

**BEARINGPOINT REPORT – RECOMMENDATIONS ON  
COST OF SERVICE/TARIFFS PROCESS  
IRAQ MINISTRY OF ELECTRICITY  
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**FINAL**

**Executive Summary**

After thorough investigations, analyses, and studies of the Cost of Service and Tariff Design process in the Ministry of Electricity since 2003, BearingPoint has identified the strengths and weaknesses within the Ministry, implemented action plans to improve the processes, and makes further recommendations.

**Strengths of the Ministry**

The Iraq Ministry of Electricity was once on the cutting edge of the electricity sector and was the model for the middle east. The Ministry supplied enough power for its own customers' needs and exported power to other countries. The degree of past professionalism and sophistication has been shown by the following strengths:

1. Although the economy and politics have been socialist oriented, the Ministry has had a lot of the basics in place that need to be there to support a competitive market based electricity sector:
  - a. An understanding of cost-based accounting and ratemaking practices
  - b. A set of rules in place that govern the processes of calculation and approval of Cost of Service and Tariffs
  - c. A number of oversight bodies within the government that serve the same purpose as an independent regulator
  - d. An organizational and accounting structure that already had most of the basic functional separation in place that can support the establishment and operation of generation, transmission, and distribution entities as corporate profit centers.
  - e. A Chart of Accounts that identifies most of the requirements of regulatory accounting as found in most western countries.
  - f. A high degree of sophistication in the type of economic and rate studies being performed to analyze customers and their behavior, such as frequency distributions, revenue simulation, and migration of customers.

- g. A strong desire among the employees to catch up to the rest of the region in technical and economic matters in order to regain Iraq's prominence in the region.

### Weaknesses of the Ministry

Two recent wars, an economic embargo, years of social and political isolation from western countries, and dictatorial practices that starved the infrastructure to build palaces and wage war have impaired the Ministry's operations and weakened its performance of Cost of Service and Tariff matters in the following ways:

1. The normal supply of historical and present data and equipment was interrupted through war and looting.
2. Billing and Collection activities were stopped immediately after the war, due to damaged or stolen equipment, vehicles, and unsafe conditions.
3. Strong economic decision-making by experienced and technically qualified employees was replaced by self-serving political appointees.
4. Sharing of data among departments was discouraged as employees sought ways to either gain political advantage or limit personal liability.
5. A dwindling of knowledge and expertise occurred through a reorganization in 2003 that split many of the operating companies in half and reduced the knowledge base in each company.
6. Evolving form driven operations and lesser educated employees replaced written Standard Operating Procedures and technically qualified employees that understood the theory (book keepers replaced accountants).
7. The art of allocating costs to separate rate classes was lost and the Ministry had no understanding of the cost to serve each individual rate class.
8. Cost of Service studies and Tariff Design have been performed on an ad-hoc basis using employees from different departments as a special project.
9. The latest Tariff changes in 2001, still in effect today, reflect Tariffs that were politicized and strayed from sound economic principles of cost-based ratemaking:
  - a. A subsidy in the rate structure that was designed for lower income domestic customers was extended to almost all customers by increasing the first block of the rate structure to 1500 kwh (94% of all domestic kwh usage).

- b. Demand charges were eliminated for industrial customers., thereby eliminating incentives for load management.
  - c. A number of subsidies have crept into the rate, resulting in a Tariff that does not recover true cost and gives improper price signals to customers, leading to unbridled usage, no thought to conservation of natural resources, and soaring demands for power plant construction, especially at a time of serious supply constraints.
  - d. The existence of a “special” class of customers (politically privileged), that were receiving discounts on their electric bills that went as high as 100%.
10. Inadequate budgeting and financial reporting practices that result in a lack of data on a timely basis, limited ability to analyze data for performance improvements, an unwieldy period required to close the financial books for the year, untimely reconciliation of monthly data, and a lack of monitoring and control of expenses compared to the budget.
  11. A lack of coordination between departments on critical issues that go into the budget before its official adoption.
  12. Multiple changes to the Budget after adoption, resulting in an inability to design Tariffs against a moving target.

#### Implementation Plans Put in Place

1. A plan for re-starting Billing and Collection activities was initiated by BearingPoint and adopted by MoE, resulting in a collection rate of customers billed of 24% in the first month, 64% for 2004, and 80% for the first six months of 2005.
2. Informal Cost of Service/Tariffs Training was performed with the Tariff Committee to produce Cost of Service Studies and Tariff Recommendations for the years, 2002, 2004, 2005, and 2006.
3. A Cost of Service and Tariffs model was developed to input budget data, statistical data, and accounting data into the building of a Cost of Service Study that reflects the costs and Tariffs needed by each customer class.
4. Formal Cost of Service/Tariffs Training was conducted at the MoE Training Center for 50 employees from various parts of the Ministry to raise the knowledge level of cost of service principles and to restore the lost art of customer class allocation of expenses.
5. A number of public policy papers were written and distributed to the Ministry on Cost of Service and Ratemaking principles.

6. A study was performed to determine the ability to pay of low income customers.
7. A review was made of the past Migration of Customers and Price Elasticity of Demand Study to estimate the response of customers to the upcoming Tariff increase.
8. A preliminary study was performed at the Minister's request on a proposal to install current limiting devices on all domestic customers' homes to curb consumption.
9. A review was made of data improvements needed to streamline the data collection, recording, and reporting processes in order to provide better data for planning, analysis, monitoring, and measurement. In particular, sub-account reporting was initiated from each of the operating classes and financial reporting from the operating companies to Ministry Headquarters was initiated on a monthly basis for analysis and reconciliation, and an early closing of the books for the year.
10. Following the recommendation of a BearingPoint Financial Advisor, the MoE is forming a Corporate Finance Group to coordinate and direct the planning and analyses that will produce sound financial and statistical information that will impact all phases of corporate finance, including systematic development of budgets. This Group will be trained through the introduction of three corporate models that have been developed in Egypt and are being adapted for use in Iraq.

### Recommendations

To continue the progress being made, the following recommendations are made to further enhance to financial health of the Ministry and to increase the internal capacity of the Moe:

1. Implement all Data Improvements previously recommended and use the newly formed Corporate Finance Group to coordinate the data improvements.
2. Implement a Tariff Increase. The required increase needed is only getting larger the longer it is postponed.
3. Avoid politicizing the Tariff Structure in the approval process. Stay as true to the basis of cost causation as possible.
4. Conduct a Public Relations Campaign to prepare customers for the upcoming Tariff increase.
5. Conduct an in-house employee education campaign about the Tariff increase so that the employees can act as ambassadors of the

- Ministry to their neighbors to explain the changes occurring in the Ministry on their behalf.
6. Formalize a permanent Tariffs Department. Rising costs over the next few years will require an annual adjustment to Tariffs. The process will become more complicated as efforts are initiated to restructure the Ministry and a Regulatory body is created. Regulatory bodies require lots of data and reports to investigate and monitor changes in the administration and pricing of electricity.
  7. The permanent Tariffs Department should include the present members of the Tariff SubCommittee plus additional experienced personnel with operational and technical expertise, such as an engineer and others as needed.
  8. The general duties of the Tariff Department should include:
    - a. Designing the systematic process of gathering, verifying, and analyzing, all data needed to calculate the Cost of Service and Tariffs for all functional units of the Ministry (generation, transmission, and distribution) for transfer pricing and the Retail Tariffs needed for the end-use customers.
    - b. Develop the studies needed to analyze customers, their characteristics, behavior, attitudes, and needs to create pricing policies consistent with sound economic and regulatory principles.
    - c. Prepare the many periodic reports that will be needed by a future regulatory body that will review the Ministry's operations and finances.
    - d. Develop an understanding of utility regulation in order to proactively work with a future regulatory body to set policies and procedures acceptable to both the regulator and the Ministry.
  9. The Tariffs Department should pursue efforts to further develop the concept of individual Tariffs for each generation company, rather than the average pricing that now exists.
  10. Have the Tariffs Department report to the Proper DG in the MoE organization that will understand and support the changes that will spring forth from the Tariffs Department.