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BY THE U.S. GENERAL ACCOUNTING OFFICE

Report To The Chairman,

Federal Energy Regulatory Commission

FERC Can Improve Its Operational Performance By Broadening And Deepening Current Management Efforts

The Federal Energy Regulatory Commission (FERC) issues thousands of similar documents each year, including licenses, rate change approvals, etc. Its operational performance can be evaluated by measuring the timeliness with which it issues these documents, the productivity of its staff (number of documents issued for a given staff level) and the quality of its work.

FERC's timeliness has improved significantly in recent years. Its productivity has improved somewhat less. Quality, however, is unknown because FERC does not currently measure it.

GAO believes that FERC's timeliness improvement has resulted from strong management attention, including specific improvement projects as well as techniques (such as measures of timeliness and goals for improvement) to assure that managers at all levels are accountable for timeliness. GAO recommends that FERC apply to productivity the techniques used to improve timeliness. It should also attempt to develop objective measures of quality. GAO also proposed fourteen more specific improvements.

FERC management is currently taking action on these recommendations and proposals.

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JANUARY 30, 1984

UNITED STATES GENERAL ACCOUNTING OFFICE
WASHINGTON, D.C. 20548

ACCOUNTING AND FINANCIAL
MANAGEMENT DIVISION

January 30, 1984

B-213992

The Honorable Raymond J. O'Connor
Chairman, Federal Energy Regulatory Commission

Dear Mr. O'Connor:

We examined the Federal Energy Regulatory Commission (FERC) to assess its overall operational performance--that is, the timeliness, productivity, and quality of its work.

The objectives of this review were to (1) assess how well an agency manages its operational performance and (2) identify opportunities for operational performance improvements. Instead of focusing on the effectiveness of a specific program, this review addressed the overall operation of FERC. The reason for such a broad scope was to be able to fairly assess management and to avoid drawing conclusions on the basis of performance in only a few areas.

Methodologically, the review had three parts:

--developing and analyzing quantitative measures of operational performance,

--identifying opportunities for improving performance, and

--assessing the strategies management used to assure good operational performance.

Operational performance has, on the whole, improved since 1980 but could be better if management would give the same attention to productivity and quality that it now gives to timeliness.

OPERATIONAL PERFORMANCE IMPROVED IN TIMELINESS AND PRODUCTIVITY; QUALITY NOT MEASURED

Operational performance is a key indicator of management's effectiveness in using its staff and other resources to accomplish its workload. Operational performance is measured by

timeliness--how long it takes FERC to act or decide on an application;

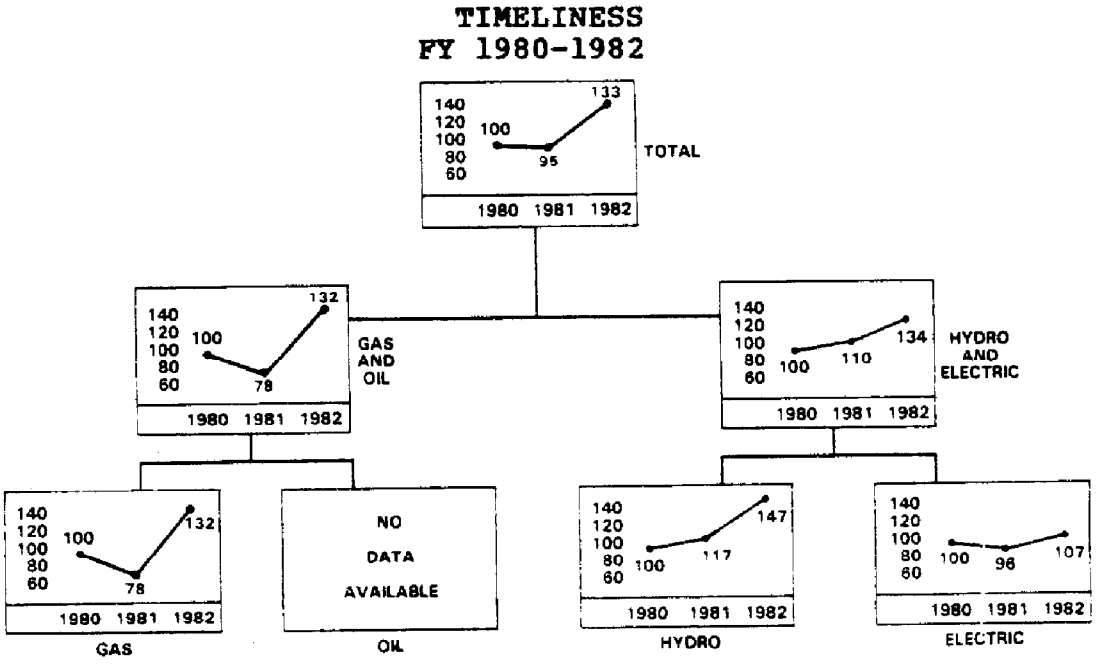
productivity--how much work FERC produces with available staff resources (includes staff time a given workload requires); and

quality--how accurately FERC performs its work, compared with objective criteria. (Quality has several dimensions, including error rates, application of rules and laws, and treatment of applicants.)

Timeliness and productivity have improved, but quality performance is not known. In 1982, products were completed 33 percent faster than in 1980, and 17 percent less staff time was required for the average action or decision in 1982 than in 1980. We were unable to determine quality performance because objective measures of quality were unavailable, and FERC managers have not agreed on a definition of quality.

Improved timeliness due to strong management efforts

Since 1980, for FERC overall and for three of its four main subdivisions,[1] timeliness has improved significantly. The following chart show these trends.



Top management has used two basic methods for improving timeliness:

--initiating specific improvement projects and

--emphasizing the importance of timeliness to all levels of management through such techniques as developing measures, setting goals, and holding lower-level management accountable.

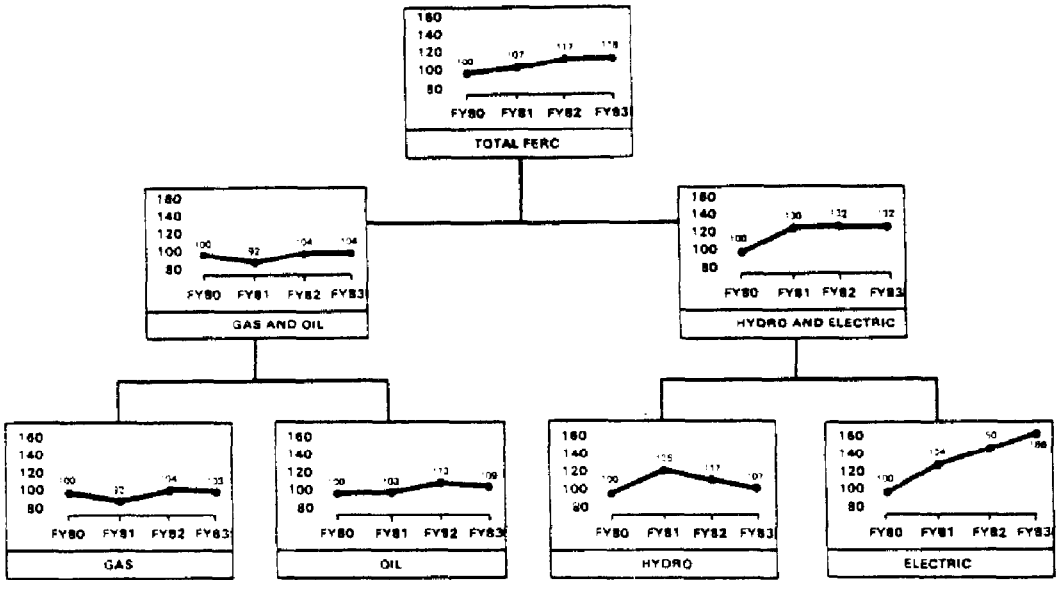
[1]We examined over 2,500 cases accounting for over 55% of the resources this study examined.

By using these methods, top management required all levels of management to become actively involved in improving timeliness through such acts as gathering and reporting timeliness data, attending monthly workload review meetings, installing workload tracking systems, and including timeliness goals in merit pay contracts. We believe this involvement was the key factor in FERC's overall improvement since workload, work complexity, staffing, and the legislative environment remained relatively constant throughout this period.

Productivity has increased since 1980 but could increase more

Using our own productivity measures, we found that between 1980 and 1982, productivity[2] in FERC rose 17 percent.[3] There was, however, only a 1-percent increase in productivity in 1983. The following chart shows that gains in productivity between 1980 and 1983 have been more moderate than those in timeliness and not as uniform across organizational subdivisions.

PRODUCTIVITY
FY 1980-1983[a]



[a]As indicated earlier, 1983 productivity data was developed by FERC. It plans to report productivity data on a quarterly basis beginning in fiscal year 1983.

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[2]Productivity is measured as the weighted number of products completed (e.g. license applications approved) divided by the resources necessary to complete those products (staff workmonths).

[3]Although FERC had no measures of productivity, we were able to develop such measures from data already collected in FERC's management information system. In 1983 FERC developed measures of productivity using the same 54 activities as in our review.

Despite these overall gains in productivity, many individual organizational units have suffered recent declines. If units were as productive as they have been in their best recent year, total FERC productivity would be up an additional 13 percent in 1982. (See app. III for a full description of this technique, called "historical best.")

We believe management should address this potential 13-percent improvement by the same methods it has used to improve timeliness. Specifically, it should establish measures of productivity, set goals based on each unit's previous best performance at a minimum, and hold managers accountable for achieving higher productivity. FERC's current management information system contains the data to develop these measures of productivity and provides a basis to set goals for performance comparisons. Further, top management should emphasize accountability to fully involve all levels of management in the improvement process and to achieve more uniform gains throughout FERC. At the time of our review, only one-third of the 75 managers we interviewed were actively trying to improve productivity, and several managers noted that there was little incentive to determine ways to improve productivity. No Senior Executive Service (SES) contracts of division directors or merit pay contracts of other managers included productivity improvement as a goal.

In addition to this increased management emphasis, we identified 14 specific opportunities to improve operational performance, many of which apply to improving productivity. These opportunities are decribed in detail in Appendix II and can be expected to produce specific gains in individual units.

Quality performance could not be determined

We attempted to evaluate the quality of FERC's products but were unable to do so because FERC has developed no criteria for judging good or poor quality. Although FERC supervisors told us that they believe the quality of their products has improved since 1980, this is based on their own subjective reviews of quality. Without objective criteria to judge the quality of its products, FERC will be unable to (1) develop measures and goals for quality, (2) hold managers accountable for achieving high levels of quality, and (3) involve lower level managers in efforts to improve quality.

While we have no quantitative data to show that quality is good or poor, we believe FERC should give this performance attribute careful attention because improvements in timeliness and productivity alone will not improve overall operational performance.

RECOMMENDATIONS TO THE EXECUTIVE DIRECTOR

We believe that additional gains in operational performance would result if the techniques used so successfully to improve timeliness were used to improve productivity and quality as well. To that end, we recommend that FERC's Executive Director:

--Develop measures of productivity, beginning in fiscal year 1983, using the current management information system as a basis.

--Establish a system of acccountability for productivity performance similar to that used for timeliness. We believe that discussing productivity as well as timeliness in the monthly workload review meetings will help provide this additional level of accountability.

--Establish productivity improvement goals for all organizational levels and require managers at each level to report their plans for achieving such goals. These goals should be incorporated into the SES and merit pay contracts of agency managers and be used to assure accountability for productivity performance.

--Develop objective measures for quality. A first step in the process should be to review FERC's 54 activities and identify those that could be measured for quality. Also, in this development process FERC should review similar organizations' experiences in developing and using quality measures.

--Address our specific proposals in appendix II.

AGENCY COMMENTS

FERC fully concurred with our recommendations and the plans for implementation. It has developed measures for the same 54 activities we reviewed and will begin reporting this data on a quarterly basis in December 1983.

It has already started on a system of accountability for productivity by discussing fiscal year 1983 productivity data during the first monthly workload review session. It will similarly discuss the quarterly trends beginning with the reporting of fiscal year 1984's first quarter productivity.

FERC has established a fiscal year 1984 productivity improvement goal of 3 percent. In addition, it is using productivity as one of the four major parameters to assess the performance of its Senior Executive Service personnel for fiscal year 1984. It will also incorporate productivity improvement criteria into merit pay contracts during fiscal year 1984.

FERC agrees to develop objective measures for quality during fiscal year 1984 for at least six activities.

As you know, Title 31 U.S.C. §720 requires the head of a Federal agency to submit a written statement on actions taken on our recommendations. This written statement must be submitted to the Senate Committee on Governmental Affairs and the House Committee on Government Operations not later than 60 days after the date of the report. A written statement must also be submitted to the House

and Senate Committees on Appropriations with the agency's first request for appropriations made more than 60 days after the date of the report.

Sincerely yours,

W. D. Campbell
Acting Director

Contents

ABBREVIATIONS

ALJ	Administrative Law Judges
DOA	Delegation of Authority
FERC	Federal Energy Regulatory Commission
GAO	General Accounting Office
MIS	Management Information System
OEPR	Office of Electric Power Regulation
OGC	Office of the General Counsel
OOR	Office of Opinions and Reviews
OPPR	Office of Pipeline and Producer Regulation
READI	Regulatory Evaluation and Docketed Information System

APPLYING THE PRODUCTIVITY REVIEW CONCEPT TO FERC

METHODOLOGY

The objectives of the productivity review are to (1) assess agency management in terms of operational performance and (2) discover opportunities for improving operational performance--particularly productivity.

A productivity review consists of three parts:

--assessing agency management by examining operational performance,

--using operational performance data and detailed structured interviews to identify opportunities for improving operational performance, and

--assessing management's strategies for improving operational performance through additional interviews with agency top management.

Throughout our work in each of these three phases, we kept agency management informed of our progress and findings. In addition, at the end of the review we briefed agency top management on the findings, conclusions, and recommendations of the review to obtain their concurrence with our recommendations for improving performance.

PHASE I: EXAMINING OPERATIONAL PERFORMANCE

There are two ways of assessing overall agency management: program effectiveness and operational performance. FERC, for example, might be assessed in terms of program effectiveness--whether it is assuring ample supplies of energy at fair prices--or in terms of operational performance--whether it is minimizing the internal costs of doing its work. A productivity review addresses an agency's operational performance and considers how well the agency is using its resources to produce its outputs.

A review of operational performance addresses the following questions to the agency about its products:

--How long do they take to produce? (timeliness)

--How much staff time do they require? (labor productivity)

--How good are they? (quality)

These three questions are interrelated and should not be considered independently. Good operational performance requires that timeliness, productivity, and quality all be good.

Operational performance can be measured most successfully when an agency produces a high volume of reasonably uniform products and

products are generally completed within a year (although adjustments can be made if this last condition is not satisfied). This type of review was appropriate to FERC because, like many Federal agencies, it performs its mission by processing thousands of documents, most of which are relatively routine and standard. FERC does things you can see, touch, count, and measure.

The high volume and uniformity of FERC's workload is easily seen in the output of a few of FERC's individual sections. FERC units produce about 85,000 decision documents a year, which, for example,

--approve rates for electric power sold across state lines (about 900 a year),

--approve preliminary studies for the construction of new hydroelectric facilities (about 1,300 a year),

--verify that local agencies have properly carried out specific regulatory actions in pricing natural gas (about 58,000 a year),

--approve pipeline rates for shipping natural gas (about 75 a year),

--examine oil tariff filings (about 2,500 a year), and

--approve prices charged by natural gas producers (4,200 a year).

Most of FERC's total effort goes into processing these types of high-volume, relatively standardized requests. So its overall effectiveness can largely be evaluated by examining how many applications FERC processes, how timely they are, and how good their quality is. These are the three principal concerns of a productivity review.

The three dimensions of operational performance: timeliness, productivity, and quality

Timeliness is simply measured as the calendar days between the day an application is accepted and entered into FERC's scheduling system and the day a decision or action is communicated in a formal order.

Productivity is how much work an agency can produce with the resources available. Thus, if an agency has the same resources in two different years, but does more work in the second year of similar or a higher level of quality, it has improved its overall productivity. Essentially, productivity is calculated by assigning a weight to each piece of work completed (based on the amount of staff time it is expected to require), adding up the weighted work completed in a given period, and dividing it by the resources used. One needs only three pieces of basic information: workload (how much work is completed), resources (total staff time expended) and

weight factors (time expected or needed to do each measured item of work). Workload and resources were already available in READI (FERC's Management Information System), and weight factors were easy to calculate.

When evaluating measures of performance change, it is necessary to determine if the products or services have changed over time. Comparisons are based on the assumption that major changes have not occurred.

Quality, the third measure of operational performance, is assessed by comparing agency products against objective criteria. These criteria establish the agency's assessment of good and poor quality. Program quality in FERC has several dimensions--particularly error rates, the appropriate application of rules and regulations, and the treatment of applicants. FERC unfortunately has not developed any objective criteria for evaluating the quality of its products. It was, therefore, impossible for us to assess any trends in the quality of FERC's products.[4]

We believe that it is appropriate to evaluate FERC's performance by (1) examining the number of applications processed using a given level of resources, the timeliness with which applications are approved or denied, and the quality of the products and (2) comparing trends for each of these measures over time and against different FERC programs. These measures, we believe, give an objective assessment of the agency's management performance over time.

Developing measures of operational performance

Developing measures of operational performance--timeliness, quality, and productivity--and their trends is a crucial step in the operational performance review. Measures provide not only objective criteria to assess the organization but a strong foundation for discussions between agency management and the productivity review team.

The performance data developed for timeliness and productivity uses 1980 as a base year. We believe this is a realistic base year for three reasons:

--Most of the major legislation affecting what FERC does and how it does it occurred before 1980.

--FERC has not had major changes in its organizational structure since 1980.

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[4]Seventy-five FERC managers told us that the quality of products had remained constant or improved since 1980. However, without objective measures of quality, a full assessment of the agency's operational performance is limited.

--Data reported by the agency and used by us for both timeliness and productivity indexes is considered reliable after 1980.

Timeliness measures

We measured FERC's timeliness in terms of case completion times. We developed this measure using FERC data to assess an individual activity's long-term timeliness trends.[5] We applied it to 17 activities, or 55 percent of the staff resources we examined in the entire study. We believe that case completion time accurately measures timeliness because most of the cases measured take less than a year to complete; therefore case completions ordinarily represent work done that same year.[6] Agency management agreed with us that this measure does accurately reflect the timeliness of their work.

Productivity measures: output and input

FERC had not developed productivity measures at the time of our review. We, therefore, developed them for 54 of FERC's activities using FERC information. As indicated earlier, the information necessary to calculate such measures includes output (the number of products produced annually by each activity, which have been adjusted by the weight or standard time needed to produce each type of product) and input (the resources necessary to complete the output).

The output of each activity is an actual count of products multiplied by their weights. We used the time it took to complete each specific product in the base year as a weight. These weights were then applied to their respective product volumes in all subsequent years to calculate a weighted output trend. The weights we used are not the only type of valid weights. The agency could in the future apply other weights to the output, such as (1) a product complexity factor, (2) a difficulty rating for processing the product or (3) a factor that reflects the amount of legal involvement in the product. The application of such weights may enable FERC to refine the accuracy of productivity measurement over time.

The input for each activity consisted of the staff time of all the different personnel who worked on the products, measured in workmonths (one person, full-time for 1 month).

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[5]A different measure is used by FERC's top management to determine timeliness problems. It does not show long-term trends but reflects short-term shifts affecting the agency's ability to get the work out the door and keep up with incoming workload.

[6]We were concerned about this because activities that had large and old backlogs could clean them up and distort the timeliness trends.

Measures are representative and reliable

We believe that the measures we developed for the 54 activities in FERC were both reasonably reliable in terms of the data developed and representative of the work of each activity. The source of the staff and workload data is FERC's main information system--READI, which FERC has used since 1977. Data from this system is reported monthly, receives constant scrutiny from top management, and is refined regularly by the program management staff. In addition, each activity manager must sign off on the actual data before it is submitted for publication. Although the READI system did not require that staff time usage be broken down to the lowest organizational unit levels during the 1980-82 time period, supervisory records were available for estimating such a breakdown.

In addition to the reliability issue, we were also concerned about how representative the data was. Therefore, we submitted the measures and the productivity trends developed for FERC to agency management for its review. We asked management to judge (1) how representative of the activities the indicators were, (2) how realistic the trends were, and (3) what the reasons behind changes in productivity trends were. In only a few cases did agency management feel that the indicators were not representative of the activity's performance. In about 70 percent of the offices examined, we were informed that the type and complexity of work had not changed in the past 3 years. In its review of the data, management did indicate that in the remaining 30 percent of the activities reviewed, the complexity of the cases had changed, thus causing some level of error in the performance trends. Thus, FERC management believes that some of the fluctuations in productivity are caused by the changes in the complexity of cases. (This error can be minimized by using more refined weighting factors.)

The high reliability and representativeness of the productivity data is best demonstrated by FERC's acceptance of the data into its management information system (MIS). At the beginning of fiscal year 1984, FERC will begin to regularly collect and report these productivity measures quarterly.

PHASE II: IDENTIFY OPPORTUNITIES FOR PERFORMANCE IMPROVEMENT--REVIEWING FERC'S OPERATIONAL PERFORMANCE TRENDS

The first step in identifying opportunities for improvement was to assess performance trends of the 54 activities studied. Our primary objective in these assessments was to identify those activities that were low and high performers so that we could identify opportunities for improving performance. An example of this approach was our review of the gas decision unit. On one hand, its overall productivity trend rose only slightly to 104 during 1980-82 (see figure I) and stayed constant for 1983. The timeliness trend, on the other hand, increased to 132 during 1980-82. Therefore, we pursued the potential productivity problems of the gas unit, but not the timeliness issue.

As can be seen from figure I, all of the resource areas within gas, except gas producer rates, stayed constant, or showed a decline in productivity during 1980-82. Therefore, we concentrated on all resource areas except producer rates during our structured interviews, paying close attention to the activities within those that have experienced productivity declines.

Figure I also shows the productivity trends of eight activities under the pipeline rate resource area. During 1980-82, five of the eight activities in gas pipeline rates experienced productivity declines. The largest of those five activities is rate change (formal).

The final portion of the figure shows the operational performance data for that specific activity. On the basis of this activity's decline in productivity in 1982, we spent additional time trying to identify the reasons behind this decline and ways to improve performance.

Structured management interviews identify opportunities for improvement

The second step in identifying opportunities for improving productivity was in-depth discussions with agency management. We feel that management is a primary source for identifying the reasons performance has changed, barriers to improvement, and opportunities for improvement. We therefore conducted structured interviews with 75 of FERC's managers, mainly in the two primary operating organizations (technical offices). We also did selected interviews in the Office of the General Counsel, Office of Administrative Law Judges, Office of Opinions and Reviews, and three of FERC's five regional offices.

The structured interviews were divided into three parts.

1. Performance data--managers were asked if the trends were valid and why performance increased or decreased.

2. Barriers to performance improvement--managers were asked what barriers negatively affected staff's performance.

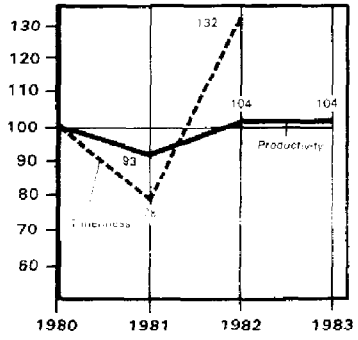
3. Opportunities for performance improvement--managers were asked what changes in managerial, technological, and human factors could enhance their performance.

The results of these structured interviews with FERC management were encouraging. We were able to identify over 25 potential opportunities for improving performance. Examples include:

--Development of a weighted workload system for high-volume, high-resource activities in the two technical offices. Such a system was being used in hydroelectric licensing but not in other activities in the agency. (See app. II p. 14.)

PRODUCTIVITY—GAS
(SELECTED ACTIVITIES)
FIGURE I
FY 1980–1983

GAS (TOTAL)



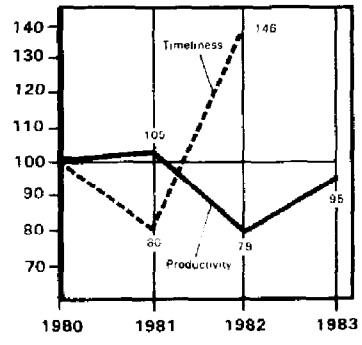
GAS RESOURCE AREAS

Fiscal year	1980	81	82	83*
Gas Pipeline Rates	100	110	94	112
Gas Pipeline Certs.	100	97	99	87
Gas Producer Rates	100	66	219	189
Gas Producer Certs	100	56	57	66
Wellhead Pricing	100	82	100	111

GAS PIPELINE RATES AREAS

Fiscal year	1980	81	82	83*
PGA Audits	100	92	107	91
Initial Rates	100	80	80	73
Rate Change (F)	100	105	79	95
Rate Change (NF)	100	90	77	93
Tracking (F)	100	152	8	46
Tracking (NF)	100	94	84	136
Refunds	100	141	184	135
Title III Transactions	100	146	216	302

GAS PIPELINE RATES
RATE CHANGE FORMAL



*Data calculated by FERC in November, 1983 and not available to GAO during the initial evaluation of the agency's productivity.

APPENDIX I

--Development of a formal incentive awards system. The current informal system did little to encourage suggestions to improve FERC's performance. (See app. II p. 21.)

--Development of an integrated office automation system. FERC was developing a clerical office automation system but was not integrating it with existing professional applications of office automation. (See app. II p. 11.)

Detailed analysis of opportunities for performance improvement

Although the structured management interviews helped us identify 26 opportunities for improving performance, it was necessary, as a third step, to do additional review work before making any proposals or recommendations. The purpose of this additional work was to (1) eliminate those opportunities with marginal payoffs and (2) better document those opportunities for significant gains. This entailed two steps:

--Further discussions with management and staff inside and outside of the agency. (For example, the proposal to develop an incentive suggestion system required us to talk with officials from the Office of Personnel Management (OPM) who have developed criteria for an effective system as well as top management in FERC responsible for the current effort.)

--Detailed auditing and analysis to identify potential benefits and to screen opportunities that (1) had little payoff to the agency, (2) were not realistically doable by the agency, and (3) had already been attempted or were in the process of being attempted by the agency. During this process we eliminated almost half, or 12, of the 26 opportunities.

PHASE III: ASSESSING MANAGEMENT'S STRATEGIES FOR OPERATIONAL PERFORMANCE IMPROVEMENT

For the management strategies phase, we examined the opportunities for improvement to determine if there were any patterns. In addition we were concerned with management's efforts to plan and set goals for improvement and its ability to measure operational performance.

To guide this phase, we administered a survey to FERC's executive director and his deputy, the office directors of the two technical divisions, two division directors in each of those offices, and the general counsel and his deputy. With the results of these interviews, we were able to better document management strategies. From this effort we identified FERC's ability to effectively manage one aspect of operational performance--timeliness--and its inability to manage the other two--productivity and quality.

Specifically, we inferred from our initial structured interviews at lower management levels that, in terms of performance improvement, FERC had

--good top management involvement in the performance improvement process,

--good measures of timeliness,

--no measures of productivity (but data was available to develop such measures),

--no measures of quality (and no data available to develop them), and

--no improvement goals or accountability mechanisms for productivity or quality.

Our assessment confirmed these five issues and provided a more detailed description of how top management related to them.

GAO PROPOSALS FOR IMPROVING PRODUCTIVITY

During our review we proposed 14 ways to improve FERC's productivity or reduce its costs, thus enabling FERC management to better control the process and obtain better operational performance. We believe, however, that FERC management should consider these proposals further as part of its overall productivity improvement strategy for fiscal year 1984.

We held extensive discussions with FERC's top management on each of these proposals. As a result of these discussions and our final briefings to FERC in July 1983, FERC accepted a number of these proposals and plans to implement them by the beginning of fiscal year 1984.

Because the 14 proposals which follow are summaries of our discussions, we felt that in-depth documentation for each proposal was unnecessary. Following each proposal is a statement describing FERC's plan of action.

DEVELOP A MANAGEMENT INFORMATION SYSTEM FOR THE LEGAL OFFICES OF FERC

Currently FERC management does not receive any information on the timeliness, productivity, or quality of the work done by its three legal offices--Office of Opinions and Reviews (OOR), Office of the General Counsel (OGC), and Administrative Law Judges (ALJs). Without such information it is difficult for top management to assign responsibility and assure accountability for work. We believe that the regular publication of a legal management information report would provide data which would be useful in determining and improving the timeliness, productivity, and quality of FERC's legal work.

The Office of Program Management has undertaken a project to develop a pilot system to report on the timeliness of the work of ALJs and OOR. Although a number of timeliness reports have been developed, these reports have not been released. Additionally, the Office of Program Management has been unable to develop similar reports for OGC because OGC staff does not consistently report data on major milestones. Also, the Office of Program Management has yet to examine the productivity and quality of OOR, OGC, and ALJ products.

Proposal

We propose that FERC develop a new legal management information report--a legal MIS beginning in fiscal year 1984. This new report would focus not only on timeliness but also on productivity and quality and would allow these offices, as well as top management, to (1) assess their performance (2) track and coordinate their work as cases proceed through the three legal offices, and (3) allocate and re-allocate resources on the basis of changing workloads and priorities. We believe that such a system can be pre-tested and ready for inclusion in the first fiscal year 1984

Redbook series. In addition, the Office of Program Management staff ascertained that the information for developing a legal Redbook is available in the READI system and that the costs of publication would not be prohibitive.

Agency comments

Agency officials concurred with our proposal. However, they indicated that they will expand the existing MIS rather than develop a new system for the legal offices. In addition, they indicated they will begin milestone reporting for the work of the legal offices in fiscal year 1984. They hope to develop productivity measures for these offices by July 1984. They also stated that collecting quality information may initially be a problem, but they are confident it can be eventually resolved.

DEVELOP A PLAN FOR INTEGRATED OFFICE AUTOMATION

In our recent review of office automation in the federal government,[7] we found that agencies (1) need to develop organization-wide plans to provide for the needs of managerial, professional, and administrative staff within one integrated system and (2) must concern themselves with managerial and human resource issues as well as technological issues when developing new systems (often through outside assistance if the expertise is not available in house).

FERC currently has no overall plan for integrating its office automation. It intends to use separate systems for administrative, professional, and managerial staff rather than one integrated system and is concerning itself only with the technological issues of office automation.

FERC uses three distinct categories of computer and office automation systems. These include basic ADP systems, word processing systems, and internal information systems. This separation is inefficient because a user who, for example, wanted to look up some information in the MIS, manipulate the data, and write a brief report on it would have to use three different systems. We believe there is a great opportunity to improve FERC's productivity through an integrated office automation system. An integrated system would provide users with the ability to do all these operations at a single work station. Such a work station would be able to access the READI system, Agenda Forecasting System, Weighted Workload System, LEGIS, and other technical and legal information systems the agency is currently using to complete its work.

FERC is currently consulting with an outside firm on plans to upgrade its administrative office automation system, but it is only

[7]"Strong Central Management of Office Automation Will Boost Productivity" (Sept. 21, 1982, GAO/AFMD-82-52).

consulting about technological concerns. FERC should broaden its efforts and plan to upgrade professional and managerial systems as well. It also should consult about human resource concerns (aid in obtaining user acceptance, minimizing user problems, and training users adequately) and about managerial concerns (cost-effectiveness and feasibility reviews).

Proposal

We propose that FERC

--expand its efforts in office automation by developing an agency-wide plan for a fully integrated system; and

--seek assistance from managerial and human resources staff involved in developing, implementing, and operating a new office automation system.

Agency comments

Agency officials indicated that new office automation systems will be tested in fiscal year 1984. They concurred with our proposal, and during the next 2 fiscal years they will attempt to develop an integrated office automation system which will meet the needs of administrative, technical, and managerial personnel. Also, in assessing these new systems, officials will address all pertinent managerial, technological, and human resource concerns.

INCREASE THE USE OF THE READI SYSTEM

The READI system is capable of providing all levels of management with information on the status of work in process at FERC. It can provide branch and section chiefs with the capability to monitor the workload of their staffs on a daily or weekly basis. We believe that the READI system is an effective management tool whose value is limited only by the frequency and degree of its use. Although the system can provide accurate and timely information in any required format, it is used very infrequently by middle managers, either because they are not aware of the capabilities of the system or they are aware but do not feel that they can benefit from its use. These managers told us that they do not believe that the system could be used to manage their workloads on a day-to-day basis. Therefore, they disregard the capabilities of the READI system and almost exclusively use their own manual versions of workload tracking systems.

Twenty-six of 33 branch and section chiefs who were interviewed maintain manual tracking systems (card files) to monitor workload. The productivity of these individuals is diminished to the extent that they spend time duplicating READI system functions, which takes time away from other work. The working efficiency of these branch and section chiefs is also further decreased because the manual systems lack some useful capabilities that the READI system

has, such as the capability to print out specific data in any format on request and the capacity to store up to 35 milestones for each unit of work.

Proposal

We propose that senior managers

--encourage branch and section chiefs to fully utilize the READI system as a tool for managing their daily operations,

--discourage the use of manual systems,

--assure that an adequate number of terminals is available for the input and retrieval of data,

--make all levels of staff aware of the capabilities of the system, and

--train selected personnel to operate the system.

Agency comments

FERC officials fully agreed with this proposal and will attempt to increase the use of the READI system throughout the agency.

MAKE THE AGENDA FORECASTING SYSTEM MORE USEFUL

FERC has an agenda forecasting system intended to help OGC prepare for specific meetings. Every office sends items and related documentation to OGC, which determines which of these will appear on the agendas of particular meetings. Items are consolidated into specific agendas and distributed to FERC members and their staffs 2 weeks before each meeting. However, because of incomplete agendas and inaccurate dates, the system has been of limited use.

The system is forecasting only 70 percent of the items that actually appear on meeting agendas. For example, items are not allowed to be placed on agendas until preliminary work on them has been completed; yet on certain types of items, the preliminary work is rarely prepared in time to put them on the agenda 2 weeks prior to meetings. This timing problem is common on items that have 30- or 60-day statuatory limits. Frequently, consideration of such items that come up without having appeared on the agenda is postponed and the items have to be reprocessed before they can be rescheduled, resulting in delays. Moreover, because the system lacks credibility, the staff is not always preparing cases that appear on agendas. This results in further rescheduling and delays.

We believe forecasts more than 4 weeks ahead are inaccurate and of little value because OGC staff and FERC members told us they do not work on cases more than 4 weeks before they come up. Items

which will not come up soon are assigned arbitrary dates, which frequently need to be changed. For example, we found some items scheduled for commission meetings in 1999.

As a result, the system has little credibility, and a number of OGC staff members we interviewed questioned its usefulness.

Proposal

We believe that, unless complete and accurate scheduling of cases can be assured, the existing agenda forecasting system serves little purpose. Consequently, FERC should consider making significant changes to it or abolishing it altogether. Some steps that can be taken to assure complete reporting include

--assigning dates for long-term cases only when it is known exactly when they will appear at meetings,

--scheduling 30- and 60-day items on the agenda when they are received by FERC instead of waiting until staff work is completed, and

--issuing forecasts no more than 4 weeks ahead.

Agency comments

Agency officials fully agreed with this proposal and will attempt to institute a more accurate 4-week forecast.

MORE FULLY USE WEIGHTED WORKLOAD SYSTEMS IN THE OFFICE OF ELECTRIC AND POWER REGULATION (OEPR) AND THE OFFICE OF PIPELINE AND PRODUCER RATES (OPPR)

Many branches in OEPR and OPPR do not have systematic methods of assigning, monitoring, and controlling work, nor do they have a formal method of measuring the individual performance of their staff. A weighted workload system is currently being used in the Division of Hydroelectric Licensing to assign work, monitor its progress, and assess the performance of individual analysts.

The weighted workload system is based on numeric weights assigned to specific categories of work. When a docketed case is received, it is given a numeric weighting (rating) based on factors such as its complexity and estimated time of completion.

We believe that such a system can be adapted to the work of at least five branches in OEPR and OPPR. This would allow branch managers to more efficiently assign and monitor work as well as objectively evaluate the work of their analysts.

Most branch and section chiefs in OEPR and OPPR currently utilize manual tracking systems to assign and monitor their work. Such systems neither adequately record the amount of work assigned, nor enable the manager to assess the staff's performance. They

usually result, however, in an unequal distribution of work. We believe, therefore, that such manual systems do not give the manager the information needed to properly control their work.

Proposal

We propose that the weighted workload system be expanded and implemented in other high-volume, high-resource technical areas, such as the

--Electric Rate Filing Branch, Division of Electric Rate Regulation;

--Gas Producer Rate Filing Branch, Division of Producer Rates and Certificates;

--Jurisdictional Agency Reports Branch, Division of the Natural Gas Policy Act Compliance;

--Gas Pipeline Certificates Branch Division of Pipeline Certificates; and

--Tariff Branch, Division of Gas Pipeline Rates.

Further examination of the agency may identify other branches where use of the system would be practicable.

Agency comments

Agency officials stated that pilot tests of the weighted workload system will be conducted in at least two additional branches during fiscal years 1984 and 1985.

ADAPT THE WEIGHTED WORKLOAD SYSTEM FOR USE IN OGC

OGC currently has no formal method of assigning cases or measuring the output of individual attorneys. Attorneys in OGC are responsible for reviewing and resolving cases after these cases have undergone a technical review and analysis by OEPR or OPPR.

We believe that the weighted workload system, discussed on page 14 can be adapted to the work of OGC's attorneys. With such a system the caseload of each assistant general counsel could be systematically and equitably distributed to individual attorneys. Additionally, we believe that such a system can be used to effectively monitor and measure workload as well as provide a basis for evaluating performance of individual attorneys.

In our review of the management of legal work by the assistant general counsels, we found that

--cases are assigned to attorneys on an arbitrary basis and little regard is given to establishing specific timeframes

for completing those assignments not subject to statutory deadlines and

--performance of individual attorneys is evaluated on the basis of subjective criteria, such as initiative, diligence, writing skills, and presentation skills.

Proposal

We propose that the weighted workload system be expanded to provide the assistant general counsels in OGC with an automated capability to systematically assign and monitor workload and provide a basis for measuring the performance of individual attorneys. We believe that such a system can be an effective management tool that will improve the timeliness of OGC, increase the accountability of individual attorneys, and make the performance evaluations of attorneys more objective.

Agency comments

Officials indicated that they will consider expanding the weighted workload system to OGC.

DEVELOP WRITTEN WORK PROCEDURES

We analyzed work procedures in eight branches which have high workload volumes and large technical staffs to determine why many tasks were requiring longer times to perform than they should. For example, one type of application was estimated by the FERC staff to require no more than 22 minutes, but was actually taking 44 minutes, according to FERC's MIS. Most analysts in the eight branches indicated that they are slow in performing their tasks because they are not adequately trained to the extent that they can complete their work on time without extensive supervisory review. In addition to the need for training, we believe that one major factor responsible for this situation is the lack of written work procedures which should supplement training. Another factor is the lack of fully effective control over the assignment and completion of work. (See training, page 18; and utilizing the weighted workload system, page 14.)

Six of the eight branches that we examined have no written procedures to guide analysts in performing their tasks. We believe that training should be supplemented by written work procedures for the following reasons:

--New employees require a long time to become familiar enough with procedures to do their jobs without assistance from supervisors. In some cases on-the-job training of new employees requires a significant amount of time. During this period, new employees are less than fully productive, and supervisors are required to spend time training and assisting them.

--Analysts' productivity is lowered because, according to interviews with supervisors, analysts cannot be sure their

work is complete and of high quality without depending on review by supervisors.

--Supervisors' productivity is lowered because they spend disproportionate amounts of time reviewing analysts' work to assure it is of high quality. Our interviews also revealed that supervisors spend about 62 percent of their time reviewing subordinates' work and doing technical work that subordinates are unable to complete. Freeing some of this time would permit FERC to reduce its number of supervisors. (See p. 20.)

Proposal

We propose that FERC develop written work procedures for processing applications in high-volume, high-resource areas.

Agency comments

FERC officials fully agreed with this proposal and are in the process of developing written work procedures in several divisions. Officials also stated that uniform and consistent written procedures would serve as a means of documenting agency policy. In January they will release a project management handbook for hydroelectric license reviews.

COORDINATE WORK PLANS AND TRAVEL BUDGET

Many FERC staff must do some or all of their work away from agency headquarters. They thus rely on the availablity of travel funds to carry out their responsibilities. Two areas which rely especially heavily on travel are purchased gas adjustments (PGA) audits (audits which authorize gas pipeline companies to collect refunds based on gas cost increases) and dam safety inspections.

In the past 2 years, however, FERC's travel budget has been reduced by $800,000, or 38 percent. Even with these reductions, top management believes that its responsibilities can still be carried out effectively. However, because these travel funds had not been allocated in any priority, planned work has been hindered. For example:

--FERC is scheduled to do an on-site PGA audit of each of 60 interstate gas pipeline companies every 3 years. However, FERC is behind schedule and does not expect to cover all the companies in the present 3-year cycle. The effect of this is that companies may not be permitted to recover refunds to which they are entitled.

--FERC is responsible for inspecting over 1,100 dam projects for safety. Inspections assure that projects are constructed, operated, and maintained according to approved plans, license requirements, and sound engineering practices. Staff cannot inspect the dams unless travel funds are available. Because of reduced travel funds, staff have

been instructed to eliminate inspections of "low hazard" dams. According to FERC, these projects will not become threats to public safety, but such inspections often uncover costly engineering problems, and these problems may now be going uncorrected. Currently, many projects are being inspected only every 2 or 3 months, and FERC estimates that 101 will not be inspected in 1983 because of budget constraints. Consequently, FERC may be violating the Federal Power Act.

Proposal

We propose that audits or inspections requiring travel be put into priority to make the best use of available funds and that annual work plans for OEPR and OPPR be developed in coordination with the development of their travel budgets.

Agency comments

Officials stated that they are now attempting to provide travel funds for priority assignments and will continue to emphasize these priorities in the future.

RE-INSTITUTE A TRAINING PROGRAM

Recent budget cuts have limited the amount of training at FERC, and this, in turn is beginning to have bad effects on FERC's operations. The training budget for fiscal year 1982 was 66 percent lower than for 1981, and no funds were allocated for training in 1983. Further, few discretionary funds are available for training because the overall agency budget is very tight--the same for fiscal year 1983 as for fiscal year 1982. Staff cannot take OPM or other external courses because of lack of funds. The only alternatives are Department of Energy courses and informal internal training. Some consequences of the budget reduction are given below:

--Specialized training for engineers, geologists, and other technical specialists has been cut because funds are no longer available for them to attend courses on new techniques and tools at the Water and Power Resources Service University.

--Financial analysts in the Gas Pipeline Rate Division need continual education in new financial techniques because of rapidly changing conditions in financial markets, but they have been unable to attend as much as required because of the lack of funds.

--Staff promoted to supervisory positions since 1981 have had little or no formal supervisory training.

--The upward mobility program which trained staff as paralegals through a sequence of courses has been cancelled, thus forcing the agency to hire fully trained paralegals from outside.

During our in-depth interviews, FERC managers identified a number of problem areas which we believe are closely related to declining training:

--Supervisors, especially in technical and legal areas, are having to spend time assisting junior staff because those staff members are not sufficiently trained. Supervisors throughout FERC spend an average of 62 percent of their time reviewing and correcting subordinates' work and relatively little time supervising. Many supervise only a few employees, as few as only two in some cases. If supervisors could devote more time to supervision, we believe FERC would require fewer supervisors and would thus save money. (See p. 20.)

--Staff time is often wasted in complex technical areas in OEPR because inadequate training has forced headquarters staff to consult regional staff or others for direct assistance in doing their work.

--OGC's lack of training for new staff in energy law has necessitated more supervision of this staff's work.

--Industry confidence in FERC's technical and analytical work may decline as the skills of the staff become outdated.

There have been no studies or quantitative data to prove or disprove the impact of this lack of training, but we believe that the longer the agency goes without formal training in these critical technical, legal, and analytical areas, the more time and money will be required to bring the staff back to a high level of proficiency. In-house training programs in OEPR, OPPR, and OGC are useful but insufficient. A formal training program is, therefore, essential.

Proposal

We propose that FERC:

--Increase informal in-house training. Managers with specialized skills in critical areas should develop workshops and possible manuals, and managers who have developed successful courses should share their expertise with others. FERC should stress the role of supervisors in training staff to produce accurate work that requires little review and should provide instruction in this skill.

--Use funds as they become available through the attrition of staff, supplemental appropriations, and reprogramming actions to re-establish and maintain a program that would provide formal training beginning in fiscal year 1984. Once training funds become available, agency training needs should be assessed and put into priority to ensure that those most critical are first addressed.

--Give higher priority to training needs in preparing the next budget request for OMB consideration.

Agency comments

Officials fully agreed with this proposal and plan to increase the training budget as well as reestablish a formal training program in fiscal year 1984. They indicated that FERC established its own employee development and training program in September when the personnel function was transferred from the Department of Energy to FERC.

REDUCE MANAGERS' TECHNICAL WORK IN OEPR AND OPPR

The number of people supervised in FERC's different levels of management varied widely, and the average percent of time managers spent supervising was low. Top managers in OEPR and OPPR currently supervise between 2.1 and 7 lower level managers, while branch and section chiefs supervise between 6.3 and 17.6 technical employees. There is no established criteria on the optimal number of people to supervise in such work, but the fact that some managers are supervising three times more than other managers should be of concern to FERC's top management, especially if the levels of complexity of the work are comparable. It may indicate that some managers are underused.

In our survey of 49 of 89 managers in OEPR and OPPR, we found that the average manager is spending 62 percent of his or her time on nonsupervisory duties, primarily technical work, rework, and review. We believe that this is too high, even though many of these managers feel they need to do technical work because of the lack of training and experience of their staff. (See p. 18.)

Proposal

We propose that the agency

--critically review the number of employees managers presently supervise in OEPR and OPPR and determine the time managers are spending on technical and supervisory work, and

--consider increasing the number of employees supervised at the section, branch, and division levels as well as providing for additional supervisory training programs.

Agency comments

Agency officials stated that a possible reorganization and staff reduction could result from the passage of gas deregulation legislation which is now under consideration. If the legislation passes, officials indicate that they will critically review the supervisory structure first within OPPR and later in OEPR; otherwise, they will consider reviewing it in the future. FERC is in the process of developing an internal management training course on the delegation of authority.

DEVELOP AN INCENTIVE SYSTEM TO REWARD EMPLOYEE SUGGESTIONS

FERC presently does not have an effective incentive awards system for eliciting employee suggestions. Its current approach to encouraging and rewarding suggestions is entirely informal, is not in accordance with OPM's guidelines for such systems, and has resulted in few suggestions being implemented. This condition illustrates the need to involve staff other than top management in efforts to improve performance.

OPM's federal suggestion awards program has developed six principles for all suggestion incentive programs:

1. active management commitment and support
2. clearly defined goals
3. adequate organization and staffing
4. aggressive implementation
5. constructive action on suggestions submitted, and
6. realistic evaluation of the system's operation and results

FERC's current system meets none of these critical principles. In our discussions with 75 managers throughout FERC, the 3 most common ways of handling suggestions were (1) staff discussion of an idea with the manager, who passes it up the chain of command if it merits furthur discussion, (2) management solicitation of suggestions from staff at branch meetings, and (3) management "open door" policies. When this informal approach identifies a suggestion, the procedure for awarding cash is cumbersome and takes so long that its positive effect on a number of recipients has been lost.

The result is that this system has produced very few implemented suggestions. When we asked 32 managers in OPPR for examples of recent suggestions that had been implemented, 19 could not identify more than 1.

Proposal

We propose that FERC develop and implement a new awards system for suggestions that follows OPM's six principles. In particular, top management should assure that operating-level managers become actively involved, that there is a simple, straightforward procedure for submitting suggestions, and that sufficient funds to motivate staff are paid in a timely manner. OPM's Federal Suggestion Awards Office indicated to us that it would assist FERC in setting up such a system.

Agency comments

FERC officials agreed with the need for an incentive awards system. They plan to establish an internal incentive awards program when FERC assumes all administrative responsibilities from the Department of Energy.

USE PARAPROFESSIONALS IN OPPR AND OEPR

Currently, professional analysts in FERC's two major technical areas, OEPR and OPPR, spend many hours processing very simple applications and performing routine tasks, such as drafting letters, responding to inquiries, and filing. In four of the eight branches we examined, the routine work and most of the simple cases could be handled by paraprofessionals. For example, one branch sorts applications received into three categories according to complexity. Applications in the two most complex categories require economic analysis, which must be done by professional staff. Applications in the third category, though they are currently processed by professional staff, require only comparing a letter and contract to make sure they are consistent and completing a checklist of simple information, such as the date the application was received.

Many analysts agreed that valuable staff years are consumed processing applications and performing tasks that can be done by lower paid paraprofessionals. OGC has identified areas where paraprofessionals can be used and has successfully used them to perform legal work.

We have not identified all the activities where paraprofessionals can be used and, thus, have not estimated the total savings possible. However, replacing a professional analyst at the journeyman level of GS-11 with a GS-7 paraprofessional would save about $8,000 annually.

Proposal

We propose that FERC identify the technical activities where paraprofessionals can replace professional analysts and begin hiring paraprofessionals in those activities as positions become available through normal attrition.

Agency comments

Officials fully agreed with this proposal. Furthermore, they believe this may be the only way to bring new professional staff in at the lower grade levels.

PUBLISH THE REDBOOK QUARTERLY

The Redbook, currently published monthly, reports workload and timeliness information on the major activities of OEPR and OPPR. Its main source of information is the READI system. It has been an important tool for top management in its efforts to improve the agency's timeliness through the Executive Director's monthly

Redbook review sessions. However, we believe FERC does not need to publish it in full every month.

Seventy-four managers in OEPR, OPPR, OGC, and the regional offices indicated that they do not need the entire publication on a monthly basis. Since these managers supply most of the information about their activities in the Redbook, they are already familiar with it.

We believe the monthly Redbook review sessions are a critical part of FERC's efforts to keep its work timely, but these sessions could use printouts, rather than the full Redbook, and still have all the necessary data. Publishing the Redbook monthly instead of quarterly costs the agency $100,000 a year, as estimated by FERC's Office of Program Management at our request. About $80,000 of this is printing and graphics cost, and $20,000 is labor.

Proposal

We propose that FERC continue monthly publication of Redbook information through printouts instead of the present six volumes. Information planned to be included in the Redbook in the future should also be reported through quarterly Redbooks and monthly printouts.

Agency comments

FERC officials believe that the Redbook is a strong management tool that would be weakened by less frequent publication. Consequently, they disagreed with the proposal.

DO MORE DELEGATIONS OF AUTHORITY (DOAs)

Due to the inordinate amount of time commissioners spent on routine items, responsibility for resolving about 13,000 items annually has been transferred during the last 5 years to the office directors within FERC. These DOAs, as they are formally called, have not only saved 91,000 calendar days of processing time per year (according to FERC estimates) but have allowed FERC to focus its attention on the more complicated and controversial items. These DOAs have progressed through the following four phases:

--Phase I-Approximately 7,000 decisions were transferred from FERC to the office directors.

--Phase II-DOAs made during phase I were amended, and an additional 4,000 decisions were transferred to the office directors.

--Phase III-About 1,700 items were delegated.

--Phase IV-Additional routine delegations were authorized, and certain aspects of earlier delegations were revised.

DOAs have been successful in improving overall agency operations as well as making FERC more effective, enabling it to better serve both regulated entities and the public. More specifically, DOAs have

--decreased FERC's workload, thus allowing it to concentrate on the more important items,

--increased FERC's operating efficiency by streamlining and expediting the regulatory process,

--improved overall timeliness by reducing the number of staff days required for processing routine items, and

--improved FERC's responsiveness to the needs and requirements of its customers.

The success of these four phases suggests that it may be beneficial to determine whether FERC can delegate other routine items to further reduce its burden.

Proposal

We propose that the commissioners continue to identify potential items that can be delegated to FERC managers.

Agency comments

Officials agreed with this proposal and have made it a fiscal year 1984 initiative. Delegation of Authority V is in the process of final preparation for the commissioners' consideration.

HISTORICAL-BEST TECHNIQUE FOR IDENTIFYING OPPORTUNITIES FOR PRODUCTIVITY GAINS

On the basis of FERC's productivity trends during fiscal 1980 through 1982, we believe that FERC could have improved its 1982 productivity by over 13 percent. This estimate, which we believe is conservative, is derived from our use of a technique called "historical-best." The historical-best technique determines the highest productivity achieved by an activity during one year of a period. The highest productivity of that period is then compared to the productivity of the current year to determine the potential for improvement and provide criteria for establishing realistic goals. The historical-best technique does not determine the highest productivity that an activity can achieve. It does, however, determine the highest productivity that an activity has achieved.

The following example illustrates the procedure for determining the historical-best performance.

1. As shown in figure I, the gas pipeline rates unit used 8.77 work months to complete a case in 1981. This is slightly better than in 1980 and considerably better than 1982 when 11.76 work months were required. Consequently, the 1981 performance is the "historical-best" performance.

2. The best performance, 8.77 work months is used as a production goal because such a performance has been proven to be achievable.

3. The most recent time period's workload, expressed as cases completed, is multiplied by the 8.77 work months/case production goal to determine how many work months it should take to complete the workload. (See figure II.)

4. The should-take work months are compared to the actual time spent doing the work. As shown in figure II, the should-take work months for gas pipeline rates is 8.77 work months, and the actual time spent was 11.76 work months. Thus, if the unit had actually worked at its historical-best level, almost 221 work months could have been saved (or applied to further reductions in backlogs).

To determine the potential for improvement of FERC's overall productivity, we analyzed the productivity trends of its four major resource areas: gas, oil pipelines, hydropower, and electric

APPENDIX III

FIGURE I
HISTORICAL BEST AVERAGE CASE COMPLETION TIME

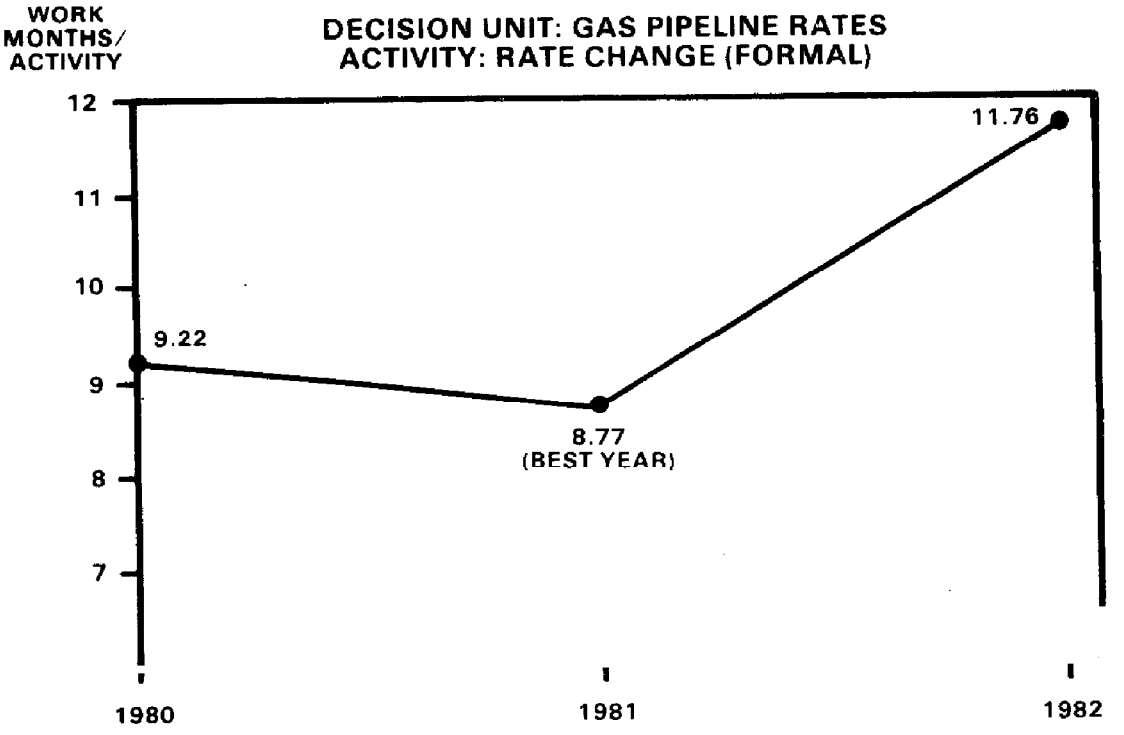


FIGURE II
HISTORICAL BEST (EXAMPLE)

DECISION UNIT: GAS PIPELINE RATES
ACTIVITY: RATE CHANGE (FORMAL)

	NUMBER COMPLETED	WORK MONTHS	WORK MONTHS/ CASE	HISTORICAL BEST STAFF YEARS REQUIRED CALCULATED WITH 8.77 WORK MONTHS/ CASE	DIFFERENCE (WORK MONTHS)
1980	96	885.0	9.22	841.9	43.1
1981	101	885.3	8.77 (BEST)	885.3	0
1982	74	870.0	11.76	649.0	221

power.[8] In performing our analysis, we assumed that no unique changes in the nature and the complexity of the work for individual activities occurred during the 3-year period.[9]

Using the historical-best technique, we analyzed the productivity achieved by the individual resource areas during each of the 3 fiscal years, determined the highest productivity achieved by each area, and compared the highest productivity with the productivity achieved in fiscal year 1982.

We found that, overall, fiscal year 1982 had the highest productivity, although the years in which each individual resource area attained its highest productivity varied. For example, the productivity for gas was highest in fiscal year 1980. Additionally, hydropower shows the greatest potential for improvement at 22 percent, while oil pipelines shows the least potential at 4 percent. (See table, p. 28.)

Our analysis also indicates that, in total, over 13 percent fewer resources were required in the most productive years than were required in fiscal year 1982 for the four combined resource areas. This means that if each of the resource areas had achieved the same productivity in fiscal year 1982 that it achieved in its most productive year, the agency would have required approximately 1,395 fewer work months, or 116 fewer staff years, during fiscal year 1982. This clearly verifies the potential for achieving higher productivity.

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[8]We reviewed the same 54 activities in these resource areas that were included in developing agency productivity trends.

[9]We assumed from our discussions with management on the data that some activities' workloads became more complex while others became less complex during the period.

FERC'S Productivity Improvement Potential

Resource area	Actual input 1982 (work months)	Ideal input (work months)	Difference (work months)	Percent improvement
Gas	5,275	4,471	804	15.2
Oil	659	633	26	3.9
Total-Sub-Gas & Oil	5,934	5,104	830	14
OPPR				
Hydropower	2,006	1,565	441	22
Electric Power	2,389	2,263	126	5.2
Total-Hydro & Electric Total OEPR	4,395	3,828	567	12.9
Total FERC	10,329	8,932	1,397	13.5

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