance for Public Utilities Commission of Ohio

The PUCO funded a three-part research and technical assistance project for FY1986. The first part examined the marginal cost of "plain old telephone" service, the second refined a telephone cost allocation model and the third modifies RAM--an electric utility financial analysis model--for use with telephone utilities. Each part is described briefly below.

The major activity under the contract was a study to develop a method of determining the long-run marginal cost of plain-old-telephone service (POTS). In order to determine these costs experimental runs of a computerized central office planning model were made. These runs were carefully designed experiments whose results are estimates of the cost of a variety of expansion plans for an actual central office owned by Ohio Bell. The experiments included a variable for interexchange traffic. Although the study is only concerned with POTS, earlier experiments had shown considerable interaction among the four variables previously used (lines, direct-inward-dial trunks, intra-office busy-hour traffic, and inter-office busy-hour traffic). As a result of the experiments some new analysis and modelling approaches have been developed with virtually all interactive effects having been eliminated. The new results are presently being documented and will be given to the PUCO in early fall.

The Interactive Cost Allocation System (ICAS) that was transferred to the PUCO in 1985 was used by the PUCO staff in a Cincinnati Bell and an Ohio Bell rate case. The staff received some assistance from NRRI in order to use ICAS in their preparation of cost study testimony.

The work of documenting the changes to the Regulatory Analysis Model (RAM) that will make it applicable to telecommunications was undertaken. Initial efforts to document the model uncovered some problems in the way depreciation is dealt with, so additional changes were made. The new model is now called RAMTEL and most of its accompanying documentation is in the final stage of revision and review.

### 3. The Nova Scotia Contract

Since May, 1985 NRRI has been helping the Board of Commissioners of Public Utilities of Nova Scotia develop an accounting system for the "Terminal Division" of Maritime Telegraph and Telephone Company (MT&T). In the past year Dr. Chessler traveled to Halifax almost monthly for meetings with the Board and the telephone company. In June and July, 1985, he prepared three "letter reports" on MT&T's three initial approaches to cost accounting. He then prepared brief letter reports after most meetings in which he evaluated the progress being made.

In April 1986, MT&T completed development of the accounting system and began to test it. In May and June 1986 Dr. Chessler developed a spread-sheet model to analyze alternative allocations of certain common costs and corporate overheads. He also advised the Board on reporting requirements. In July, Dr. Chessler helped the Board write the order accepting the system.

### 4. Long Run Marginal Cost

This project was intended to develop a new method of measuring the Long Run Marginal Costs of telephone companies. An innovative approach was developed, and good cooperation was achieved with the California Public Utility Commission, General Telephone of California, and GTE Service Corporation. A letter report will be prepared in late summer 1986 describing the status of the project and future efforts to implement the method.

### 5. The Regional Holding Companies Project

In fiscal year 1986 this project produced four reports. The report on the National Exchange Carriers Association, the successor to the Bell System "Division of Revenues" and "Independent Company Settlements," was released in November, it was entitled The National Exchange Carrier Association, Inc.,: Structure and Operation. A survey of how states have adapted to the way the six of the seven Bell Regional Holding companies structured their Yellow Pages operations, placing them in subsidiaries of the holding companies rather than

in the telephone companies, was published in the NRRI Quarterly Bulletin in January. A survey of state pooling arrangements for intrastate settlements, A Survey of Statewide Pooling Arrangements was published in February.

The major publication in this project was released in April. It was a comprehensive study of the unregulated and new activities of the Bell entitled, Unregulated Enterprises of the Bell Regional Holding Companies. It included a treatment of their regulatory status in law and under the 1982 Consent Decree. After some discussion of the differences in structure of the new companies, the report discussed their business activities at some length. This discussion centered on station equipment and cellular radio, which are the principal new and unregulated activities, but it also covered ventures in real estate (including "smart buildings"), Southwestern Bell's Yellow Pages acquisitions, and other topics.

5.a. The National Exchange Carrier Association, Inc.:  
Structure and Operation

The National Exchange Carrier Association (NECA) was formed in response to the FCC's access charge order. Its designated duties are to file access charge tariffs, collect and access charge revenue pools. This report details the origin and the organizational structure of NECA. It also details the procedures used to determine access charge tariffs and describes the pool management processes. The report, The National Exchange Carrier Association, Inc.: Structure and Operation, was published in December 1985.

5.b. A Status Report on Intrastate Pooling Arrangements and Alternative Toll Revenue Distribution Mechanisms

With the establishment of interstate access charge individual states reviewed and reorganized the procedures they use for intrastate interLATA and intrastate intraLATA toll access revenues. This report reviews alternative mechanisms for distributing access revenues. It also includes the results of a survey of forty-five states. The survey questions related to whether facilities-based toll competition was authorized for intraLATA and interLATA toll traffic, and whether pooling, bill-and-keep, or some other procedure was

used for access revenue distribution. The report, A Status Report on Intrastate Pooling Arrangements and Alternative Toll Revenue Distribution Mechanisms, was published in February 1986.

6. Investigating Methods for Determining Route-Specific IntraLATA Toll Costs

With the advent of toll competition, there has been pressure to allow cost based rates for the regulated carriers. For toll routes, this presumably means that rates on high-density, low-cost routes would fall while the rates on low-density, high-cost routes would rise.

This project has the goal of identifying ways that route-specific costs can be determined, and thus the impact of rate deaveraging can be estimated. The introductory writing has been completed, and the project team is currently defining the data to be collected. The project was begun in the spring of 1986 and is expected to be completed in the spring of 1987.

7. The Regulation of New Entities

This project was designed to investigate regulatory issues and problems surrounding the new market structure for telecommunications services. It consists of four papers. One paper, by Dr. Vivian Davis, explores the policy issues surrounding shared tenant services. It was issued in August 1985 and is entitled A Review of the Current Status of the Regulation of Shared Tenant Services.

The other three papers explore conceptual issues with the goal of promoting broader public discussion of the regulatory difficulties in moving from a regulated to a competitive environment. Two of these papers are completed. They are: "Regulation and Effective Rivalry in Telecommunications Markets and Submarkets", by Dr. Boyd L. Nelson and "Deregulating Telecommunications Markets: Methods of Assessing How Imperfect the Competition Might Be", by Dr. Richard E. Schuler. The third paper, by Dr. David Chessler, explores the feasibility of marginal cost pricing for telecommunications services and will be completed in August, 1986. The three papers will be published in one volume titled: Issues in Regulating Imperfectly Competitive Markets.

8. Cost-of-Service Manual for Intrastate Telephone Services:  
A Peak-Responsibility Method

The purpose of the project is to develop a peak-responsibility cost-of-service manual that delineates allocation procedures for the costs of intrastate telephone service. In April of 1986 a draft of Cost-of-Service Manual for Intrastate Telephone Services: A Peak-Responsibility Method was completed and sent to parties involved in the pilot study for a technical review. It is anticipated that a copy of the draft manual will be available for circulation to state commissions by the first week in August of 1986. The cost-of-service manual delineates procedures for a fully-distributed-costing method based on peak responsibility. This costing procedure allocates the booked costs of telephone plant and equipment, operating and maintenance expenses, depreciation expenses, taxes, and operating revenues to services offered by the company and to customer classes.

The peak-responsibility method specified in this manual is based on the application of congestion or queuing theory to the allocation of costs. This approach captures telephone planning criteria used for planning the capacity of switching and trunk plant by telephone planning engineers. Fourteen customer classes for message service are defined which includes four classes of residential customers, seven classes of business customers, and three miscellaneous customer classes. The allocation factors specified are to be based on hourly usage data never before available which provides daily usage profiles for the customer classes and their use of various services. The allocations of interstate costs according to Separations procedures is accepted as determining the interstate jurisdictional costs.

## 9. Telephone Cost-of-Service Pilot Study

The purpose of the cost-of-service pilot study for intrastate telephone services is to test the peak-responsibility method of allocating telephone costs that was specified in the Cost-of-Service Manual for Intrastate Telephone Services: A Peak-Responsibility Method. In order to facilitate the development of the manual, a pilot study relationship was established with the Public Utility Commission of Texas. Southwestern Bell of Texas was chosen as the telephone company for the pilot study. Since the establishment of this pilot relationship, numerous meetings and telephone conversations have been held in which data sources and measurement techniques have been identified and discussed. The work on the pilot study for the past fiscal year can be divided into three conceptual parts: (1) Data requests for accounting, engineering, capacity, and usage data; (2) development of software to calculate the probability-weighted usages; and (3) implementation of the allocation procedures in the NRRI's Interactive Cost Allocation System.

The data requests are currently in the hands of Southwestern Bell of Texas. Sample selection for the subscriber line usage study of 4,700 subscriber lines located in 336 local dial switches is underway. Southwestern Bell had a target date of July 1, 1986 to have the sample up and collecting data. As of July 21, 1986, the sample selection and implementation is only about 67% complete. Data requests for accounting, engineering, and capacity data have been submitted to Southwestern Bell. It is anticipated that Southwestern Bell will respond completely to these data requests, including usage studies, by the end of 1986.

The development of the software to calculate the probability-weighted usages for purposes of allocating costs can be divided into two parts. The first part is developing the algorithms needed to do the computations. The methods developed will be published in a report on computational procedures. The second part of software development is writing the programs to perform the computations. Work is underway on the specification of computational procedures and the development of the software.

The implementation of the allocation procedures in the Interactive Cost Allocation System (ICAS) is underway. ICAS has been converted to a microcomputer program. The allocation procedures specified in the Cost-of-Service Manual for Intrastate Telephone Services: A Peak-Responsibility Method are being entered into ICAS. The procedures are expected to be entered by September 1, 1986.

#### D. WATER UTILITIES

##### 1. The Takeover of Small, Troubled Water Utilities: An Analysis of Incentives and Disincentives

As a follow-up to the two previous NRRI reports on small, troubled water utilities, the NRRI undertook a project to examine the incentives and disincentives that exist that state commissions can use if the commission decides that the sale of a small water utility is in the best interest of all parties. The project investigated both sales or takeovers by local units of government as well as by regulated utilities.

A brief literature survey was undertaken and a survey questionnaire designed. The survey was sent out to all 46 state commissions that regulate water utilities accompanied by a letter from Illinois Commissioner Andrew Barrett. Thirty-nine were returned in the first wave and the remaining 7 are being contacted by telephone to encourage their participation in the survey. The information from the survey has been used to follow three lines of inquiry: 1) Is it possible to develop an "early warning system" to alert commissions as to the existence of a troubled water utility using standard monitoring techniques? 2) What are the financial incentives that are congruent with traditional regulatory concerns that have been used in the sale of troubled water utilities to other utilities? 3) What incentives exist that explain the takeover of troubled small water utilities by local units of government?

A simple early warning system has been designed and the investigation into the takeovers by local units of government and regulated utilities is approximately three-quarters completed. The planned completion date is September 30, 1986.



E. MULTI-UTILITY

1. NRRI Quarterly Bulletin

The NRRI Quarterly Bulletin is a medium for communication among state regulatory commissions about issues, actions, and research in telecommunications, electricity, gas, and water, and areas that overlap particular industries. Fifty-one commissions have contributed information and assigned a staff contact person for the Bulletin. All commissions receive as many free copies of the Bulletin as they feel they can use. In fiscal 1986 forty-five commissions contributed to the NRRI Quarterly Bulletin.

"NRRI Reports," brief articles of immediate concern to the commissions, in fiscal 1986 abstracted NRRI research reports on utility performance evaluation through decision analysis, electric utility subsidiaries, and natural gas rate design. In addition, "NRRI Reports" were prepared solely for the Bulletin on commission use of negotiated settlements to expedite the regulatory process and commission action on Yellow Pages subsidiaries of the Bell regional holding companies.

An extra promotional effort was made to sell subscriptions to the NRRI Quarterly Bulletin, resulting in sales of an additional 36 subscriptions. Paid subscriptions at the end of fiscal 1986 totaled 101.

2. NRRI Cosponsorship of the Fifth NARUC Biennial Regulatory Information Conference

As it has for past conferences, the NRRI is cosponsoring the Fifth NARUC Biennial Regulatory Information Conference (BRIC-V) by providing assistance in selecting papers, organizing sessions, and registering conference participants. The BRIC-V is scheduled to be held in Columbus, Ohio on September 3-5, 1986.

During fiscal year 1986, the NRRI staff wrote and printed two national calls for papers, which were mailed out to over 4,500 members of the regulatory community. Robert Burns and Mary Murphy of the NRRI staff met with the BRIC-V steering committee twice, once in late April, a second time in late May. During May, Mr. Burns put together a program committee to assist in

selection of papers. The program committee consists of fifteen NARUC staff subcommittee chairpersons or their designees.

Also in May 1986, abstracts of 164 papers were received. Each of these abstracts was sent out to two or more members of the program committee who then selected papers for the conference sessions. In mid-June, the program committee notified Robert Burns of their selections. Mr. Burns then reorganized the sessions to eliminate overlapping of papers and duplication of session topics. The program committee was asked in late June to contact the authors of 153 of the abstracts to inform them of acceptance of their papers.

Mr. Burns is currently finalizing the BRIC-V program. Ms. Murphy is handling registration materials.

## F. QUICK RESPONSE

Under the quick response project, NRRI staff answered requests for information from members of the regulatory community. In the Electric and Gas Research Division alone, one staff member logged 163 information requests and responses between July 1, 1985 and June 30, 1986. While not all of the requests came from governmental agencies, the majority did. This one NRRI staff member responded to information requests from Alabama Public Service Commission, Arkansas Attorney General's Office, the Arizona Commerce Commission, the California Public Utility Commission, the Colorado Public Utilities Commission, the Connecticut Public Utility Authority, the Congressional Research Service, the District of Columbia Public Service Commission, the U.S. Department of Energy's Office of Energy Research and National Energy Information Center, the Federal Energy Regulatory Commission's staff and General Counsel, the French Embassy in Washington, D.C., the Georgia Attorney General's Office, the Georgia Public Service Commission, the Idaho Public Utilities Commission, the Illinois Attorney General's Office, the Kentucky Public Service Commission, the Maryland Public Service Commission, the Massachusetts Governor's Executive Office of Energy Resources, the Massachusetts Department of Public Utilities, the Montana Public Service Commission, the New Jersey Public Advocate's Office, the New Mexico Public Service Commission, the Nova Scotia Board of Commissioners, the Ohio Consumer's Counsel, the Ohio Public Utilities Commission, the Oregon Department of Energy, the Southern States' Energy Board, the Texas Public Utility Commission, the Utah Energy Office, the Utah Legislative Service Commission, the Utah Public Service Commission and the Virginia State Corporation Commission.

At its summer 1985 meeting in San Francisco, the NARUC Committee on Communications established an Ad Hoc Subcommittee on FCC Preemption. The committee requested the services of Dr. Chessler of the NRRI staff as a "resource person." Dr. Chessler wrote three memoranda on how NARUC might deal with FCC preemption, including one in which he made several specific recommendations as to how NARUC and the FCC might achieve a more cooperative working relationship, both at the commissioner and the staff level.

Partly as a result of the work of the Ad Hoc Subcommittee on FCC preemption, the NARUC Committee on Communications held a Retreat at the Tuck School of Dartmouth College in Hanover, New Hampshire in April. The Committee requested that Dr. Chessler also act as "rapporteur" for the sessions. Dr. Chessler produced notes for all but two of the sessions.

## PART 3

### GOVERNANCE AND STRUCTURE

The 17-member Board of Directors governs and controls the NRRI. The Board held three meetings in FY86. The dates were September 12, 1985, January 9, 1986, and May 15, 1986. All were held in Columbus, Ohio and the agendas appear as appendices to this report. Table 3 shows the Board membership at the beginning of the fiscal year, and Table 4 indicates the membership at the end of FY86. Changes were occasioned in part by the changes in NARUC ex officio memberships in the fall. Mr. Lee White was reappointed for another full term as a Public Member and Professor James Meeks was reappointed as a University member.

By action of the Board, Commissioner Edythe Miller was reelected Chairman of the NRRI Board at the September 1985 meeting. At the May meeting the Board voted to alter the Bylaws of NRRI, including the ex officio membership of certain NARUC officers. Basically the proposed change is to drop the ex officio membership of the President of NARUC and to allow the chairperson of the NARUC Committee on Administration to designate a Committee member to serve on the Board in that Chairperson's place if the chair so chooses. (The full text of the Board-proposed changes in the Bylaws appears in the appendix.) Commissioner Guess was appointed to NARUC membership on the Board when Commissioner Loewith's term expired.

The Board adopted with some modifications the Research and Assistance Plan and Budget for the NRRI for FY1986 at its annual meeting in September.

Appointments were made to three ad hoc committees of the Board and the one standing committee established by the Bylaws (the Nominating Committee). These current memberships are listed in Table 5. Dr. Mary Bane was reappointed chairperson of the Research Advisory Committee, and the Board extended for a year the terms of three RAC members past the normal expiration date of their appointments. One vacancy occurred on the RAC in the course of the year. Table 6 lists the current members. The RAC met three times in the course of the year and ably assisted in the selection and accomplishment of the research and assistance agenda for the year. It also reviewed the quality and usefulness of Institute reports, as is its task.

TABLE 3  
THE NATIONAL REGULATORY RESEARCH INSTITUTE  
(July 1, 1985)

Representatives of the National Association of Regulatory Utility  
Commissioners:

George H. Barbour, First Vice-President  
National Association of Regulatory Utility Commissioners  
Commissioner  
New Jersey Board of Public Utilities

Peter A. Bradford, Second Vice-President  
National Association of Regulatory Utility Commissioners  
Chairman  
Maine Public Utilities Commission

Gloria L. Gaylord, Commissioner  
Public Utilities Commission of Ohio

Susan M. Knowles, President  
National Association of Regulatory Utility Commissioners  
Commissioner  
Alaska Public Utilities Commission

Robert E. Johnston, Commissioner  
Arkansas Public Service Commission

Marvin S. Loewith, Commissioner  
Connecticut Public Utilities Commission

Kenneth D. Stofferahn, Commissioner  
South Dakota Public Utilities Commission

Ann F. Mead, Commissioner  
New York Public Service Commission

Edythe S. Miller, Chairperson of the Board  
Chairwoman  
Colorado Public Utilities Commission

Paul Rodgers, Administrative Director and General Counsel  
National Association of Regulatory Utility Commissioners

Linda C. Taliaferro, Chairman  
Committee on Administration  
National Association of Regulatory Utility Commissioners  
Chairman  
Pennsylvania Public Utility Commission

Representatives of The Ohio State University

Donald D. Glower, Dean  
College of Engineering  
The Ohio State University

Douglas N. Jones, Director  
The National Regulatory Research Institute

James E. Meeks, Professor  
College of Law  
The Ohio State University

Representatives of the Public

Henry Moak Rollins  
Financial Consultant  
Financo, Inc.

Harry M. Trebing, President  
Institute of Public Utilities  
Michigan State University

Lee C. White, Attorney  
White, Fine and Verville

TABLE 4  
THE NATIONAL REGULATORY RESEARCH INSTITUTE BOARD OF DIRECTORS  
June 30, 1986

Representatives of the National Association of Regulatory Utility  
Commissioners:

Hamp Baker, Second Vice-President  
National Association of Regulatory Utility Commissioners  
Chairman  
Oklahoma Corporation Commission

George H. Barbour, President  
National Association of Regulatory Utility Commissioners  
Commissioner  
New Jersey Board of Public Utilities

Peter A. Bradford, First Vice-President  
National Association of Regulatory Utility Commissioners  
Chairman  
Maine Public Utilities Commission

Gloria L. Gaylord, Commissioner  
Public Utilities Commission of Ohio

Carolyn S. Guess, Commissioner  
Alaska Public Utilities Commission

Robert E. Johnston, Commissioner  
Arkansas Public Service Commission

Kenneth D. Stofferahn, Commissioner  
South Dakota Public Utilities Commission

Anne F. Mead, Commissioner  
New York Public Service Commission

Edythe S. Miller, Chairperson of the Board  
Commissioner  
Colorado Public Utilities Commission

Paul Rodgers, Administrative Director and General Counsel  
National Association of Regulatory Utility Commissioners

Linda C. Taliaferro, Chairman  
Committee on Administration  
National Association of Regulatory Utility Commissioners  
Chairman  
Pennsylvania Public Utility Commission



Representatives of The Ohio State University

Donald D. Glower, Dean  
College of Engineering  
The Ohio State University

Douglas N. Jones, Director  
The National Regulatory Research Institute

James E. Meeks, Professor  
College of Law  
The Ohio State University

Representatives of the Public

Henry Moak Rollins  
Financial Consultant  
Financo, Inc.

Harry M. Trebing, Director  
Institute of Public Utilities  
Michigan State University

Lee C. White, Attorney  
White, Fine and Verville

TABLE 5

BOARD COMMITTEE APPOINTMENTS BY CHAIRPERSON MILLER

Committee on Finance:

Chairperson G. Barbour  
G. Gaylord  
M. Rollins  
L. Taliaferro

Committee on Research:

Chairperson A. Mead  
J. Meeks  
R. Johnston  
H. Trebing

Committee on Funding and  
Institutional Objectives:

Chairperson protem C. Guess  
P. Rodgers  
K. Stofferahn  
D. Jones  
P. Bradford

Nominating Committee:

Chairperson C. Guess  
D. Glower  
L. White

TABLE 6  
RESEARCH ADVISORY COMMITTEE  
(June 30, 1986)

Mary Bane\*  
Research Director  
Florida Public Service Commission

William Brownell  
Deputy Director, Policy & Planning Division  
California Public Utilities Commission

Robert L. Whitaker  
Director, Office of Research  
New York Public Service Commission

John D. Borrows  
Director of Utilities  
Public Utilities Commission of Ohio

Jerry Mendl  
Administrator, Systems Planning  
Wisconsin Public Service Commission

George J. Parkins  
Supervising Engineering Analyst  
Colorado Public Utilities Commission

James E. Suelflow  
Professor, School of Business Administration  
Indiana University

Thomas G. Cowing  
Professor, Department of Economics  
State University of New York

Whitfield A. Russell  
Consultant

David Silverstone  
Attorney

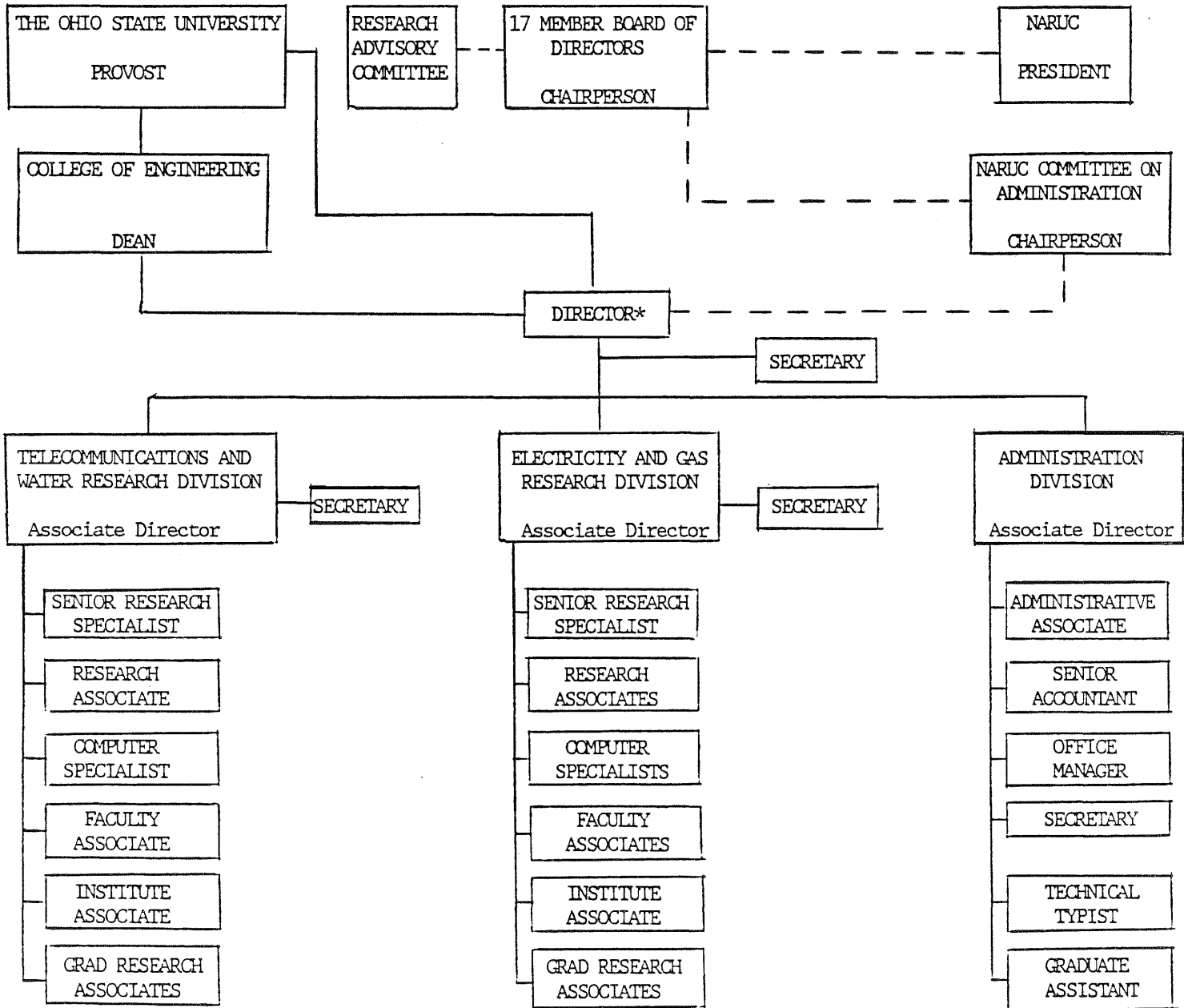
Vacancy, (Commission Member)

\*Chairman of the RAC

Table 7 displays the current organization chart of NRRI. In May the telephone and water research and assistance responsibilities were grouped together into a second research division (counterpart to the Electric and Gas Research Division). This allowed consolidation of research activities and leaves only administrative duties with the Associate Director for Administration. Table 8 lists the current Institute Associates of NRRI—a cadre of experts on campus and around the country who do research for the Institute from time to time for compensation. This group is a valuable supplemental resource to NRRI's own research staff.

The NRRI in-house staff is further aided by the information and contacts available to it through membership in thirteen NARUC subcommittees. Close liaison with NARUC activities is maintained by the NRRI through the (non-voting) membership of many of the NRRI staff on NARUC subcommittees. Staff members also regularly attend meetings of the computer and the Energy Conservation subcommittees. Table 9 lists these NARUC subcommittee memberships.

TABLE 7  
 ORGANIZATIONAL CHART OF THE  
 NATIONAL REGULATORY RESEARCH INSTITUTE  
 June 1, 1986



\*The Director answers to the Provost for academic matters in managing the operation of the Institute.

TABLE 8

INSTITUTE ASSOCIATES

June 30, 1986

Henry Canady, Policy Analyst  
Office of Regulatory Analysis  
Federal Energy Regulatory Commission

Warren E. Farb  
Senior Economics  
U.S. Department of Commerce

Alvin Kaufman  
Senior Specialist, Congressional  
Research Service, Library of Congress

Donald W. Kiefer  
Economist, Congressional Research  
Service, Library of Congress

Patrick C. Mann, Professor  
Department of Economics  
University of West Virginia

William Melody, Professor  
Department of Communications  
Simon Fraser University

Robert Poling  
American Law Division  
Library of Congress

Robert J. Rohr, Professor  
Resource Policy Center  
Dartmouth College

David Schwartz  
Economist  
Bethesda, Maryland

David C. Sweet, Dean  
College of Urban Affairs  
Cleveland State University

Wilpen L. Gorr, Professor  
School of Public Administration  
The Ohio State University

Raymond J. Krasniewski, Professor  
Academic Faculty of Accounting  
The Ohio State University

Arthur D. Lynn, Jr., Professor  
School of Public Administration  
The Ohio State University

Clark A. Mount-Campbell, Professor  
Dept. of Indus/Systems Engineering  
The Ohio State University

Robert F. Redmond, Dean  
Engineering Experiment Station  
The Ohio State University

George L. Smith, Chairperson  
Dept. of Indus/Systems Engineering  
The Ohio State University

Richard A. Tybout, Professor  
Department of Economics  
The Ohio State University

Robert Backoff, Professor  
Department of Economics  
The Ohio State University

Richard Murdock, Professor  
Academic Faculty of Accounting  
The Ohio State University

TABLE 9

PRESENT NRRI SUBCOMMITTEE ASSIGNMENTS

|   |   |
|---|---|
| Staff Subcommittee on Accounts                  | William Pollard                           |
| Staff Subcommittee on Economics                 | J. Stephen Henderson                      |
| Staff Subcommittee on Admin Law Judges          | Robert Burns                              |
| Staff Subcommittee on Education                 | Raymond W. Lawton                         |
| Staff Subcommittee on Executive Directors       | Raymond W. Lawton                         |
| Staff Subcommittee on Law                       | Robert Burns                              |
| Staff Subcommittee on Communications            | Jane Racster                              |
| Staff Subcommittee on Cost Allocations          | David Chessler                            |
| Staff Subcommittee on Telephone Service Quality | Clark Mount-Campbell                      |
| Staff Subcommittee on Electricity               | Kevin A. Kelly                            |
| Staff Subcommittee on Engineering               | Kevin A. Kelly                            |
| Staff Subcommittee on Gas                       | J. Stephen Henderson                      |
| Staff Subcommittee on Water                     | Raymond W. Lawton<br>Vivian Witkind Davis |





## PART 4

### INSTITUTION BUILDING

In addition to the specific research and assistance projects that ultimately comprise the technical efforts of the NRRI staff and the budget allocations that underpin this effort, there are always other pursuits of management that fall into the category of institution building. In this section we enumerate some of them and the progress made.

#### Institute/Host University Relations

The Ohio State University again this year allowed us to operate on an annual budget, even though the actual inflow of NARUC funds was monthly and uneven. This allows for continuity and better planning on our part. The careful management of spending as against income together with earlier rebilling of contributors has meant that the periodic sizable cash flow difficulties we experienced in recent years were lessened.

In addition to a cash and non-cash contribution to the Institute's annual budget for FY86, the University provided new and permanent office space for NRRI beginning in December 1985. Moving and refurbishing costs were absorbed by the University and resulted in high quality facilities for the Institute.

Faculty "release time" was purchased from four departments in the host university involving six professors; ten Graduate Research Associates were employed at the Institute during the year from six academic departments. Also five Institute staff gave occasional classroom lectures, two sat on masters examinations, and one on a doctoral examination in the course of the year. The University very much values these types of integration of a research center with the academic life of the campus.

#### Staff Support

In the interest of personal renewal and increased job satisfaction (in addition to participating in some of the university activities mentioned above) we allow researchers to attend an occasional professional meeting in

his or her discipline and to write and give technical papers in appropriate forums. With the easing somewhat of financial stringency this year we were able to have Institute staff analysts attend various NARUC staff subcommittee meetings around the country.

In FY86 we computerized the research accounting, and word processing activities of the Institute with the acquisition of a AT&T 3B2/400 computer and terminals. We continue to have full access, of course, to the University's mainframe computer for research efforts that require its capacities.

### Institute Visibility

Awareness of NRRI has continued to grow this year in the regulatory, academic, and public community at large, and additional opportunities keep presenting themselves. These often take the form of public appearances of various kinds and the publishing of papers in professional or trade journals. It can also take the form of wider distribution of our publications and editorial (and other) recognition thereof. On the first count we increased our distribution of complimentary copies of our reports by 120 to commission staff members (from 122 previously).

The year 1986 marks the tenth year since NARUC voted in Honolulu at its annual convention to establish NRRI. While the actual anniversary of that action is November 1986, it was thought that recognition of this tenth anniversary should be made throughout the year as opportunities arose. Accordingly, our stationery carries an additional heading, "Our Tenth Year of Service," and at this writing a congratulatory resolution acknowledging that service has been passed by four NARUC Regional Conferences (Appendix C). In addition a laudatory letter was received from the U.S. Department of Energy, an early funding source for NRRI in the amount of some \$3.5 million from 1978 to 1981. It is expected that other "anniversary recognition" will be received over the balance of 1986.

With finances more stabilized, Institute staff were more able to travel this year in connection with their research tasks - especially to NARUC meetings of various kinds. Such travel allows professional staff ready access to what commissioners, commission staff, and others in the regulatory field consider the issues of the day and ways to cope with them.

In addition to the NARUC Annual meeting and Summer and Winter meetings, staff attended the five Regional Conferences and in a number of instances gave panel presentations - either reporting on research at NRRI or delivering original prepared papers.

Staff visited commission offices in eight states with specific technical assistance given in Florida, New Hampshire, Texas, Missouri, Ohio. Staff also made presentations or otherwise participated at the Telecommunication Network Conference in S.C.; at the Institute of Internal Auditors meetings in Atlanta; at the North Carolina Utilities Commission telecommunications conference in Raleigh; at the "Research and Development Conference on Transmission" in Chicago; at the Northeast-Midwest Institute's "Electricity Policy and Economic Growth" Conference in Itasca, Illinois; at the Michigan State University Williamsburg Conference; Atlantic Provinces and New England Telecommunications Conference in Nova Scotia; and before the New York Society of Security Analysts in New York City.

Institute staff occasionally lectured on and off campus, e.g., at Ohio State University's Schools of Public Administration and of Education, and the College of Engineering and at Ohio University's Department of Communications. Staff with academic affiliations occasionally met with graduate students having a specialization in one or another of the utility fields. Again this year the Director gave six hours of lectures in public utility economics at the month-long American Electric Power Management Program provided by Ohio State University.

Papers by six staff members appeared (or were accepted for publication) in several professional journals this year. These included the Energy Journal, Journal of Public Economics, Socia-Economic Planning Science (Great Britian), and Public Utilities Fortnightly. Two others appeared in published proceedings of two major conferences.



PART 5

CONSOLIDATING STATE-PROVIDED REGULARIZED FUNDING  
AND OTHER SOURCES OF FUNDS

The \$700,000 shortfall from the \$2 million authorized target budget on which NRRI has been operating since 1982 was narrowed this year to \$600,000. A good bit of managerial attention of the Director and the Board has to be given to funding matters in these circumstances. The shortfall is occasioned by the non-participation of some states and the partial participation of six others.

On the positive side of funding matters the following should be mentioned:

--we ended FY85 with 40 state PSCs paying into the Institute and ended FY86 with 44 commissions\* paying in and one more having been billed for FY86 but not yet paid in (Arizona).

--the goal of reducing the Institute's cash flow problem by \$100,000 was accomplished by spending that amount less than we took in.

--a "Canadian initiative" was implemented whereby the counterpart commissions in Canada were invited to subscribe to Institute publications on a flat fee basis and three have done so.

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\*These are: Ohio, Kansas, North Carolina, South Carolina, Massachusetts, Idaho, Vermont, Utah, Connecticut, Missouri, Montana, Rhode Island, New Hampshire, Washington, Oklahoma, D.C., Maine, Hawaii, Colorado, Maryland, Alaska, New Mexico (PSC), Delaware, New York, Florida, Arkansas, Indiana, California, Illinois, North Dakota, South Dakota, Wyoming, Wisconsin, New Mexico (CC), Texas (PSC), Kentucky, Iowa, Tennessee, Michigan, Nevada, Minnesota, West Virginia, New Jersey, Alabama, and Arizona.

--sales of Institute publications, including the NRRI Quarterly Bulletin, were for 1807 copies, bringing in some \$45,000 (as against a revised estimate of \$33,000). Sales of computer tapes of various kinds continued apace.

--contract monies were drawn down under four research assistance projects for the Ohio PUC, and one for the Nova Scotia Board of Public Utilities.

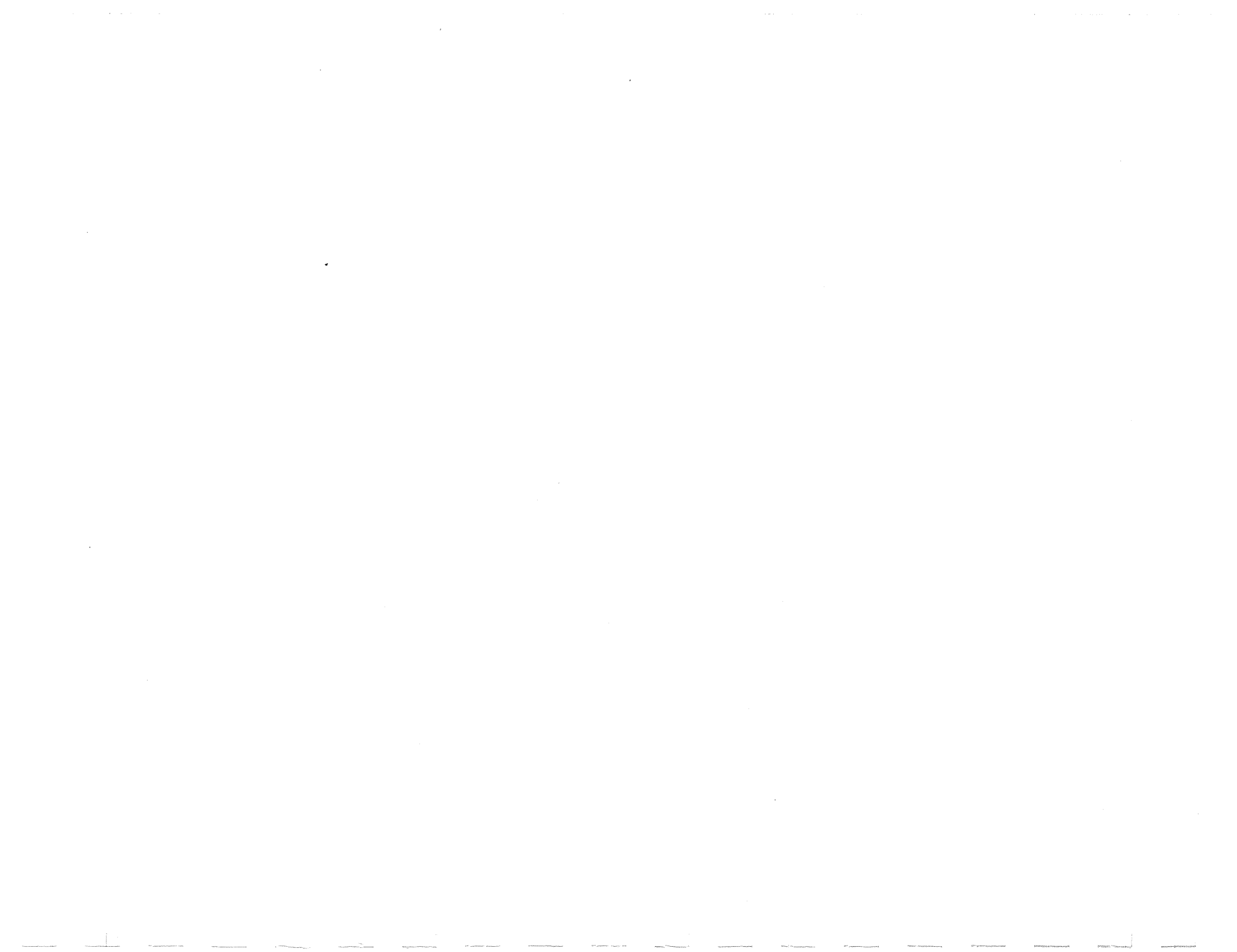
--an invited contract proposal was resubmitted to the N.J. BPU (\$52,000), but the result was unknown as of the close of FY86.

Importantly, the Board considered and set a goal of raising an additional revenue in the target budget for NRRI for FY87, mainly through getting the partial funding states to increase their contributions toward their full shares. This was felt to be a preferred way of increasing receipts rather than a change in assessments, in the face of our cost/revenue squeeze.

The goal of making truly "routine" the annual collection of regularized funding for the Institute is an elusive one. Indeed, with the turnover of commissioners, commission staff, governors, state budget officers, legislators, and utility executives, the goal is unattainable in any permanent sense. Several funding states and utilities required special attention with regard to collections, including trips to commission offices and detailed presentations and letters. Rebilling of all states is now done in the first six months of the fiscal year (except for those few who ask to be invoiced in the next calendar year). This mitigates the cash flow problems we earlier faced. As indicated, contract work was again pursued to keep the Institute financially "whole" and enable research staff to be fully underpinned and be available for NARUC sponsored work.

For FY86 NARUC headquarters, as the collection point for regularized funding contributions, invoiced \$1,465,808 destined for NRRI accounts and received some \$1,322,705 by June 30, 1986. (One large state contribution and two smaller ones attributable to FY86 were received during July 1986.) The host university provided \$360,500 (of which \$162,000 was for moving and

remodeling expenses for NRRI's new offices on campus), and contract research and technical assistance resulted in \$169,000 in revenue during the fiscal year. Overall we forecasted total revenues of \$2,181,948 at the beginning of FY86 and actually received revenues of \$1,926,425 (when July receipts for FY86 are added in).





## PART 6

### SPENDING AND FINANCIAL REPORTING

Our general plan was to spend all of the year's expected revenues. This is because our NARUC clientele wants the most possible research and assistance for their contributed money. If more revenues are received than forecasted, then projects on the Board-approved alternate list may be started. If the revenue initially estimated turns out to be less, then some combination of cost-curtailement and revenue raising (e.g., contracts) are undertaken. And where monthly receipts tend to be more uneven than monthly expenditures (a large proportion of the latter is for wages and salaries), spending control is always a major concern for Institute management.

As mentioned previously, a strong revenue stream during all of FY86 allowed somewhat higher total spending (\$90,000) than for the previous year - even with attainment of the \$100,000 Cash Flow Payback. Monthly expenditures for FY86 averaged \$138,000 as against \$131,000 for FY85. Data for FY86 are displayed in Table 10.

Financial reports are sent to all Board members monthly, and quarterly are sent to members of the NARUC Committee on Administration. Last year we devised a different method of calculating and displaying Institute budget accounts such that individual projects would more accurately reflect their true costs and the overall amounts allocated to research and non-research could be more easily determined. This method was implemented in our FY86 financial plans and reporting, and will be continued for FY87.

Table 10

NRRI EXPENDITURES FOR FY1986  
July 25, 1986

| (1)<br><br><u>Month</u> | (2)<br>Total<br>Monthly<br><u>Expenditures</u> | (3)<br>Cumulative<br>Monthly<br><u>Expenditures</u> |
|-------------------------|--|---|
| July 1985               | \$117,272                                      | \$117,272   |
| August 1985             | 114,165  | 231,437   |
| September 1985          | 142,202  | 373,639   |
| October 1985            | 161,113  | 534,752   |
| November 1985           | 192,541  | 727,293   |
| December 1985           | 152,719  | 880,012   |
| January 1986            | 152,285  | 1,032,297   |
| February 1986           | 113,724  | 1,146,021   |
| March 1986              | 108,388  | 1,254,409   |
| April 1986              | 123,315  | 1,377,724   |
| May 1986                | 112,577  | 1,490,301   |
| June 1986               | 167,295  | 1,657,596   |

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Source: NRRI monthly Revenues and Expenditures statement

## PART 7

### FINANCIAL STATEMENTS

The revenues and expenditures of the NRRI for FY86 are presented below in a three-part financial statement. Part 1 (Table 11), and attachments report NRRI FY86 revenue ultimately will be \$1,949,935. NARUC Headquarters Office summary statement of income and disbursements to NRRI for FY86 is reproduced as Attachment 3.

Part 2 (Table 12) lists NRRI FY86 expenditures by three major line item categories: payroll salaries, payroll benefits, and non-payroll. The expenditures for NRRI for FY86 totaled \$1,657,594. Table 13 displays FY86 expenditures attributable to each project.

Another financial statement (Table 14) is included from The Ohio State University Research Foundation (OSURF) certifying the amount of the revenues received from NARUC and expenditures made, and that those expenditures were made in accordance with University policies and practices. This statement is required under provisions of the operating agreement between OSURF and NARUC governing how NARUC supplied funds would be recovered, recorded, and expended. Interpreting Table 14 in part requires knowledge of the facts that (1) only 11 months of revenues are counted while 12 months of expenditures are counted, and (2) that contributions arriving after June 30 but attributable to FY86 are not included in this representation. Even with these qualifications a positive balance was achieved (\$34,000) with respect to NARUC contributed funds.

TABLE 11

THE NATIONAL REGULATORY RESEARCH INSTITUTE  
REVENUES AND EXPENDITURES STATEMENT FOR THE 1986 FISCAL YEAR

PART I: NRRI FY86 REVENUES AS OF 6/30/86

| (1)<br><u>Revenue Sources</u>  | (2)<br><u>FY86 Revenues</u> |
|--|-----------------------------|
| 110. Revenues from NARUC Member Contributions <sup>1</sup><br>(Accounts 111-119) |                             |
| 111. FY86 State Provided Contributions Received in FY86                          | \$1,274,063 <sup>2</sup>    |
| 112. FY87 State Provided Contributions Accrued for FY86                          | 115,422 <sup>3</sup>        |
| 113. FY85 Uncollectible State Provided Contributions                             | <390> <sup>3</sup>          |
| 114. Travel Supplement <sup>4</sup>  | 1,500                       |
| 115. Net Interest Revenues   | 7,929                       |
| 119. Total NARUC Contributions   | \$1,398,524                 |
| 130. Revenues from The Ohio State University<br>(Accounts 131-149)               |                             |
| 131. OSU Graduate School Allocation  | \$ 145,000                  |
| 132. OSU Research Contingency Funds  | 0                           |
| 133. OSU Computer Service Credits  | 2,104                       |
| 134. OSU Course Payment Credits  | 16,985                      |
| 135. OSU Release Time  | 0                           |
| 136. OSU Supplemental Rent Allocation  | 5,700                       |
| 137. Moving and Remodeling   | 162,000                     |
| 149. Total OSU Support   | \$ 331,789                  |
| 150. Revenues from Contracts<br>(Accounts 151-169)                               |                             |
| 151. PUCO Telecommunications   | \$ 58,289                   |
| 152. PUCO Management Audit   | 44,391                      |
| 153. PUCO Telephone Usage  | 24,640                      |
| 154. PUCO Time of Use  | 10,092                      |
| 157. U.S. GAO Contract   | 73                          |
| 158. Nova Scotia   | 31,618                      |
| 169. Total Contract Revenues   | \$ 169,103                  |
| 170. Other Non-contractual Revenues<br>(Accounts 171-189)                        |                             |
| 171. Sale of NRRI Publications   | \$ 45,194                   |
| 172. Sale of Computer Tapes  | 1,050                       |
| 173. BRIC-V Fees Collected   | 0                           |
| 174. Canadian Subscription Fees  | 4,275                       |
| 189. Total Other Non-contractual Revenues  | 50,519                      |
| 199. Total NRRI FY86 Revenue as of 6/30/86                                       | \$ 1,949,935                |

Notes

<sup>1</sup>All NARUC contributions are displayed net of the 5% administration fee charged by NARUC.

<sup>2</sup>This amount represents FY86 state contributions formally agreed to but not received as of 6/30/86. Collections on this amount totaled \$91,532 in July. See Attachment 2 for detail regarding FY86 payments received and outstanding.

<sup>3</sup>An accrual to revenue was made for the fiscal year 1985 totaling \$126,542 of state provided contributions. \$126,152 was subsequently received during FY86.

<sup>4</sup>See Attachment 1 for additional information.

Attachment 1

NRRI SUPPLEMENTAL TRAVEL FUND  
STATEMENT OF REVENUE AND EXPENDITURES FOR FY86  
(July 1, 1985 - June 30, 1986)

|  |                          |                    | Totals                 |
|--|--------------------------|--------------------|------------------------|
| I. BALANCE 6/30/85   |                          |                    | \$1,256.64             |
| II. DEPOSIT  |                          |                    |                        |
| <u>Date of Deposit</u>   | <u>Amount of Deposit</u> |                    |                        |
| September 16, 1986   | \$1,500                  |                    |                        |
| Total Revenue  |                          |                    | <u>1,500.00</u>        |
| Total Balance Available  |                          |                    | \$2,756.64             |
| III. DISBURSEMENTS   |                          |                    |                        |
| <u>Nature of Expense</u>   | <u>Approval Date</u>     | <u>Form Number</u> | <u>Amount Approved</u> |
| 1. D. Jones to Great Lakes Conference, White Sulfur Springs, WV    | 7/25/85                  | 86-1               | 571.20                 |
| 2. D. Jones to NARUC Summer Meetings, San Francisco, CA            | 8/5/85                   | 86-2               | 137.15                 |
| 3. J. Racster to NARUC Summer Meetings, San Francisco, CA          | 9/16/85                  | 86-3               | 49.38                  |
| 4. Bank Service Charge September                                   |                          |                    | .78                    |
| 5. Bank Service Charge October                                     |                          |                    | .85                    |
| 6. D. Jones to New York Society of Security Analysis, New York, NY | 2/14/86                  | 86-4               | 109.71                 |
| Total Expenses   |                          |                    | <u>869.07</u>          |
| IV. BALANCE AS OF 6/30/86  |                          |                    | \$1,887.57             |

## ATTACHMENT 2

STATUS OF NARUC FY86 REVENUE RECEIVED AND OUTSTANDING  
AS OF JUNE 30, 1986

| (1)<br><u>State*</u> | (2)<br>Amount<br>Agreed to<br><u>for FY 1986</u> | (3)<br>FY 1986<br><u>Payment</u> | (4)<br>FY 1986<br><u>Amount Remaining</u> |
|----------------------|--|----------------------------------|---|
| Alaska               | 4,084  | 4,084                            | -0-                                       |
| Arkansas             | 20,581   | 20,581                           | -0-                                       |
| California           | 211,591  | 211,591                          | -0-                                       |
| Colorado             | 25,257   | 23,442                           | 1,815                                     |
| Connecticut          | 18,000   | 18,000                           | -0-                                       |
| Delaware             | 7,018  | 7,018                            | -0-                                       |
| District of Columbia | 7,100  | 7,100                            | -0-                                       |
| Florida              | 89,824   | 89,824                           | -0-                                       |
| Hawaii               | 6,653  | 6,485                            | 168                                       |
| Idaho                | 8,787  | 8,787                            | -0-                                       |
| Illinois             | 136,587  | 136,922                          | -0-                                       |
| Indiana              | 20,637   | -0-                              | 20,637                                    |
| Indiana (FY85)       | 24,482   | 24,482                           | -0-                                       |
| Iowa                 | 29,666   | 29,669                           | -0-                                       |
| Kansas               | 24,469   | 24,977                           | -0-                                       |
| Kentucky             | 31,491   | 31,491                           | -0-                                       |
| Maine                | 7,671  | 7,671                            | -0-                                       |
| Maryland             | 5,000  | -0-                              | 5,000 **                                  |
| Massachusetts        | 10,000   | 10,000                           | -0-                                       |
| Michigan             | 87,321   | 86,796                           | 525                                       |
| Minnesota            | 5,000  | 2,000                            | 3,000                                     |
| Missouri             | 48,475   | 47,344                           | 1,131                                     |
| Montana              | 5,473  | 5,473                            | -0-                                       |
| Nevada               | 9,787  | 9,787                            | -0-                                       |
| New Hampshire        | 8,292  | 8,292                            | -0-                                       |
| New Jersey           | 78,163   | -0-                              | 78,163**                                  |
| New Mexico (PSC)     | 11,819   | 8,812                            | 3,007                                     |
| New York             | 146,989  | 144,174                          | 2,815                                     |
| North Carolina       | 48,098   | 48,098                           | -0-                                       |
| North Dakota         | 15,771   | 15,771                           | -0-                                       |
| Ohio                 | 114,641  | 114,641                          | -0-                                       |
| Oklahoma             | 29,998   | 29,998                           | -0-                                       |
| Rhode Island         | 6,943  | 6,942                            | 1   |
| South Carolina       | 25,846   | 25,846                           | -0-                                       |
| South Dakota         | 3,655  | 3,655                            | -0-                                       |
| Tennessee            | 7,500  | 7,500                            | -0-                                       |
| Texas                | 13,305   | 12,500                           | 805                                       |
| Utah                 | 10,697   | 10,697                           | -0-                                       |
| Vermont              | 3,735  | 3,734                            | 1   |
| Washington           | 24,000   | 24,000                           | -0-                                       |
| West Virginia        | 20,145   | 16,776                           | 3,369                                     |
| Wisconsin            | 43,899   | 42,839                           | 1,060                                     |
| Wyoming              | 4,890  | 4,899                            | -0-                                       |
| Total                | \$1,463,340                                      | \$1,342,698                      | \$121,497                                 |

\*State contributions displayed here in gross, i.e., before 5% NARUC administration fee is taken out.

\*\*All of the New Jersey contribution was received in July, 1986, attributable to FY86 as was the \$5000 contribution from Maryland. In addition, Alabama joined in Institute funding for the first time with a \$5,000 payment in July.

ATTACHMENT 3

FINAL STATEMENT

STATEMENT OF INCOME AND DISBURSEMENTS  
STATE CONTRIBUTIONS FOR THE BENEFIT OF  
THE NATIONAL REGULATORY RESEARCH INSTITUTE

FISCAL YEAR ENDING JUNE 30, 1986

NATIONAL ASSOCIATION OF REGULATORY UTILITY COMMISSIONERS  
1102 INTERSTATE COMMERCE COMMISSION BUILDING  
CONSTITUTION AVENUE AND TWELFTH STREET, N.W.  
POST OFFICE BOX 684, WASHINGTON, D.C. 20044

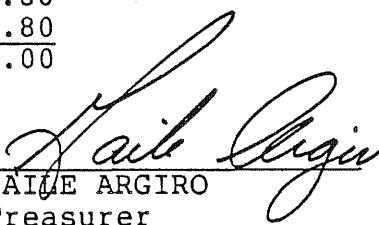
INCOME

|                                      |                       |
|--------------------------------------|-----------------------|
| State Contributions for FY 1985..... | \$ 157,909.84         |
| State Contributions for FY 1986..... | 1,322,705.07          |
| Interest.....                        | 8,345.89              |
| Total Income                         | <u>\$1,488,960.80</u> |

DISBURSEMENTS

|  |                  |
|--|------------------|
| The Ohio State University.....                                 | \$1,413,012.76   |
| Huntington National Bank<br>(NRRI Travel Adjustment Fund)..... | 1,500.00         |
| NARUC 5% Administration Fee.....                               | <u>74,448.04</u> |
| Total Disbursements.....                                       | \$1,488,960.80   |

|                          |                     |
|--------------------------|---------------------|
| Previous Balance.....    | \$ 2,600.00         |
| Total Income.....        | 1,488,960.80        |
| Total Disbursements..... | <u>1,488,960.80</u> |
| Balance - June 30, 1986. | \$ 2,600.00         |

  
GAILE ARGIRO  
Treasurer

\* \$91,532.08 was received in July 1986 for Fiscal Year Ending June 30, 1986.



TABLE 12

## PART 2: NRRI FY86 EXPENDITURES BY LINE ITEM AS OF JUNE 30, 1986

| (1)<br>Expenditure<br>Categories                         | (2)<br>Total FY86<br>Expenditures* |
|--|------------------------------------|
| 210. Payroll Salaries Expenditures<br>(Accounts 211-219) |                                    |
| 211. Staff Salaries and Wages                            | \$659,400                          |
| 212. Faculty Salaries                                    | 68,796                             |
| 213. Graduate Research Associates Salaries               | 127,035                            |
| 214. Other Salaries and Wages                            | 1,369                              |
| 219. Total Payroll Salaries Expenditures                 | 856,600                            |
| 220. Payroll Benefits Expenditures<br>(Accounts 221-229) |                                    |
| 221. Retirement  | 108,179                            |
| 222. Vacation  | 35,816                             |
| 223. Sick Leave  | 20,221                             |
| 224. Insurance   | 44,533                             |
| 225. Course Payment Credits                              | 22,148                             |
| 229. Total Payroll Benefits Expenditures                 | 230,897                            |
| 230. Non-Payroll Expenditures<br>(Accounts 231-279)      |                                    |
| 231. Advertising   | 9,790                              |
| 232. Computer Services                                   | 9,976                              |
| 233. Consultants   | 46,737                             |
| 234. Equipment Lease                                     | 26,209                             |
| 235. Equipment Purchase                                  | 41,971                             |
| 236. Mail  | 20,072                             |
| 237. Meetings  | 4,575                              |
| 238. Printing & Copying                                  | 62,991                             |
| 239. Subscriptions & Books                               | 6,959                              |
| 240. Supplies  | 22,306                             |
| 241. Telephone   | 28,478                             |
| 242. Temporary Office Services                           | 23,945                             |
| 243. Travel  | 91,701                             |
| 244. Other   | 5,818                              |
| 245. Travel Supplement                                   | 869                                |
| 246. Space Rental - Neilwood Gables                      | 5,700                              |
| 247. Moving and Remodeling                               | 162,000                            |
| 279. Total Non-Payroll Expenditures                      | \$570,097                          |
| 299. Total NRRI FY85 Expenditures as of 6/30/86          | \$1,657,594                        |

\*Where applicable, amounts listed include the appropriate University indirect cost rate.

TABLE 13

THE NATIONAL REGULATORY RESEARCH INSTITUTE MONTHLY FINANCIAL  
REPORT FOR INDIVIDUAL ACCOUNTS OF JUNE 1986  
(FOR FISCAL 1986: JULY 1, 1985 - JUNE 30, 1986)

| (1)<br>Account   | (2)<br>Expenditure<br>Budget<br>for FY86 | (3)<br>June<br>Expenditures | (4)<br>FY86<br>Expenditures<br>To Date | (5)<br>Commitment <sup>1</sup> | (6)<br>Unencumbered<br>Balance | (7)<br>Project<br>on Budget |
|--|--|-----------------------------|--|--------------------------------|--------------------------------|-----------------------------|
| 300. FY85 NARUC-Funded Project Accounts <sup>2</sup><br>(Accounts #301-#316) |  |                             |  |                                |                                |                             |
| 301. Cost of Service Manual  | \$ 46,569                                | \$ 1,459                    | \$ 45,701                              | \$ -0-                         | \$ 868                         | On                          |
| 302. Regional Holding Companies  | 64,651                                   | 537                         | 85,863                                 | -0-                            | <21,212>                       | Over                        |
| 303. Regulation of New Entities  | 30,019                                   | 6,362                       | 42,357                                 | -0-                            | <12,338>                       | Over                        |
| 304. FY85 Project Summary  | 362,950                                  | 143                         | 260,537                                | -0-                            | 102,413                        | On                          |
| 316. Subtotal FY85 NARUC-Funded<br>Project Accounts                          | \$ 504,189                               | \$ 8,501                    | \$ 434,458                             | \$ -0-                         | \$ 69,731                      |                             |
| 320. FY86 NARUC-Funded Project Accounts <sup>3</sup><br>(Accounts #321-#338) |  |                             |  |                                |                                |                             |
| 321. Travel Supplement   | \$ 2,757                                 | \$ -0-                      | \$ 867                                 | \$ -0-                         | \$ 1,890                       | On                          |
| 322. Cost of Service   | 70,001                                   | 4,937                       | 38,549                                 | -0-                            | 31,452                         | On                          |
| 323. IntraLATA   | 100,000                                  | 3,416                       | 28,104                                 | -0-                            | 71,896                         | On                          |
| 324. Telephone Marginal Cost   | 100,833                                  | 561                         | 6,385                                  | -0-                            | 94,448                         | On                          |
| 325. Innovative Admin. Procedures  | 25,840                                   | <2>                         | 7,349                                  | -0-                            | 18,491                         | On                          |
| 326. Model Dissemination   | 10,833                                   | 128                         | 9,003                                  | -0-                            | 1,830                          | On                          |
| 327. Gas Topical Studies   | 68,334                                   | 1,012                       | 44,729                                 | 17,980                         | 5,625                          | On                          |
| 328. Pricing Wheelled Electricity  | 158,333                                  | 5,270                       | 70,194                                 | -0-                            | 88,139                         | On                          |
| 329. Small Water   | 64,167                                   | 13,099                      | 23,799                                 | 25,955                         | 14,413                         | On                          |
| 330. BRIC V  | 27,500                                   | 8,425                       | 28,110                                 | -0-                            | <610>                          | On                          |
| 331. NRRI Quarterly Bulletin   | 120,833                                  | 17,474                      | 112,647                                | -0-                            | 8,186                          | On                          |
| 332. Quick Response Assistance   | 22,666                                   | 2,831                       | 20,021                                 | -0-                            | 2,645                          | On                          |
| 333. Common Project Cost   | 25,001                                   | 9,687                       | 28,473                                 | -0-                            | <3,472>                        | Over                        |
| 334. NRRI Administration   | 10,832                                   | 2,864                       | 11,078                                 | -0-                            | <246>                          | On                          |
| 335. Board of Directors  | 117,500                                  | 4,837                       | 69,342                                 | -0-                            | 48,158                         | On                          |
| 336. Research Advisory Committee   | 95,000                                   | 8,435                       | 63,902                                 | -0-                            | 31,098                         | On                          |
| 337. Marketing   | 127,500                                  | 14,255                      | 118,709                                | -0-                            | 8,791                          | On                          |
| 338. Subtotal FY86 NARUC-Funded<br>Project Accounts                          | \$1,147,930                              | \$ 97,229                   | \$681,261                              | \$ 43,935                      | \$422,734                      |                             |
| 339. Total NARUC-Funded Project<br>Accounts <sup>4</sup>                     | \$1,652,119                              | \$105,730                   | \$1,115,719                            | \$ 43,935                      | \$492,465                      |                             |
| 350. The Ohio State University (OSU)<br>Accounts (Accounts #351-#359)        |  |                             |  |                                |                                |                             |
| 351. OSU Contribution  | \$ 145,000                               | \$ 33,758                   | \$ 169,659                             | \$ -0-                         | \$<24,659>                     | Over                        |
| 352. OSU research contingency funds  | 28,740                                   | -0-                         | -0-                                    | 5,000                          | 23,740                         | On                          |
| 353. OSU In-Kind   | 24,789                                   | 5,240                       | 24,789                                 | -0-                            | -0-                            | On                          |
| 354. Moving and Remodeling   | 162,000                                  | -0-                         | 162,000                                | -0-                            | -0-                            | On                          |
| 359. Total of OSU Accounts   | \$ 360,529                               | \$ 38,998                   | \$ 356,448                             | 5,000                          | <919>                          |                             |
| 360. Contract Accounts (Accounts #366-#379)                                  |  |                             |  |                                |                                |                             |
| 366. PUCO telephone  | \$ 58,289                                | \$ 5,281                    | \$ 58,289                              | \$ -0-                         | \$ -0-                         | On                          |
| 367. PUCO telephone usage  | 24,640                                   | 7,837                       | 24,640                                 | -0-                            | -0-                            | On                          |
| 368. PUCO management audit   | 44,391                                   | -0-                         | 44,391                                 | -0-                            | -0-                            | On                          |
| 369. PUCO time of use  | 10,092                                   | 6,168                       | 10,092                                 | -0-                            | -0-                            | On                          |
| 370. Nova Scotia   | 31,618                                   | 2,509                       | 31,618                                 | -0-                            | -0-                            | On                          |
| 371. U.S. GAO  | 73                                       | -0-                         | 73                                     | -0-                            | -0-                            | On                          |
| 379. Total of Contract Accounts <sup>5</sup>                                 | \$169,103                                | \$21,795                    | \$ 169,103                             | \$ -0-                         | \$ -0-                         |                             |
| 380. Non-Contractual Revenues Accounts<br>(Accounts #381-#398)               |  |                             |  |                                |                                |                             |
| 381. Sale of NRRI publications   | \$ 45,194                                | \$ 772                      | \$ 14,514                              | -0-                            | \$30,680                       | On                          |
| 382. Sale of computer tapes  | 1,050                                    | -0-                         | 1,640                                  | -0-                            | <590>                          | On                          |
| 383. Conferences   | -0-                                      | -0-                         | 172                                    | -0-                            | <172>                          | On                          |
| 398. Total of Non-Contractual Accounts                                       | \$ 46,244                                | \$ 772                      | \$ 16,326                              | -0-                            | 29,918                         |                             |
| 399. Total for All NRRI Accounts   | \$2,227,995 <sup>6</sup>                 | \$167,295                   | \$1,657,596                            | \$ 48,935                      | \$521,464                      |                             |

<sup>1</sup>The outstanding commitments are shown only for consistency with previous monthly reports. These commitments will be carried forward to FY87 as that is when they will be expensed.

<sup>2</sup>Includes only that portion of each FY85 account to be expended in FY86. Accounts will be funded out of FY86 revenues in a total amount not exceeding that authorized by the NRRI Board.

<sup>3</sup>Includes only that portion of each FY86 account to be expended in FY86.

<sup>4</sup>All amounts listed in accounts 301-338 include the 45 per cent MTDC indirect cost rate for services received.

<sup>5</sup>All amounts listed in accounts 370-371 include the 45 per cent MTDC indirect cost rate for services received.

<sup>6</sup>When the expenditure budget exceeds the planned revenue, NRRI manages actual expenditures so as not to exceed FY86 revenues.



TABLE 14  
July 28, 1986

FINANCIAL STATEMENT  
As Of June 30, 1986

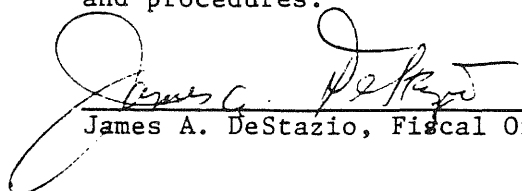
State Member Support of NRRI Through  
Regularized State-Provided Contributions  
RF 763289/063289

Sponsored by:

National Association of Regulatory Utility Commissioners

|                                       |                   |                            |
|---------------------------------------|-------------------|----------------------------|
| Beginning Balance, July 1, 1985       |                   | \$ (287,349.38)            |
| Add: Receipts Received During FY 1986 |                   | <u>1,437,038.13</u>        |
| Subtotal                              |                   | \$ 1,149,688.75            |
| Less: Expenditures During FY 1986     |                   |                            |
| Direct Expenditures                   | \$ 769,407.22     |                            |
| Indirect Expenditures                 | <u>345,655.25</u> | <u>1,115,062.47</u>        |
| Ending Balance, June 30, 1986         |                   | \$ <u><u>34,626.28</u></u> |

Pursuant to the provisions of Section 4, "Use of State Contributions by NRRI" found in the Operating Agreement between NARUC and OSURF this is to certify that, to the best of our knowledge, these funds have been disbursed for NRRI consistent with applicable University policies and procedures.

  
 \_\_\_\_\_ July 28, 1986  
 James A. DeStazio, Fiscal Officer Date



PART 8

APPENDICES

- A. Agendas of the three meetings of the NRRI Board of Directors during FY1986.
- B. Proposed new Bylaws for NRRI passed by Board of Directors
- C. Congratulatory Resolution on Tenth Anniversary of NRRI
- D. Laudatory Letter from DOE on Tenth Anniversary of NRRI

DRAFT AGENDA

The National Regulatory Research Institute  
Board of Directors Meeting

September 12, 1985, 8:45 A.M.  
Board of Trustees Conference Room  
Room 202 John W. Bricker Bldg.  
The Ohio State University  
190 North Oval Mall  
Columbus, Ohio 43210

- I. CALL TO ORDER - Chairperson Edythe Miller
  - A. Announce quorum; introduce new Board members and attending staff members, and guests.
  - B. Adopt agenda
  - C. Report on Nominating Committee recommendations for Board chairperson and RAC chairperson - Commissioner Susan Knowles
- II. ACCEPTANCE/CORRECTION OF MINUTES OF MAY 9, 1985 MEETING - Dr. Douglas Jones, Director
- III. REPORT OF THE CHAIRPERSON - Committee Assignments
- IV. REPORT OF THE DIRECTOR - Doug Jones
- V. OLD BUSINESS
  - A. Committee on Finance - Commissioner George Barbour/Commissioner Gloria Gaylord
  - B. Committee on Funding and Institutional Objectives - Commissioner Peter Bradford/Doug Jones
  - C. Committee on Research - Commissioner Anne Mead/Dr. Mary Bane
- VI. NEW BUSINESS
  - A. Adoption of Business Plan for FY86
    - 1. Budget Plan - Doug Jones and Dr. Raymond Lawton
    - 2. Research and Assistance Plan
      - a. Where We Left Off in May
      - b. Detailed Discussion and Adoption
  - B. Appointment of New Nominating Committee
  - C. Other

Notes: Lunch at 12:15 P.M.: planned adjournment at 4:00 P.M.  
Overnight accommodations at the Holiday Inn on the Lane, 328 West Lane Ave. have been made for out-of-town members requiring them.

AGENDA

The National Regulatory Research Institute  
Board of Directors Meeting

January 9, 1985, 8:45 A.M.  
Board of Trustees Conference Room  
Room 202 John W. Bricker Bldg.  
The Ohio State University  
190 North Oval Mall  
Columbus, Ohio 43210

- I. CALL TO ORDER - Chairperson Edythe Miller
  - A. Announce quorum; introduce new Board members and attending staff members.
  - B. Adopt agenda
- II. ACCEPTANCE/CORRECTION OF MINUTES OF SEPTEMBER 12, 1985 MEETING -  
Dr. Douglas Jones, Director
- III. REPORT OF THE CHAIRPERSON - Edie Miller
- IV. REPORT OF THE DIRECTOR - Doug Jones
- V. OLD BUSINESS
  - A. Committee on Funding and Institutional Objectives -  
Commissioner Peter Bradford
    - 1. Reappointment question on Research Advisory Committee member terms
    - 2. Question of fewer Board Meetings
    - 3. The Free Rider Question -
  - B. Committee on Research - Commissioner Anne Mead/Dr. Mary Bane
- VI. NEW BUSINESS
  - A. Funding formula for FY 1987 - Doug Jones
  - B. Tenth Anniversary Year for NRRI - Edie Miller/Doug Jones
  - C. Other

Notes: Lunch at 12:15 P.M.: planned adjournment at 4:00 P.M.  
Overnight accommodations at the Holiday Inn on the Lane, 328 West Lane Ave.  
have been made for out-of-town members requiring them.

AGENDA

The National Regulatory Research Institute  
Board of Directors Meeting

May 15, 1986  
Board of Trustees Conference Room  
Room 202 John W. Bricker Bldg.  
The Ohio State University  
190 North Oval Mall  
Columbus, Ohio 43210

- I. CALL TO ORDER - Chairperson Edythe Miller
  - A. Announce quorum; introduce attending staff members and visitors.
  - B. Adopt agenda.
- II. ACCEPTANCE/CORRECTION OF MINUTES OF JANUARY 9, 1986 MEETING -  
Dr. Douglas Jones, Director
- III. REPORT OF THE CHAIRPERSON - Edie Miller
- IV. REPORT OF THE DIRECTOR - Doug Jones
- V. OLD BUSINESS
  - A. Report on NRRI Tenth Anniversary Activities - Doug Jones
  - B. Staff Recruitment Approaches - Dr. Kevin Kelly
  - C. Committee on Funding and Institutional Objectives -  
Commissioner Carolyn Guess
    - 1. Status of State Funding Participation (Dr. Jones)
    - 2. Question of One and One-half Day Annual Meeting (September)
    - 3. Deferring Some Research Agenda Choices Until January
    - 4. NARUC Ex Officio Board Membership Questions
    - 5. Other
  - D. Committee on Research - Commissioner Anne Mead/Dr. Mary Bane
- VI. NEW BUSINESS
  - A. Filling of RAC Vacancy (Commission Staff Category) - Anne Mead
  - B. Report on Upcoming Fifth Biennial Regulatory Information  
Conference - Dr. Kelly
  - C. Report on Institute Study on Bell Regional Holding Companies -  
Dr. Chessler
  - D. Other

Notes: Lunch at 12:45 P.M.: planned adjournment at 4:00 P.M.  
Overnight accommodations at the Holiday Inn on the Lane, 328 West Lane  
have been made for out-of-town members requiring them.



**BY-LAWS OF  
THE NATIONAL REGULATORY RESEARCH INSTITUTE**

**ARTICLE I  
NAME AND DEFINITIONS**

Section 1. The name of this Institute shall be "The National Regulatory Research Institute".

Section 2. The following words, when used in the By-Laws, shall have the following meanings:

(a) The word "Association" shall mean the National Association of Regulatory Utility Commissioners;

(b) The word "Institute" shall mean The National Regulatory Research Institute, established by the Association as its research arm, and shall be a unit of the University; and

(c) The word "University" shall mean The Ohio State University.

**ARTICLE II  
OBJECTIVE**

The primary objectives of the Institute shall be to perform research and related activities to satisfy the needs of the members of the Association, and to serve the purposes of the University through the programs of the Institute for research, education and public service.

**ARTICLE III  
BOARD OF DIRECTORS**

Section 1. The Board of Directors shall exercise general supervision over the work of the Institute. The Board shall report annually on the work of the Institute to the Association and the University.

Section 2. The Board of Directors shall consist of: the First Vice President, the Second Vice President, the Chair of the Committee on Administration or a member of the Committee designated by the Chair to serve for the duration of the term for which the Chair would otherwise serve, and the Administrative Director and General Counsel of the Association; seven active members of the Association appointed by the President of the Association; the Director of the Institute; two faculty members of the University appointed by the Provost of the University; and three public members, who are not active members of the Association or members of the faculty of the University, to be appointed by the President of the Association with the concurrence of the President of the University. A vacancy in the term of an appointed member of the Board shall be filled in the manner provided above for the remainder of the unexpired term. A majority of the members of the Board of Directors shall constitute a quorum. Due notice shall be given of all meetings of the Board. The Board of Directors shall annually elect one of its Association members to serve as the Chair of the Board. Any committee of the Board shall contain representation from each class of membership of the Board.

Section 3. The term of an appointed member of the Board of Directors shall be for three years, beginning on July 1. An appointed member of the Board may not serve more than two consecutive terms, except that this limitation shall not apply to a member in charge of the basic educational program of the Association. The present appointed members of the Board, for so long as they are active members of the Association or faculty members of the

University, as the case may be, may serve until the expiration of their terms, and upon the expiration of the last such term, this sentence shall be automatically repealed.

**ARTICLE IV  
DIRECTOR AND STAFF OF THE INSTITUTE**

Section 1. The Director shall carry out the work of the Institute under the general supervision of the Board of Directors according to its research interests, and under the general supervision of the University according to its academic interests. The Director shall be nominated by the Board and appointed with faculty rank by the University, and shall serve at the pleasure of the Board and the University.

Section 2. The Director and permanent staff members of the Institute shall be employees of the University. Fellows or associates may be affiliated with the Institute without being employed by the University.

**ARTICLE V  
AMENDMENTS AND REPEAL**

Section 1. The By-Laws may be amended by the Board at any meeting by a majority vote, if thirty days notice has been given, or by an affirmative vote of twelve members without such notice, and, in either event, upon the approval of the amendment by the Association and the University.

Section 2. Irrespective of the provision contained in Section 1, the By-Laws may be unilaterally repealed by either the Association or the University upon twelve months notice by one to the other, and in such event the Association shall locate the Institute elsewhere.

APPENDIX C

RESOLUTION CONGRATULATING THE NATIONAL  
REGULATORY RESEARCH INSTITUTE  
FOR TEN YEARS OF SERVICE

WHEREAS, The National Regulatory Research Institute will complete its first decade of service to the membership of the National Association of Regulatory Utility Commissioners (NARUC) later this year; and

WHEREAS, The regulatory community had previously expressed the continuing need for an independent institute to analyze public policy issues on an objective and timely basis, provide technical assistance to state commissions, and educational programs for regulatory commissions and their staff; and

WHEREAS, The 1976 NARUC Annual Convention adopted the unanimous recommendation of the Ad Hoc Committee on Regulatory Research to establish a National Regulatory Research Institute at The Ohio State University; and

WHEREAS, the 1981 NARUC Annual Convention recognizing the need for more stability in the Institute's funding sources and the obligation of the states to financially support their own creation, accepted and endorsed a funding mechanism by which the Institute could obtain money for research and assistance on a regular basis; and

WHEREAS, The National Regulatory Research Institute has now successfully obtained support funds from state public service commissions, federal regulatory agencies, and the host University; and

WHEREAS, The structure and governance of the Institute assure that its programs are completely responsive to state regulatory problems and needs; and

WHEREAS, The National Regulatory Research Institute has sought the guidance and advice of the NARUC standing committees and their staffs, has had State regulator members of NARUC on its Board of Directors throughout its history, and selects its annual research and assistance agenda with the participation of a Research Advisory Committee having a majority of state staff members; and

WHEREAS, The National Regulatory Research Institute has demonstrated its value to the Nation by conducting a program of research and assistance of the highest quality and of great benefit to commissions, the ratepayers, and the regulatory community at large; and

WHEREAS, The National Regulatory Research Institute will continue to help strengthen public utility regulation by providing practical research on the major emerging issues confronting regulators; now, therefore, be it

RESOLVED, That the [NARUC Regional Conference] assembled in its Annual Meeting in [city and state] recognizes and congratulates the National Regulatory Research Institute, for its ten years of distinguished research and technical assistance; and be it further

RESOLVED, That the NARUC calls upon its members to continue their steadfast support of a strong research and assistance effort for the benefit of their constituencies.

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Sponsored by



APPENDIX D

**Department of Energy**

Washington, DC 20585

June 5, 1986

Mr. Douglas N. Jones, Director  
The National Regulatory Research Institute  
1080 Carmack Road  
Columbus, Ohio 43210

Dear Mr. Jones:

I am writing to you on the occasion of the National Regulatory Research Institute's tenth anniversary.

The history of the Institute is clearly a success story. Ten years ago, in the midst of a nation-wide "energy crisis," it became apparent that state regulatory utility commissions were faced with a wide range of novel, urgent, and difficult analytic challenges. These needs were recognized by the federal government, and in 1976 the Congress appropriated funds to assist in the establishment of an institution which could serve state commissions as an analytic resource on common long-term issues.

Since that time, the Institute has demonstrated its worth to its state sponsors and has become totally independent of federal funding. There is now a new slate of problems and issues which warrant your attention, and I am certain that you will give them your best efforts.

The establishment of the Institute stands as a successful experiment in federal-state cooperation to create new non-federal agencies to meet specific long-term needs. On behalf of the Department, I am happy to offer you and the Institute my congratulations.

Sincerely,

A handwritten signature in dark ink, appearing to read "J. Herod", written over a circular stamp or mark.

J. Steven Herod  
Director  
Office of Coal and  
Electricity Policy