THE SCIENTEX CORPORATION

CENTER FOR PRIVATIZATION

PN. ABL-363

PRIVATIZATION PROSPECTS FOR THE JORDAN ELECTRICITY AUTHORITY (JEA)

Report By

PAUL H. ELICKER
EXECUTIVE DIRECTOR
CENTER FOR PRIVATIZATION
2000 Pennsylvania Avenue, N. W., Suite 2500
Washington, D.C. 20006

Prepared at the Request of the
Jordan Mission
U. S. Agency for International Development

Project No. 7236-117 **August, 1989**

Prepared Under Contract with the
Bureau for Private Enterprise
U. S. Agency for International Development

The Scientex Corporation

CENTER FOR PRIVATIZATION
2000 Pennsylvania Avenue, N.W., Suite 2500
Washington, D.C. 20006
(202) 872-9250
(202) 872-9256 (FAX)

Herewith transmitted are copies of the report of the Center for Privatization on prospects for privatization of the Jordan Electricity Authority. This letter of transmittal contains two supplementary comments by the author.

First, it should be realized that the field work on which this report is based was conducted prior to recent changes in the Government of Jordan. The report does not attempt to survey the disposition of the government as previously organized toward privatization for JEA, nor does it take into account any consequences from the more recent changes in government.

Second, the report attempts to present a judicious and objective review of the pros and cons of various possible courses of action. It was written in this way so that all interested parties in JEA and in the Government of Jordan could consider the merits of any program under review.

At the same time, the report clearly endorses a preference for the maximum acceptable movement toward privatization of JEA. The various arguments are presented in the report.

In summary, we believe that measures falling short of committing to eventual privatization may very well deal adequately with the problems besetting JEA in the short term, but the best assurance of long-term health and vigor is to move toward privatization in the moderate program recommended.

Beyond the welfare of JEA itself, there lies the economic interest of the Kingdom as a whole. If privatization starts with JEA and proceeds successfully, it could be the key to a revitalized and effective private sector and an improved balance between public and private enterprise. In this sense, JEA represents a national opportunity to make a lasting contribution to the economic future of the Kingdom of Jordan--an opportunity that we hope the Government will take advantage of to the full benefit of its economic future.

Respectfully submitted,

Paul H. Elicker
Executive Director

TABLE OF CONTENTS

PAGE

PRIVATIZATION PROSPECTS
FOR THE JORDAN ELECTRICITY AUTHORITY (JEA)

I. EXECUTIVE SUMMARY

Purpose of This Report

The Jordan Electricity Authority is a highly efficient enterprise with a commendable track record. Until recently, JEA had a good deal of autonomy to manage its own affairs. Several impending administrative changes, however, threaten to restrict JEA's autonomy to a significant degree and endanger its fine performance.

JEA's management has been considering a number of possible solutions, ranging from an expansion of its autonomy, to a change in its legal status, to various forms of privatization. Recognizing that privatization is a separate body of knowledge, it has asked USAID for advice and technical assistance. USAID is supplying this assistance under the auspices of the Center For Privatization (CFP), a private firm that specializes in such assistance.

The future of JEA is of paramount importance to the Kingdom of Jordan. As in most countries throughout the world, electric power is one of Jordan's largest industries in terms of total assets, capital requirements and people employed. The continued reliability and improvement of JEA's services have important consequences for consumers, businesses and the economy as a whole.

This report contains the findings of CFP based on extensive interviews with JEA and government officials and a careful review of related documents. It discusses the pertinent characteristics of JEA, the contours of the present problem as it is emerging, and the advantages and disadvantages of various alternative solutions. Recommendations are made for the best alternative and a detailed action plan is submitted for implementing it.

Regulation and Control of Electric Utilities

Governments establish regulations to control utilities for many reasons. They do so to enhance efficiency, to protect consumer interests, to achieve a measure of political control over key public services and to advance other social and economic goals. While the institutional arrangements for the regulation and control of electric utilities vary by country, ultimately, the responsibility for regulation must rest with some ministry, agency or set of individuals responsive to the government. The tasks are too complex and time consuming for the legislature or the chief executive to conduct them on their own.

The means of regulatory control may be classified as either direct control (before the fact) or regulatory reviews (after the fact.) These may be illustrated as follows:

Direct control:

(a) powers of appointment;
(b) the presence of civil servants at many levels of the organization or enterprise;
(c) the provision or authorization of finance;
(d) the power to approve investments and other decisions.

Regulatory review:

(a) revocation of appointments;
(b) monitoring results;
(c) performing audits.

Most industrial nations prefer controls in the form of regulatory reviews to direct controls. Regulatory review allows management more flexibility in handling such matters as unexpected delays in construction schedules, shifts in consumer demand and sudden recruiting needs. Loosening direct controls under proper circumstances tends to increase operating efficiency, improve cost containment and boost employee morale.

Selected Characteristics of JEA

In order to fully understand the impact of the impending administrative changes on JEA, it is first necessary to understand its basic characteristics and the environment in which it operates.

Legal Status/Ownership

JEA's legal status as a "government authority" is set forth in a number of laws, the most important one being the "General Electricity Law (16) of 1986." This law places definite but tolerable restrictions on JEA's freedom to manage its own affairs. It has had more or less full responsibility for the following functions: facilities planning, engineering, construction, procurement, operation, and maintenance; and personnel management, compensation and training. JEA has had partial responsibility for marketing and finance. Significantly excluded are tariff-setting and debt management. JEA management believes, correctly, that pending revised regulations will limit its responsibility and authority to an important degree in almost every one of these areas.

Organization and Staffing

In many ways, JEA resembles a business more than it does a governmental bureau. It is a free-standing entity. It has a Board of Directors and a management that performs all or most of the functions that a typical management would. It is operated as a responsibility of The Ministry of Energy. The "Regulation of Jordan Electricity Authority (52) of 1983" establishes certain work rules, personnel pay categories and salaries for JEA employees. Despite the abundance of rules, JEA has had relative freedom in the area of personnel management. Many of the rules were, in fact, originally drafted by JEA.

Application of the Civil Service Law scheduled to enter into full force in 1991 will seriously reduce its powers over personnel pay and practices. Importantly, those employees with the most seniority or holding key management positions stand to suffer the most under the new Civil Service pay structure. Labor costs could increase.

Operations

JEA has virtually full responsibility for the day-to-day running of the utility, including facility planning, procurement, construction, operations and maintenance. Although JEA initiates proposals for new facilities and programs, there are heavy restrictions on what it can authorize. For example, capital expenditures exceeding 5,000 dinars must be approved by the Board of Directors and, above 100,000 dinars, by the relevant committee of the Ministry of Public Works. These approval levels are quite low by public utility standards in other countries. JEA does the actual procurement of facilities and parts according to procedures contained in the 1967 Regulation (69) for the year 1975. New "omnibus" decrees may require JEA's complex and technical procurement activities to fall under standard government procedures, inviting frequent delays, misunderstandings and even forced cancellations. JEA management is justifiably alarmed by the prospect of complying with new blanket procedures.

Marketing/Rate Setting

In the area of marketing, JEA has full responsibility for identifying and selling to new markets. JEA's prowess in this area has enabled it to provide consultancy expertise to other Arab neighbors. Tariffs are set infrequently, on the average of every two years. The tariff-setting process requires a great deal of routing of reports between ministries and study groups. Management may recommend what the tariff should be but does not have the ultimate responsibility for determining rates.

Financing

JEA prepares operating and capital budgets and projects cash flow and balance sheets subject to the active review of the Finance Ministry. A Corporate Planning Department was recently set up to coordinate five-year budgets and plans. JEA has none of the responsibility for fund raising. At present, debt accounts for more than 50% of total capitalization which is not at all unusual for the utility industry. JEA is responsible for carrying out debt service.

Assessment of JEA Performance

JEA is an efficient provider of electric power with a superior staff and moderate to superior performance compared to other LDC utilities. As illustrated in the table below, it compares adequately with the industrial world when adjustments are made for the much higher capacities and resulting economies of scale in those countries. The Kingdom of Jordan and JEA management are justifiably proud of its performance record. Steps must be taken, however, to preserve and enhance JEA's performance as explained below.

RETURN ACHIEVED BY JEA AND
SURVEY RESULTS U.S. ELECTRICITY COMPANIES
(after adjustments per pages and)

Factor	1986	1987	1988	962 U.S. Electricity Companies - 1988: Median All Companies	962 U.S. Electricity Companies - 1988: Median Lower Quartile	73 Large Electric Service Companies 1988
Return on Assets	1.7%	1.7%	n.a.	5.3%	2.6%	2.5%
Return on Fixed Assets	2.6%	2.1%	1.7%	7.7%	3.4%	n.a.
Return on Net Worth	5.7%	4.7%	4.0%	14.4%	8.2%	1.2%

Emerging or Potential Problems

JEA is faced by a variety of problems from both external and domestic sources.

The Jordanian economy is currently experiencing difficulties and among other consequences, this has resulted in a slow-down in electricity demand. This reduction in demand is further aggravated by accompanying fuel cost increases, increased capital spending and a somewhat heavy debt burden. Operating profit has been static over a six-year period and is currently budgeted to be down. Net profit after interest has been marginal and has developed losses that this year are substantial. Cash flow has been consistently negative during this period. (Page 21 and Exhibit 5).

JD in 000's

Year	Net Profit Before Interest	Net Profit After Interest
1984	5358	1940
1985	5213	1669
1986	7277	1803
1987	9487	(183)
1988e	9457	(3689)
1989e	8600	(12000)

e - estimate

Internally, there are a number of problem areas, many of which stem from proposed administrative changes. New regulations are expected to have the most profound impact in the areas of personnel pay and management, and procurement. In particular, bringing all JEA employees under the "Civil Service Law (1) of 1982" will force JEA to replace a progressive, flexible pay grade structure with a more rigid, static structure. Under the new laws, hiring and promotion rules will be standardized and JEA's ability to run its own training programs will be challenged. In all likelihood, the new regulations will restrict and make less efficient the function of personnel management. It can very likely cause morale to deteriorate and has at least the potential for significant payroll cost increases.

The revision of tendering and procurement regulations to bring these activities under standard government practice (in accordance with "The Government Works Law (71) of 1986") may well require ordinary, civil construction procurement rules to be used in purchasing complex electro-mechanical mechanisms. Decision-making powers for complex and highly technical purchases will be bestowed on rule-bound committees that may lack sufficient utility expertise and familiarity with JEA's unique needs. Frequent delays, reroutings and order cancellations can be expected under the new system.

There is a variety of other problems plaguing JEA of somewhat lesser importance, mostly stemming from the attempt to apply other standard government regulations and procedures to JEA. In order to avoid these further problems, promote greater efficiency and improve JEA's performance, we believe it is in the best interests of the Government to relieve JEA of the heavy burden of complying with the omnibus regulations. Indeed, we believe a program that is remedial, tailored to JEA, and mindful of future conditions and opportunities will produce markedly improved results. This is the program that we have recommended.

Choosing an Alternative

Assuming that adopting no course of action is eliminated as an alternative, there remain three basic alternatives for JEA. Any and all future courses of action are variations on one of these three alternatives. In particular, these include:

A. Exempt JEA from the stricter regulations contained in the new administrative proposals.

B. Convert JEA to a wholly-owned government company, as allowed under Temporary Law (1) which elaborates on Article (8) of the Companies Law of 1989.

C. Move, to some degree, toward privatizing JEA.

We believe the proper alternative to select is Alternative B followed by a significant movement toward Alternative C. A summary of our reasoning on each alternative follows:

Alternative A - Exempting JEA addresses the immediate problems but does not provide a permanent solution. This alternative is procedurally easy to accomplish. It may be more likely to win government approval because it is not as comprehensive a change. It is preferable to doing nothing, but lacks many of the advantages of Alternative B.

Alternative B - Converting JEA to a wholly-owned government company requires several more changes than Alternative B but is still quite easy to accomplish. The legal route to Alternative B has already been established under Temporary Law (1) which elaborates on Article (8) of the 1989 Companies Law. Importantly, this alternative resolves JEA's management problems on a more permanent basis and introduces new possibilities for improved cost savings, higher morale and eventual privatization.

We believe the principal argument against this option revolves around the Government's possible concern about making an even greater exception for JEA than would be required for Alternative A. Indeed, it may be argued that once one exception is made to the rules, a series of unwise exceptions may follow. However, other organizations have obtained company status and the legal framework clearly exists for permitting such a change.

Alternative C - Privatization can only be accomplished after Alternative B, converting to company status, has been completed. The degree of privatization recommended is modest, and the pace would be gradual. This first step would implement a privatization program to which the Kingdom has committed itself. Certain questions, however, need to be resolved. For example, it is not known what market conditions will be at the time minority shares are offered or how responsive prospective buyers will be at that time.

Alternative C is somewhat more complex to accomplish than the other alternatives but still not especially difficult. It provides all of the benefits of Alternatives A and B. Moreover, experience shows that, once accomplished, privatization maximizes earnings capabilities, promotes greater efficiency and accountability and produces a greater emphasis on planning and marketing. Additional benefits of privatization are described on pages 42 to 46.

Proposed Action Program

We recommend that JEA take the steps required to accomplish Alternative B, converting to a wholly-owned government company, while working toward Alternative C, privatization. The action program, fully described in the report, involves the following steps, all of which are authorized by law:

1. JEA prepares a written proposal to become a wholly-owned government company.

2. The Minister of Energy presents this proposal to the Cabinet. As required by Temporary Law (1) of 1989 elaborating on Article (8) of the Companies Law, recommendation on the transfer is made by the Minister of Energy with the Minister of Trade and Industry and the Minister of Finance.

3. The Cabinet appoints a Special Committee that completes the required review

and prepares necessary documentation.

4. The Cabinet appoints the new Board members of the new Company on behalf of the government.

We believe the proposed actions will arrest the unfavorable developments facing JEA and restore it to its former level of effectiveness as soon as economic conditions permit. The plan has the further merit of being the first step in a program of limited privatization (involving the sale of a minority interest) that we think should also now be committed to. We heartily recommend that JEA adopt this program and that the Government of Jordan provide the necessary authorization to seize the opportunity while the time is ripe.

II. INTRODUCTION

The Jordan Electric Authority is a free-standing business entity that provides all of the country's electricity generating and transmission capability. It distributes 10% of the country's electricity directly to consumers and another 35% directly to large industrial customers. It is a wholly government-owned entity that has been operating in a category known as a "government authority."

JEA was created in 1967 when the state felt the need to coordinate various private municipal power systems in light of the substantial capital requirements for power generation and, to a lesser extent, for power transmission. Despite the fact that power distribution in the Amman area is majority privately-owned, JEA is a 100% government-owned monopoly.

Until recently, JEA has operated with a good deal of autonomy for three reasons. JEA previously operated under the provisions of General Electricity Law (16) which gave it a separate legal personality and some amount of financial and administrative independence. Moreover, the Ministry of Energy is headed by Minister Khatib who was formerly operating head of JEA. He is very familiar with JEA's problems and appreciative of its capabilities. A further reason for JEA's relative degree of autonomy has been the fact that JEA was established early, before there existed comprehensive "omnibus" government procedures. As a highly technical entity with specific requirements, it participated in the drafting of many of the governing provisions.

Over the years, it was able to operate efficiently and establish a commendable operating record. Comparison worldwide with other country power operations firmly establishes that it has been in every way a good performer. Other countries, especially in the Near East, hold JEA in high esteem. An important key to JEA's success has been its relative autonomy.

The recent emergence of several administrative proposals, however, threatens to restrict JEA's autonomy to a significant degree. We understand that the principal motivation for the administrative changes may not relate directly to JEA but rather to the Government's desire to standardize and further extend uniform practices in government hiring and procurement. We agree that JEA is right to be seriously concerned with the potential consequences. In the absence of any of the remedies proposed in this report, JEA will not secure the benefits to its organization that can otherwise be brought about.

This report discusses the potentially serious consequences to JEA and the Kingdom of Jordan of the impending administrative changes. It presents recommendations for maximizing the benefits that we feel are achievable by JEA management.

III. SELECTED CHARACTERISTICS OF JEA

In order to fully understand the impact of the proposed restrictions, it is necessary to first discuss certain characteristics of JEA and the environment in which it operates.

Legal Status/Ownership

JEA is a wholly government-owned enterprise that was set up in 1967 as a "government authority." Its status as a government authority distinguishes it in a legal sense from a government-owned "company" as will be discussed below.

At the time of its inception, the existing private municipal power companies that generated power locally did not have the financial ability to provide the huge increase in power needed.

JEA was created as a monopoly because given the size of the country and the amount of generation capability needed, the government felt it was the best way to provide the necessary infrastructure.

JEA's legal status as a "government authority" is set forth in a number of successive laws, of which the principal one is the General Electricity Law (16) of 1986. This law places definite but tolerable restrictions on the freedom of JEA's management to manage. Several provisions of the General Electricity Law are worthy of special note to illustrate this point:

- Conditions of employee hiring, service, discipline, termination and all components of compensation are governed by special regulations issued under this law.

- Section (18) specifies that prices are "fixed under the provisions of this law or regulations issued hereunder." Sections (31) and (32) specify that the prices of "energy and other services" are fixed by the Board and Cabinet.

- After establishment of certain reserve funds, all profits above a 9% return on fixed assets revert to the government. In effect, these are legally mandated "dividends."

Despite these apparently very tight restrictions, in practice they have been something less than a strait-jacket. The best proof of this is that JEA has operated with an adequate rate of return and has been efficient by any measure. One reason why operations have been conducted with reasonable freedom probably relates to the fact that, as a government authority, JEA was established early on and to some degree had to make up its own rules. Expertise in large-scale power generation and transmission was scarce and JEA had a corner on this expertise. This also helped it to write its own rules and practices.

In brief, JEA has had more or less full responsibility for the following functions: facilities engineering, construction, operation and maintenance, and personnel management and compensation. Despite the existence of detailed regulations, (initially drafted by JEA), management has had full responsibility for personnel training and has conducted extensive technical training programs.

It has had full responsibility for the actual procurement once authorized of facilities components and for procuring operating materials. It has had partial responsibility for marketing and for finance. Significantly excluded are pricing (tariff determination) and contracting of debt and debt management.

These restrictions, while not quite onerous, are already tight when compared to those governing most publicly-owned utilities in the industrial world. In general, the governments of these countries tend to exercise regulatory review rather than proscription in advance.

In France, where a single state company known as Electricite de France (EDF) has a virtual monopoly over the industry, direct controls were loosened through the use of management contracts negotiated between EDF and the government. Once certain targets were established, it was EDF's responsibility to determine the best way to meet them. According to the contract plan covering the years from 1984 to 1988, for example, average costs per kilowatt were to be reduced 3% per year and self-financing was to reach 48% in 1984, increasing each year thereafter. The contract also stated that annual rate increases should be equal to the rate of inflation minus 1%, subject to periodic review.

EDF successfully resisted the elaboration of more specific sectoral and regional targets, preferring to be evaluated on its overall performance. The targets were flexible and could be revised according to formulas contained in the annexes to the contract. In addition, EDF was to issue a statement each year explaining why its performance deviated from the agreed targets. For its part, the government promised to compensate EDF for meeting any new obligation placed upon it that would reduce its revenues and to substitute regulatory review for direct controls wherever possible.

Another example of the greater degree of managerial freedom among public utilities in other countries is the Ontario Hydro Authority. Exhibit 1 at the end of this report illustrates the contrasting mode of management where the principal restriction is regulatory review.

The table below summarizes activities requiring government approval as well as those that JEA can implement on its own. It is shown here not so much for the details as to illustrate that even though JEA is a free-standing entity, there are important restrictions on its freedom of operation.

Activities Requiring Both Board & Cabinet Approval

1. Develop electrical network
2. Veto coverage proposals
3. Appoint Director General
4. Acquire facilities
5. Supervise operations of any component of the system
6. Issue securities
7. Guarantee loans
8. Set and publish prices to consumers (Sec. 32)
9. Set and publish prices of energy and [illegible] services to suppliers

Activities Requiring Board Approval Only

1. Authorize JEA policies
2. Extend coverage
3. Purchase facilities
4. Supervise construction, operation and maintenance (Sec. 11C)
5. Supervise arrangements with sources of supply
6. Research energy improvements
7. Encourage employee training (Sec. 10F)

Activities JEA Can Put Into Effect on its Own

1. Supervise employees and executive personnel
2. Prepare and submit Quarterly Budget
3. Keep the books
4. Carry out financial and administrative regulations

Organization and Staffing

As a free-standing enterprise, JEA resembles a business more than it does a governmental bureau. It has a Board of Directors and management that performs all or most of the functions of manufacturing and engineering, finance, marketing and personnel, just as other companies do in one way or another.

JEA is governed by a Board of Directors composed of eight members. All but one of the board members are government officials, the majority of whom have no previous direct experience in utility operation. In France, by comparison, only 5 members of the Conseil d'Administration represent the state: two proposed by the Ministry of Industry, two proposed by the Ministry of Finance, and one by the Ministry of Agriculture. Five are chosen for their business or professional qualifications or their ability to represent regional or local interests. The remaining five represent the employees of EDF.

a. Staff Recruitment

Approximately 70% of JEA's staff (1,309 people) consist of employees with technical job descriptions as presented in Exhibit 3. The other 30% (560 people) hold non-technical positions.

JEA's past history of recruitment of senior staff and to some extent technical staff is interesting, particularly when it is compared to contrasting recruiting procedures that

JEA expects to be forced to comply with in the future.

When JEA was created, a major challenge facing the government was staff recruitment. At that time, many Jordanians were working abroad in Arab countries. Talent needed to be sourced from both inside and outside of Jordan. Under regulations approved by the Board of Directors, JEA had a free hand to hire any talent that it could locate that had utilities experience. In general, employees returning home at that time took about a 1/3 pay cut when they left their foreign jobs and returned home. A large portion of this pay cut was offset by lower cost of living and other advantages of being at home. JEA initially offered about 1 1/2 times local salaries to foreign recruits, still not matching the foreign salaries. Most of JEA's senior management and much of its critical technical management were recruited from abroad. The 1 1/2 times premium for foreign workers still applies even though a good part of it has been eroded by inflation.

b. Legislation

The "Regulation of Jordan Electricity Authority (52) of 1983", which is an enabling document to Articles (14) and (37) of the General Electricity Law (8) of 1976 (now 1986), establishes certain work rules, personnel pay categories and amounts for JEA employees. Despite the abundance of rules, JEA has always had the authority to hire and fire employees. Pay regulations, while tightly prescribed, are unique to JEA and were in fact originally drafted by them. Overall, in the past JEA has had relative freedom in the area of personnel management.

This system will be superseded in 1991 when Civil Service Law (1) of 1988 will apply to all employees. Until 1991, present employees have the option of transferring to the Civil Service Law pay scales but, to date, very few have chosen this option. The new pay scale automatically applies to those employees hired since January 1, 1988. Further discussion on the marked differences between JEA and Civil Service pay scales and their implications follows in Section IV.

c. The Civil Service System

Civil Service regulations are set forth in a lengthy document referred to as Law Number (1) of 1988, "Civil Service Law." The main features of this law, with particular emphasis on those sections that appear to have a particular importance to JEA, are as follows:

(1) The system works in large part through a network of committees with high-ranking membership. We counted at least 13 such committees. In many cases, they are supplemented by lower-level "working committees" and delegation as to membership is permitted.

(2) In general, a great many decisions involving considerable detail or that represent individual cases move all the way up to these ministerial level committees for decision.

(3) The pay-grading is routine in the sense that the pay scale to which an individual is

assigned depends more on routine generalized abilities than on the specific or unique aspects of his job. With regard to pay scales, it should be noted that designation of pay grades within a category specified as "the fourth category" was scheduled by law to be completed by now, but to our knowledge this has not been done. Pay scales in this category, therefore, will lack the precision originally intended for the system. Given the mass of details necessary to implement this system, it is not surprising that there are delays in the system which, moreover, could easily become chronic.

(4) One of main features of the Civil Service system is a greater emphasis on academic attainment in qualifying for higher grades. As we will see in Section IV, this bias has a severe effect on the hiring, promotion and motivation of employees.

(5) Procedures for personnel actions, meanwhile, are extremely detailed and elaborate. Rather than serving as a "how to" or working document for the company, the procedures incorporate a great deal of legal protection and are in fact a legal document.

(6) In general, the regulations tend to concentrate on routing logistics and form and are rather vague than on substantive issues that will come up in the future. Much is left at the discretion of the committees which can be very active if they choose to be, or very inactive.

Marketing/Rate Setting

In the area of marketing, JEA has full responsibility for identifying and selling to new markets. This is a new function of increasing importance to JEA. It has evolved out of JEA's ability to provide consultancy expertise to other Arab neighbors. In addition, management is responsible for providing customer service and for being responsive to consumer needs.

Management does not have the ultimate responsibility in the important area of tariff-setting. Management sometimes recommends what the tariff should be but on other occasions defers to the government. This represents a significant departure from the regulatory review of pricing that prevails in most industrial world authorities.

In the United States, each utility decides on the rate it believes is necessary to achieve a "just and reasonable" return and petitions to the state utility commissions for a rate increase. The utilities are allowed to achieve a certain rate of return determined by the commission. The commission, in turn, must balance the consumer's right to rates that are fair, just and non-discriminatory with the utility's need to cover operating costs, attract capital and earn a reasonable rate of return for investors.

Rate hearings are usually held within a few months after the rate request is filed and may require 5 to 10 days of testimony. Pending a final decision (averaging 9 months), the commissions may set temporary rates to prevent unnecessary hardship to the utility. The utilities are very aggressive in making requests for rate increases, often in anticipation that their requests will not be fully met.

In Great Britain, each of the regional Area Boards buys bulk electricity at the same price from the Central Electricity Generating Board but decides on its own what rates to charge customers. The differences in rates result from differing management views on how best to retrieve the cost of electricity bought from the CEGB as well as different demographic characteristics and demand schedules. By statute, one category of consumers is not allowed to subsidize another. Consequently, major industrial users may be charged a lower price than household consumers. Load management terms are offered to intensive users who are able to reduce their consumption, on request, for short periods of time. The resulting tariff schedules prepared by the Area Boards are often quite complex, with a vast array of domestic tariffs, commercial block rates, and time-of-day tariffs.

Tariffs are set infrequently in Jordan, on the average of every two years. This is due in part to the lengthy tariff-setting process. First, the JEA planning staff, relatively small in size, conducts a variety of complex studies and projects a number of options, considering what is politically feasible as well as economically justifiable. These studies are passed back and forth and re-worked several times by management. Eventually they are presented to the Minister of Energy, and then to the Board. Each one of these stages usually involves revisions. They are then presented to the Prime Minister. During this time, the Minister of Finance is also actively involved. His staff works on similar rate studies which are compared to JEA's. Each step involves re-routing and re-work. Eventually a proposal in its final form is presented to the Cabinet. The time from first presentation to the Minister to final presentation to the Cabinet is said to take about one month, which under the circumstances seems quite fast.

The interesting aspect of the tariff-setting process is the amount of schedule re-work and approval routings required. This constant reference of studies back and forth is also evident in the Distribution Department. Many of their studies go from local distribution outlets to central headquarters and back several times. The common characteristic of these studies is that they are heavily technical. Most of them are not mandated from outside JEA but are initiated internally when perceived to be needed.

Operations

JEA has virtually full responsibility for the operation of the utility, including facility planning, procurement, construction, operations and maintenance. The following is a summary of how the different functions at JEA are carried out:

a. Facility Planning

Although JEA initiates proposals for new facilities and programs, there are heavy restrictions on what it can authorize. For example, there has always been a limit of JD5,000 on capital expenditures that can be authorized by the Director General with no official provision for delegation by him of this authority. By any international standard, this is a somewhat restrictive amount. (For further discussion, see "Finance and Accounting," below.)

b. Tendering and Procurement

The existing procedure for tendering and procurement is specified in a 1967 Regulation (69) for the year 1975. According to this regulation, several checks by government authority, principally the Ministry of Energy, are required. The original main purpose was to ensure competitive bidding. Another reason was to make sure that the proper customs treatment was applied to imported components.

JEA does the actual procuring of all facilities, components and supplies, with, as noted, restrictions as to authorizations. In practice, related authorizations have been quickly obtained. As an example, the Board of Directors meets every three weeks and a Tender Committee of the Board meets before the Board to clear projects.

JEA has always been required to exercise competitive bidding through the tender offer route. Procurement of thermal power generating equipment is a large and complex affair involving sizeable orders (usually millions of JD's) and frequently foreign suppliers. The process starts with substantial studies as to thermal feasibility. Once the size, general configuration and number of units are agreed upon, specifications and preliminary design and engineering proceed. When these are completed, bids are solicited. Proposals, ranging from several to as many as ten, are received and evaluated. In time, an award is made. Actual design and engineering work and related procurement follow.

c. Construction

During construction, JEA must continually supervised the work and keep expenditures within budgetary limits. Testing of components and of the system is also a significant JEA activity during construction.

At present, major thermal generation expansion is not an issue for JEA. Current estimates are that major new capacity will not be needed until perhaps 1994. While preliminary studies have already begun, until about 1991, JEA will not be affected by any changes in approval procedures. Actual authorizations and money approvals will not take place until after that.

d. Operations and Maintenance

Management generally has final authority over operating and maintaining its facilities and distributing power. Prices of supplies are not the responsibility of management. The most important supply is, of course, that of fuel where the government mandates the price. In fact, for a period of a few years, now discontinued, JEA paid a price that was a premium over market and thereby subsidized in part the government's purchase of fuel.[1]

---

[1] Fuel is predominantly oil, none of it local and all supplied by Gulf States. Recently there have been some natural gas finds, but their extent and capability of being commercialized are not known. Extraction from oil shale is still in the research stage.

Finance and Accounting

Management has full authority for keeping the books with only minor constraints requiring conformance to auditing and government accounting methods. It prepares operating budgets and projects cash flow and balance sheets subject to the same active review as previously noted by the Finance Ministry. The Finance Ministry understandably tends to concentrate on the cash budget. Capital budgets (discussed below) are also prepared with the same active review.

A Corporate Planning Department has recently been set up. It is principally involved in coordinating five-year budgets and plans. Financial analysis is being increasingly used as a part of the back-up for each 5-year plan.

In general, the rate of return earned by utilities, although steady, is low compared to industrial companies. As a result, utilities tend to borrow heavily to finance capital requirements. JEA's debt structure of more than 50% of total capitalization may seem high but is not at all unusual for the industry. JEA has none of the responsibility for fund raising; this is the prerogative of the Cabinet. Management is responsible for carrying out debt service.

a. Capital Expenditure Budgets

For JEA, heavy capital spending occurs in cycles that last for several years when power generation capacity is being expanded. JEA has just finished such a period and now will have a period when there is very little such expenditure. During such lighter periods, a typical capital budget would be around three million dinars. Half of this is for the maintenance of generation equipment and other miscellaneous items and the other half is for transmission and distribution.

A feature of all JEA capital budgets is successive levels of authorizing authority. In JEA, the Director General only has authority up to JD5,000 of capital expenditures. In our experience, this is low for the head of a utility. Items over 5,000 dinars must go to the Board of Directors. An item of 100,000 dinars or more must be approved by the relevant committee of the Ministry of Public Works.

b. Accounting

The Government's method of accounting for utilities (as well as for other enterprises) is largely confined to the cash basis. All accounting records are therefore kept according to this accounting method. The procedures by which cash accounting is performed are very specific, quite theoretical and difficult to modify. By contrast, JEA keeps its records on an accrual basis, and its accounting system conforms to generally accepted accounting principles.

The budgets of the Government and of JEA also reflect a difference in approach. On occasion, JEA makes use of flexible budgets, whereas the Government does not.

With regard to cash management, the approach is also somewhat different. The Government approaches cash management with overriding assumptions as to overall funds availability and furthermore no individual government unit has control of its funds because of the Government's centralized deposit system whereby all deposits go into the Central Bank. Moreover, contrary to JEA procedures, this centralized government system precludes taking advantage of contracting with alternate banking sources for specialized services, a practice sometimes used by JEA. The Government system also precludes contract flexibility and short-notice modification. The need for and importance of this in procurement is discussed on page 30 and 31.

Other than these important distinctions in approach, we were not able to identify other separately important existing or impending restraints in financial accounting required to conform to other Government accounts or accounting procedures.

IV. ASSESSMENT OF JEA PERFORMANCE

By any standards, JEA is an efficient operator. The management is justifiably proud of its performance. The Kingdom of Jordan has every right to be proud as well.

The statistics in Exhibits 2 and 2a confirm the statement that JEA is an efficient operator. All readily available statistics are presented therein. Even though the statistics are somewhat spotty, the following conclusions seem warranted:

- Jordan provides excellent, efficient power service that is superior when compared to other parts of the developing world.

- Operating performance, except recently, compares adequately with that in the industrial world when adjustment is made for the much higher capacities and resulting economies of scale in those areas. It is moderate to superior when compared to other LDC performers.[2]

In addition, the following conclusions are warranted:

- Per unit of electric output, JEA does not seem overstaffed.

- Overall costs of production seem to be in line.

In assessing costs, we have to discount fuel costs which are generally beyond the control of power companies. Jordan suffers from combined disadvantages in that it presently depends on oil as its fuel and, while Jordan is tied to the Gulf's Oil Producing States, it does not have its own source of oil.

- Jordan sells its power at a reasonable price and provides excellent high quality service. This is its general reputation and it is supported, for example, by an interruption frequency record that is good.

---

[2] Exhibit 2a compares recent JEA performance with various survey data on financial results of United States' electricity companies. Both JEA data and, where necessary, US data have been adjusted for comparability. JEA data has been shown before and after interest charges and after 50% of regular interest charges. The latter is shown because US electricity companies on the average have a debt-to-equity ratio of about half as much debt as JEA carries and it is assumed that half as much debt would carry half as much interest cost as a "normal" level by US standards. All US survey data is before income tax, since JEA does not have this expense. Where pre-tax data was not available, an assumed "normal 30% tax rate was used.
So adjusted for comparability, the data shows that insofar as adequate comparison can be made, JEA if relieved of all of its interest cost, or at least is at the lower limits of average performance. As regards return on assets, it has not historically performed as well comparatively.
It should be kept in mind that despite these survey results, return on equity of 12% to 15% for the better performing utilities is not at all unusual. (The Dun & Bradstreet survey, for example, shows that the upper quartile median performance of the top 120 companies is in excess of 13.7% return on equity after applicable taxes.
The statement on comparability to LDC performance is based on the various data in Exhibit 2.

- In earlier years, JEA earned an excellent return on fixed assets. This return has declined significantly, partly because facilities have been expanded. JEA is at a high point in its percentage of reserve capacity. This is good in terms of providing peak load service, but it is expensive. It is, however, just part of the regular cycle of facilities expansion that will even itself out in future years. Other factors in the decreased return are a declining rate of increase in the demand for power, which is a quite natural evolution, and, recently, devaluation of the dinar that has made debt service more expensive. Projected levels of return for 1989, around 3%, are not what they should be.

V. EMERGING OR POTENTIAL PROBLEMS

A variety of operational problems exists or is emerging.

Some of these are externally caused and therefore are largely beyond management control. Others are specific operating problems related to daily operations of JEA. These two categories of problems feed on each other to the point where together they can properly be called an emerging crisis.

A. External Problems

The Jordanian economy is currently experiencing difficulties. A full discussion of the causes of these difficulties is beyond the scope of this report. The effect on JEA is one of a slow-down in demand and revenue growth. This reduction in growth in demand is further aggravated by accompanying cost inflation, particularly with respect to fuel costs. JEA is particularly vulnerable to increases in this component. Fuel represents 50% of all operating costs, and the source of supply and the cost of it cannot be controlled by the Jordanian government.

Meanwhile, the poor economic conditions have coincided with the completion of a period of heavy capital expenditures. For a utility, these periods come in cycles. The recent expansion of power-generating capability, particularly in Aqaba, had the effect of setting up the company for a bad reversal in cash flow.[3]

Exhibits 4 and 5 illustrate this problem clearly. Exhibit 4 shows that over a six-year period, net profits before interest have, in the face of the economic conditions described, been somewhat static, being up in three years and down in two years.

This is summarized as follows:

JD in 000s
Net Profit Before Interest

1984	5358
1985	5213
1986	7277
1987	9487
1988e	9457
1989e	8600

Net profit before interest in 1989 would be ahead of 1984, but only moderately

[3] In 1986, which was the highest year for capital expenditures, 124% of the application of funds even after netting out depreciation was for investment.

ahead if adjusted for inflation over the period six years earlier. Exhibit 4 shows the mounting increase in interest cost and Exhibit 5 shows what an important part of the cash flow the combination of investment and debt service have become. Exhibit 4 also segregates interest cost in order to highlight the final blow to JEA cash flow: the consequences of the dinar devaluation that occurred in 1988 and that will have a major impact on 1989. The result of this dinar devaluation alone increased debt servicing costs from JD26 million to JD37 million. All deficits are financed by general government funds as procured and administered by the Ministry of Finance.

JEA budgets, which at least in the past have been accurate, estimate that this cash flow will turn around and will be back in balance by 1992. But because many of the current problems are caused by external factors, there is genuine uncertainty as to future performance. Whether the cash flow will actually turn around must be of primary importance to the Finance Ministry as it considers JEA's budget.

JEA's requirements for foreign exchange should also be considered as part of this catalog of difficulties. Fuel is the largest part of JEA's operating costs and requires foreign exchange. Much of its capital equipment also requires foreign exchange. As to operating deficits alone, we estimate that roughly 85% of any deficit will have a foreign exchange impact.

The following table illustrates JEA's cash flow situation:

JD in 000's

Year	Operations Cash Flow	Debt Service	Net Funding Requirement
1984	(26362)	(8706)	(35068)
1985	(32725)	(11979)	(44704)
1986	(14224)	(13903)	(28127)
1987	11303	(23680)	(12377)

It is reasonable to conclude that JEA cannot be expected to shoulder all of these extraordinary effects. One solution from the government's point of view would be to capitalize some portion of the debt, for example, that portion caused by the dinar devaluation. There is theoretical support for this in that JEA's proportion of debt is already rather high and of equity rather low. But whether debt is capitalized is not the key question. The key question is whether these debt-caused components of cash flow prove to be temporary such that JEA becomes a net cash contributor to the government again.

B. Specific Operating Problems

Operating efficiency is excellent. In many areas, however, JEA is faced with emerging problems. Recent government actions bear considerable responsibility for these problems.

There are a number of problem areas, each of which is discussed below, but there are two particular areas that are responsible for most of the present or potentially harmful consequences for JEA. These are the areas of personnel pay and management, and the procurement area. These two areas are discussed first, followed by a discussion of other areas of lesser importance.

1. Personnel Pay and Management

a. Summary of JEA Pay Scales as They Have Been and as Planned under Civil Service in the Future.

As stated previously, the present system of personnel pay and practices will be superseded in 1991 when Civil Service Law (1) of 1988 will apply to all employees. In the meantime, the new law applies automatically to all new employees hired since January 1, 1988 and applies to employees hired before that date on a voluntary basis.

In order to make clear the very marked difference between the prior JEA pay system and the newly applicable Civil Service System, please consult Exhibits 6a and 6b, "Comparison of Pay Grades JEA and Civil Service," and Exhibit 7 "Correlation of JEA Pay Grades with Civil Service Categories." Exhibit 6a is a graphic representation of the six pay grades under which the JEA pay system has been operated. Note that this system was constructed by JEA and is therefore an "in-house" system that we assume is unique to JEA. Exhibit 6b shows the same material for Civil Service Grades (called Categories). Exhibit 7 compares the two systems directly by illustration of one likely way JEA grades could be matched up with Civil Service Categories.

The following is a brief discussion of the main conclusions from each of these exhibits. A more detailed discussion of these exhibits is contained in Section 1c.

Exhibit 6a. JEA Pay Grades

1. The grade structure under which JEA has been operating is sufficiently progressive and flexible to operate a personnel pay system with adequate compensation incentives.

2. It features increased flexibility and incentives for those classified as engineers.

3. On the other hand, it is not excessive and contains adequate controls.

4. Judged by the standards of private enterprise in the industrial world, it is structurally sound.

Exhibit 6b. Civil Service Pay Grades

1. This pay system is dramatically different from the JEA system.

2. It is a static system with emphasis on equalizing pay rather than rewarding performance through pay incentives and promotion to higher grades.

3. It is typical of civil service pay systems.

Exhibit 7. Correlation of JEA Pay Grades with Civil Service Categories

1. A specific plan for mass switch from one system to the other has not yet been detailed as far as we know but would presumably match up along the lines of this exhibit.

2. There are some transition problems in switching from one system to the other.

3. The more senior engineers, about half of them, may match up as overpaid by Civil Service standards. This could disadvantage them for future pay increases and is a potentially serious matter.

4. Some of the more junior non-engineers may be transferred into positions within their new categories where there might be increased pressure for general pay increases at these levels. This could be expensive but is probably manageable without serious consequences.

b. Extension of Civil Service to JEA.

In Jordan, Civil Service is already so broadly applied that the extension of coverage in 1991, while it affects JEA intensely, will not have a major impact on the country as a whole. Approximately 124,000 people, or 20% of the country's work force, are presently under Civil Service. The extension in coverage taking place in 1991 will add 10,000 people or less than 2% of the total work force. JEA, meanwhile, represents just under 2,000 of this 10,000 total brought in under Civil Service at that time or less than 0.4% of the work force (and less than 1.5% of the projected number of civil servants in 1991).

Overall, what is an intense problem for JEA does not therefore appear to be a matter of national concern. Understandably, employees at JEA feel that their case, not being a major one to the economy, is much more likely to be changed without adequate consideration of their individual needs. The impact on morale of incorporating all JEA employees under the Civil Service should not be underestimated.

c. Details of JEA and Civil Service Pay Scales

The following is a more technical discussion of the detailed features of Exhibits 6a, 6b and 7. As a supplement to Section 1a, it can be omitted by the general reader.

In discussing the potential effect of the switch to Civil Service pay scales, it is well first to look more closely at the number of individuals in each JEA pay grade range. This is summarized as follows:

NO. of Employees

Grade	Non-Engineers	Engineers	Totals	Percent
1	8	21	29	2%
2	29	78	107	7%
3	106	102	208	13%
4	184	14	198	12%
5	130	-	130	8%
6	7	-	7	-
Subtotal			679	42%

In order to get from this sub-total to the total number of employees, we must add the following:

Graded Employees	679	
Contract Employees	25	
Civil Service Grade	215	
Unclassified	950	58%
Total	1869	

Note that unclassified are 950 people or 58% of the total of graded employees plus unclassifieds.

Contract employees are not involved in the question of appropriate pay grade. Employees in the Civil Service grade are those hired since January 1, 1988. They have been required to enter under the new Civil Service System that will replace the old system in 1991.

Let us next discuss the features of Exhibit 6a. Look first at the lower set of bars for each grade. These are the pay grades for non-engineers. First of all, the amount of pay permitted under each successive grade (Grades 6 through 1) allows a substantial increase in each grade compared to the next lower one. The midpoints for Grades 5 through 1

(Grade 6 is a small grade containing the lowest paid laborers) accelerate at an average rate of over 35%. Furthermore, the spread from midpoint within any grade is more than 40%. In addition, there is a three-grade overlap between the top of one grade and the bottom of the next three grades.

These features of the JEA pay scale indicate a progressive system with sufficient flexibility to allow performance-based compensation. While this system is generous, there is no reason to say that it is excessive or unreasonable. As one example, the highest paid person in the company has a pay midpoint of six times the midpoint for the lowest paid person which is a very conservative spread.

The top set of bars shows grade ranges as they apply to engineers. (For Grades 6 and 5, the ranges are the same as for non-engineers). While grades are numbered the same, the top four grades for engineers really constitute a separate pay system. The grade ranges are narrower but, as shown in the graph, pay is at a much higher level. In general, the pay system for those classified as engineers is even more progressive and flexible than that of non-engineers.

In order to show the sharp contrast between the JEA and Civil Service pay systems, consult Exhibit 6b, which shows the Civil Service system on the same scale.

Exhibit 6b presents four Civil Service grades. Actually, these four groupings are called "categories." Within the top three categories there are two to four grades each, the details of which were not readily available to us and are therefore not shown here.

Nonetheless, it is still possible to see that the two systems are almost exactly opposite. Under the Civil Service system, the grade increases of the top three categories are very gradual; there is a lot of overlap between the three categories; and further inspection would surely show that there is not a lot of spread within each grade. On average, although it is not shown on this chart, from the midpoint to the bottom or top of each grade in Categories 1-3 is less than 30% compared to over 40% in the JEA system for non-engineers.

Also in order to consider the effect of switching from one system to the other on individuals and in the aggregate, we would of course have to know what system of switching would be adopted. We do not know what is intended and believe that at least within JEA no systematic work planning how to accomplish this has been initiated. Nevertheless, certain logic prevails in designing any switchover system.

The first "rule" would be that insofar as possible, individuals should not be transferred to a grade where they would be below the minimum for that grade. If this were the case for any large number of people, then sooner rather than later, action would have to be taken to bring them up at least to their new grade minimum. This would be expensive if widespread.

On the other side of it, the second "rule" is that individuals should not, insofar as possible, be transferred to a grade where they are over the maximum because then a different kind of problem arises. With regard to their new grade, they would be in a position commonly called "red circle." The customary attitude toward such individuals is that they are viewed as overpaid, at least relative to the new grade they are in. They, therefore, are customarily either frozen or severely limited as to the amount and timing of what raises they may receive or ways are sought to justify moving them to a higher grade, a practice that runs the danger of destroying the system. In any case, the consequences to this category of individuals is that they feel that they are discriminated against and at a dead end as regards advancement. Morale suffers and resignations rise.

Therefore, any supervision charged with switching from one pay scale system to another will try to conform employees' old pay ranges within new pay ranges to the extent possible.

Given this guideline, there are a number of possible variations. Exhibit 7 illustrates one such switchover that conforms to this logic insofar as possible.

Without creating any new grades, each present JEA grade, separately for engineers and non-engineers, has been aligned with the Civil Service category with which it most closely conforms. JEA Grades and Civil Service Categories have been rematched as follows:

	JEA Grade	Civil Service Category
Non-Engineers	3-6	4
	2	3
	1	1
Engineers	4	3
	3	2
	1-2	1

The match up is not conforming for JEA Engineering Grades 1-2 because no present Civil Service Category we are aware of covers pay at these ranges.

Inspection of these comparative ranges indicates that from an individual's point of view when his Grade is realigned to a Civil Service Category he finds himself in one of four positions with the consequences as follows:

1. He is below the minimum of his new category with consequences as discussed above.

2. He is above the maximum of his new category, with consequences as

discussed above.

3. He is within category limits but higher in the range than he was in his former grade. From his point of view, this is liveable, but somewhat undesirable because:

a. Generally, raises come at longer intervals and in lesser amounts the closer one is to the top of the range.

b. From a future promotion point of view, the higher the category one is in, the more likely he is to be promoted to the next higher category.

4. He is within category limits, but lower in the range than he was in his former grade. From his point of view, this is desirable for exactly the opposite reasons to 3 above: raises are likely to come more frequently and in larger amounts.

In order to determine the relative importance of these four sets of attitudes and problems, we need a rough estimate of how many persons in this example fall in each of these four classifications. Since we know the number of persons in each present grade, this can be estimated as follows:

	Engineers	Non-Engineers	Unclassifieds
Above assigned category range	109	0	0
Within upper half of assigned category range	106	161	150
Within lower half of assigned category range	0	303	800
Below assigned category range	0	0	0

From this admittedly rough estimate, we conclude that at least in this and similar examples of transition to Civil Service Categories:

1. A severe potential problem of pay over grade exists for the more senior grade engineers. This is the most serious transition problem.

2. The bulk of the non-engineers and unclassifieds would be in the lower part of their respective grade ranges. There is no administrative problem with this as long as it does not result in pressure for general wage increases for the lower levels of skills.

3. There can at worst only be a small handful of people (we estimate none) who will translate into a sub-minimal pay position.

4. Some "cramping" would exist at the top of the new categories for perhaps a third of the non-engineers and for the lower half of the engineers.

It is not surprising that top management considers such impending changes as potentially disastrous. Not only is its own pay subject to being restricted by "cramping" but it is concerned about its senior technicians pay being cut or frozen. Moreover, we understand that various other allowances, particularly those affecting the higher paid persons; are also to be cut or frozen. For example, many engineers can build up a special allowance under the old system; this will be discontinued. At the other end of the scale, there is some danger, perhaps not acute, that wage pressure for increases for the lower-paid, lesser-skilled individuals may come out of a switch to Civil Service.

Again, the Civil Service system seems almost designed to hurt the key specialists and favor the lower ranking individuals whose abilities, and hence, contribution to JEA, are more limited.

d. Personnel Administration.

As concerned as JEA executives are about pay scales, they are at least equally if not more concerned about the procedures the Civil Service Law provides for personnel administration. These are very lengthy and detailed and specify exactly what procedures must be followed and what forms must be used. At the same time, the law is imprecise as to overall duties and responsibilities, granting broad powers to the Ministry of Energy and other components of government.

In fact, Law (1) of 1988, "Civil Service Law," provides various government bodies external and superior to JEA with complete authority over hiring, promotion and termination. The powers of these external bodies can be seen by merely skimming the Table of Contents of the Civil Service Law. Exhibit 8 presents selected parts of this Table to illustrate the point.

The following are some specific examples of the procedures for personnel administration contained in the Civil Service Law. These procedures clearly erode JEA's ability to manage its own personnel.

(1) Hiring. An organization table must be produced every year prior to any hiring procedures. Only once a position exists in the organization table and becomes vacant can hiring take place. Job descriptions must exist covering each position on the table with standard prescribed components. Job descriptions are not "tailor made" and so there is no established way that a job can be fashioned around the particular talents of an individual.

Qualification for any given job is by written examination, taking into account the individual's previous work history. Special attention is paid to the individual's degree of academic attainment. In fact, in the higher grades, an individual will generally only be eligible for a job if he has certain specific academic training and degrees.

Based on these records, a priority list of applicants for each job opening is prepared. The company is required to hire the highest ranking individual on the list and to proceed down the list until the job is filled by the highest listed available employee.

(2) Promotion. Promotion is also based on a number of predetermined factors, with an emphasis on seniority. As a result, the "fast track" of promotion - a key element in most progressive industrial organizations that has also been significant in JEA's history will no longer be available.

In most cases, there is a qualifying written examination for promotion. The system for evaluating the eligibility of individuals for promotion is prescribed in detail. There is, therefore, no "personal touch" involved in promotions.

(3) Training. Special attention should be paid to the contrast between regulations for training under Civil Service and past and current practice at JEA. JEA has a history of conducting extensive training programs for its employees. These include both in-house and externally organized seminars. JEA has also provided scholarships for education and training.

The Civil Service law includes specific provisions for determining eligibility for training. What is not clear is whether Civil Service would take over and run an individual company training program. The broadness of its charter allows Civil Service to specify which courses are to be attended and by whom. It could therefore discontinue JEA courses through non-certification or institute and conduct its own training courses at its discretion. Specifically, Chapter 3, Section 8B of the Civil Service Law states that the Civil Service Commission has as one of its responsibilities, to "prepare and execute training programs." This law challenges and erodes JEA's power to conduct training as it sees fit.

(4) Termination. The dominant theme of the termination regulations is one that surrounds the process with legal protection, both the state against the individual and the individual against the state, with the company's welfare therefore subordinate. An entire chapter, Chapter 16, is devoted to termination, covering the circumstances under which it can be put into effect, the proceedings required, and the rights of the individual. Some of the few individuals who opted to transfer to Civil Service before 1991 have done so almost boasting that they cannot be fired now.

e. Exemption from Coverage

As provided by law, exemptions from governance by Civil Service can be and have been allowed by the Cabinet. The pattern of obtaining permission for exemption is not entirely clear but in two instances (ALIA and TCC, the latter may be still pending) this may relate to their transfer or intended transfer to government-owned company status. (Discussed below.) Exemption status has also been granted to Social Security, to TV operations, and to the Central Bank.

2. Tendering and Procuring

a. The New Procedures

The section on "Operations" (p. 14) summarizes the existing procedures for tendering and procurement as they relate to JEA. As of 1988, new procedures contained in the basic governing law (71) of the 1986 "Government Works Law" are partially in force. For almost all kinds of JEA procurement, the new procedures, if and when fully applied, present serious problems. In all probability, they were drafted to encompass other simpler types of problems and to correct unrelated abuses.

As an example, in accordance with the new law, the "Instructions for Classifications for Contractors", published March 16, 1987, and "Instructions for Government Tenders", published March 1, 1987, provide general regulations for tendering and procurement by governing bodies. At present, it is not clear whether procurements with an electro-mechanical component are covered. The instructions were originally designed for the type of ordinary civil construction that most government operations are involved in. Given the special nature of tendering and procurement for electro-mechanical components, special regulations will need to be prepared. There was one attempt by JEA and government procurement officials to jointly specify such procedures but this did not materialize.

Note that JEA's position is that it has to assume that it is exempt from such regulations for now, since specific procedures for electro-mechanical procurement have not been set up.

Law (71) further requires frequent reference to and approval from government officials operating in committee and superseding the authority previously exercised by the JEA Board of Directors. The principal referral committee is the Tender Committee of the Ministry of Public Works. JEA is represented on these committees but only by one or two members. Generally, the committees approve specifications, approve the tender, approve to whom it may be made, and award the contract. As part of the routing described below, this involves a large number of intricate steps and therefore, a large number of approvals of details.

Delegating these responsibilities to committees presents three types of problems:

(1) Lack of familiarity with the complex and unique technology of JEA's specialized equipment procurement

(2) Lack of necessary confidentiality

(3) Frequent procedural delays, reroutings, and cancellations caused by lack of compliance to the formal requirements that have been set up

These problems become extremely apparent when viewed on a daily level. In a huge contract, as is typical, a large number of adjustments, checkbacks, and change orders are necessary. Every one of these, without exception, is specified as requiring individual clearance. As one example, one of the reasons why on-site supervision of contractor construction by JEA is necessary is because of required work method alterations that take place. Knowledgeable parties can easily agree without much possibility of error or irregularity that such mid-course adjustments make sense. In such construction work, timing is of the essence.

Under the new procedures, all such adjustments to construction work require committee clearance. In fact, delays may well cause a contractor to file damage claims. While the timing for approval used to be very quick, it now takes about one month. Any delays during a complex power generation construction project will be compounded.

JEA is particularly aggrieved by this because it has repeatedly been told that it is especially competent in the complex area of capital construction and has a good record of handling the related problems in a straightforward and skillful manner.

Given JEA's commendable performance in handling this unique, complex process, we believe separate treatment is fully justified. As was the case for governance by Civil Service, exemption from the Tender and Procurement Regulations is provided for by law. We are not aware that any exemptions from the Government Works Law for procurement have been granted.

3. Capital Expenditure Approvals

As mentioned in Section III, JEA capital budgets require approval from several successive levels of authority. The Director General only has authority up to JD5,000 of capital expenditures. Items over 5,000 dinars must go to the Board of Directors and items over 100,000 dinars must be approved by the relevant committee of the Ministry of Public Works.

Under the current set-up with extensive approvals needed, the basic purpose of successive authority levels with accompanying delegation of decision is not achieved. To be sure, the large price tags on capital items in the utility business necessarily mean that these projects require a high level of approval. On the other hand, the large number of individual procurements involving technical complexity calls for delegation of even many items sizeable in amount that are, relatively speaking, details in the overall procurement.

One feature of the current system that could become more problematic with time is that there seems to be no differentiation as to whether an item is in a budget or not. In our experience, permitted levels of authorization in other countries are often higher for items that have first been included in an annual capital budget.

The impact of the new procurement regulations on the timely procurement of complex equipment should not be taken lightly. These regulations will further complicate this already somewhat cumbersome procedure substantially.

4. Operating and Cash Budgets

JEA prepares operating budgets that are submitted to successively higher levels of authority. A cash budget in a separate format is prepared specifically for the Ministry of Finance.

There is nothing particularly unusual or burdensome about this procedure. There are, however, a few differences worth noting.

First, the budget cycle at JEA begins about one calendar quarter earlier than is customary elsewhere because of the extra governmental levels of information and authorization that are required.

The second point is that there is something of a dual budgeting system. As the cash budget is being developed, the Ministry of Finance engages in active discussion of it. Because the Ministry of Finance feels obligated to present as nearly balanced a budget as is reasonable, it sometimes, after discussion, goes its own way and presents to the Cabinet a more nearly balanced budget.

This is going to be something more of a problem in 1989 than in the past. The 1989 process is presently under way. In 1989, primarily because of heavy debt service expense, the deficit is 12 million dinars, a gap probably too wide to be closed by any modest shift in assumptions about the budget. JEA budgets are based on basic assumptions as to demand in the first instance, and JEA officials have made the statement that their operating budgets have always been accurate within 2%.

It should be kept in mind that if JEA is put on a fully profit-responsible basis, at some point it will have to pay taxes and may pay dividends. We understand that tax rates permit the average company to have an average tax rate no higher than 35% of operating profit after interest. Given the adequate cash flow that can be typical of a high performing utility, dividends in utilities are usually high.

In summary, while the present budget structure and approval system has certain benefits, such as forcing internal planning, it severely limits the ability of JEA to delegate decision levels and reduces its flexibility to conduct operations within a broader range of permissable activities.

5. Cash Control and Financial Accounting

a. Cash Control.

The possibility that all or significant parts of JEA's cash disbursement activities would be processed in the future by the Central Bank has been raised and needs to be further discussed. It is viewed with grave apprehension by JEA. The logic of this proposal is that since sizable capital expenditures need to be disbursed by the Central Bank already on behalf of JEA, perhaps it should processing all other disbursements as well.

Many important arguments can be made against this proposal. First, with regard to cash management, the approaches followed by JEA and by the Government are quite different. The Government approaches cash management with overriding assumptions as to overall funds availability. No individual government unit has control of its funds because of the Government's centralized deposit system, whereby all deposits go into the Central Bank. Moreover, this centralized government system precludes JEA from taking advantage of contracting with alternate banking sources for specialized services, a practice sometimes used by JEA. The Government system also precludes contract flexibility and modifications on short notice which are vital to the procurement process.

If JEA were to switch the cash control function over to the Central Bank, the transfer could be made rather easily. There are, nevertheless, a few procedural difficulties that would arise. For example, Accounts Payable would probably require an outside and definitive audit before being forwarded for disbursement. This in itself would create unnecessary delay and confusion.

We do not know whether the Government currently has any plans to assume the cash management function. In our opinion, this would be a great mistake. Any future change in JEA's organizational structure would be seriously compromised by such a move. (One has only to look at TCC to see how difficult commercialization, or in JEA's case, re-commercialization, is, and how much further off it puts privatization or any other major organizational change).

The Government should also avoid force-mandating or force-contracting key elements of the business. It is important that JEA have all of the key elements of business management under its control so that it has responsibility for the bottom line.

b. Financial Accounting

As mentioned above, JEA uses the accrual basis of accounting and follows generally accepted accounting principles. The government's method of accounting for utilities (and other enterprises as well) largely confines itself to a cash basis. JEA and Government budgets reflect the same difference in approach.

While noting these important distinctions in approach, we were not able to identify any existing or impending restraints in financial accounting required to conform to other government accounts or accounting procedures.

6. <u>Tariff-Setting</u>

Tariff-setting is not the responsibility of JEA but is reserved to the highest levels of government. There is no intention as far as we know to further restrict the role that JEA plays in tariff-setting. There is also no immediate intention, nor do we recommend it, to expand JEA's responsibility for tariff-setting in the near future. An analysis of JEA's role in this area, therefore, is beyond the scope of this report.

Looking ahead, it is probable that one day direct supervision of utility activities in Jordan, including tariff-setting, will decrease to some extent, and governmental regulatory oversight will substitute. We believe this is a trend worldwide. Developing a regulatory system takes time and patience, but offers innumerable benefits. Any changes that JEA can institute or that the Government can foster to anticipate the advent of regulation will result in long-term benefits to Jordan's power system.

C. Management Scope

Setting aside for the moment the details discussed in the preceding sections, the purpose of this current section is to discuss the overall effect of tightening the restrictions on JEA and to make certain general points.

We feel that the trend toward tighter restrictions and more routine procedures that the Government may have in mind for JEA as part of an overall program has a great many specific disadvantages to JEA's effective operations. Moreover, we think the cumulative effect of this trend may have serious consequences for morale. There is already a feeling at JEA that "the good old days are past; things can only get worse." We think this negative feeling needs to be combatted by a dramatic move as discussed in the next section, that will give a signal that the trend toward increased bureaucratic control is about to reverse.

We think it is useful to analyze the range of concerns affecting JEA management. These include the following:

1. They are concerned about recent regulations that JEA either has or will become subject to. These regulations are all "omnibus" in character, bringing JEA in under a common umbrella of overall general government regulation.

2. The scope of power given to the Government under these regulations is broad. The extent of actual control that will take place is very much subject to interpretation. The uncertainty surrounding these future interpretations is worrisome to JEA.

3. Tighter restrictions represents a trend in the eyes of JEA management causing continual fear of what is forthcoming or what may evolve.

4. Under present and impending regulations, a great many more substantive decisions will be made beyond the JEA board level and even beyond the Ministry of Energy level. JEA fears that its welfare will be only one of many considerations.

5. Many regulations that may be objectionable in principle are in fact tolerable because JEA knows that with Minister Khatib as the Minister of Energy, they have a knowledgeable "friend in court." But understandably, they are concerned that, as circumstances inevitably evolve, this Minister of Energy might be replaced with another less familiar with the background and technical knowledge necessary to make effective rulings for JEA.

D. Outlook

When JEA has inquired why regulations that seem to them to be inappropriate have to be applied, the answer they report receiving is, "They weren't designed for you. These regulations are designed to correct other conditions. But we can't make an exception."

We think the real question is, "Why can't judicious exceptions be made?"

JEA can present quite an argument for the success of its unique circumstances and past regulatory history. It has high motivation. It is well run. Organizationally, it is well positioned, whereby management can make a difference because it is a free-standing organization. JEA is a good case example of effective operation and it can continue to be an example of this and of excellent management if it is unencumbered.

Moreover, if the current cycle of restrictions on management continues, a decline in morale and a deterioration of profit are likely to result. Not only JEA but Jordan has something to lose. We think judicious exceptions in circumstances where they seem eminently called for represent the art of effective management on the Government's part.

JEA reports to us that there is some feeling in Government that the form of these regulations doesn't matter, that the only real thing that makes a difference is management. That is, management under any set of regulations will be effective if it is competent, and if it is not, it won't. Of course, we think management makes the difference, but we further believe that the set of restrictions under which an organization operates also makes a difference. For one thing, there is the question of morale, not only of top management, but of the middle managers and of the intelligent, discriminating workforce that JEA apparently has.[4]

It is interesting, as will be discussed in the next section, that the Government has wisely provided for legal relief through exception as contained in the laws that have recently been established. Exceptions from at least one of the two general laws discussed have already been granted and the procedure to do so is relatively easy for both, particularly in JEA's case. We think JEA deserves to be rewarded for its past good performance by the allowance of somewhat greater latitude, not punished by restrictions

[4] While it is not a typical example, the apparent attitudes of the 25-person headquarters computer staff is interesting. Today, JEA offers competitive salaries for computer staff against private industry. The computer employee's loyalty is to job content, rather than to the company. Although other specialists more directly related to utility operations may be an exception, we believe it is one illustration of how technicians think about their job.

put in force possibly because of the faults of others. We think allowing them this latitude of authority represents the best single opportunity over a period of time for JEA to further improve its good operations, turn cash flow positive again, and rebound as expected. While JEA morale is still good, it is in danger of deteriorating. We think a remedial program can reverse this trend and, over a period of a few years, show remarkably improved results.

In the next section, the various alternatives that should be considered are evaluated. The program we consider to be most promising is described and recommended.

VI. ALTERNATE SOLUTIONS AND THEIR RELATIVE MERITS

One supposed alternative, i.e, taking no action at all, has no benefits and the problems outlined above will probably get worse and thereby cause a decline in JEA's effectiveness. No action would be required, and in that sense, this is not really an alternative. Furthermore, this represents a policy of drift on JEA's part in which they are passive rather than taking an active management stance. We consider it inadvisable.

There are, therefore only three alternative courses of action that are feasible. Each of these is discussed below. For each alternative we first discuss the procedure to bring it into being. In each case, the procedure is in large part determined by existing law. The time and costs to put each alternative into effect are estimated. For no alternative other than the last are time and cost a major factor. The advantages and benefits and the disadvantages of each alternative are discussed and an action program of how the recommended program is brought into being is described.

Of the three alternative programs (called Alternatives A, B, & C), we recommend that Alternative B: "Request Right to Transfer to Become a Wholly-Owned Government Company" be the one adopted, to be followed by the first steps toward Alternative C, "Privatize by Issuing Shares." We consider this to be highly preferable to Alternative A: "Request Certain Specific Exemptions." Only Alternatives A and B are feasible at an early date. Discussion of each of these alternatives follows.

A. Alternative A: "Request Certain Specific Exemptions"

1. Procedure. The procedure to bring this into being is quite easy and is well spelled out by law. It simply requires a letter to the Prime Minister from the Ministry of Energy requesting that the Cabinet exempt JEA from the Civil Service Law (1) of 1986 and from the Government Works Law (71) of 1987 and related Instructions for Tenders of Government Works. This letter would be sent by Minister Khatib. It would be followed by a request to add an Article to the General Electricity Law (16) of 1988, stating that JEA would be governed not by it but by special regulations and also modifications to some existing articles of the Law.

2. Estimated time and cost. We, of course, are not able to estimate how long it would take the Government to resolve what its position should be. After that decision is reached, whenever it is reached definitively, it would then take two or three months during which a Legislative Committee is appointed to study and issue the required regulations. The cost of pursuing this alternative is nominal.

3. Advantages of this Alternative. The advantages of this alternative over taking no action are many. The risks and the investment in time and energy are minimal, and the results would be a lot better than taking no action at all, and letting the situation drift.

a. Of all the alternatives requiring action, this may be the easiest one to gain approval. However, there are more pros and cons to this than might seem obvious at first. On the one hand, it may be simpler for the government to grant what amounts to two specific exceptions, rather than to create a major new entity. On the other hand, making specific exceptions to existing laws may be a more difficult position for the Government to take than changing the overall status of JEA. We simply don't know and can't speculate what the Government's attitude is.

b. This Alternative can be accomplished very quickly. The other Alternatives take more time.

c. It is sometimes easier to take a single step than to map out and pursue a whole program. It could be that this alternative would ease into privatization by a simple first step.

d. It avoids probable deterioration of JEA performance.

e. It eliminates major pending problems, in particular, personnel, procurement, and the general restriction of management.

f. Substantial improvement in morale will preserve team feeling and permit further team building.

g. JEA will operate with more realistic budgets and capital planning and be more responsive to them.

h. Efficient operations will continue and should improve.

i. Ability to act quickly, especially in emergencies.

4. Disadvantages of this Alternative

a. This alternative may not be acceptable at all at this time to the Government. There is always some disadvantage to having advocated a proposal that is rejected. However, it represents a minimal try and our studies have convinced us that the benefits to JEA are so substantial that it is worth the risk.

b. This represents the least movement off dead center. It represents standing pat in the sense of trying to reconstruct a past that seems more attractive rather than adopting some alternative more related to the future. Looked at this way, such a program, even though attractive, doesn't represent real progress nor is it moving on into the future.

c. Neither we nor JEA seem to have the ability to speculate which alternative is more likely to receive a favorable reception from the Government. This Alternative only represents half a step when a full and more beneficial step as described in Alternative B may be just as easy to obtain. Since we just don't know, it seems better to take a more progressive stance than this limited one.

d. There is one practical danger to this alternative. If JEA's immediate crisis is ended by the revocation of the regulations objectionable to it, there is a distinct possibility that the organization will be satisfied and any program to achieve greater benefits will be put off, perhaps never to be revived.

We have to tell you that a sample of your senior management, while not definitive, reveals to us that not all your management prefers a bolder initiative than this. This should not bother you. In every situation, in every company, and indeed in every country, creating a fully free-standing management when one has previously lived under a protective cloak has its opponents as well as its advocates. This is especially true on the subject of privatization. We think this should not turn you aside; if the program that is adopted produces good results, you management will rally behind it.

e. The fact that exemption status is so easily achieved has another side to it. It is a Cabinet ruling easily taken and therefore one that can be easily reversed in the future. It therefore has the disadvantage of lack of assured permanence of status.

B. Alternative B: "Request Right to Transfer to Becoming a Wholly-Owned Government Company"

1. Procedure. Although not as easy to accomplish as Alternative A, this is still relatively easy to accomplish. It is clearly permitted under Temporary Law (1) of 1989 elaborating on Article (8) of the Companies Law and requires the following steps:

a. A recommendation is made by the Minister of Energy that there be a transfer of status for JEA.

b. This agreement is triggered by a Company request presented by the Minister of Energy in letter form. In our opinion, the letter should be a full and thorough document, providing all supporting arguments. Since a letter petition must be prepared in any case, it seems better to make a major effort and a full request for all that can reasonably be expected. We think it is, furthermore, advisable to request that the letter be followed by personal presentations, to the Cabinet, and others as required.

c. Study and recommendation on the transfer is conducted by the Ministry of Energy with the Minister of Trade and Industry and the Minister of Finance.

d. When the three ministers have recommended the transfer of JEA to wholly-owned government company status to the Cabinet and the Cabinet has agreed, it appoints a Special Committee.

e. The Special Committee performs the following functions:

(1) Prepares Articles of Association or Memorandum of Association.

(2) Handles completion of all transfer procedures.

(3) Registers new company.

f. The Council of Ministers (i.e., the Cabinet) appoints and sustains or terminates new Board members and its Chairman.

2. Estimated time and cost. Again, there is no way to estimate the length of time for the Ministers and then the Cabinet to take a position. Once this has happened, the procedure should take four to six months to accomplish. The principal time required is that consumed by the actions required of the Special Committee. The cost is still quite nominal.

3. Advantages and Benefits of this Proposal

a. This is a more thorough and lasting solution to the problems presently confronting JEA. It is not a half measure as Alternative A is. All the benefits of Alternative A would be achieved. Some of them would be enhanced.

b. This alternative solves the management problems of JEA on a more permanent basis, preserving its independence and giving it a marked change of course that will mean a big boost in morale.

c. "Independent" status achieved would be permanent and would be perceived as permanent.

d. Full ability to act quickly, especially in emergencies.

e. Responsibility can be assigned for debt servicing.

f. Limited responsibility for raising needed capital can be introduced.

g. Definite possibility of management uncovering further savings. Experience shows this usually occurs given increased responsibility as a result of greater independence.

4. Disadvantages of this Proposal

a. Both this alternative and Alternative A raise the question of creating an exception for JEA. Alternative B is an exception of larger magnitude. On the other hand, other organizations have attained Company status and, in that sense, it is not unusual. One might argue that exempting from specific overall laws such as Civil

Service and Tender and Procurement is more of a departure from normal procedure than converting to a Company under the Companies Act. The only conclusion we can reach is that both procedures are authorized by law. They were written into the law with the idea that they would be used when confronted with the appropriate circumstance. JEA and the circumstances confronting it represent the appropriate vehicle at the appropriate time.

b. This is a bigger step procedurally than Alternative A. It represents a bigger move for the Government to make. It represents, as regards JEA, a greater relaxation of centralized control.

c. There are some operating questions, not of overwhelming magnitude, that have to be looked into with the solution determined before Company status can be finally established. We do not believe them to be major.

d. Even though accomplishing this step is procedurally quite easy, there is a moderately greater time delay and such a time delay always means some risk that the program won't carry through.

C. Alternative C: Privatize by Issuing Shares

Conversion to company status under the Companies Law, of course, does not commit the Government to subsequently take in any owners other than the Government itself, i.e., issue shares, privatize in any way, or take any other additional organizational step.

Even under continuing 100% government ownership, it is clearly legally free to do so. A rough English translation of the pertinent sections of the Companies Law is attached in Exhibit 9. On the other hand, establishing JEA as a Company under the Companies Law is a necessary first step toward even the limited privatization that would then be represented by issuing a minority of shares. In other words, Alternative C, privatizing, can only be accomplished after Alternative B has been largely completed. We recommend that the Government proceed along these lines, announcing as early as possible that the subsequent step of privatization is its intention.

1. Procedure.

    a. First requires completion of Alternative B.

    b. After JEA has become a Company, the various documents then required for making possible the issuance of shares need to be prepared as described in the Companies Law.

    c. The Cabinet appoints a Special Issuing Committee to study these prepared documents: the listing application, the prospectus and other prospective shareholder documents. We believe this to be the same Committee as that required in attaining Company status and of course, its work could proceed sequentially if so desired.

d. These procedures are moderately complicated but still not particularly difficult. The significant fact is that they are less complicated for JEA than they would be for any other companies (e.g., TCC) because JEA is already a free-standing entity.

2. Estimated time and cost. This alternative takes about one year once a decision is reached. Whatever the exact timing, some of the time can run concurrently with Alternative C, since that has to be done first.

Unlike the other alternatives, this is moderately costly. The exact cost of a first-time issue in Jordan at some future unspecified date can't be determined in advance. It depends on conditions at the time of issuance. However, based on stock issue costs in various other countries, a very rough guess is that a minimum figure would not be lower than JD250,000.

3. Advantages and Benefits of This Proposal

a. Advantages specific to JEA and the efficient providing of electricity

(1) All the benefits in Alternatives B and C would be achieved. Some of them would be enhanced.

(2) Especially when this step is preceded by Alternative C, the entire program will be seen as a series of logical development steps.

(3) There would be greater accountability. Financial responsibility would be maximized.

(4) Experience shows that once accomplished, privatization maximizes earnings capabilities.

The following benefits usually result from privatization: greater accountability, greater efficiency, improved financial performance and cash flow and in time an improved growth rate. Also, typically occurring under privatization is reward from and greater emphasis on planning and especially on marketing. Within JEA new international marketing efforts have started and should be encouraged.

We think that for JEA there is an especially interesting role model. The Electric Company of New Zealand (ECNZ) has followed exactly the path herein described, although it has not as yet completed it. It was formerly a government department. It converted to company status and has now completed its first year in that role. At the end of this period, it issued its first annual report as a wholly-owned government company. It used this occasion to cite the benefits of its being a free-standing, profit-oriented entity. It is interesting to note the benefits they have cited in detail as concretely experienced in the first year of their operation. Many of these benefits may well be applicable to JEA. A listing of these benefits as they listed them with comments on their applicability to JEA is included as Exhibit 10. ECNZ has at this point now been a wholly-owned government company for about a year and a half in the same sense that a company in Jordan under the Companies Law would be. At this point, no shares have been issued to the public. However, from the very start, the Government had committed itself to the program that it would later issue some minority shares and thereby create a degree of privatization. The Company's listing operation is still in process but the commitment that listing would occur was made public from the very first. Therefore, the benefits they have experienced are not separable between those derived from becoming a fully separate Company entity and those in anticipation of privatization.

The fact that there was overall benefit is established by the fact that in their last full year as a government authority they earned 4% return on fixed assets, and in their first full year as a separate company they earned 10%. Please consult Exhibit 10 for the details of this particularly pertinent case.

(5) The Government of Jordan is committed to privatization, by which is meant the transfer of an enterprise from public to private hands. This can be accomplished by a number of mechanisms and can take a number of forms. It can be partial or complete.

JEA is a good candidate for privatization, perhaps the best available, and therefore successful conversion and resulting improvement is that much more likely.

(6) Full responsibility for raising capital, limited only by the extent of government guarantees.

(7) Possible innovative organizational moves, for example, the spin off of Distribution as a private company and the possible combination of this function with JEPCO and/or IDECO. Financial viability of this is questionable but it seems possible. Another possibility would be contracting out certain services. Under this privatization alternative, other possible management innovations are more likely with greater flexibility and authority as a result.

(8) Financial attractiveness to potential investors of a minority position in JEA has not been studied but the Gulf Area financial community might be interested.

(9) Privatizing represents the opportunity for the Government to build experience in public regulation of utilities. This development is probably coming in the future anyway.

(10) Overall, this alternative has a much greater benefit return for relatively little increase in effort compared to the alternatives previously discussed.

(11) Additional private minority representation on the Board could result in a

helpful fresh point of view.

b. More General Advantages to the Jordanian Economy as a Whole

We think there is also merit in our providing you with some of the more general benefits of privatization. We do this in order to show in more general terms what experience elsewhere indicates might happen in Jordan if it follows some of these historical patterns of privatization.

Countries privatize most often to avoid progressive deterioration of state-owned enterprises or other negative operating or financial consequences. In other words, they privatize not for ideological reasons but to attain certain specific expected benefits. To do this, each country permits certain of its state-owned enterprises to go as far as it deems appropriate along the route toward privatization. In general, the further such a company goes, the greater the benefits realized. Often, the kinds of state-owned enterprises selected are very like JEA: sound enterprises, well managed, but with a present performance and outlook that suggests that some revitalization of approach is needed if the enterprise is to live up to its former potential.

We have summarized the national benefits of this kind that seem especially pertinent to JEA's and Jordan's current and prospective experience.

1. Efficiency. Time and again experience has shown that private institutions are more efficient users of assets than public institutions. Maximizing efficiency is what private institutions do well. In general, the most efficient utilities are privately owned utilities. We are sure that over time JEA will be more efficient and therefore contribute more to its own and to Jordan's welfare if it is privatized.

2. Payrolls. Government ownership represents a constant invitation to inflate payrolls beyond what is efficiently necessary. Sooner or later, as JEA's present situation illustrates, government encroachment on operations sets in. Sooner or later, government mandates increases in payrolls for a variety of motives not relevant to efficient conduct of the business. The threat is always there and is only removed by privatization.

3. Management Effectiveness. In private companies, management has the ability to make decisions that are entirely business-based. Private companies have the ability to further this approach and attitude by building in monetary and other support incentives. In private companies, bureaucracy is reduced because the enterprise is accountable. At the very least, management gets some relief from the distraction of the government-caused political intrusion into in their decisions. In general, the management of private enterprises is results-oriented, not process-oriented as is so often the case in government bureaucracies.

Private management is more sensitive to the market place and more responsive to consumer needs. For a utility, this inevitably results in improved service to the customer.

4. Government Efficiency. Not to be overlooked is the tendency that public ownership similarly distracts government from effectively pursuing its own mission. Time spent by government officials learning operating details of little long-term use to them is time taken away from deep deliberation on governmental policy matters.

5. Attracting Capital and Using it Productively. All search for new capital is a competition. Capital secured in a competitive marketplace flows naturally in the direction of rewarding superior performance. Those who are efficient users of capital attract more capital, those who are not, do not. JEA has been efficient even as a public company. It can be more efficient as a private company and that much more effective in attracting capital from new sources as well as old ones.

Moreover, privatization sends a signal from the host country of improved investment climate. A swing toward private ownership in itself attracts foreign investment. Jordan would be no exception. Lastly, this search in the competitive marketplace for ways of attracting capital can be a way of expanding the country's stake in equity ownership and expanding and strengthening its capital market.

6. A Regulatory Framework. As set forth in the report, we think that down the road developing-country societies will switch away from direct control of public services to controlling them through a regulatory framework. Privatization would help JEA adapt to this trend as it emerges.

7. Increase in Jobs. Over the short period of time, redundancy sometimes occurs in companies that privatize. Over a long period of time, there is almost always an increase in jobs. This is because in private companies, jobs that are filled are pointed toward growth opportunities. To the extent this anticipated growth materializes, more jobs are created and a growth-oriented cycle is instituted. Growth-oriented job increases occur more often in private companies than in public enterprises.

The point is that there are plenty of instances of redundancy resulting from privatization and also plenty of instances of governments' handling this with resulting economic and political success.

8. Enervating Effects. Government ownership has many enervating effects. One of the best examples is subsidies. Under government ownership, subsidies always loom as a possibility. In fact, from time to time JEA has been involved in subsidies. Subsidies seem like a support but in the long run they end up as a burden because they decrease the competitive edge and breed complacency. Subsidies are not healthy long-run economics.

Lastly, there are two longer range effects of privatization that may make other benefits ultimately available, if not now, then at a later time for a privatized JEA.

9. Expanded Citizen Ownership. Privatization presents the opportunity to spread

capital ownership to a widened public that is increasingly involved directly in the economic well- being of the country. "Popular Capitalism" started as a by- product of privatization; more recently, it has become one of the main reasons why countries privatize.

10. Employee Stock Ownership Plans (ESOP's). This is one of the most popular sub-topics related to privatization in the world today. The process of privatizing makes it possible to award, sell or give some partial ownership in the company to its employees. A stake of approximately 15% is the most predominant. ESOP's are perhaps the ultimate in private-enterprise-created efficiency and motivation wherein employees identify their own personal well being with that of the enterprise for which they work and a part of which they own. One of the times when an ESOP is most easily created is at a time when the company is going through successive stages of privatization.

4. Disadvantages of This Proposal

a. There have been relatively few privatizations of power companies, but some of them have been very significant. In the developing world, Chile, for example, has privatized almost its entire power system, and in the industrial world, in New Zealand and pre-eminently in Great Britain, privatization is now taking place.

b. We should not underestimate the degree to which this kind of a program requires major shifts in thinking for any business entity involved and specifically so for JEA. The kinds of policy determinations involved and especially how policies are implemented require a new approach to what were formerly familiar problems. The goals of the company will become clearer, but in many ways they will be different.

c. Creation of another candidate on the road toward privatization even in such modest steps as those contemplated here, will provoke some domestic controversy. On the other hand, the fact that this program represents a series of logical, integrated steps will work in its favor.

d. When this program comes to the point of determining the valuation and pricing of shares, the timing of the program becomes much more critical. If it is started too early, proceeding with the offering of shares may be premature. In any case, the values that will maintain at some future time cannot be accurately estimated now.

In addition, as the program unfolds, we don't know whether the current national economic difficulties will be continuing or if so, with what severity. Related to this, we also don't know whether the cash gap JEA is experiencing will continue or not.

e. At some point in time, it will also be necessary to prepare for a different Government atmosphere, one that shifts from direct control to regulatory review, as discussed elsewhere in this report.

VII. PROPOSED ACTION PROGRAM AND TIMING

We recommend that JEA take the steps described above necessary to accomplish Alternative B, "Request Right to Transfer to Becoming a Wholly Owned Government Company." We believe that you should also aim toward achieving in time Alternative C, "Privatize by Issuing Shares." We further believe that the various benefits discussed are achieved more effectively and earlier if your action program is accompanied at an early date by the statement that it is the Government's intention not only to establish JEA's status as a separate company but to proceed toward the subsequent issuance of some shares in the company to be created. By "some shares" we mean the sale of a minority interest to parties to be chosen and identified at a later date.

The alternatives outlined in detail and discussed in the previous section can be looked at not as different courses of action, but rather as a judgment as to how big an advance to attempt and how much of a program should be outlined at an early date. As examples, Alternative B, applying for wholly-owned government company status, can be looked at as an end in itself or as the necessary first step in at least a partial program of privatization. These objectives can be looked at as a series of successive steps to be decided at successive points in time or they can be looked at as interlocked parts of a program. Similarly, a request for exemption from certain laws (Alternative A) can be looked at as a remedial end in itself or as the first step in a larger program.

In recommending which alternative should be followed, and the sequence and timing of actions, we have been guided by two principles:

A. Political Decision

In the end, the degree of autonomy allowed to JEA by the Government of Jordan is a political decision and the assessment of how much latitude is likely to be allowed and what line of argument will be the most persuasive is an assessment of the political climate. We cannot make an informed judgment in this matter and have not attempted to do so. Only JEA and particularly the Ministry of Energy can make a capable judgment in this matter.

We serve JEA and the Government of Jordan best if we cite our experience and the experience of other countries in these matters, rendering our opinion as to what will serve everyone best in the long run.

That is what we have done by identifying alternatives and laying out a program for each feasible alternative. We recognize that which of the several ways to go and which of the several alternatives will be accepted are political judgments.

Our experience tells us this is quite normally the case.[5]

We think each of the alternative programs ought to be politically acceptable but beyond that we cannot judge their degree of relative political appeal. It is our opinion that any of the alternatives, including the one recommended, will permit the Government in any case to pursue its social and economic programs.

B. How Far Is It Wise to Go?

The second principle by which we have been guided is that while a program that is unrealistic and goes too far or recommends too much is obviously inadvisable, a program that is too timid and doesn't go far enough can also be a mistake. This is particularly the case where we cannot be knowledgeable about politics and must therefore rely on what to us makes logical operating sense. We think a program of conversion to company status together with a stated intention to pursue limited privatization has about the right amount of "reach" and forward movement to it. It is a conservative program that moves forward step by logical step. It provides the greatest amount of reasonably assured benefits at a level that is still one of moderate risk.

[5] Globally, with regard to privatization of electricity companies, it is important to recognize what has happened and what has not. The fact is that to date most privatization activity for electricity companies has:

a. occurred in the industrial world with far greater frequency LDC's.
b. Even where there has been privatization, frequently the government retained majority control.
c. Much more privatization activity is still in the planning stage than in the accomplishment stage.

In summary, while our knowledge may not be complete, we know of accomplished privatization of majority control having occurred or scheduled to occur for one or more companies in Chile, France and the United Kingdom and being planned for majority transfer in New Zealand and only in a very general way in Fiji, Portugal and SriLanka. Privatization of minority holdings has occurred in France (a second company) and operations have been contracted out to a company in Canada. Less than majority privatization is planned in Austria, South Korea, Singapore and Spain.

EXHIBIT 1

ONTARIO HYDRO DIVISION OF POWER AND DUTIES

Under the Power Corporation Act, Ontario Hydro has been given certain specific powers and authorities, some of which may be exercised only with the prior approval of the Lieutenant Governor in Council, as well as the general power and authority to do all such things as in its opinion are necessary, usual or incidental to the furtherance of its purposes and to the carrying on of its business. The following are the principal specific powers and authorities given to Ontario Hydro under the Power Corporation Act which may be exercised without the approval of the Lieutenant Governor in Council (Memorandum of Understanding reference: paragraph 2.1):

1. Appointing and employing such officers and employees as it considers necessary for the conduct of its affairs (section 7).

2. Administering the Ontario Hydro Pension and Insurance Plan and Fund (section 20).

3. Acquiring real and personal property for office and service buildings (section 37) and for retail distribution facilities in the rural power district (section 83).

4. Providing energy conservation programs to encourage the safe and efficient use and the conservation of all forms of energy, and the lending of money as part of an energy conservation program (1981, c.16, s.3).

5. Acquiring lands by expropriation or otherwise for the purpose of carrying out an act in respect of the production, sale, supply and delivery of heat energy that has been approved by the Lieutenant Governor in Council (1981, c.16, s.4).

6. Allocating available electrical power and heat energy during a state of emergency (section 72; 1981, c.16, s.4).

7. Determining the price payable for electrical power supplied by it to its direct industrial customers (section 69), its municipal electrical utility customers (section 75) and its rural retail customers (section 90).

8. Administering the Ontario Electrical Safety Code (section 93).

9. Approving and controlling the rates chargeable by a municipal electrical utility or by any other company or individual receiving electrical power from it for supply to others (section 95).

10. Approving and controlling the following aspects of a municipal electrical utility's operations: borrowing (section 94), bookkeeping systems (section 96), liability insurance (section 97), collection of arrears (section 98) and application of surplus funds (sections 101 and 102).

Under the Power Corporation Act, Ontario Hydro has been given certain specific powers and authorities, some of which may be exercised only with the prior approval of the Lieutenant Governor in Council, as well as the general power and authority to do all such things as in its opinion are necessary, usual or incidental to the furtherance of its purposes and to the carrying on of its business. The following are the principal specific powers and authorities given to Ontario Hydro under the Power Corporation Act which may be exercised only with the prior approval of the Lieutenant Governor in Council (Memorandum of Understanding reference: paragraph 2.1):

1. Making regulations governing the Ontario Hydro Pension and Insurance Plan (section 20).

2. Acquiring, by expropriation or otherwise, constructing and using real and personal property for the supply and use of electrical power (section 23).

3. Using any of its electric power works to produce heat energy (1981, c.16, s.4).

4. Acquiring, constructing and operating equipment, facilities and works for the production, supply and delivery of heat energy (1981, c.16, s.4).

5. Selling, supplying and delivering heat energy (1981, c.16, S.4).

6. Engaging in the specific activities described in subsection 56g(1) for the purpose of facilitating the use and sale of heat energy produced by works of Ontario Hydro in the Township of Bruce (1983, c.15, s.1).

7. Borrowing money for any of its purposes and issuing securities (section 50, 51 and 55).

8. Entering into contracts for the supply of electrical power to a municipal electrical utility (section 60) or to any other person (section 69) other than contracts for the supply of power to its rural retail customers (section 83).

9. Making regulations governing the supply and use of electrical power and heat energy during a state of emergency (section 72; 1981, c.16, s.4).

10. Prescribing the Ontario Electrical Safety Code (section 93).

Under the Power Corporation Act, the Lieutenant Governor in Council has been given certain powers in respect of Ontario Hydro. The following are the principal powers given to the Lieutenant Governor in Council under the Power Corporation Act in respect of Ontario Hydro) (Memorandum of Understanding reference paragraph 2.1):

1. Appointing, removing for cause and determining the remuneration and expenses payable to the Chairman and other directors of Ontario Hydro, except the President (section 3).

2. Appointing auditors to audit the accounts of Ontario Hydro (section 10).

3. Borrowing money for the purposes of Ontario Hydro (section 47) and advancing the proceeds to Ontario Hydro (section 50).

4. Advancing money appropriated by the Legislature for the purposes of Ontario Hydro (sections 48 and 49).

5. Guaranteeing securities issued by Ontario Hydro (section 53).

Ontario Hydro derives powers under acts other than the Power Corporation Act. The following are the principal powers derived by Ontario Hydro under other acts (Memorandum of Understanding reference: paragraph 2.2):

1. The Conservation Authorities Act. This act provides that

   (a) Ontario Hydro's approval is required before a conservation authority can proceed with a project which interferes with one of Ontario Hydro's works (section 32); and

   (b) Ontario Hydro has the sole right to use any water power created by a conservation authority on its lands (subject to the conservation authority's right to use the water power for its own use) but may consent to the use of the water power by another person on such terms and conditions as are satisfactory to Ontario Hydro and the conservation authority (section 35).

2. <u>The Corporations Act</u>. Ontario Hydro has the powers conferred under this act on corporations incorporated by a special act of the Legislature.

3. <u>The Expropriations Act</u>. This act provides that, where Ontario Hydro is expropriating a limited interest in land for an electrical transmission or distribution line, Ontario Hydro may register a preliminary plan before it registers a formal plan. The result is that the effective date of the expropriation of the interest in land is the date that the preliminary plan is registered rather than the date that the formal plan is registered (section 9).

4. <u>The Ontario Niagara Development Act, 1917 The Niagara Development Act, 1951.</u> These acts authorize Ontario Hydro to divert the waters of the Niagara and Welland Rivers and to construct, operate and maintain works for the development and utilization of the power resources of these rivers.

5. The Ottawa River Water Powers Act, 1943. This act authorizes Ontario Hydro to carry out the terms of the Ottawa River Powers Agreement relating to the development of five interprovincial water power sites on the Ottawa River and to acquire, for and on behalf of the Province of Ontario, the lands in Ontario required by the Quebec Streams Commission (now Hydro-Quebec) for the purposes of the Agreement.

6. The Power Corporation Insurance Act. This act authorizes Ontario Hydro, among other things, to enter into an agreement with a municipal electrical utility authorizing Ontario Hydro to contract with an insurance corporation for insurance for the employees of the utility (section 2).

7. The Public Utilities Act. This act provides that Ontario Hydro's approval is required before a municipal electrical utility may dispose of its surplus assets (section 36). This act also contains a number of provisions relating to the relationship between Ontario Hydro and municipal electrical utilities complementing or supplementing the provisions of the Power Corporation Act.

8. <u>The St. Lawrence Development Act, 1952 (No. 2)</u>. This act authorizes Ontario Hydro to construct, operate and maintain works for the development and utilization of the power resources of the International Rapids Section of the St. Lawrence River.

The responsibilities of the Hydro Board are generally to direct and control the business and affairs of Ontario Hydro. The following are the principal specific functions performed by the Hydro Board in carrying out its responsibilities (Memorandum of Understanding reference: paragraphs 3.1 and 3.2):

1. Approve and, as occasion demands, initiate the development of overall corporate policies and objectives.

2. Review and approve for planning purposes predictions relating to load growth, social and economic trends, financial capability, capital availability and other basis for the Corporation's program and to review and commit recommended strategies related thereto.

3. Control the performance of the Corporation by:

   (a) assessing periodically the effectiveness of the Corporation in attaining its objectives;

(b) reviewing conformance to policies and procedures and redirecting activities as appropriate.

4. Review and recommend for authorization by the Lieutenant Governor in Council those programs requiring authorization by that body under the Power Corporation Act, and review and commit those portions of the programs that are under direct control of the Board.

5. Review and approve recommendations with respect to all matters of execution of the Corporation's programs for which approval authority has not been delegated by the Board.

6. Designate a member of the Board as Vice-Chairman.

7. Establish and/or modify the structure, functions and authorities of committees of the Board and of the Executive Office.

8. Appoint members of the Board to serve on committees of the Board.

9. Establish and/or modify the functions and authorities of the following officers of the Corporation: Chairman, Vice-Chairman, President, Executive Vice-Presidents, Vice-Presidents and the General Counsel and Secretary.

10. Approve the organizational structure down to and including the Vice-Presidential level.

11. Appoint the President, Executive Vice-Presidents, Vice-Presidents and the General Counsel and Secretary and fix their compensation.

12. Perform the function of statutory trustee with respect to the maintenance and administration of the Pension and Insurance Fund of Ontario Hydro.

13. Report upon its stewardship as required from time to time by the Corporation's constitution.

14. Ensure the development and maintenance of documented statements which describe:

(a) the entire organization's structure, assignment of responsibilities for functions and delegation of authority and the policies, objectives and procedures of the Corporation,

(b) the predictions, resources, strategies and programs for the organization.

EXHIBIT 2: COMPARATIVE PRODUCTIVITY STATISTICS

Factor	All Jordan 1987	All Jordan 1980-1986	All Jordan 1985	JEA 1987	JEA 1986	JEA 1985	Ontario Hydro 1987	Eastern Elec. Board 1986
GWH/Employee	0.67	0.47	0.56	1.73	1.51	1.33	4.14	2.7
Consumers/Employee	89	81.5	90.4	33	32.4	32.9	101	301
Consumption Kwh/per capita	1092	1090	932					
Costs								
KWH sold/fils	30.67		33.76	14.4	17.19	20.7	17.14	2[illegible].7
Fuel cost/fil	10.87		17.15	10.87	13	16.06	4.48	
Salary cost/fils	2.82			1.1	1.19	1.21		
Other cost/fils	16.98			2.94	3	2.8		
Salary & other cost/fils	19.8		16.61	4	4.19	4.01	12.66	
Selling price in fils/KWH	32.06	31.5	34.3	20.3	22.34	25.76	18.04	
Selling price/cost		83%						
Total Electrical Losses	15.2%	14%	14%*	9.9%			9.6%	
Losses in transmission & distribution				10.2%	10.5%	9.8%		
Losses in transmission				7.6%	5.6%	7.7%		
Hrs.interruption/year/consumer	8.6					10.9	3.22	1.6
Total installed capacity	979Mw	979Mw	712Mw	870Mw	870Mw	610Mw	30,080Mw	
Peak load	516Mw	488Mw	436Mw	486Mw	458Mw	398Mw	20,500Mw	
Reserve Capacity	89.7%	100.6%	63.3%	79.0%	90.0%	53.0%	47%	
Invest. in Dinar/KWH sold	0.129							
Rate of return on fixed assets					4.2%	4.4%		3.6%
% Annual Self-financing		60% -70%		15.8%	24.0%	8.6%		

*Excluding industrial losses

EXHIBIT 2: COMPARATIVE PRODUCTIVITY STATISTICS (continuation)

Factor	Central Elec. Gen. Board (Grt. Britain) 1986	New Zealand Electric 1987	N. Ireland Electric 1987	Irish Republic 1987	Cyprus 1987	Egypt 1987	Malaysia 1985	Denmark 1987
GWH/Employee	4.86	6.1	1.1	1.1	0.98		0.46	
Consumers/Employee			103	107	166		85	
Consumption Kwh/per capita								
Costs								
KWH sold/fils	17.77	9.22	29.88	34.53	31.75		24.27	
Fuel cost/fil	9.73		13.02	11.23	13.35		16.87	
Salary cost/fils	1.81		2.98	3.57	7.62			
Other cost/fils	6.23		13.88	19.73	10.78			
Salary & other cost/fils							7.4	
Selling price in fils/KWH		10.32	32.89	37.79	33.21			
Selling price/cost								
Total Electrical Losses		7.1%	14.55%	15.89%	10.73%		15.32%	
Losses in transmission & distribution								6.7%
Losses in transmission	2.23%							
Hrs.interruption/year/consumer				8.16	4.0			
Total installed capacity			1,800Mw	4,009Mw	342Mw	8,913Mw		
Peak load		4,765Mw				6,152Mw		
Reserve Capacity			34%	70%	17%	31%		
Invest. in Dinar/KWH sold			0.178	0.099	0.093			
Rate of return on fixed assets	2.86%							
% Annual Self-financing								

EXHIBIT 2: COMPARATIVE PRODUCTIVITY STATISTICS (continuation)

Factor	Norway 1987	Sweden 1987	Finland 1987	Iceland 1987	Saudi Arabia 1986	Italy 1986	U.S. 1980-1986	Third World 1980-1986
GWH/Employee					1.297			
Consumers/Employee								
Consumption Kwh/per capita							10,500	500
Costs								
KWH sold/fils					13.92			
Fuel cost/fil								
Salary cost/fils								
Other cost/fils								
Salary & other cost/fils								
Selling price in fils/KWH					8.33			
Selling price/cost							100%	20%-40%
Total Electrical Losses						11%	5%-10%	20%-30%
Losses in transmission & distribution	10.1%	8.6%	5.3%	9.6%				
Losses in transmission								
Hrs.interruption/year/consumer								
Total installed capacity					18,310 Mw			
Peak load					10,252Mw			
Reserve Capacity					44%			
Invest. in Dinar/KWH sold								
Rate of return on fixed assets								
% Annual Self-financing								20'

Exhibit 2A: Comparison of Returns Earned
JEA vs. U.S. Survey Statistics
(Both after adjustments)

Factor	JEA 1986	JEA 1987	JEA 1988	962 U.S. Electricity Companies 1988 Figures (Source: D & B) Average	Median	Lower Quartile	73 U.S. Electric Service Companies with Assets over $250 Mill. (Source: Almanac of Business and Industrial Financial Ratios) 1988
Profit before interest & taxes:							
÷ Assets	2.6%	3.4%	n.a.				10.6%
÷ Fixed Assets	4.2%	4.3%	4.3%				
÷ Net Worth	9.1%	9.7%	9.8%				5.0%
Profit after regular interest & before taxes							
÷ Assets	0.7%	-0.1%	n.a.	4.7%*	5.3%*	2.6%*	2.5%
÷ Fixed Assets	1.0%	0.0%	-0.7%	15.8%*	7.7%*	3.4%*	
÷ Net Worth	2.3%	-0.2%	-1.8%	12.0%*	14.4%*	8.2%*	1.2%
Profit after 50% of interest & before special interest & taxes							
÷ Assets	1.7%	1.7%	n.a.				
÷ Fixed Assets	2.6%	2.1%	1.7%				
÷ Net Worth	5.7%	4.7%	4.0%				

*After assumed 30% tax rate

EXHIBIT 3

Evaluation of Employee Job Content
Totals as of December 1988

Employee Job Description	Technical		Non-Technical	
	Number of Employees	Subtotal	Number of Employees	Subtotal
Technical Departments				
Engineers	223			
Tech. Supervisors	149			
Tech. 1-3	774			
Tech. Labor	92	1,238		
Administrative				
Section Heads & Dept. Managers	16	16		
Store Controllers			20	
Stores & Procurement			11	
Clerks			100	
Typists & Secretary			48	179
Financial				
Accountant	10		43	
Audit	13			
Accounting Clerk			24	
Collectors			46	
Consumer Clerk			18	
Cashier			9	
Statisticians			6	
Economist	3	26		146
Computer				
Programmers & Analysts	24			
Computer Operators	4			
Data Entry & Admn.	1		8	
		29		8
Services				
Drivers			123	
Telephone Operators			9	
Guards			44	
Messengers			11	
Laborers			40	
				227
TOTAL			**1,309 (70%)**	**560 (30%)**
GRAND TOTAL			**1,869**	

EXHIBIT 4: JEA Six-Year Profit and Interest Cost Summary
JD in 000's

	1984	1985	1986	1987	1988*	1989*
Revenue	41,646	50,288	55,954	58,411	56,062	62,000
Expenses	36,288	45,075	48,677	48,924	46,605	53,400
Net Profit Before Interest (NPBI)	5,358	5,213	7,277	9,487	9,457	8,600
NPBI %	12.8%	10.3%	13.0%	16.2%	16.9%	13.8%
Regular Interest	3,418	3,544	5,474	9,670	11,178	10,600
Net Profit After Regular Interest	1,940	1,669	1,803	(183)	(1,721)	(2,000)
Dinar Devaluation Interest					1,968	10,000
Net Profit After Interest	1,940	1,669	1,803	(183)	(3,689)	(12,000)
Net Profit After Interest %	4.7%	3.3%	3.2%	-0.3%	-6.6%	-19.3%
Average Fixed Assets	103,496	118,538	174,506	220,518	222,476*	199,800*
Return (NPBI) on Average Fixed Assets	5.1%	5.3%	4.4%	4.3%	4.3%	4.3%
Equity (Capital and Reserves)	86,420	90,882	79,761	98,283	96,012	n.a.
Return on Equity	2.2%	1.8%	1.8%	-0.2%	-3.8%	n.a.

EXHIBIT 5: Four Year Source and Disposition of Funds
(JD in 000's)

	1984	1985	1986	1987	Total
Net Profit Before Interest	5,358	5,213	7,277	9,487	27,335
Less:					
Investments	36,836	58,600	38,793	11,702	145,931
(Depreciation)	(6,311)	(7,446)	(9,875)	(10,973)	(34,605)
Subtotal	(25,167)	(45,941)	(21,641)	8,758	(83,991)
Other Operating Sources Less Operating Applications	(1,195)	13,216	7,417	2,545	21,983
Subtotal	(26,362)	(32,725)	(14,224)	11,303	(62,008)
Less:					
Debt Service	(8,706)	(11,979)	(13,903)	(23,680)	(58,268)
Net Funding Required	(35,068)	(44,704)	(28,127)	(12,377)	(120,276)

COMPARISON OF PAY GRADES
JORDAN ELECTRICITY AUTHORITY

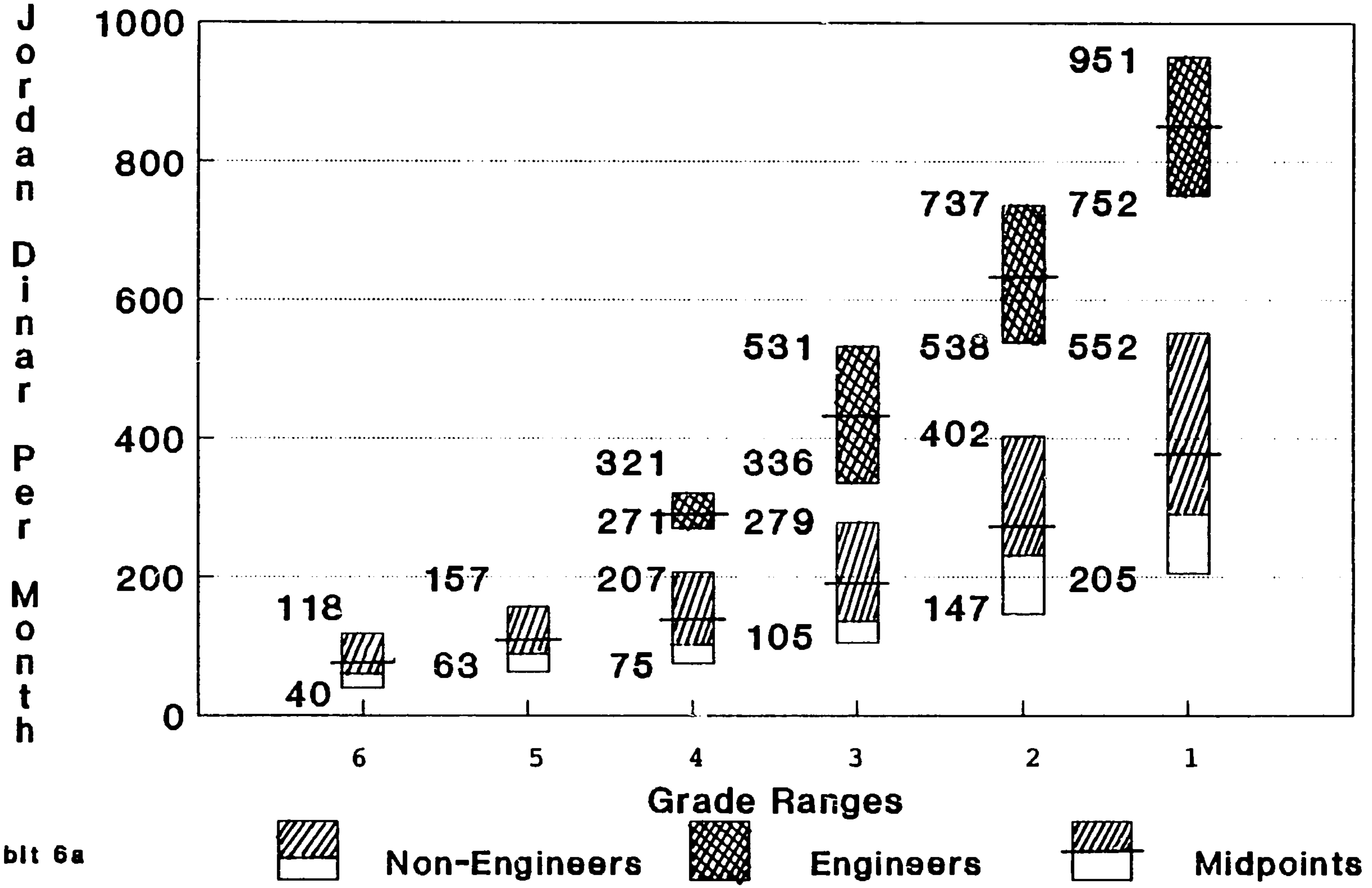

Exhibit 6a

COMPARISON OF PAY GRADE
CIVIL SERVICE

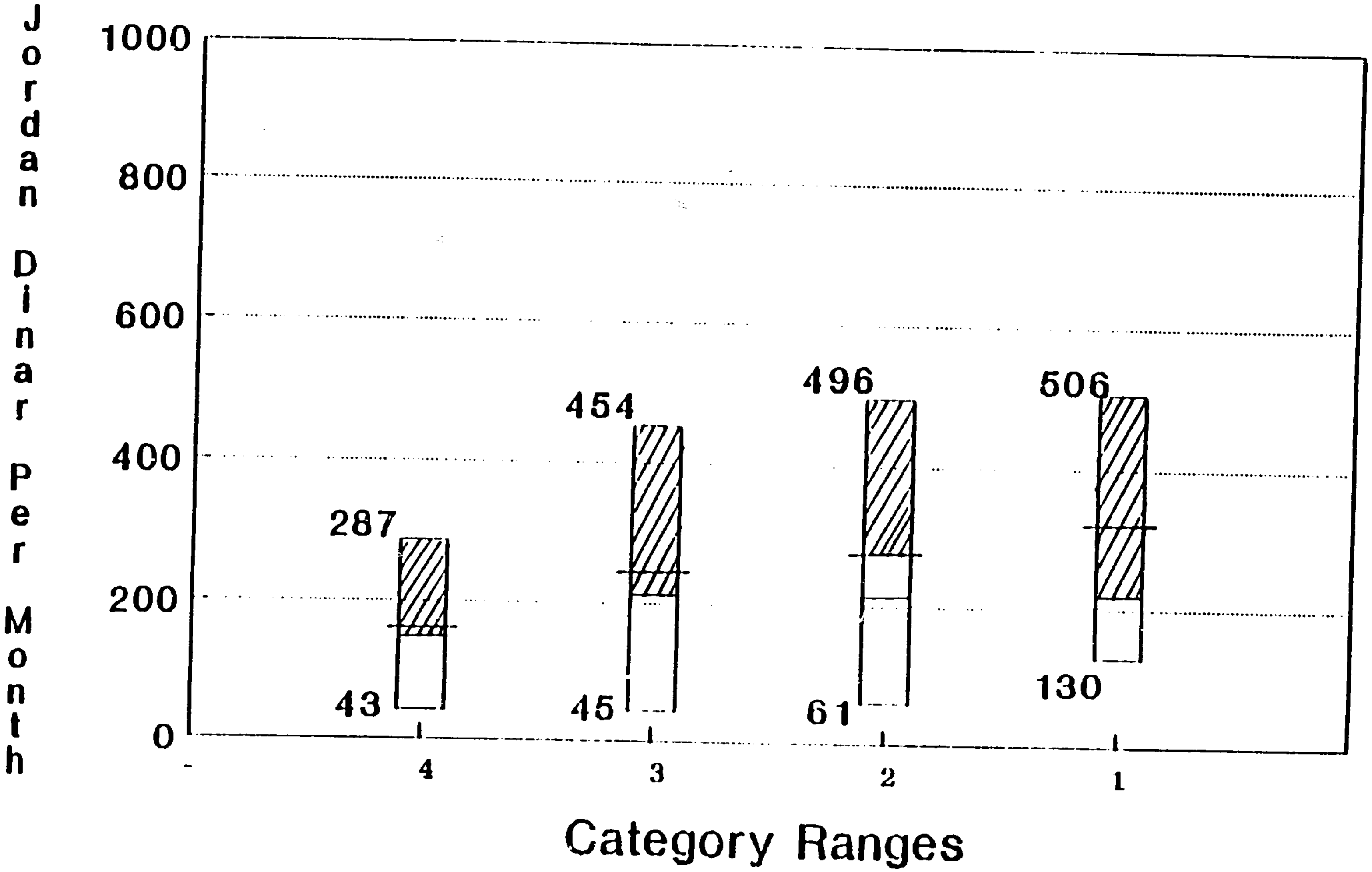

Exhibit 6b

CORRELATION OF JEA PAY GRADES WITH CIVIL SERVICE CATEGORIES

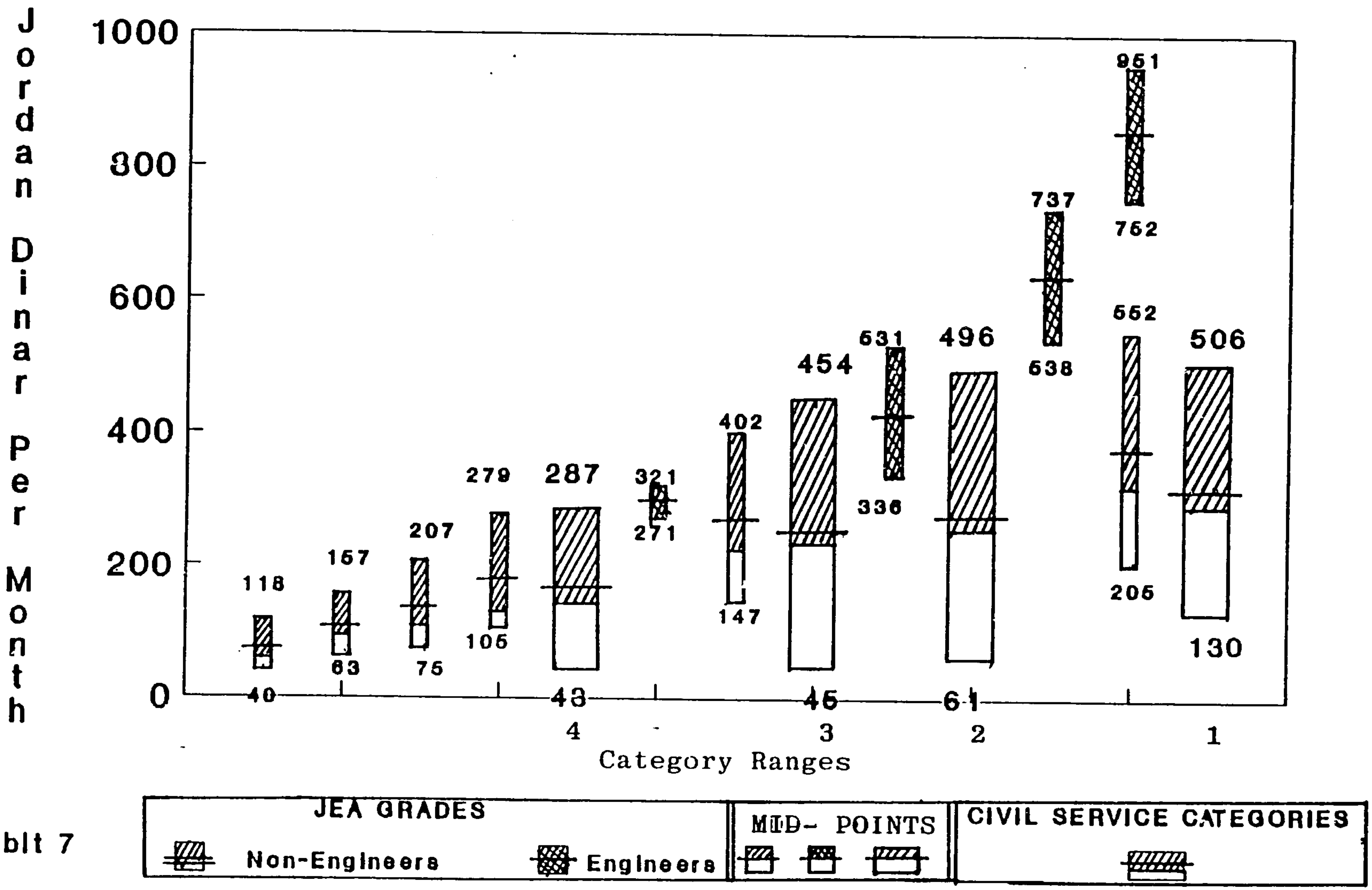

Exhibit 7

EXHIBIT 8

Summary of Subject Matter Covered in Table of Contents,
Civil Service Law (1) of 1988

Reference Section			Title or Subject Matter
Chapter II.			
4.			Council of Ministers
	1b		Review of salary and incremental scales
	1e		Work periods
5.			Joint duties: Department and Council
	a.		Specifying goals
	b.		Designing administrative structure
	c.		Specifying annual table of organization
	f.		Selecting suitable employees
	g.		Evaluating performance
	h.		Maintaining job descriptions
6.	a.		Creating Departmental Personnel unit
		1.	Establishing policies
		2.	Employing modern methods
		3.	Specifying training
Chapter III.			
8.			Powers and Duties of Civil Service Commission
	a.		Ensuring compliance
	b.		Preparing and executing training programs
	f.		Laws to be developed
	g.		Test rules for applicants
	h.		Selecting applicants
	j.		Studies on need for jobs
	k-o.		Records and studies maintained
	p.		Considering appropriate employee benefits
9.			Commission follow-up unit
	a.1		Data required
	a.2		Records to be reviewed
	a.3		Evaluating effectiveness of procedures

11.		Powers and Duties of Civil Service Council
	A(a)	Forming general policies
	(b)	Development efforts
	(c)2	Optimum utilization of labor force
	B 2	Evaluating training plans
	5	Recommending organizational structures
	6	Developing laws and drafting legislation
	7	Designing new job classifications
	9	Salary, wage, increment and award policies
	11	Rules for selecting employers
Chapter IV.		Establishing Categories and Groups
Chapter V.		
	14	Setting salaries and increments
	18	Special Commission to establish fourth category positions, salaries, and increments
Chapter VI.		
	20	Appointment and promotion duties of Central Personnel Committee
	21	Promotion duties of departmental Personnel Committees
Chapter VII.		
	23	Specifying the application form
	24, 25	Appointment prerogatives of Council of Ministers
	26	Category and grade educational requirements
	29	Approval of job descriptions
	31a	Requirement for multiple applicants
	33	Table of Organization regulations
	36	Probationary promotions
	37-41	Alternate regulations for contract employees
Chapter VIII.		Rules for Employee Behavior
Chapter IX.		
	45a	Specifying performance evaluation form
	b	Ministerial inspection of form
	46	Evaluative criteria
	50	Employee inspection and hearing rights
	52	Regulations governing rating relationship to increments

Chapter X.		Promotion
	55	Promotions to vacant positions only
	56	Promotion priority criteria
	57	Educational and seniority rights
	60-61	Relationship promotions to ratings and previous raises
Chapter XI.		Regulations for transfer, TDY, deputization and employee loan
Chapter XII.		Employee leaves
Chapter XIV.		Scholarships and training courses
	109	Scholarships and training Course Committee
	113	Training plan submission
	114	Committee determination of training course availability
	115	Training course enrollee qualifications
	118-123	Participant contractual obligations and rights
Chapter XV.		Disciplinary actions
Chapter XVI.		Termination--justification, proceedings and employee rights

EXHIBIT 9

Excerpts from Article #8 "Companies Law"
Temporary Law #1, 1989 (Rough English Translation)

A. 1. The Council of Ministers on recommendation of the Minister of Trade and Industry and Minister of Finance and the responsible Minister have the right to transfer any establishment or authority or corporation to a public shareholding company owned completely by the Government of the Kingdom without offering those shares to any public offering and it can be registered in the Ministry of Trade and Industry in this form in accordance with its Articles of Association or Memorandum of Association which must be prepared by a Special Committee created by the Council of Ministers who will appoint a Chairman from its members. This Committee will handle the completion of all procedures necessary to transfer the establishment, authority or corporation to a Company and register it in addition to any other responsibilities that the Council of Ministers may request.

2. The Council of Ministers appoints the Chairman and members of the Board of Directors of the Company following the incorporation and registration procedures. It can terminate all or any members at its option. It may also appoint one or more supervisors to follow up the managerial and financial work of the Company and produce regular or special reports to the Board concerning these matters together with suitable recommendation.

------

4. The Council of Ministers may upon the recommendation of the Minister of Trade and Industry, the Minister of Finance and the Director General of the Capital Market Authority agree to offer the shares of this new company formed as above partly or completely to a public offering.

EXHIBIT 10

Benefits Experienced by Electric Company of New Zealand (ECNZ) and Possible Application to JEA

Benefit Experienced		If JEA Becomes a Wholly-Owned Government Company	If JEA Subsequently Privatizes
1.	Reduction of payroll	Not known, but possible	Not known, but probable over time resulting from new approaches
2.	Innovative ways to defer capital spending	Not needed in near term because no sizeable projects scheduled	Possible longer term
3.	Organizational restructuring	Not needed in near term because ECNZ reorganization was along JEA lines	Possible longer term as new activities become more prominent, Marketing, for example
4.	Greater emphasis on Marketing	Good start, further improvements	Additional improvements possible
5.	Contracting out	Possible, for example certain distribution activities, maintenance, etc.	Possible and more likely under privatization
6.	Competitive negotiation of fuel contracts	Appropriateness not known but does not seem likely	Appropriateness not known but does not seem likely
7.	Strategic planning and risk analysis more prominent	Good. Needs further encouragement	Good. Needs further encouragement

8.	Individual performance criteria set up	More likely as a company and may be needed	Even more likely under privatization. Meaningful bonus plans become possibility
9.	Innovative pricing	Possible	More possible
10.	Price Increases	Apparently needed, but probably not attractive to government	As privatized industrial companies are exposed to market forces, prices often go up as subsidies are withdrawn; less likely with utilities. Experience with JEPCO would be instructive. Political situation in Jordan suggests extreme caution and close government control for foreseeable future.
11.	Market-driven decision making	Will experience greater emphasis	Will experience even greater emphasis

APPENDIX 1

SCOPE OF WORK

BACKGROUND

Jordan Electricity Authority (JEA) was established by virtue of the provisions of law number 21/1967, (superseded by law number 16/1986) as a Government Corporation, and was given a legal personality and a financial and administrative independence.

JEA is administered by an eight-member Board of Directors, comprising a Chairman (the Minister of Energy and Mineral Resources) and six other part-time members, together with a full- time Director General appointed by the Cabinet.

JEA at present is responsible for generation and transmission of electrical power for all Jordan, and the distribution of electricity in any area not supplied by the private companies (JEPCO and IDECO) which work on a concessionary basis.

The present status allowed JEA to meet the objectives in an efficient and speedy way, the results of which are apparent now when viewing its modern steam plants, the national grid, rural electrification scheme, and the level of reliability and security of supply.

In order to retain these gains and improve on them continuously, the independence of JEA must be ensured legally, financially, and administratively. For this purpose JEA has been studying all possible alternatives which provides continuous flexibility and limits the government interference and routine. These alternatives include privatization.

In the wider sense of privatization, JEA is thinking at present of transferring from a Governmental Authority to a Government-owned Company. This new company will have a concession and will be operated in a commercial way in accordance with the Jordanian Companies Law.

SCOPE OF WORK

1. Review existing laws under which JEA operates, especially its enabling legislation and the new civil service and procurement laws.

2. Identify constraints to efficient operation that exist or will go into existence as a result of the present legal framework.

3. Evaluate the operational costs and benefits of transforming JEA to a public shareholding company.

4. Present an Action Plan listing the legal, operation and regulatory modifications needed to transform JEA to a public shareholding company.

5. Set out a time frame for the necessary action listed on #4 above.

6. Advise the JEA Board of Directors and senior management on the possible new relations with government ministries, departments and agencies resulting from turning JEA into a public shareholding company.

REPORTS

For USAID and JEA, prepare a report in draft form before departing Jordan covering the items identified in the SCOPE OF WORK. A final edited version will be submitted to USAID and JEA within three weeks of the contractor's departure.

PERIOD OF ORDER

The period of this order will be approximately two weeks.

APPENDIX 2

PERSONS INTERVIEWED IN CONNECTION WITH THIS STUDY

JEA PERSONNEL

M. Arafa, Director General
W. Jaouni, Assistant Director General
M. Abu-Alsoud, Assistant to Director General
W. Nabulsi, Head of Production and Operations Division
R. Hamdan, Head of Transmission and Distribution Division
M. Qawasme, Distribution Department
W. Sabri, Substations Department
H. Raei, Overhead Lines Department
M. Jamal, Head of Finance and Administration Division
A. Hamdan, Finance Department
A. Salem, Accounting Department
A. Zu'bi, Administration and Personnel Department
K. Quronfuleh, Procurement and Stores Department
B. Azhari, Internal Audit
A. Zubi, Head of Project Division
M. Azzam, Head of Technical & Corporate Planning Division
J. Makhoul, Corporate Planning Department
F. Karmi, Technical Planning Department
F. Anshasi, Computing and Information Center Department
F. Abu-Sharakh, Studies and Development Department
A. Hiyasat, JEA International

OTHERS

M. Khatib, Ministry of Energy
M. Ismail, Director General, TCC
V. Bhargava, Division Chief, Industry and Energy Operations - Middle East Region, World Bank
M. Kappaz, Partner, K & M Co. (Consulting Engineers)