

PD-ABR-287
100856



USAID Eastern Europe Regional Energy Efficiency Project

Regulatory Reform and Energy Sector Restructuring Contract

ANNUAL REPORT

April 15, 1998

Prepared for

United States Agency for International Development

Project Office - ENI/EUR

Project No 180-0030

Under Contract

**Regulatory Reform And Energy Sector Restructuring In Central And
Eastern Europe And The Baltics**

Contract No - DHR-C-00-95-00016-00

Bechtel Consulting

22934-001-003



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1 0 Overview

Awarded in March 1995 the aim of the United States Agency for International Development (USAID) sponsored Regulatory Reform and Energy Sector Restructuring in Central and Eastern Europe and the Baltics Project is to provide technical and advisory services, training and research in the areas of a) regulatory reform, b) energy sector restructuring and c) independent power and policy development. The project is being carried out by Bechtel International Inc, together with its team of subcontractors Arthur Andersen LLP, National Economic Research Associates (N/E/R/A) Pierce Atwood Gaffney Cline and Associates, Long, Aldridge and Norman, and International Development Planners. The team was selected by competitive bidding to perform the services of this contract for USAID.

Work on this contract began immediately following award and eleven programs were approved and begun during the first year of the contract. Much of this work continued into the second and third years, building on the accomplishments and lessons learned in the first two years. To continue to meet the overall goals of the project and USAID's strategic objectives the workplans were refined and adjusted throughout the project. This allowed the project to continually meet the dynamic conditions and needs in the countries of Central and Eastern Europe and the Baltics. Brief program descriptions and accomplishments for the last year are highlighted in Table 1.2.

Because of the work under way in key country programs, USAID requested a proposal from the Bechtel team in late 1997 which would cover additional time, level of effort and cost for the overall contract. Based on this proposal and Bechtel's response, the contract was awarded a nine-month extension with an increased level of effort and value in January 1998. With this extension, the project will now conclude on December 31, 1998 instead of the original contract termination date of March 31, 1998. Therefore the final project close-out report will be issued in early 1999 and work will continue through this calendar year.

New programs started during the third year of the project include

- 1) Placement of a resident Advisor to the Latvian Energy Regulatory Council and Ministry of Economy
- 2) Tariff Implementation Assistance to the Lithuanian Pricing Commission and the placement of a resident advisor to the Pricing Commission
- 3) Energy Sector Strategy and Energy Law Development Assistance to Bulgaria
- 4) CEE/NIS Energy Regulatory Conferences and Exchanges

In addition to new programs the project completed programs in several countries. The following programs were completed during the 1997 - 1998 time period:

- 1) Electric Sector Business Unit Performance Management Assistance in Bulgaria
- 2) Regulatory Organizational Development in the Czech Republic
- 3) Regulatory Advice and Assistance to the Hungarian Energy Office
- 4) Downstream Petroleum Sector Restructuring in Romania
- 5) Technical Assistance to the Romanian National Agency for Mineral Resources

1.1 Project Strategic Objectives

The primary goal of the Eastern European Regional Energy Efficiency Project is to develop a more economically sound and environmentally sustainable energy sector. The project is also working within the energy sector to increase the transfer of state-owned assets to the private sector and accelerate the development and growth of private enterprises. These objectives will in turn, foster the emergence of a competitive, market-oriented economy in which the majority of the economic resources are privately owned and managed. A number of supporting targets are also part of the greater objective and include:

- Development of policy and institutional framework for more efficient and rational energy production, use private investment in energy companies, and improved technologies
- Strengthening intra-regional cooperation in energy and stimulating the development of new energy supply arrangements that integrate Eastern Europe with Western Europe and international markets
- Enhancement of the coordination of assistance among the European Community, the World Bank and the International Energy Agency to avoid duplication of efforts and to leverage limited US resources
- Assistance in establishing a business environment which supports private sector growth
- Promoting sustainable use of natural resources
- Helping to put into place laws and legal institutions which support democratic and market-oriented values

During the project (1995 - 1998), the project team worked closely with USAID in the development and implementation of the strategic objectives for the programs, develop measurable targets and indicators and helped the Agency monitor the results of the work being done in the region.

Table 1.1 shows the countries in which we are working and their key strategic objectives

Table 1.1 Country/Strategic Objective Matrix

Country //ENI Objective	1.3 Accelerated development and growth of private enterprises	1.5 A more economically sound and environmentally sustainable energy system
Bulgaria	IR 1.3.3 Key laws policies and regulations foster competition and private sector growth	
Hungary		IR 1.1 & 1.2 Effective regulatory body in place, Improved efficiency of production and delivery
Latvia		IR 1.5.1 Promulgation of energy standards, policies and legislation that supports restructuring and an energy efficient commercial market
Lithuania	IR 1.3.1.2 Energy Prices set to reflect actual economic costs	
Poland	IR 2 Improved long term provision of energy services supports a market economy	
Regional		IR 1.5.5 Expanded Regional and International Energy Trade and Integration of Energy Systems with Western Europe
Romania		IR 3 Improved profit oriented investment

1.2 Workplan and Project Tasks

The third year work plan and proposed activities for the project were developed during the course of the second year of the project by the Project team and Jacqueline De Rosa Contracting Officer's Technical Representative (COTR) USAID. The following is a summary of the activities proposed in the third year work plan and indication of their subsequent approval/status.

Program Title

Status

Energy Sector Strategy and Energy Law Development Assistance to Bulgaria

Approved and in progress

Tariff Implementation Plan for the Lithuanian, Pricing Commission including a resident advisor to the Commission Approved and in progress

Regulatory and Tariff Methodology Assistance to the Latvia Energy Regulatory Council and the Government of Latvia including the placement of a resident advisor to the ERC and GoL Approved and in progress

CENTREL Regional Regulatory Exchanges Workshop Approved and in progress

Phase II Implementation of the Study of Long-Term Options for Restructuring the Power Sector in Romania Revised SoW under review

Table 1 presents a brief summary of the accomplishments of each major task undertaken in the program during the first, second and third years of the contract and the significant accomplishments for each program to date

1 4 Table 1 2 - Summary of Tasks and Accomplishments

Task	Accomplishments To Date	Significant Related Actions
Energy Law Development Assistance to the Bulgarian Committee of Energy	<ul style="list-style-type: none"> • Reviewed and drafted recommendations for changes to the draft Energy Law 	<ul style="list-style-type: none"> • A draft Energy Law is under review by the Bulgarian Parliament
Electricity and Coal Prices and Tariffs Study for Bosnia-Herzegovina	<ul style="list-style-type: none"> • Conducted research and data gathering work in early 1997 • Completed the final report in July 1997 	<ul style="list-style-type: none"> • Review of report and its recommendations is still underway
Regulatory Advice and Assistance to the Hungarian Energy Office	<ul style="list-style-type: none"> • Initial Operational Code approved • Tender guidelines circulated • Assistance in privatization tenders licenses, and legal issues • Competition Study 	<ul style="list-style-type: none"> • Competitive tenders issued for 500 MW +/- 200 MW of new capacity • Licenses are issued or transferred to new owners by the HEO • GoH EU Harmonization committee makes recommendations
Tariff Methodology and Legal Assistance to the Latvian Energy Regulatory Council (ERC)	<ul style="list-style-type: none"> • Final methodology report issued to USAID and the ERC in March 1997 • Placement of a resident advisor to work with the ERC and GoL 	<ul style="list-style-type: none"> • The Government of Latvia is preparing for the privatization of its energy sector assets • The ERC used the methodology developed under the report to develop their tariffs

<p>Pricing Methodology Assistance to the Lithuanian Pricing Commission & Technical Assistance on Accounts Receivable at the Lithuanian Power Company (LPC)</p>	<ul style="list-style-type: none"> • Assisted the Lithuanian Energy Institute in the development of heat, gas and electricity tariff methodologies • Issued reports and procedures on correcting the Account Receivable problems at the LPC • Provided input on the database design for the Accounts Receivable function and training on Oracle databases 	<ul style="list-style-type: none"> • The methodologies were approved by the GoL in late 1996 • The Pricing Commission was formally established by Presidential Decree in December 1996 • Tariffs recommended by the NCC approved by the Government in 1997
<p>Regulatory Organizational Development Training and Advice to the Government of Poland</p>	<ul style="list-style-type: none"> • Continued advice to the Ministry of Industry and Trade and the Sejm on secondary legislation and implementation of the Energy Law • Assisted the ERO in the development of their organization and staffing plan 	<ul style="list-style-type: none"> • The Energy Law was signed into law in May 1997 and took effect in June 1997 • The Energy Regulatory Office (ERO) officially opened in December 1997
<p>Privatization Program for the Polish Distribution Companies</p>	<ul style="list-style-type: none"> • Privatization Conference held March 3, 1998 • Draft Privatization Manual Issued • Restructuring Seminar, November 1997 	<ul style="list-style-type: none"> • A new Government was elected in the fall of 1997, so a Privatization approach is still undecided
<p>Downstream Petroleum Sector Restructuring in Romania</p>	<ul style="list-style-type: none"> • Rationalization and Critical Investment Summary Report - Volume I and Volume II were issued to USAID, The World Bank and the Romanian Counterpart team in 1997 	<ul style="list-style-type: none"> • 3 refineries to be rationalized and one to be sold (Petromedia) as part of the Government's rationalization plan
<p>Study of Long-Term Options for Restructuring the Power Sector in Romania</p>	<ul style="list-style-type: none"> • Phase I Options Report issued April 1, 1996 • Phase I Extension Supplemental Analysis of Issues Paper issued in March 1997 • Target Structure Proposal paper issued in 	<ul style="list-style-type: none"> • RENEL restructuring plan drafted and submitted to Parliament for approval in early 1997

<p>Technical Assistance to the Romanian National Agency for Mineral Resources</p>	<ul style="list-style-type: none"> • Petroleum regulation specialist, Bechtel, worked with NAMR staff on the development of technical regulations for the operation under the approved regulatory framework • Procured and installed the equipment for the National Geological Database 	<ul style="list-style-type: none"> • The Romanian Government raised excise sale taxes on gasoline and diesel
<p>CENTREL Regional Regulatory Assistance Program</p>	<ul style="list-style-type: none"> • Preliminary discussion paper on CENTREL Regional Electric Regulatory Issues issued September 1997 • Two CENTREL Regional Roundtable Forums were held for ministry/regulatory and utility representatives in Warsaw in September 1997 (organized by Electrotek) and in Prague in January 1998 (organized by Bechtel) • Planning is underway for third CENTREL Regional Roundtable Forum and third Regulators meeting in Bratislava in May 1998 	<ul style="list-style-type: none"> • Poland, Czech Republic, and Hungary included in first group of EU accession countries Slovakia in second • EU Electricity Directive issued, providing strong incentives for power sector liberalization • Success of Hungarian power sector privatization provides positive example to other CENTREL countries • CENTREL Council appointed working group to investigate electricity market harmonization

2 0 Bosnia-Herzegovina

2 1 Program Description and Sector Overview

Bosnia and Herzegovina is divided into two entities - the Federation of Bosnia and Herzegovina (referred to as the Federation) and Republika Srpska (RS). The Ministry of Energy, Mining and Industry administers the power sector for the Federation. This function is performed by the Ministry of Energy in RS.

All coal and electricity enterprises are state-owned. The Federation is served by Elektroprivreda Bosnia and Herzegovina (EPBiH) and by Elektroprivreda Hrvatske Zajednice Herceg-Bosne (EP Mostar). RS is served by Elektroprivreda Republike Srpske (ERS). EPBiH was also the name of the utility that supplied electricity to all of Bosnia and Herzegovina before the war.

EP Mostar is supplied entirely by hydroelectricity, while EPBiH and ERS are mixed hydro-thermal systems. Each of the latter have two thermal power plants supplied by domestic brown coal and/or lignite. The ERS thermal plants have dedicated mines, power plant and mine operations are integrated. Because of the integrated operation, with no formal transactions between mines and plants, there is no direct economic regulation of coal or lignite prices in the RS. Separate mining enterprises supply EPBiH plants with coal and lignite with prices regulated by the Ministry of Energy, Mining and Industry.

The Ministry of Energy, Mining and Industry maintains retail electricity pricing jurisdiction in the Federation, however, it appears that in practice, EP Mostar operates under a separate regulatory structure. The Ministry of Energy of RS controls retail electricity pricing in RS.

The objective of the Bechtel performed study was to support the energy price reform objectives of the Memorandum of Understanding between the Government of the United States and the Government of the Federation of Bosnia-Herzegovina. This was in association with the rehabilitation of Units #5 and #6 of the Kakanj Thermal Plant and upgrading of the Vrtiste Surface Coal Mine. Specifically the objectives were to

- Provide support for the adjustment of the coal and electricity prices to reflect their true cost of production
- Provide support for the deregulation of coal prices and the regulation of electricity prices through a transparent decision making process protecting the interests of all consumers of electricity, consistent with social stability and environmental protection

The technical assistance covered the review of the current level of electricity and coal prices, the current levels of production costs of electricity and coal, the relationship between coal and electricity prices, the methods used to establish electricity prices for the various customer groups and the institutional processes used to adjust electricity tariffs and coal prices.

2.2 Program Status

The Bechtel team made two trips to Bosnia and Herzegovina (B&H) during 1997 to collect data and make site visits, and later to discuss the draft report with Ministries and operating enterprises. Team members visited all four major coal power plants and coal mines supplying power plants: Tuzla power plant and Tuzla mines, Kakanj power plant and Middle Bosnia mines, Ugljevik power plant and a dedicated coal mine, and Gacko power plant and a dedicated coal mine. Tuzla and Kakanj are located in the Federation of B&H while Ugljevik and Gacko are located in Republika Srpska, Serbian entity of B&H.

The team members also had a number of meetings with local utilities, coal mining companies, the Mining Institute in Tuzla, and with the Ministries for Industry, Energy and Mining in both entities. The working group to monitor the study was formed by the Ministry in the Federation of B&H.

The team members also had a number of meetings with international agencies, banks and organizations to collect and exchange information, and to facilitate coordination among several ongoing or planned studies in the energy sector. The coordination was organized with the representatives from EBRD, World Bank, International Management Group (IMG), Overseas Development Agency (ODA) - UK and Price Waterhouse.

The work on the study was finalized and the final report was submitted in September 1997.

2.3 Results to Date

The conclusions drawn from the study were:

- The cost of coal in Bosnia and Herzegovina is high and, while it may be a cost-effective resource for domestic power production, it is not competitive on the world market.
- The regulated coal price in the Federation is inadequate to cover the costs and generate reasonable profit for any of the Federation mines evaluated.
- The incremental investment and operating cost from all rehabilitation projects considered is between 8 and 13 Pf/kWh. It is not likely that long-term arrangements for power exports can be made if power is priced at this level.
- If depreciation and profit on existing assets are considered in addition to incremental cost, the total cost of electricity from the proposed rehabilitation projects is from 10 to 16 Pf/kWh.
- Retail tariffs are inadequate for EPBiH and ERS to support the cost of electricity generated from these rehabilitation projects.
- In the long term, the use of imported natural gas and coal should be given consideration in power resource development strategy and rehabilitation options should be considered on the same basis as new plant options.

2.4 Key Issues

This task was designed to constitute the first step of price reform assistance. Additional steps for possible assistance are to

- Facilitate the creation of a temporary inter-ministerial Tariff Setting Committee that would include ministries concerned with energy, economic and finance matters. This committee would have the authority to set electricity tariffs and settle payment disputes between the national electricity company and coal enterprises, until such a time as a permanent public utility regulatory authority is established and the price of coal is decontrolled and set by market forces.
- Provide the services of tariff specialists who can advise the Tariff Setting Committee on cost allocation methods, transfer pricing, tariff setting, contractual methods between electricity companies and coal suppliers and their customers and developing a schedule for adjusting electricity tariffs and freeing coal prices to bring both in line with their production costs, giving due consideration to social stability in the country.
- Monitor electricity and coal mine companies' receipts to identify the effect of increased revenues to these entities.
- Draft legislation to create an independent regulatory body to replace the Tariff Setting Committee.

2.5 Final Year Activities

No additional activities planned during the final year.

3 0 Bulgaria

3 1 Program Description and Sector Overview

Our project's ability to work in Bulgaria in 1997-98 was adversely affected by the sweeping changes that took place within the Bulgarian Government and the Bulgarian Committee of Energy ("CoE"). In February 1997, Mrs. Ivanka Dilovska, Deputy Minister, with whom our project had been working closely and effectively, left the CoE. Supervision of the power sector passed to Georgi Stoilov in his newly appointed capacity of Minister of Energy and Energy Resources, but Mr. Stoilov was replaced following a general election in April. Similar changes took place at the National Electric Company ("NEK"), the most recent being a change of senior management in November 1997. At present, supervision of the energy sector is vested with the CoE under the chairmanship of Ivan Shiliashki.

In the spring of 1997, we attempted to implement a program of technical assistance that would support the CoE's efforts to commercialize operations at the Maritza East thermal power plant complex. This program was initially suggested by Mrs. Dilovska prior to her departure from the CoE and was approved by Mr. Stoilov during his brief term in office. In the wake of the general election and the further restructuring of the Ministry/CoE, this proposed project was never undertaken. Similarly, we proposed a continuation of the tariff work that had begun during Mrs. Dilovska's term in office, but there was no support for this activity either.

No project activities were undertaken in Bulgaria between April and October 1997. In October, our project was asked by the CoE to provide assistance with the development of energy legislation. The CoE and its various predecessors had been working on an energy law for many months, but there was not yet a draft that could be presented to Parliament. During the last months of 1997, our project worked closely with the CoE to develop a draft energy law that would reflect the basic principle that market forces, rather than governmental dictate, should guide the development of Bulgaria's power sector. A key element of that development is the establishment of an independent regulatory authority.

In addition to working directly with the CoE in the preparation of this legislation, Bechtel Consulting made presentations to the Parliamentary Commission on Energy and Energy Resources, at a seminar hosted by the Black Sea Regional Energy Center and in private meetings with various deputy ministers and key staff members. These presentations outlined general principles for reform of the energy sector that would meaningfully assist the Bulgarian government in attracting investment for needed refurbishment and new construction.

Although many throughout the Bulgarian government saw the merits of our approach as consistent with Bulgaria's overall objective of restructuring the power sector to achieve market-oriented development, the management of the CoE took a more protectionist stance. Adamantly opposed to the creation of an independent regulatory authority – or to any mechanism that would weaken the CoE's control over sectoral transactions – the CoE developed its own legislation in January 1998. This legislation, while focusing upon meeting the minimum standards of the EU, falls far short of encouraging free-market operations within the context of independent regulatory oversight. Bechtel

Consulting was asked to comment upon the proposed legislation and did so with the view that the law must be re-written to mandate meaningful reform by explicitly separating utility operations from governmental control. CoE dismissed these comments.

Subsequently, USAID adopted the strategy of working with the international donor community – the World Bank, the International Monetary Fund, the European Bank for Reconstruction and Development – to encourage the Bulgarian government that needed reforms, such as those which our advice on an energy law reflected, must be implemented. Further work in Bulgaria is in large part dependent upon the success of that strategy.

3.2 Program Status

Our initial support of the CoE's development of energy legislation was concluded in March 1998. CoE's draft legislation is in the process of being presented to the Bulgarian Parliament and no further work in this area is expected until there is a willingness on the CoE's part to make changes to the law that are directed toward market-oriented reforms.

While USAID's strategy with respect to further work in Bulgaria is being discussed, we hope to maintain our contacts in Bulgaria, to assess the possibilities of providing assistance to Bulgaria's National Electric Company and to coordinate with USEA and other contractors and, as appropriate, assist with their tasks in the region.

3.3 Results to Date

The CoE was presented with draft energy legislation and constructive criticism about the kind of legislation that is needed to effect essential reforms and attract foreign investment.

3.4 Key Issues

The key issue in implementing meaningful sectoral reform in Bulgaria is whether or not the government, through the CoE, can maintain its absolute control over utility operations. Our assessment of CoE's management is that this issue, which creates an impasse for future assistance, is based upon a sound understanding of the basis for reform and a decision to reject reform in favor of retaining the command-and-control system.

Bulgaria is in need of funds for rehabilitation of existing generation and other facilities; various international investors have made overtures to the CoE to provide undisclosed funds in exchange for undisclosed returns on those investments. It is unclear that these private overtures reflect sincere business arrangements or that the results will benefit the development of the power sector. Our position is that such transactions must be more transparent in nature in order to foster the competitive environment in which the sector can develop to the profit of the Bulgarian economy as well as select individuals.

Bulgaria continues to use the issue of closing Kozolduy Units 1-4 as a bargaining chip in broader negotiations for support of the power and other sectors. Kozolduy complex produces approximately 45 per cent of Bulgaria's power and cannot be shut down without the guarantee of reliable

alternatives The development of competitive generation companies will ensure that there are reliable, commercially viable and environmentally responsible alternatives to those elements of the nuclear complex at Kozolduy that should be closed This option is preferable to selective refurbishment of existing plants in the absence of a long-term strategy for energy development in Bulgaria

Over the longer-term Bulgaria will be a zone of receipt and transit for additional volumes of natural gas from various sources throughout the former Soviet Union Although Bulgaria's so-called "strategic" vision is short-sighted and focused upon near-term plant rehabilitation and labor questions with respect to Bulgaria's lignite mines there is little apparent attention paid to the role that natural gas may play in the long-term future of Bulgaria's energy supply, including power generation

3.5 Final Year Activities

The need for a continuation of activities in Bulgaria is currently a subject of discussion within USAID Options for future work range from discontinuation of activities through working directly for NEK on a pre-privatization oriented task to assisting the CoE in their implementation of a meaningful reform strategy

4 0 The Czech Republic

4 1 Project Description and Sector Overview

The Regulatory Reform Assistance to the Czech Republic provided assistance in a two-step program. The Bechtel team conducted a Seminar on regulation in the energy sector in October 1995. The purpose of this effort was to provide sessions covering the legal and regulatory framework for the energy sector in the United States and the potential for similar systems in the Czech Republic. Experts in energy law, regulation, utility pricing, revenue requirements, project financing and policy framework in the United States traveled to Prague for the Seminar from October 10 -12, 1995. The Seminar, which was attended by over 80 Czech Ministry officials, staff, and energy industry representatives and was highly praised as informative and productive. The Seminar informed representatives of the Czech energy sector of the principles and experience of regulation in the United States, with specific advice regarding effective regulatory structures and procedures.

Following this Seminar, the Bechtel team developed a terms of reference for additional assistance to the Czech Ministry in this area. This assistance was designed to build on the Seminar and provide assistance to the Czech Ministry of Industry and Trade (MoIT) in the areas of regulatory organizational development, training, tariff setting and revenue requirements, and cost analysis, training, legislative and legal advice, and regulatory experience information exchange via a study tour to the United States to meet with US regulators and industry experts.

The overall goals of the USAID regulatory assistance in the area of energy regulatory reform and restructuring in the Czech Republic were to (1) structure a capability to implement the country's basic energy law, Act 222 and, more generally, to structure a sound regulatory agency for the energy sector, and (2) advance market development and privatization of the energy industry.

4 2 Program Status

The Czech assistance program ended in June 1997 with the closing of the USAID Mission in Prague and the graduation of the Czech Republic from USAID assistance in September 1997. The Czech Republic continued to be included in regional programs, such as those scheduled for the CENTREL countries (Czech Republic, Hungary, Poland and Slovakia) in 1997 and 1998.

4 3 Results to Date

The Ministry of Industry and Trade ("MoIT") sought and was provided assistance in drafting proposed amendments to Act 222 to facilitate regulatory development, and clarify the scope of regulation and advance competition in the energy sector. The project team lawyers worked with local counterpart lawyers and Ministry personnel to resolve key questions and issues such as the authorization and scope of regulation, generally, marketer and broker participation in the sector, import and export regulation, and related issues. The Ministry of Industry and Trade reviewed the drafts and submitted their recommended changes to Act 222, but no progress has been made to date.

4.4 Key Issues

The Czech Republic has been slow and cautious in moving to privatize its energy sector or to make other changes in the status quo, post Act 222. The success of its economy in other areas has reduced the perception in the Government of the immediate need for energy regulatory reform or restructuring. The Ministry of Industry and Trade (MoIT) understands that Act 222 needs clarification and amendments to provide a solid basis for secondary legislation and implementing regulation and to be brought into harmony with the European Union (EU) directives. However in 1997 the Czech economy took a decided downturn. CEZ, the once most-profitable company in the Czech Republic is suffering due to slow rise in electricity prices. Perhaps this change will incite some moves toward reform during the next few years.

4.5 Final Year Activities

The project wrapped up its bilateral assistance in June 1997. No additional work will be done under this contract. The Czech Republic will be included in the regional programs.

5 0 Hungary

5 1 Program Description and Sector Overview

The purpose of the Regulatory Reform Assistance to the Hungarian Energy Office program is to advise the new Hungarian Energy Office (HEO) in the development of regulatory methodologies and processes and in establishing an organizational structure to carry out the responsibilities of this authority as provided in the Electric Energy Law established in 1994 (Act XLVIII of 1994, hereafter called the "Law")

Technical assistance was provided to the HEO to assist in the establishment of a viable regulatory body to license and regulate the production transmission and distribution of electric energy and to assure that customer demands are efficiently met at minimum cost With USAID's consent, the Bechtel team also procured shipped and installed basic computer hardware and software at the HEO and provided information management support in conjunction with the procurement To accomplish the objectives outlined above, this program, which concluded on 31 March 1998, included the following tasks

- 1) Support the development of an Operational Code to facilitate integration of the Hungarian system into the CENTREL and UCPTE grids
- 2) Advise the HEO on the development of processes for new capacity tendering and power plant licensing
- 3) Provide legal advice and support to the HEO
- 4) Conduct a Tariff Workshop
- 5) Advise the HEO on the development of a management information system and provide selected hardware and software
- 6) Public Hearing Process According to the law, the Hungarian Energy Office is mandated to conduct a variety of consumer protection activities The Bechtel team advised on a new Public Hearing decree and process which was proposed to the Government in early 1996
- 7) Acquaint the HEO with regulatory methods and procedures in the USA
- 8) Standards of Performance Guidelines The Hungarian Energy Office has the responsibility of developing the guidelines to establish the technical standards of electricity supply to ensure the customer is properly served The regulator therefore, needs to establish a method for collecting and evaluating customer data on the quality of electricity supplied This part of the program is providing advice to the HEO on developing business conduct rules to ensure customer satisfaction with reliability of

electricity service and for establishing standards of performance and measurement techniques to assess performance against these standards

- 9) Enhance the HEO's ability to review and approve demand and capacity forecasts
- 10) Acquaint the HEO with methodologies and procedures of power sector operation management and regulation as practiced throughout the world
- 11) Assist the HEO with its program of institutional development to ensure sustainability of its operations. And,
- 12) Advise the HEO on issues of Competition and Restructuring such that its management could exercise its influence upon the EU harmonization effort and use that work as a vehicle for Hungary's adoption of market-oriented reforms

5.2 Program Status

All project activities were concluded on or before 18 February 1998. The activities undertaken during the year 1997-98 in support of each task are as follows:

1) OPERATIONAL CODE

Objective

Support the HEO in its efforts to review and comment on operational regulations and codes, as they are being developed in order to facilitate integration of the Hungarian system into the CENTREL and UCPTÉ grids.

Accomplishments in 1997-98

- Preparation of second code revision (Advice on this revision was provided through the conclusion of project activities on 18 February 1998)

2) ADVICE ON PROCESS FOR NEW CAPACITY TENDERING/POWER PLANT LICENSING

Objective

Support the development of guidelines and procedures for new capacity tendering and for granting and approving licenses for new power generating facilities.

Accomplishments in 1997-98

- HEO adoption of model guidelines for new capacity, self-use and direct sales
- HEO adoption of process for implementing licensee ownership transfer
- HEO adoption of guidelines to limit monopoly ownership
- MVM issued competitive tenders for new capacity

3) PROVIDE LEGAL ADVICE AND SUPPORT TO HEO

Throughout the project, Pierce Atwood provided legal advisory services, integral to Tasks 2 and 12 along with other aspects of the project, to the HEO on an ad hoc basis. In addition Dr. Erika Nemeth, a Hungarian attorney, worked on-site with the HEO on a regular basis, under terms of a sub-contract with Pierce Atwood.

4) TARIFF WORKSHOP (Task completed in 1995 - no activities during the reporting period)

Objective

Provide information to HEO management and senior staff on tariff methodologies and strategies.

5) INFORMATION MANAGEMENT ADVICE

Objective

Assist the HEO in performing its new regulatory function by providing needed hardware and software as well as advice on the development of a management information system.

Accomplishments in 1997-98

- Purchased and installed infrastructure for office automation (completed in 1996)
- Provided basic training to network administrators - i.e. HEO's energy information department
- Established a strategy for improving management information as it applies to the HEO regulatory functions
- Conducted an eight-day information management workshop in Budapest
- Completed the analysis of the HEO licensing workflows and information requirements
- Installed and configured the California Energy Commission's Compliance Tracking System software
- Implemented a high priority software acquisition program to provide a database management system

6) PUBLIC HEARING PROCESS (Task completed in 1996, no activities during the reporting period)

Objective

Draft a decree on the public hearing process that could be proposed by HEO to the Hungarian Government.

7) MEETINGS WITH US REGULATORY AGENCIES

Objective

Acquaint the HEO with regulatory methods and procedures in the USA such that they may adapt applicable features thereof to their work within Hungary.

Accomplishments in 1997-98

- Meeting with Massachusetts Department of Energy (January 1998)
- Meeting with Oregon Public Utilities Commission (early 1997)

9) DEMAND AND CAPACITY FORECAST REQUIREMENTS

Objective

To enhance the HEO's ability to review and approve demand and capacity forecasts that will be developed by supply companies

Accomplishments in 1997-98

- Concluded a pilot study with Demasz, estimated statistically valid relationships to project future demand using a hybrid technique relying on historical data on consumption
- Study tour to Massachusetts (January 1998) to visit the New England Electric Pool also various officers of the Massachusetts Department of Energy

10) INTERNATIONAL WORKSHOPS AND CONFERENCES

Objectives

Acquaint the HEO with methodologies and procedures of power sector operation management and regulation as practiced throughout the world such that they may adapt applicable features thereof to their work within the Hungary power sector

Accomplishments in 1997-98

- UNIPEDE-Congress, Montreal, Switzerland (May 97)

11) INSTITUTIONAL DEVELOPMENT

Objectives

To enhance the regulatory competence of the HEO by adding qualified personnel commensurate with the HEO's increasing responsibilities and work load

Accomplishments

In the course of the USAID assistance the HEO added competent legal staff, including those who were trained by and who worked with US attorneys under the program. Conversations were held with senior HEO staff regarding further staff recruitment efforts, and it is felt that the comparatively low salaries of Government civil service employees most hampers this effort. In that regard, many conversations during the assistance program with Ministry and Parliament emphasized the need for increased and independent HEO funding.

12) COMPETITIVE MODEL & RESTRUCTURING STUDY

Objective

Assist the HEO in exercising its influence upon the EU harmonization effort such that this work can become a broader vehicle for Hungary's adoption of market-oriented reforms and full integration into the European power grids

Accomplishments in 1997-98

- Study papers on (a) ownership issues, (b) trading arrangements, (c) regulatory issues (d) financial issues, (e) transitional issues and (f) operational issues were prepared and have been incorporated by reference and in part within HEO papers and presentations

5.3 Results to Date

Prior to the adoption of an Electricity Act – and, therefore, the establishment of the HEO – the Hungarian government was unsuccessful in its attempt at selling some of its electricity assets in 1993. After the establishment of the HEO another attempt at privatization was considerably more successful. This round of privatization which occurred during the fall of 1995 resulted in the sale of 18.8 percent of MOL – Hungary's integrated oil and natural gas company – to international investors for US\$153-million additionally, five regional gas distribution companies were sold for US\$461-million. In the electricity sector, US\$1.3-billion was generated by the sale of minority interests in six electricity distribution companies and two power plants. This success reflected not only an increasing market interest in the Hungarian energy sector, but an interest that is encouraged by the reassuring presence of the HEO and the stabilizing influence of its regulatory functions.

Competition in market entry for the supply of new generating capacity can be accomplished in one of three ways under the current legal framework. The first approach is through competitive bidding for the supply of new or refurbished capacity through the Establishment Plan process required by the Electricity Act. One of the ways by which USAID project team has assisted this process was in assisting HEO with the development of a competitive bidding process for the supply of new power generation capacity. An important outcome of this assistance was that in October 1997 the first round of a tender by MVM using HEO's guidelines, produced 89 bids from 30 bidders for 2000 MW of new capacity (this capacity was subsequently reduced in the second round of bidding to 500 MW +/- 200 MW).

Building upon the foundation of this success, the next steps quite clearly include proactive measures of environmental protection. Hungary is eager to join the European Community and the HEO, among other agencies and commissions of the Hungarian Government, is carefully studying the means by which Hungarian business and environmental practices must be harmonized with those employed by their neighbors in the west. In that proactive analysis, we are assured that environmental protection is an essential part of the broad political and socio-economic changes that have brought Hungary to the forefront of restructuring in Central Europe.

The HEO has been active in helping the Government of Hungary understand what it must do to meet EU requirements and understanding its options for change in the future. The HEO, despite the lack of legal and formal power, has proactively taken an aggressive position in advancing the public interest and influencing the government. Currently, for example, the content of long-term purchase and sale contracts among generators, distributors and the MVM are being reviewed. The HEO has properly shown great concern about locking into long-term deals without any escape. Our USAID-funded work has advised the HEO on approaches to risk of change in Purchase Power Agreements and concluded work in February by providing further advice regarding the long-term contracts being entered-into at this time.

Perhaps the Government of Hungary's greatest success has been in establishing a fair, independent and knowledgeable licensing department in the HEO. Since its inception, HEO has issued many licenses of high sophistication and all pursuant to the letter of the law. The Bechtel/USAID team has worked closely with the HEO in this area, giving detailed advice; other countries could learn a great deal by examining the content of these issued licenses. Some of this work was linked with existing and new capacity issues, in that licensing is a necessary component to entry for a new investor. For example, we worked with the HEO on facilitating the successful resolution of many complex and legal issues surrounding the Tenneco investment at Dunafer.

Lastly, an area in which the HEO is probably more advanced than any other Central or Eastern European nation is what can be called "process." The HEO is higher on the learning curve as to how a good regulator should go about its business. It has made this progress largely because of the creativity, intelligence and determination of its leaders. Throughout its experiences in having to implement the law and regulation, the HEO has learned important lessons from which other countries, just embarking on their development of a similar system could take with them. This sharing of lessons learned certainly is a step that will support the achievement of USAID's objectives. The Hungarian energy sector is moving ahead and assuming its responsibilities for supporting the prospering of a market-based economy. Private ownership is encouraged by law and institutional action in ways that will not be reversed. Energy efficiency and environmental sustainability are recognized as achievable targets and priorities for energy sector participants.

5.4 Key Issues

The HEO is without a doubt the most competent and respected energy regulatory body in Central and Eastern Europe. However, it is still not independent, and is subject to both political and bureaucratic pressures from the Ministry to whom it reports. Its funding is not reliable, as it must depend on year to year budget approval by the Ministry. And there is a growing need to recruit and train young, new staff who can be groomed to rise through its ranks to leadership positions when the current leaders retire or move on.

Therefore we would like to conclude this program of assistance with the following recommendations

- The HEO should be granted the independence envisioned in its enabling legislation. Its decisions including electricity tariffs should be given the force of Government regulation reviewed by the courts and Parliament rather than by a government Ministry. Its President should serve for a set term, and be removed only for specified causes.
- Funding the HEO should be provided by a reliable source independent of the national budget, such as a small added fee to energy rates or fees paid annually by licensed energy enterprises. The increased and reliable funding should be dedicated to operations of the HEO and to a concerted recruitment effort, which will need to be coupled with the authority to pay its staff salaries above the civil service rates.

HEO's achievements, reflecting its capabilities to analyze issues and regulate judiciously and effectively, are generally acknowledged and the HEO has established a commendable international reputation as a responsible arbiter of the public interest. With the implementation of these recommendations HEO will become an even stronger example to the rest of the economies in transition that sustainable growth in the energy sector is ensured by the pro-active involvement of a competent, independent and professional energy regulator.

5.5 Final Year Activities

Work under this program was completed in February 1998 with the conclusion of the February 18, 1998 close-out meeting. As with the Czech Republic Hungary will be a key player in the regional work being done under this project and will stay involved on that basis.

6 0 Latvia

6 1 Program Description and Sector Overview

The Energy Regulatory Council (ERC) was formed in July 1996 to regulate electricity and natural gas. They also regulate district-heating prices in Riga. Outside Riga they have responsibility for determining the methodology for setting district-heating prices, which are the responsibility of municipalities. This project will provide the ERC assistance in energy facility licensing issues and assistance in the development of tariff methodologies for electricity, gas and heat.

The overall goals of USAID regulatory assistance in the area of energy regulatory reform and restructuring in Latvia are to 1) aid in the development of an energy sector in Latvia that is capable of providing reliable, fair and economically priced electric, gas and heat energy service so to 2) effectively privatize the sector.

Latvia has one vertically integrated electricity monopoly, Latvenergo, and one vertically integrated gas company, Latvijas Gaze. Plans are underway to privatize both entities.

Given this structure, strong regulatory oversight is required. Workplan objectives concentrate on (1) advising the newly formed Energy Regulation Council, its Chairman and the Energy Department of the Ministry of Economy in the development of regulatory methodologies and processes as prescribed in the Law on Regulation of Entrepreneurship Activities in Energy Industries passed in September 1995, (2) developing tariffs and licenses, and (3) promote commercialization and privatization of the state-owned enterprise. Specific assistance focuses on the development of primary and supplemental legislative acts and regulations for the scope of regulation, tariffs and pricing, review of existing and proposed tariff methodologies for gas, development of methodologies for setting electricity prices and tariffs, development of supplemental legislative acts and regulations for licensing of energy enterprises, and training Energy Regulatory Council staff.

6 2 Program Status

Under the current Workplan, substantial, concrete assistance has been delivered to the Energy Regulation Council (ERC) on tariff methodologies for electricity and gas and with respect to related tariff structure and data identification issues. This part of the work was essentially completed in the fall of 1997. Additional follow-up and short-term questions were answered during the last few months.

The legal work on the Umbrella Energy law was intermittent during the year, with the team responding to questions and needs put forward by the Ministry of Economy and their advisors.

In February Bechtel hired a resident advisor to work with the ERC on the implementation of tariffs, licensing and other issues surrounding the pending privatization of Latvia's energy assets.

6.3 Results to Date

The second draft of an Energy Pricing Methodology report had been completed at the time of the last annual report. That methodology provided for dividing all energy costs into those which are controlled by the enterprises (primarily labor, material and investment-related costs) and those which are not (primarily fuel and imported electricity). The first category is to regulate under a revenue cap and the latter is to be passed through to consumers.

The final report was delivered in June 1997 without significant changes from the draft. We conducted additional staff training at that time. A leadership change at ERC in May and plans to create a "super-regulatory" body that included telecommunications and transport was accompanied by delayed decisions in the later part of 1997. However, the methodology has been accepted in principle by the ERC and they have begun to implement the methodology in actual tariff recommendations. Assistance has been requested to achieve full implementation, as discussed more fully in Section 5 below.

A search was conducted for a Resident Advisor to the ERC. Candidates were interviewed and evaluated. Dr. Charles Zimmerman, an economist with a background in tariff analysis in NIS countries, was selected for this position. He was introduced to the ERC in February 1998 and began work in March.

6.4 Key Issues

Communications was identified as the key difficulty during the year. Language and the introduction of new technical terms combined to make it difficult to provide an acceptable translation of the final report. While this problem is common to most countries covered by this contract, it is judged to be more severe in Latvia. It is clear that future work will require significant support for translation and interpretation combined with training in fundamental economics for ERC staff. These factors have been factored into plans for future work. Our Resident Advisor's prior residence in Riga, his understanding of the culture and of rudimentary Latvian should also be helpful in addressing this issue.

6.5 Final Year Activities

An outline of additional activities to be conducted by, or in support of, the Resident Advisor has agreed upon. The additional activities are:

Task 1--Tariffs

The task will build on this foundation and permit the ERC to implement specific methodologies for setting electricity, district heat and natural gas tariffs, to complete tariff design for the sector, and to administer the tariff-setting process.

Task 2--Legislation and Regulation

The new work would involve further support on primary legislation and secondary legislation/regulation.

7 0 Lithuania

7 1 Program Description and Sector Overview

Following the June 1995 signing of the European treaty Lithuania, and other Baltic states, became associated members of the European Union (EU) This required restructuring of their economies including the energy sector to be in line with the EU requirements For the energy sector it means market liberalization, transparency of pricing, security of supply and the application of safety and environmental standards

According to the Energy Law passed in 1995 and revised in 1997, the Ministry of Economy regulates energy activities representing the interests of the state Other energy regulatory institutions are the State Energy Inspection the State Nuclear Power Safety Inspection, and the National Control Commission for Energy Prices and Energy Activities (NCC) The State Nuclear Power Safety Inspection is monitoring the operation of the Ignalina nuclear power plant (NPP) ensuring that it is in full compliance with the Lithuanian and international safety regulations The tasks of the State Energy Inspection are licensing of energy activities and supervision over energy equipment to ensure reliable efficient and safe supply and utilization of energy resources NCC's main objectives are to set energy pricing principles, and to implement energy policy goals in the control of energy activities NCC's responsibility is to determine tariff calculation principles, and to approve the tariff calculations Strengthening the NCC's capabilities was the major focus of the USAID sponsored energy regulatory assistance in Lithuania during the last year

Restructuring of the energy sector also requires institutional and legal changes Assistance in drafting the Energy Regulation Law was provided by the EU PHARE Program The Lithuanian experts will review the draft proposals and the revised draft will be provided to the Parliament Under the current draft proposal, the State Energy Inspection would merge with the NCC, thus making NCC responsible for issuing licenses, fix and control energy prices for the regulated energy utilities and control performance standards

The Lithuanian Government started to implement a broad program of restructuring and privatization of the restructured industries However, the energy sector is still dominated by vertically integrated monopolies Electricity is supplied by the Lithuanian Power Company (LPC) controlling transmission distribution and part of the generation facilities Ignalina NPP producing about 80% of the Lithuanian electricity consumption, is organized as a separate government company Vilnius and Kaunas combined heat and power (CHP) plants are owned by municipalities (ownership was transferred from the central government during 1997) LPC buys power from Ignalina NPP and CHP plants and resells it to final customers The Lithuanian district heating sector is more decentralized, even before the ownership transfer of big CHP units with municipalities and industrial customers owning part of the network and heat generation units The gas sector is dominated by one vertically integrated company "Lithuanian Gas", purchasing gas from Russia and distributing it to the final customers Affiliates of the Lithuanian Gas also control the production of gas equipment, transportation of gas, operation of gas network, and distribution of gas However according to the third party access rule a private company may also enter the market buying gas from Russia and

reselling it to Lithuanian Gas, or using the Lithuanian Gas network to sell it directly to final customers. The Lithuanian petroleum industry is fully deregulated with refineries, oil pipeline, oil harbors, and distribution network operated by different companies and suppliers.

Energy companies also own facilities not related to their core activities as a legacy of the past system. During the restructuring process, separation of these activities from the energy companies is proceeding as a preparation for future privatization.

7.2 Program Status

Part of the third year work was to finalize projects started during the first two years, and summarized in three tasks: 1) advise the National Control Commission of Prices for Energy Resources and of Energy Activities, on pricing, regulatory and organizational issues, 2) provide assistance to the Lithuanian Power Company in organizing an effective accounts receivable system and 3) to provide Oracle data base development assistance and training to the Power Company accounting staff.

The next phase of assistance that was agreed upon and initiated in 1997 is the Tariff Implementation Project. This project is designed to support the analytical component of the design and implementation of tariffs within the regulatory framework. While in the near term, it is anticipated that the significant portions of the energy subsectors will remain monopolies in need of regulation, major goals of the project are to ensure that energy prices reflect the actual economic cost, to make the tariff process transparent, and to lay the groundwork for introduction of more competition into the Lithuanian energy sector. The new Resident Advisor, Jim Strangways, will conduct the primary implementation of this phase.

The Tariff Implementation Project is proceeding on the cost of service study. Another part of this project was a one day presentation to the Parliament of Lithuania on Energy Restructuring and Energy Pricing Reform topics, since successful implementation of the energy restructuring initiatives will now depend on effective and timely communication with customers and legislators. This presentation was prepared as a joint effort of USAID, EU and World Learning Inc. The presentations, and the following discussion, covered current energy sector and pricing reforms in Lithuania, the impact the reforms will have on the economy and the privatization process, analysis of the international experience in restructuring energy utilities, and the potential social implications of the restructuring process.

7.3 Results to Date

The final part of the ORACLE accounting system assistance, which was primarily executed in previous years, was training in use of the system. The training was performed for the LPC staff from all the district utilities and included five Oracle development courses with three training sessions per each course. Each session was for the 8 LPC staff for a total of 24 trainees for each course. The training was performed by Information Technologies, the ORACLE licensed distributor for Lithuania, and was finalized in December 1997.

At the beginning of 1997 the temporary energy regulatory commission was dissolved and the new permanent National Control Commission for Energy Prices and Energy Activities (NCC) was established. NCC was formed following the USAID/Bechtel recommendations and bases its work on the energy pricing methodologies defined through joint work of the Lithuanian and US experts. By mid year the Commission gained more responsibilities and full independence in making pricing decisions in the energy sector.

The Lithuanian government made the decision to separate the electric utility and district heating operations. This separation is seen as a major step in restructuring of the energy sector. It will enable transparent accounting procedures, rationalization, and streamlining of both operations, reduction of potential cross-subsidies from electricity to heating, thus moving energy companies closer to privatization and private investments.

During the last part of the year, a number of training and exchange visits were organized to allow Lithuanian experts to broaden their knowledge and understanding of restructuring and tariff development and setting procedures. Two NCC members visited the US and participated in workshops, and visited various regulatory, utility and energy organizations. The chairman of NCC participated in a hands-on workshop on restructuring and pricing held in Florida. Four NCC staff members, including Vice-Chairman Sidzikauskas participated in a joint workshop for all newly formed energy regulatory commissions in NIS and Eastern and Central European countries was organized by USAID/USEA in Budapest in November 1997.

7.4 Key Issues

The energy sector in Lithuania is still facing major challenges as accounts receivable are high, utilities are facing a lack of funds for maintenance and upgrades of the systems, the electric utility has an excess of production capacity with uncertainty in future sales and some of the issues facing the prolonged operation of nuclear units are still open. Adding to the problems is the lack of information available regarding the financial accounting of Ignalina NPP (the nuclear power plant) which impedes work on tariff rationalization. As responsibilities of the Commission grow, increased work is required in strengthening its capabilities and responsibilities. The Commission is already in the position to have a significant impact on the future development and progress of the pricing and restructuring work in the Lithuanian energy sector.

7.5 Final Year Activities

During the next year, the work will continue with the regulatory Commission on the Tariff Implementation Project and to provide broad assistance to the Lithuanian energy sector by placing a resident long-term energy advisor in Lithuania. The resident advisor will work closely with the Commission, will be able to address a broad spectrum of questions facing the Commission and make recommendations on restructuring and development issues of the energy sector.

8 0 Poland

8 1 Program Description and Sector Overview

This section reports on the third year's activities and results for the Bechtel-USAID 'Regulatory Reform and Energy Sector Restructuring' Project in Poland. This Project was initiated in July 1995 to continue and expand upon earlier USAID-funded work undertaken during 1993-95. It has been a principal component of the Energy Sector Restructuring, Privatization and Regulatory Program started by the Government of Poland (GOP) in 1991.

The GOP Program is aimed at assuring Polish consumers long-term security of energy supplies at economically reasonable prices, while promoting the long-term financial viability of the energy sector. This is to be achieved through

- creation of a market environment for enterprise competition in all productive sectors that are not "natural monopolies",
- establishing a transparent and efficient regulatory system (including new tariff setting methodologies) for "natural monopolies" such as certain electricity distribution services,
- economic rationalization of prices and elimination of subsidies to the extent possible,
- commercialization and ultimate privatization of state owned enterprises in order to upgrade management and corporate behavior as well as to attract private investment capital for rehabilitation, modernization and development of the energy sector.

Significant technical assistance for the energy sector of Poland has been provided under bilateral and multilateral agreements. During its five-year existence, it was an important task of the Energy Restructuring Group (ERG) to coordinate the international effort and to establish a discussion platform for different solutions proposed to Polish beneficiaries.

The ERG was established in late 1992 and completed its formal operations in mid-1997 although some carryover activity has continued. The ERG provided foreign and Polish expertise within and across the subsectors of the energy industry participated in the drafting of several new laws and was instrumental in shaping State energy policies that will affect the Polish energy industry and its customers. Funding for the ERG was provided by USAID, European Union-PHARE and the United Kingdom Know How Fund.

To assist the GOP in accomplishing the ambitious transitions shown above the USAID Project has been providing further technical assistance and training support to the Polish power sector, with an emphasis on electricity sector privatization, energy legislation and policy development, and regulatory authority development and implementation. The focus of this Project is on the power industry but its success depends on the overall progress of energy sector reform and especially the successful establishment of the legal and regulatory framework.

The USAID Project is intended to elevate Poland's ability to attract foreign and domestic investment and thereby to achieve substantive improvements in the efficiency and effectiveness of the energy sector and pave the way for a commercially viable customer oriented, and ultimately privatized industry to succeed in a competitive environment. To do this within the overall USAID Strategic Objectives 1.1--Privatization of State-Owned Enterprises, and 1.3--Private Sector Development is Stimulated at the Firm Level the Project has had the following overall objectives

- Creation of the legal and regulatory framework for the energy industry through the link with the ERG and in cooperation with other international programs that assist the GOP and the power, gas and district heating industries,
- Introduction of advanced methods of tariff-setting under the new regulatory system, and practical implementation of tariffs by the electricity distribution companies,
- Further restructuring of the power sector into economically viable and competitive companies, with an emphasis upon the distribution sector (including three demonstration projects and a generating company pilot project),
- Preparation for the ultimate privatization of electricity distribution companies by development of practical guidelines on planning and operations and through training of managers in organization development and good business practices

8.2 Program Status

Progress in regulatory reform and energy sector restructuring is continuing to be made although the pace continues to lag expectations. Passage of the Energy Law has been a prerequisite for meaningful privatization of, and investment in the energy sector. That major step has been taken the new law went into effect in June, 1997, following nearly four years of preparation. The political consequences of the Law are not minor. Progress of reform is being impeded by social opposition to labor layoffs resulting from cost saving strategies of commercialized companies (this is not limited to the energy sector, in March, 1998 there was a major demonstration by labor union members from the Ursus tractor factory against the removal of state subsidies and customs barriers, and the lack of pay increases and job security guarantees in the nearly-bankrupt business). Another impediment is the low level of social acceptance of energy price increases necessary to reach economic levels.

Within the GOP a major organizational revision at the beginning of 1997 resulted in new Ministries, with attendant start-up problems (the Ministry of Industry and Trade, which was the principal agency for the energy sector was replaced by the Ministry of National Economy, with entirely new senior officials). The Parliamentary election in October 1997 produced a new governing coalition that has an orientation toward dispersion of governmental control and operations away from the center, with potentially significant consequences for implementation and revisions of the Energy Law. In the meantime the electricity, natural gas and district heating industries have been functioning at lower levels of efficiency and higher levels of cost than necessary and the required rehabilitation and environmental funding is not available.

The following facts mark the progress of the reforms by the beginning of 1998

In the Legal Framework

- The Energy Law cleared Parliament in substantially the same form as sought by the 'former GOP'. The law was drafted and negotiated with the continuing assistance of the ERG and this Project. Assumptions and drafts for the basic secondary legislation, needed to flesh out the Energy Law, were issued beginning in Fall 1997 and are under close review against a deadline for adoption of June 1998, although at this writing there are revisions to the primary legislation under discussion in the Parliament. The outcome of these discussions is not predictable. The Project has ongoing involvement with the secondary legislation and ordinances needed to implement the Law, and is commenting on the potential revisions as well.
- The "Energy Policy Guidelines for Poland Until the Year 2010" document, which is the basic planning resource for the energy sector, was prepared in the ERG under the Bechtel-USAID Project and adopted in 1996. A biennial revision is due later this year.
- The GOP "White Book" on "Demonopolization and Privatization of the Polish Power Sector" with significant contributions from ERG and this Project, was accepted by the GOP in September 1996 as the official policy regarding further steps toward sector privatization. With the change in the GOP in late 1997, the current status of this policy is unclear.

In the Power Sector Restructuring

- All power distribution enterprises have been transformed into joint stock companies, wholly owned by the State Treasury, as the first step towards privatization,
- The process of internal restructuring is being continued. Many enterprises have divested their non-core activities into separate subsidiaries or sold non-productive assets,
- A bulk power tariff has been introduced. However, tariffs for final electricity consumers are still being set by the Minister of Finance. Prices for households are still uniform throughout the country and still are below their economic level. Prices for industrial customers have been slightly diversified. This does not allow proper functioning of the bulk power tariff.

To reach the objectives described above, this Project was reviewed in September, 1996 for the appropriateness of the initial work plan. Scope and emphasis revisions were made to reflect the current situation, and the Project was reorganized into three principal tasks, with supporting activities summarized below. In addition, the Project's scope and duration came under review during much of 1997, leading to an increase in total level of effort and an extension of time from the end of March, 1998 to the end of 1998.

Task 1 Long Term Advisor

To provide the continuity needed to carry out this Project in an era of change in Poland, the project relocated an American expatriate long term advisor, Chris Turner, and paired him with Polish expert

counterparts and staff support in September 1995. Under this Task, regular involvement with GOP Ministries and with the energy sector enterprises occurs both on a day-to-day basis and in more formal meetings and working sessions. Coordination is carried out among Project Tasks and with other energy sector efforts particularly during 1997 with the ERG, the World Bank-ESMAP project to implement the Energy Regulatory Office (ERO) under the Energy Law, and those that also involve USAID support. As detailed below, the focus of the Project is shifting to the Energy Regulatory Office and the principal areas of cooperation are with the ERO and with other assistance providers.

Task 2 Regulatory Organization Development and Implementation

The Project Team is participating fully in the implementation of the Polish Energy Regulatory Office. Near term, the team is assisting the GOP in the development and justification of secondary legislation and regulations. The long term US advisor in Poland and his Polish counterparts and outside experts advise the GOP and assist in the development of the ERO.

Task 3 Privatization Preparation for Energy Enterprises

This Task has focused on working closely with three Polish distribution companies and one generating company as pilot enterprises for the restructuring of the electricity industry into commercially viable, customer oriented and ultimately privatized firms. The long term US advisor in Poland and his Polish counterparts coordinated inter- and intra-sector assistance activities, including the interaction among the regulatory, generation, transmission distribution and independent power production interests. Project subcontractor Arthur Andersen Polska of Warsaw was the primary consultant for the privatization and restructuring activities, which are virtually completed as of March 1998.

8.3 Results to Date

Although the industry-level progress continues to be a function of the social, political and economic environment, the USAID Project has accomplished several meaningful results by focusing on specific opportunities.

Energy sector training has continued. A special gas-sector program was delivered in June to both regional and headquarters managers of the vertically integrated gas company, which faces both restructuring and competition in the near future. The program concentrated on the lessons and opportunities from the recent US restructuring. At the request of the Ministry of Economy's Department of Energy and Environment, a two-day seminar, "Energy Markets Operation in the USA and Poland: Experiences and Problems of Implementing the Market Solutions in the Power and Gas Sectors" was delivered to Ministry and other GOP participants by a Bechtel-led team that included US, Spanish and Polish experts.

In November, a roll-out conference and seminar were delivered to executives and planning managers of the electricity distribution companies. These involved the ongoing internal restructuring, strategic planning and process reengineering activities at the Torun electricity distribution company. The principal benefit for attendees was in improving their understanding of the steps that are involved.

in preparing the organization (and in particular its middle managers) for the changes that come from adoption of more modern business practices

Also "roll-out" of the results and the processes used in the four enterprise privatization preparation analyses was the subject of a major conference in Warsaw in March 1998. The process of determining the enterprise privatization strategies and their valuations was described in detail for senior executives whose companies are likely to be part of the privatization of the sub-sectors. Nearly 150 executives and GOP officials attended the conference which was a joint effort of the Bechtel team and of Arthur Andersen Polska.

In the political arena the Project has maintained continuing involvement with the GOP in advancing the Energy Law and in supporting sector reform. Project consultant Mirek Duda has been a principal advisor to the GOP throughout the drafting, justification, negotiations and revisions of the Energy Law and the secondary legislation needed to implement the Law. He also has been instrumental in efforts to present information about and explanations of the law and its implementation to a variety of Polish audiences, including major customers and key personnel from enterprises that will be regulated under the law. Also, Chris Turner and Mirek Duda have provided briefings to interested foreign-based parties including many potential investors/developers looking into the Polish situation and to the Energy Committee of the American Chamber of Commerce in Poland, whose members need ways to present their positions to the GOP in the Energy Law discussions.

These ongoing activities help to prepare the ground in anticipation of full implementation of the Energy Law and the further commercialization and ultimate privatization of the energy enterprises.

8.4 Key Issues

Implementation of the Energy Law over a two-year period from June 1997 has proven to be a challenging process. The Project is focused on the operational framework that will permit further progress toward transparent and appropriately limited regulation of the energy industry and that will encourage commercial behavior and privatization. Successful implementation of the ERO will require a well-conceived program with maximum Polish involvement. Attraction and retention of top-level Polish expertise to the ERO remains a problem, as does a slow startup due to budget constraints.

For the enterprises, a key issue continues to be the extent to which their employees are "on board" for the changes that will come from privatization. Some enterprises, such as the Rybnik Generating Company and the Gliwice distribution company, have carried out extensive programs of employee familiarization and appear to have significant support, other enterprises may face strong opposition. Also the privatization policies of the GOP for the energy sector are not clear, and the continuing delays are signaling a lack of political will to get the job done.

8.5 Final Year Activities

Extension of the Project through the end of 1998 was predicated mainly on the provision of significant assistance to the Energy Regulatory Office. Given the promulgation of the Energy Law on June 5, 1997, the major implementation milestones for the ERO are:

- December, 1997 "Opening" of the ERO for business, albeit at a very basic and beginning stage,
- June 1998 Completion of the secondary legislation process
- December, 1998 Issuance of the over-1000 licenses for existing (and any new) energy enterprises,
- December 1999 Expected transfer of the price regulation functions and responsibilities from the Ministry of Finance to the ERO

A Support to the ERO for Information Management Systems

The main purpose of this effort is to help the ERO design and implement automated systems to collect and manage the information it needs to carry out its regulatory mission. The work will include helping the ERO:

- identify information management requirements for each department,
- determine how information will flow among ERO departments and between ERO and external entities,
- develop functional specifications for the computer systems and software necessary to meet its information needs
- implement data management systems for key regulatory functions

The objective is to help the ERO develop a well-integrated approach to managing information from the beginning, as the agency is organizing itself and becoming operational. The ERO must have such a system to function effectively, particularly considering its mandate to complete the licensing of approximately 1,000 energy enterprises before the end of 1998. Our assistance to the ERO on this task will build upon Bechtel's recent similar work with the Hungarian Energy Office.

B Support to the ERO Licensing Department

Licenses are crucial for effective operation of the sector. They identify who can participate, the terms of participation, and the duration. The licenses establish the authority of the regulatory body. A properly established license process:

- Demonstrates the intention to have an open, transparent, and non-politicized system by which parties can enter the energy sector
- Builds investor confidence
- Facilitates non-utility private sector energy projects, and
- Facilitates privatization of the state-owned utility sector

The Project's consultants will work with the ERO to develop draft licenses and licensing procedures and standards beginning in March 1998 and continuing at a high level of involvement through the middle of the year. This will enable the ERO to allow for the energy companies to apply for licenses in the third and fourth quarters of 1998. Then licensing support will continue through the Project's end: first to complete the initial issuance process, then to focus on licenses to new entrants, amending licenses for transfer of ownership, beginning the compliance/enforcement processes, and for other reasons as conditions change.

C Support to the ERO Tariff Department

US and Polish advisors based in Warsaw will work with the ERO staff to advise on electric, district heating, and gas pricing matters. The advisors will continue to expose the staff to new energy pricing policies, train the ERO on pricing techniques currently being used in competitive energy markets in the US, UK, and other countries, and assist the ERO in analyzing tariffs for gas, electricity and district heating. The advisors, while specializing in energy pricing, will assist with technical assistance on all tasks related to the energy regulatory program.

D Support for ERO Training

In keeping with the priorities established in the Energy Law for ERO implementation, and in view of the available time period, the focus of the USAID training effort will be in the licensing and tariff areas, in conjunction with the wide range of other assistance to those critical departments detailed above. In both areas, emphasis will be placed on pragmatic, experience-based training rather than general and conceptual programs that, while often useful, do not relate well to the near-term needs of the ERO headquarters and regional staff.

During 1998, the bulk of the USAID training will consist of seminars and workshops in the ERO itself, with an initial program scheduled for May. There is a potential for attendance by some of the ERO staff at a USA-based longer program (two weeks is likely) later in the year if staff is available. After the initial licensing of existing enterprises, there is an opportunity for expanded training outside Warsaw. This may involve study tours to, e.g., the UK and the Scandinavian countries under the auspices of other donor agencies.

E Looking Ahead

During the two-year period for implementation of the Energy Law, the distribution companies will need to have considerable assistance in learning to "cope" with regulation, on the one hand, and with commercial behavior on the other. Neither concept is well known among the operating managers of the enterprises. This assistance, along with the ongoing support for the ERO through tariff development, training and consultation on regulatory policies and practices, would constitute the "long term advisor ongoing support" for the Polish energy industry beyond the Project's current expiration date of December 31, 1998.

9 0 Romania

9 1 Program Description and Sector Overview

The project effort in Romania is characterized by its diversity. Three sectors are involved: the oil and gas upstream sector, the downstream petroleum refining and petrochemical sector, and the power sector. These in turn deal with regulatory reform, energy sector restructuring and privatization. The tasks undertaken are: Downstream Petroleum Sector Restructuring, Study of Long-Term Options for Restructuring the Power Sector, and Technical Assistance to the National Agency for Mineral Resources, the regulatory agency dealing with the oil and gas upstream sector.

The government of Romania decided in 1995 that fundamental reforms to the power sector, one of the most important sectors of the Romanian economy, is an integral part of its transition to a market economy. The Study of Options for the Long-Term Structure of the Power Sector, funded by USAID, was seen by the Government of Romania (GOR) as providing the basis for action for the sector's transformation to a market economy. The objective of the study is to assist GOR in selecting the structural option that will come closest to achieving its policy objectives and in defining the legal and regulatory framework most appropriate for implementation of that option. Phase I of the study concentrates on identification of a set of restructuring options and associated regulatory and legal framework, while Phase II will focus on developing a detailed implementation plan for the preferred option selected by the GOR. Presently, the GOR controls the sector and there is no profit incentive. With no competition, there is little incentive to improve efficiency of the sector. Without transparent and objective regulation, there can be little certainty regarding return on investment or other basic requirements of business. These factors make it difficult to attract private capital. Fundamental changes are required to promote a competitive environment for the generation of electricity. These changes can be achieved in varying degrees by restructuring the sector and identifying and selecting a viable option to do so is the thrust of this study.

The oil and gas upstream and downstream sectors are also in need of significant restructuring based on fair and equitable regulatory systems to encourage and promote competition, new capital and private investment. The GOR is actively pursuing this goal and in December 1995, passed a new national Petroleum Law, which became effective on March 27, 1996. Two projects have been undertaken under the Contract to promote both sector's restructuring and development of new regulatory systems.

Romania's downstream petroleum sector is riddled with distortions caused by central planning and regulation. Romanian consumers pay above-market prices for refined products, Romanian oil producers take low prices for their oil, and the GOR is being deprived of an important source of tax revenues available in most countries. These distortions serve to prop up an inefficient sector that is burdened by structural over-capacity and excessive employment and that is operated using management practices that deplete value. To cure these problems, fundamental and radical change will be necessary. The government's involvement in the sector needs to be relaxed, prices must be permitted to respond to market conditions, and capacity and employment must be rationalized. Only then can the sector be restored to profitability and become able to generate investment capital, and

use it productively. These are the matters that were addressed in the Romanian Downstream Petroleum Sector Restructuring Project.

A new government was elected in November 1996 and is more reform minded than the old government. It has taken action to begin privatization or liquidation of the excess refineries. Meanwhile the National Oil Company structure remains in place complicating the situation. Unless some specific action is taken in the near term, the refineries will have a very difficult time importing the necessary crude to meet next winter's demand for heating and fuel oil.

The upstream sector, one of the world's oldest oil and gas industries, suffers from a lack of operational and capital investments, centralized monopolistic operations which are not based on economic criteria, antiquated technology and inefficient use of the country's dwindling oil and gas resources. A significant infusion of capital is necessary to modernize current operations and expand exploration and development of new reserves. Based on the limited government resources available to fund such activities, private domestic and foreign capital must be encouraged to enter this sector.

The GOR, in recognition of this need, is actively attempting to stimulate Western companies' participation in the oil and gas exploration and producing activities to bring in capital for new ventures and to assist Romanian entities in the producing, servicing and manufacturing sub-sectors. To accomplish these goals will require a restructured sector, privatization of sub-sectors, introduction and access to common carriers, pipelines and facilities and, most importantly, transparent oil and gas regulations to ensure fair and equitable treatment of private companies with government agencies. The National Agency for Mineral Resources' (NAMR) Technical Assistance Project supports this effort by assisting in developing and implementing oil and gas regulations, implementation of a National Database to encourage efficient use of oil and gas resources and to serve as the basis for data for promoting oil and gas concessions offers and to implement rates and tariffs for third party access common carrier pipelines. NAMR announced the First Round Licensing offer of Romanian oil and gas concessions at the American Association of Petroleum Geologists annual conference in San Diego in May 1996. Assistance in San Diego was funded by the project.

The Downstream Petroleum Sector Restructuring in Romania Program

The purpose of the program was to a) create an economically and financially viable strategy for the downstream petroleum sector which will translate into a specific action for commercialization of the sector and b) develop a workable privatization scheme. The workplan outlined ten key tasks to be undertaken in the first year of the contract. The team proposed to execute these tasks along parallel paths reflecting the natural segmentation of the industry: refining, petrochemicals, lubes, distribution and retail.

The primary deliverables for this project were: 1) The Restructuring Strategy, which addressed the prospects for each of the market segments based on the results of the tasks discussed above. The report then addressed the various restructuring alternatives for the industry as a whole, based on principals of economic efficiency, competition, value considerations and commercial viability. A preferred strategy was recommended along with the requisite labor and corporate/organizational changes, policy and regulatory requirements, and institutional changes.

The second part of this report the Critical Investment Report, identified and provided justification for and prioritizes the most significant investments for each surviving entity Major investments were classified according to major process improvements energy efficiency improvements environmental projects and human resource programs

The third deliverable, the Privatization Proposals, presented a detailed plan, rationale and most appropriate modalities for the privatization of the refinery products retail marketing and service subsector and 3-5 large refinery/petrochemical entities The report identified the up-front actions required by the Government of Romania to facilitate the transactions These reports were issued in draft form in 1996 and finalized in Fall 1997

The Study of Long Term Options for Restructuring the Power Sector

The objective of the Study of Long Term Options for Restructuring the Power Sector in Romania program was to undertake a study of options for the long-term structure of the Romania electric power sector, including its legal and regulatory aspects The team also looked at capital formation, commercialization and demonopolization/privatization in this sector The study provided a detailed analysis of alternative options of sector structure for consideration by the Government

- The main thrust of the GOR s original policy was to improve the efficiency and reliability of the sector and to meet the demand for electricity in the most economic manner, while minimizing negative environmental impacts Reform was to be on a progressive, phased-in basis

The proposed effort focused primarily on the power sector, with the heat supply system addressed only with respect to the role of CHP facilities and the issues related to cost allocation and impacts on pricing The assignment was built on a review of existing studies and reports

The study was designed to be executed in two sequential phases **Phase I** This phase included (i) the identification of constraints (ii) the design of potential models, and (iii) the preparation of sensitivity analysis, and (iv) the presentation of potential models and recommendations This Phase included a detailed diagnostic and analytical phase that set out to identify and evaluate restructuring options for the electric industry **Phase II** is the implementation of and transition to the structure chosen by the GOR based on the Phase I report

The primary deliverables for this program are 1) the Inception Report, 2) the Options Report, which presented and discussed the results of Phase I This report discussed the detailed assessment of the restructuring options and the recommendations by the team regarding each option, 3) the Action Plan Report will present the results of the Phase II tasks

The final report will be a compendium of the first three reports, plus any comments from the GOR and the Steering Committee regarding the proposed action plan

Technical Assistance to the National Agency for Mineral Resources (NAMR)

The National Agency for Mineral Resources of Romania, NAMR was formed in 1994 pursuant to Government decision 417 issued in October 1993 in compliance with the conditions of a loan agreement with the World Bank. The Agency is responsible for both regulatory and business oversight of the upstream oil and gas business in Romania in addition to other mineral extraction but has limited experience in international business or regulatory patterns. A goal is to develop transparency in administration in both areas to facilitate productive international and domestic investment in the industry to materially enhance the economy.

The project funded by USAID is intended to help the Agency in meeting its obligations in the oil and gas province by providing assistance in six Task areas. These are:

1. Implementation of a national rates and tariffs system for common carrier pipelines,
2. Developing regulations and a regulatory framework and management system for oil and gas exploration and producing,
3. Train Romanian entity database operators in converting and loading current and historical oil and gas exploration and production data into the National Database consistent with the system devised by NAMR and its consultant
4. Purchase, deliver and install computer hardware at each entity for collecting and delivering data to the National Database,
5. Plan and provide air fare, lodging and facilities for Petroleum Sector promotional trip to the USA by the NAMR promotion team,
6. Provide two weeks professional bid evaluation economics and negotiating training in Bucharest for the NAMR negotiating team

9.2 Program Status**The Downstream Petroleum Sector Restructuring In Romania Program**

A team of petroleum industry specialists with diverse technical, financial and institutional expertise completed the study. This USAID funded study was conducted under the overall supervision of Bechtel International as the prime contractor to USAID. The team included the following companies and consultants:

Bechtel International Inc	Arthur Andersen, LLP
InfoChem	Cambridge Energy Research Associates (CERA)
Chimexim	Western IQ
IntraTech	Liviu-Dan Ioan

The main conclusions of the Team's work were delivered in the summary Critical Investment Report and Rationalization Strategy in March, 1996. This Summary Report was then translated into Romanian and distributed in May 1996. The detailed report was revised and reviewed by the team members, and delivered in draft form, to USAID and the World Bank in early June 1996. Following authorization the report was distributed in Romania during a visit by the Team at the end of June, 1996 and finalized in Fall 1997.

A new reform-oriented government came into office in January 1997. It has taken some action in the petroleum sector, shutting down some refineries and attempting to privatize others with mixed results. The GOR has not indicated an interest in additional assistance thus, no further activity was planned in this component of the program.

The Study of Long Term Options for Restructuring the Power Sector

In March 1997 the more reform-oriented goals of the new Government were being reflected in changes to the power sector. A new Chairman was appointed for RENEL, who asked for USAID / Bechtel assistance in the form of supporting analysis of structural alternatives that RENEL now favored, in order to assist the GOR in making a decision in the near future. The main task was to prepare a draft white paper (Proposal) which would be suitable for communicating the preferred "Target Structure" to the Government and seek its approval. The Target Structure was in most respects similar to the most advanced (i.e., most competitive) structure of the Phase I report which was Option 4, the "Competitive Market" model. In June Bechtel prepared a draft outline for such a paper and performed initial calculations that illustrated the benefits of the new structure with respect to the potential for private investment, tariff levels and other factors. On 4 August 1997 RENEL issued a draft Romanian version of a Proposal which was 85-90% based on a draft provided to RENEL by Bechtel on 25 July, 1997. After revision it was completed on 4 September 1997.

While awaiting a Government decision on the new power sector structure, in the fourth quarter of 1997 the Bechtel team also prepared a draft Electricity and Heat law and provided review and comments on the draft Energy Law prepared by Ministry of Industry and Trade (MOIT). The team also worked with RENEL staff at RENEL's request, to draft an Ordinance creating an independent regulatory authority in advance of an Energy and Heat law. Representatives of the Bechtel team also accompanied USAID during country visits and meetings with RENEL and the MOIT in January and February, 1998.

However despite these promising steps the Government did not make a decision on a new power sector structure by 31 March 1998, nor did it pass an Energy Law. Consequently the program still awaits the decision of the Government regarding which option it will follow for restructuring the power sector. The political situation is somewhat unsettled as of March, 1998, which may make it more difficult for the Government to move forward rapidly at this point. Consequently the Bechtel team has not yet been able to initiate work on the originally planned Phase II.

Technical Assistance to the National Agency for Mineral Resources (NAMR)

The goal of this task was to provide technical assistance to NAMR in the areas of calculating and implementing crude oil and natural gas tariffs for pipeline transportation. This task has been substantially completed. There were 5 key activities and all were addressed in the work. These key activities are listed in boldface and the status of each are listed in italics and are as follows:

- 1) **Provide training in theory and application of pipeline rates and tariffs** NAMR Staff have been trained in said theory and application by on-the-job training in the operation of NAMR's crude oil tariff models. This training should be sustainable as NAMR Staff is now in the process of explaining the tariff theory and application to interested entities. In addition, Bechtel supplied a manual on fundamental determination of transportation tariffs with specific examples related NAMR's responsibilities.
- 2) **Provide analysis, training and support in the utilization of the NAMR's computer model for rates and tariffs determinations (which is being developed under contract by the NAMR's consultant BEICIP), with loading of program input parameters and operation of the model and with the calculation of rates, fees, and tariffs for various applications** Bechtel staff provided training on the crude oil tariff model and assistance and support with the loading of new data for determination of 1997 tariffs. Tariffs were then calculated for the imported crude oil pipeline system and for the domestic crude oil pipeline system. Said tariffs are under consideration for adoption by NAMR but have not yet been adopted.
- 3) **Establish areas of applicability and timing for implementation of rates and tariffs based on economic and social impacts of the potential transmission costs increases** The results of the NAMR computer programs for crude oil transportation tariffs do not represent large increases over current tariffs. Bechtel and NAMR staff input 1997 cost and asset data to the respective computer programs and found that domestic crude tariffs should be \$5.43/ton and imported crude tariffs should be \$6.80/ton. Domestic tariffs currently in use were very close to those calculated by the NAMR computer program for September. Thus there were no implementation issues for the domestic tariffs. The imported tariffs represent a 25% increase from proposed September levels. Bechtel staff recommended a phase-in of the increase by equal monthly steps over the last quarter of 1997 with the full \$6.80/ton tariff formula in effect on January 1, 1998. This recommendation was under consideration by NAMR staff.
- 4) **Monitor and evaluate the application and impact of rates and tariffs and modify fee structure and tariff levels as required** NAMR and Bechtel staff found cost-based crude oil transportation fees to be only slightly greater than the proposed September tariffs. Impact of these fees should be slight and thus no monitoring or evaluation is contemplated at this time.
- 5) **Assist NAMR in preparing documents for establishing and implementing a transition strategy for rates and tariffs application (this activity to be further defined as BEICIP's work progresses)** Cost-based tariffs calculated by the BEICIP computer program for domestic crude transportation are the same as those proposed by NAMR for September. Hence there no implementation strategy is necessary. Tariffs for transportation of imported crude were calculated to

be approximately 25% higher than those proposed by NAMR for September. Bechtel has recommended the three-month phase-in for these tariffs with full adoption no later than January 1, 1998. This transition strategy is under consideration by NAMR.

Task 2 was completed in July 1997. Pat Kelly collaborated with NAMR staff and middle management during April through early July to review and edit the English version of oil and gas exploration, production, pipeline and environmental regulations. The database regulation was also completed at that time except for an annex of technical instructions, which awaited several events including endorsement by NAMR management and coordination with another consultant retained by the World Bank. Translation into Romanian was essentially complete when the English version was delivered to NAMR President Mihail Ianas and the USAID Mission Office in July.

At the request of NAMR General Director Arkadi Hinculov, Pat Kelly worked with translator Florina Sora to translate Romania's 1996 Methodological Norms into technical English utilized in the international oil and gas business. Pat relocated back to the United States in July 1997, having completed his assignment in Bucharest.

For Tasks 3 and 4, in early 1997 the NAMR asked for assistance in developing detailed regulations governing submittals of exploration and production data by licensees. Such regulations are necessary to make sure that licensees submit the required data on a timely basis and in a format suitable for incorporation into the National Database.

In August 1997 Bechtel completed detailed regulations and technical instructions that specify how and when licensees must submit E&P data to the NAMR. In October Bechtel supplemented these regulations to include data components required to calculate crude oil transport tariffs. The rates and tariffs data regulations followed the NAMR's receipt of the pipeline tariff model from Beicip in August.

During spring 1997 the NAMR stated its intention to adopt the E&P database regulations by September 1997 so that the database project could move ahead according to the schedule in effect at that time. Instead, the Agency decided to delay adoption of all the database regulations until a separate environmental component could be added (The NAMR is receiving advice on the environmental data from other sources.) In September the NAMR also substantially delayed the schedule for completing the database. The NAMR had not adopted the database regulations by the time Bechtel's assistance ended in December 1997.

Bechtel finished its work on Tasks 3 and 4 between April and December 1997. We completed installation of computer hardware and software at sites of the five entities (Atlas GIP, Foradex, Petrom, Prospectum and Romgaz) and at the NAMR office. We continued to train and advise the NAMR and entity staff on database-related issues. In September of 1997 the NAMR again significantly delayed its target date for making the database operational, from December, 1997 to September 1998. (Under the NAMR's original schedule, the database was to become fully operational by December 1996.) With USAID concurrence Bechtel completed its support to the database project as planned by the end of 1997.

In April and May we installed 18 Bechtel-provided PCs at sites of the five entities (Atlas GIP Foradex Petrom Prospectum and Romgaz) and at the NAMR office. Supplying these PCs was an addition to the original scope of Task 4. The PCs are existing Bechtel-owned equipment that we agreed to provide for the project's use and to leave behind at the end of our contract. The PCs were required for initial data loading. We installed and configured local-area networks at each site integrating the Bechtel PCs, Sun workstations and existing PCs at the sites. We provided informal training to NAMR and entity staff on using the PCs and networks.

During the summer of 1997 the NAMR's computer systems, purchased under its World Bank Loan, were installed. During this period we completed the database regulations. The computers were fully installed and tested by September. The NAMR postponed commissioning of the database from December, 1997 to September, 1998. The Agency also indefinitely postponed adoption of the database regulations. USAID decided that Bechtel should complete its support on Tasks 3 and 4 as planned by the end of 1997. In September we provided the NAMR with data quality control guidelines and a set of performance-oriented goals for the remainder of the database development effort. Between September and December we completed the ongoing training and support activities for the NAMR and entity staff.

9.3 Results to Date

The Downstream Petroleum Sector Restructuring In Romania Program

All deliverables under the original task have been completed and delivered. The final version of the Summary of Critical Investments and Recommendations Report was delivered in both English and Romanian in July, 1997. The final version of the detailed Rationalization and Critical Investment Report was delivered in September, 1997.

The new Government in place since January 1997 decided to move forward with a restructuring plan that contained many of the elements of the Bechtel recommendations. The principal difference is that the Government is dealing with the facilities on a discrete basis whereas the Bechtel report recommended a sector wide strategy and restructuring program. For example, the GOR has recreated a vertically integrated monopoly from assets currently held. Accordingly some, but not all, of the objectives of the program have been achieved. No further assistance was provided in 1997.

The Study of Long Term Options for Restructuring the Power Sector

The project began with meetings in Romania in July 1995. The Phase I Power Options Report was completed on March 12, 1996. Following comments from USAID, the World Bank, EBRD and the Romanian counterparts, it was issued on April 1, 1996. This submission marked the completion of Phase I of the project.

Since submission of the Phase I Options report the Government of Romania has not made its final selection regarding the preferred power sector structure. To assist the new Government in making its

selection Bechtel was asked to prepare a Supplemental Analysis of Issues concerning the options for power sector structure

Between March and October, 1997 the Bechtel team worked on Interim Assistance to help RENEL prepare a Proposal seeking GOR approval of a new Target Structure for the power sector We provided a draft outline for the Proposal in June and a draft Proposal in July The Proposal RENEL finally submitted was largely based on our draft, but differed in some respects In the fourth quarter of 1997 the Bechtel team also prepared a draft Electricity and Heat law, provided review and comments on the draft Energy Law prepared by Ministry of Industry and Trade (MOIT) and helped RENEL draft an Ordinance that would create an independent energy regulatory office

In February 1998 representatives from Bechtel and USAID met with RENEL and the GOR to assess the current situation RENEL was very supportive of proceeding with the development of an implementation plan No specific direction was provided by the GOR

Technical Assistance to the National Agency for Mineral Resources (NAMR)

As mentioned in the Program Status section, Task 1 suffered significant delays due to the delay in delivery of the BEICIP report on crude oil products and the its associated computer model There were 6 end products to be delivered They are as noted

- **Analysis of the BEICIP reports on gas and oil rates and tariffs** Complete
- **NAMR staff trained in fundamental pipeline rates and tariffs** Complete for crude oil tariffs At the end of the year the tariff program for natural gas had not yet been received by NAMR Thus no assistance has been provided on gas tariffs The methodology used for crude oil tariffs however, is very similar to that planned for the natural gas tariffs
- **NAMR staff trained in operation of their rates and tariffs computer model** Complete for operation of the crude oil tariff computer model No training was provided on natural gas tariffs, as the program had not been received at the close of the year
- **Identified areas for fee application and timing schedule for their application** Complete for crude oil transportation tariffs Application and schedule for gas awaits receipt of the gas tariff model
- **Economic and social impact evaluation** Tariff for crude oil will not be raised sufficiently to warrant economic and social impact evaluation

Implementation of rates and tariffs to identified areas of operation Tariff for NAMR staff has calculated crude oil transportation with Bechtel assistance An implementation plan has been proposed but has not been adopted by NAMR as of the end of the year

As for the remaining tasks, Task 2, Regulatory Development, Task 4 - Computer Hardware and Software procurement, Task 5, Petroleum Sector Concession Tour and Task 6 - Economic Evaluation and Bid Negotiation Training were essentially completed in 1996. Under Task 4, the Bechtel team procured and installed five Sun Microsystems work stations and companion equipment for the five source entities. The Task 5 Concession Tour was completed in May 1996 with the participation of the NAMR team at the Annual American Association of Petroleum Geologists in San Diego California. Finally Task 6 - Economic evaluation and bid negotiation training, was executed by Gaffney Cline and Associates in mid to late October 1996. Task 3 was completed in December 1997.

9.4 Key Issues

The Downstream Petroleum Sector Restructuring In Romania Program

The technical analysis and reports were completed at a higher cost than anticipated due to schedule delays, additional analysis and review, and the problems associated with delivering very unpopular and politically sensitive recommendations. The Privatization Initiatives report was essentially rewritten during the June/July, 1996 period as the formation of the Romanian National Oil Company was completed with no advanced warning making most of the original text and recommendations moot.

The formal presentation of the Rationalization and Critical Investments study findings was twice rescheduled and finally conducted on September 30 and October 1, 1996, some six months after submittal of the summary report document. Following the elections, the turnover and uncertainty on the Romanian side was very high, which made it difficult to get decisions and direction from the Romanian counterparts.

The fundamental issues that must be resolved with the Romanians with regard to the downstream sector are political and social ones. The GOR has in fact implemented its own plan to restructure the petroleum sector through consolidation of the remaining operations into a vertically integrated national oil company and decommissioning of the Petrotel, Darmanesti and Vega refineries and offering for sale the Petromedia refinery which continues to operate. However, meaningful investment from foreign strategic investors has not yet occurred due to poor implementation of privatization by the GOR.

The Study of Long Term Options for Restructuring the Power Sector

The submission of the final Power Options Phase I Report completed Phase I of the program. According to World Bank and EBRD loan conditions, the Government of Romania was to have 90 days to make its decision on the long-term structure of the power sector. However, no decision has yet been made. As a result it has not been possible to proceed with Phase II. The Supplemental Analysis Of Issues and Interim Assistance In Structural Definition And Analysis were prepared to assist the Government in making its decision. Although the Government has taken several steps that

demonstrate its commitment to reform, restructuring the power sector involves complex issues and difficult tradeoffs. Consequently, it may require more time to come to its final selection.

The submission of the final copy of the Power Options Phase I Report in April 1996 completed Phase I of the program. The subsequent interim activities were intended to clarify specific issues in the Phase I report and provide the new Government of Romania additional information on which it can base its decision. This included support to RENEL as they developed their own restructuring plan. This plan has been submitted to the Government for their approval, but again, no final decision has been made.

Technical Assistance to the National Agency for Mineral Resources (NAMR)

Task 1 as related to crude oil tariffs is finished and all deliverables have been satisfied. A key issue affecting the deliverables for natural gas was the delay in receipt of the natural gas tariff computer program by NAMR. This program was to be designed by NAMR's consultant BEICIP. Numerous delays occurred during the year that precluded the program from being delivered as scheduled at the end of the third quarter of 1997. The program was not delivered by the end of 1997 and delivery was anticipated for the first quarter of 1998. Without the natural gas computer program, only limited support and assistance could be provided, mainly in terms of showing similarities between the crude oil methodology and the natural gas methodology.

Bechtel was to provide assistance in implementation of the crude oil tariffs. Although an implementation schedule was designed and recommended, NAMR has taken no action on implementing these tariffs. A key issue is the apparent lack of enforcement authority of NAMR. Although NAMR's enabling legislation gives it the authority to determine tariffs for transportation, the legislation fails to give the agency powers it can invoke to implement the tariffs. The agency is in solely an advisory, albeit ineffective mode. Pipelines are planned to make the transition to common carriers. To avoid monopolistic practices, a neutral third party is necessary to determine tariffs that will be paid from shippers to the transporter. The neutral third party in theory must balance competing interests for the national welfare. NAMR's computer programs showed that tariffs for transport of domestically produced crude should increase by approximately 25%. The transporter (pipeline) was due these tariffs for operation, maintenance of the pipeline and return on the pipeline's investment. In Romania, the crude producer pays the tariff to transport its crude to a refinery. The 25% increase in domestic transport tariffs constitutes an increased cost which the producer does not want to pay. Currently one company produces all domestic crude, the state owned oil company. There are no other producers the pipeline can turn to for business. The producer essentially constitutes a monopoly. The pipeline has no recourse other than to do business with the sole producer. If the producer chooses not to pay a higher tariff, the pipeline cannot enforce the tariff. Lacking enforcement authority, neither can the regulatory agency, in this case NAMR. A stalemate occurs and no movement is made towards free markets.

Although the services and deliverables designed into Task 1 were satisfied, no real advancement toward liberalizing tariffs was made. The key issue here is that the agency determining the tariffs, NAMR, lacks the authority to enforce the tariffs.

With regards to the conclusion of Database project (Tasks 3 and 4) the NAMR and the five entities have the basic tools that they need to build the database. Bechtel provided the entities with the necessary computing infrastructure and training to supply the NAMR with data. We prepared the regulatory framework to enable the NAMR to collect petroleum information from the five Romanian entities and other current or future license holders. In addition, we helped the NAMR on a day-to-day basis with a wide range of database-related issues including the scope of information required, evaluation of commercial software and hardware to implement the system, quality control procedures, electronic data interchange with the entities and project management.

The ultimate success of the database project depends primarily on the NAMR's ability to collect the information it needs and build a working database. The Agency has not put enough effort into achieving this central objective. The Agency has put much effort into buying computers and software, attending classes, drafting plans and schedules, then later revising them, as well as proposing new initiatives for USAID assistance. Many of these activities are important, but by themselves they do not constitute real progress toward creating a functioning database. The NAMR and its database subcontractors have very capable staff. The Agency has both the human resources and computing tools it needs to successfully complete the National Database project; they only need to utilize them properly.

9.5 Final Year Activities

The Downstream Petroleum Sector Restructuring In Romania Program

No further activities are anticipated.

The Study of Long Term Options for Restructuring the Power Sector

It is hoped that within in the next few months the GOR will ultimately move to restructure and privatize the power sector. Accordingly it now appears prudent to undertake work prior to that decision to provide a solid platform for timely action once the decision is made. Bechtel is drafting a Work Plan for USAID's consideration that will include developing a detailed implementation plan for restructuring, preparing a strategy for independent power producer and privatization, implementing cost centers, implementing a training and human resources development program, and supporting the legal and regulatory reform process.

Technical Assistance to the National Agency for Mineral Resources (NAMR)

This program was completed in December 1997. While there is additional work and support that the NAMR would like and needs, USAID priorities and funding are currently focused on restructuring the Romanian Power Sector and no additional work is planned for this program for the remainder of the project.

10 0 Regional Assistance Programs

10 1 Program Description and Sector Overview

CENTREL Regional Regulatory Assistance Plan

This program provides regional regulatory assistance and consultancy support to the electric power sector regulatory bodies and operating companies of the four CENTREL countries (Poland, Czech Republic, Slovakia, and Hungary). It is aimed at identifying common intraregional regulatory issues associated with the structure and operation of the CENTREL power systems and developing mechanisms to assist all parties reach common understandings and regulatory approaches consistent both with regional requirements and the policies being instituted in each country.

Each CENTREL country is at a different stage in restructuring its electric power sector and developing its regulatory mechanisms and therefore different approaches to regional issues may be required in each country. However, the CENTREL power systems are now interconnected to the UCPTE Western European system and each CENTREL country is pursuing membership in the European Union so all countries are facing many common issues and could benefit from addressing them together. The EU Directive on liberalization of the electricity market issued in April 1997 identifies several specific requirements, which each member state and accession country must meet as a condition for membership. Other common interests relate to the need to attract investment in the power sector to upgrade facilities, improve operating efficiencies, and become competitive in regional power markets.

This program builds on prior and ongoing regulatory and restructuring efforts of Bechtel and is closely coordinated with other USAID activities in the region. The Bechtel team has been working with individual CEE countries to help them develop sound energy sector policies, regulatory frameworks and restructuring strategies, and is assisting in preparing energy laws and secondary legislation. USEA conducts seminars and exchange visits on regulatory issues for both utility and regulatory representatives of the CENTREL countries to present information on basic fundamentals and experiences in other countries. Electrotek Concepts Inc is working with the CENTREL utilities to address technical and economic issues related to integrated system operation. Because many of these activities are closely related, Bechtel and Electrotek are working together on a series of Regional Roundtable Forums at which ministry/regulatory and utility representatives meet together to discuss regional issues from both operational and policy/regulatory perspectives.

The principal objectives of this program are to

- Identify and jointly address the key regional electric power system regulatory issues affecting the CENTREL regional grid system and its interconnected operation with the UCPTE system
- Assist in reconciling regional regulatory issues and approaches with the evolving regulatory approaches being developed in each of the CENTREL countries
- Provide a forum for regulatory and policy officials of each CENTREL country to exchange information among themselves and with foreign regulators and other experts about their experiences and planned approaches for power sector regulation

- Provide a forum for discussing regional power system operation and regulation issues among the power system operators and regulators of each CENTREL country
- Provide the basis for a mechanism of ongoing coordination of intraregional regulation of CENTREL power system operations

The main elements of this program as identified in the workplan are the following

- Identification of priority issues
- Preparation of discussion paper
- Regional roundtable forums (4)
- Focus meetings

CEE/NIS Energy Regulatory Conference

This task is providing regional regulatory assistance and consultancy support to the regulatory bodies in the CEE and the NIS. This is being accomplished through technical assistance and logistical support for key conferences and working group meetings. The first activity was the Energy Regulatory Conference held in Budapest, Hungary from November 18 - 20, 1997. Participants included regulatory and commission staff from the CEE and NIS as well as US experts provided by the three-contractors/grantee organizations. Bechtel worked with USEA and Hagler Bailly to coordinate and execute this Conference.

10.2 Program Status

CENTREL Regional Regulatory Assistance Plan

The program workplan was finalized and approved following a meeting of USAID, Bechtel, USEA and Electrotek representatives in Washington on June 5, 1997. This followed a series of earlier drafts and numerous discussions among the participants on how best to coordinate the various related CENTREL activities. As a result of the agreements reached during this meeting and in subsequent discussions and correspondence, the following activities have been performed to date under this program:

Participation in USEA Regulatory Executive Exchange Visit for the CENTREL Countries

USEA conducted a Regulatory Executive Exchange Visit to the U.S. on July 20-31, 1997, for government and utility representatives of the CENTREL countries under the Utility Partnership Program. The visit included meetings with NARUC committees and regulatory agencies in San Francisco and Sacramento, California, Columbus, Ohio, Harrisburg, Pennsylvania, and Washington, DC. Bechtel participated in the meetings to assist in providing coordination and maintaining continuity with the participants for future activities in the program.

CENTREL Regional Electric Regulatory Issues Discussion Paper

Bechtel prepared a preliminary Discussion Paper Regarding CENTREL Regional Electric Regulatory Issues, describing the program and summarizing the key issues expected to be

addressed. Attachments to the paper provide brief descriptions of each country's economy and energy sector and summaries of EU harmonization issues for each country. The paper was approved for distribution by USAID in September 1997 and was provided to ministry/regulatory and utility participants of the Regional Roundtable Forums. Preparation and issuance of the paper served to establish a baseline for the program and provide a common basis of understanding for the subsequent discussions of issues.

Participation in First CENTREL Regional Roundtable Forum on Transmission Services and Pricing

Electrotek organized the first CENTREL Regional Roundtable Forum on the subject of Transmission Services and Pricing, held in Warsaw on September 16-18, 1997. Presentation/discussion topics included Financial and economic concepts for pricing transmission services, transmission open access, ancillary services and pricing transmission service markets, transmission service pricing examples in practice (UK, Scandinavia, Spain, Argentina), and the California Plan to establish an Independent System Operator and Power Exchange. Bechtel invited and paid the expenses of up to four ministry and regulatory representatives from each country to participate in the Roundtable.

First CENTREL Regulators Meeting

Bechtel organized the first meeting of CENTREL ministry/regulator representatives held in Warsaw on September 17 and 18 in conjunction with the Warsaw Regional Roundtable Forum. Bechtel explained the purpose and planned activities of the program and distributed the preliminary CENTREL issues discussion paper for review and comment. The meeting provided an opportunity for the regulators to meet each other and to suggest subjects for future meetings.

Second CENTREL Regional Roundtable Forum on Competitive Power Markets

Bechtel organized the second CENTREL Regional Roundtable Forum, on the subject of Competitive Power Markets, held in Prague on January 20-22, 1998. A ministry/regulatory representative from each country gave a report on plans for competitive power market development in his country, including the status of energy legislation and regulations. A U.S. regulator and a U.S. lawyer discussed principles of competition in power markets and how they might apply in the CENTREL countries. A representative of the European Commission energy directorate outlined the requirements of the EU Electricity Directive and their implications for power sector restructuring and competition. A representative of Svenska Kraftnat (the Swedish Grid Company) and participant in NordPool described many of the issues involved in operating an international power pool. A U.S. power plant developer described privatization approaches used in various countries and necessary conditions to attract foreign investment. The recently-appointed chairman (from CEZ of the Czech Republic) of a CENTREL working group on Electricity Market Harmonization described the group's plans to review conditions and plans in each country and develop recommendations for possible future cooperation. In the final session, panels of participants provided comments on the key issues discussed during the Roundtable. There was active participation in all discussions and good exchanges of ideas and opinions among the participants, a key objective of the Roundtables.

Second CENTREL Regulators Meeting

The second CENTREL regulators meeting was held in Prague on January 22 1998, following close of the Prague Roundtable. Discussions were held on possible future roles of a CENTREL regulators group and subjects for future meetings. It was decided that the next meeting should be an all-day meeting with presentations and discussions on the subject of Improving Public Understanding and Support of the Regulatory Process.

Planning for Third CENTREL Regional Roundtable Forum on Electricity Contracting and EU Harmonization

Planning is underway for the third Regional Roundtable Forum to be held in Bratislava in May 1998. This Roundtable also is being organized by Bechtel and will address in more detail many of the key issues raised at the Prague Roundtable concerning compliance with the EU Directive requirements. Many of the previous participants are expected to attend and some of the same outside speakers will participate again making it possible for the discussions to build on the previous Roundtables. Maintaining a consistent approach and continuity of contact persons and participants has contributed to the success of all of the Roundtables.

Planning for Third CENTREL Regulators Meeting

Planning also is underway for the third CENTREL regulators meeting to be held the day before the Bratislava Roundtable in May 1998. As suggested at the previous regulators meeting, presentations and discussions will address the subject of Improving Public Understanding and Support of the Regulatory Process.

CEE/NIS Energy Regulatory Conference

Bechtel provided logistical and technical support in the November Energy Regulatory Conference in Budapest Hungary. This included participation as moderators during the committee meetings as well as travel support for the CEE participants from Estonia, Bulgarian, Hungary, Latvia, Lithuania, Macedonia, Poland, Romania and the Slovak Republic.

10.3 Results to Date**CENTREL Regional Regulatory Assistance Plan**

Although the program is still underway, many of the original objectives have already been achieved and several benefits have been realized. Key results to date include:

- A forum has been established for ministry/regulatory and utility representatives of the CENTREL countries to discuss issues of common interest and exchange information on approaches being pursued in each country to address key power sector issues. This forum has achieved stability and success due to the interest and consistent participation of the key representatives from each country.

- The CENTREL Council appointed a working group to investigate harmonization of electricity markets among the CENTREL countries. This was due in part to the interest expressed at the first Roundtable in a possible CENTREL power market, which would require a significant expansion of the charter of the current CENTREL organization. The working group is expected to make its recommendations about midyear 1998. Their findings could provide a basis for discussions at a fourth Roundtable on issues related to implementing a possible CENTREL power market.
- The ministry/regulatory and utility representatives of the CENTREL countries have become more aware of the power sector liberalization requirements of the EU Electricity Directive and the necessary steps, including additional energy legislation and regulatory and pricing reforms, to comply with the requirements. In the remainder of the program these requirements will continue to be discussed since they provide the greatest incentive to make important changes.

These results directly support Strategic Objective 1.5, A More Economically Sustainable and Environmentally Sound Energy System and Intermediate Result 1.5.5 Expanded Regional and International Energy Trade and Integration of Energy Systems with Western Europe and International Energy Markets. The following *indicators are addressed* directly:

1.5.5.2 Establishment of effective regional power pool among CENTREL countries (Poland, Czech Rep., Slovak Rep., and Hungary)

1.5.5.3 Integration of CEE into Western European UCPTE electric system

In addition, the program will contribute significantly to the following *indicator*:

1.5.5.4 Establishment of contractual and pricing mechanisms for energy trade among CEE and NIS countries

It still remains to be seen to what extent these objectives will be achieved under this program, or whether some of the objectives should be modified, but the program is providing much of the information and many of the tools necessary to help make the decisions.

CEE/NIS Energy Regulatory Conference

The program is still underway, but the initial Conference in Budapest was very much a success. The participants engaged in high levels of discussion and exchange regarding the development of market-based energy regulatory functions. The shared experiences and expertise has prompted the request from several countries that this type of exchange be continued and perhaps expanded in terms of organization and topic areas. Based on these requests, USAID has organized the April core group meeting to investigate how this cooperation can be best continued and a meeting on licensing issues to be held in June 1998.

The core group meeting will involve 2 staff and/or Chairmen from three regulatory bodies from Central and Eastern Europe and the same from three regulatory bodies from the NIS. This meeting is planned for April 14 and 15, 1998, again in Budapest, Hungary. The follow-on from November also includes a working group meeting that will focus on the regulatory/licensing issues. This is an

extension of the working committee formed for the November Conference. A June meeting is planned for members of this group.

10.4 Key Issues

CENTREL Regional Regulatory Assistance Plan

The following issues could affect the direction and success of the program. The first of these issues has been satisfactorily addressed and currently presents no significant problems. The other issues are largely beyond our control, but regardless of their outcome this program will contribute significantly to more informed decision-making on the part of the CENTREL countries and utilities.

- Since this program requires coordination among related USAID programs and assigning responsibilities for individual activities (e.g., responsibilities of Bechtel and Electrotek for organizing and funding the Roundtables), frequent communication with the other contractors and with responsible COTRs is necessary to clarify responsibilities and avoid overlaps or conflicts. Following the coordination meetings early in the program, communication has been good and potential problems have been avoided. This coordination will have to continue throughout the program to maximize the benefits to the recipients of the USAID funds expended.
- The CENTREL utilities are currently evaluating the desirability of forming a power pool or power market in addition to the technical and operational coordination they are currently providing. If the results are encouraging, the program will provide key assistance in establishing and operating a regional market. If they decide against a regional pool or market structure, the information provided will allow each country to participate more effectively in the European power markets.
- None of the CENTREL countries currently meet all of the EU Electricity Directive requirements, although all appear to be aware of the key requirements and have either passed new energy legislation, are in the process of doing so, or have initiated regulatory actions to address the major issues. It remains to be seen to what extent the desire for EU membership and the political will in each country can overcome public resistance to some of the more difficult adjustments.

CEE/NIS Energy Regulatory Conference

The key issue facing this work is the continued cooperative and coordinated efforts between the contractors supporting this effort and between the regulatory agency staff involved in these meetings. If the success of the November is any indication, this should not be a problem, but it will require work on the part of everyone involved.

10.5 Final Year Activities

CENTREL Regional Regulatory Assistance Plan

The CENTREL Regional Regulatory Assistance program is continuing into the final year of the contract (through calendar year 1998). The third Roundtable Forum and the third Regulators meeting have been scheduled for the week of May 25 in Bratislava and planning for these activities is well underway as noted above.

A fourth CENTREL Regional Roundtable Forum is included in the program workplan but it has not yet been scheduled and the responsibility for organizing it has not been assigned. The planned topic for the fourth Roundtable is Power Pooling issues which would effectively consolidate many of the discussions of the first three Roundtables related to this subject. However, the CENTREL Council has assigned a working group to investigate harmonization of electricity markets among the four CENTREL countries and their recommendations are not due until after the middle of the year. (The working group chairman provided a status report on the plans for his group at the second Roundtable and has been invited to provide an update on plans and progress at the third Roundtable.) Until the group reports its findings to the Council it will be unclear whether the CENTREL member utilities will want to pursue a regional power pool or power market, and their representatives may be reluctant to discuss the subject in detail. For this reason and because of the holiday season and other regional activities, it is expected that the fourth Roundtable will be held in the fall of 1998, probably in Budapest. In addition to power market and pooling issues, it is likely that further discussion of compliance with EU requirements will also be discussed since they are becoming the main incentive for the CENTREL countries to enact legislation liberalizing their power sectors. Furthermore, this is an area where all countries have common interests and can benefit from each others' experiences as well as from the experience of other EU members who have already gone through the harmonization process.

A fourth Regulators meeting also is planned, probably in conjunction with the fourth Roundtable in the fall. Possible subjects for discussion will be discussed at the third Regulators meeting to be held in May. Since the fourth Regulators meeting is likely to be the final one under this program, a key subject will be possible mechanisms for ongoing future coordination and exchange of information among the CENTREL country regulators and ministries. The meeting will also serve to summarize accomplishments and progress to date and identify unresolved issues for possible future action.

CEE/NIS Energy Regulatory Conference

The final year will focus on the follow-on and continuation of the programs begun during the last year. As a follow-on to the November 1997 Budapest CEE/NIS Energy Regulatory Conference, there will be additional focus meetings in April and June and plans are underway for a 2nd Annual CEE/NIS Energy Regulatory Conference in the fall of 1998.

11 0 Additional Final Year Activities

In addition the projects highlighted in the earlier sections of this report, the project will provide assistance to the Macedonian Ministry of Economy. Potential areas of assistance under our contract include

- Options for restructuring the Macedonian power sector
- Models for concessions (for hydro power stations)
- Models for licensing

Bechtel visited Macedonia in March and is working with USAID and the Macedonian Ministry of Economy to define a scope of work for further actions in 1998

11 1 Conclusion

The third year of work under the Regulatory Reform and Energy Sector Restructuring Contract has continued to be dynamic and challenging. Much has been accomplished in the sector such as the implementation of the Energy Law in Poland, the establishment of the Polish Energy Regulatory Office, the issuance of tenders for new capacity in Hungary (based on the guidelines issued by the HEO), continued tariff assistance to the developing regulatory bodies in Lithuania and Latvia, and the development of a national power sector strategy that embraces full competition in Romania. The majority of these accomplishments are a result of our work under this and prior contracts with USAID. We believe that our continued assistance will set the stage for many more accomplishments in the energy sector.

We look forward to these and other accomplishments in the sector, deepening our ties with our Central and East European and Baltic counterparts and to successfully completing our major first, second, third and final year projects.

Table 2 Reports and Other Deliverables Issued under the Contract to Date

Report/Deliverable Title	Date Issued	Author(s)
<u>BOSNIA-HERZEGOVINA</u>		
Coal and Thermal Power Cost Study for Bosnia and Herzegovina, Draft Report	June 1997	Bechtel
Coal and Thermal Power Cost Study for Bosnia and Herzegovina, Final Report	August 1997	Bechtel
<u>BULGARIA</u>		
Interim Report - Tariff Methodology and Implementation Strategy for Bulgaria	December 1995	Bechtel
Two Energy Tariff Workshops in Sofia Bulgaria for representatives of CoE, NEK and other industry representatives	November 1995 & February 1996	Bechtel & Arthur Andersen
Paper on "International Perspectives on the Importance of Electric Tariff Transitioning to Cost-based Levels in Bulgaria	June 1996	Bechtel
Final Report - Tariff Methodology and Implementation Strategy for Bulgaria	June 1996	Bechtel
Two Transfer Pricing Workshops	June 1996 & September 1996	Bechtel
Interim Report - Pricing for Generation, Transmission and Distribution	February 1997	Bechtel
Memoranda with comments on the draft Energy Law	January 1998	Bechtel
<u>CZECH REPUBLIC</u>		
Seminar on Regulatory Practices in the US and the UK For Czech Ministry of Industry and Ministry of Finance staff	October 1995	Bechtel, Arthur Andersen, Pierce Atwood & Skadden Arps, et al,
Advice on revenue requirement methodology submitted to MoIT staff in the Czech Republic	March 1996	Arthur Andersen
Advice and memoranda on Act 222 (the Czech Energy Law)	November 1996	Pierce Atwood, Local counsel & Bechtel

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Report/Deliverable Title	Date Issued	Author(s)
Regulatory Assistance Report for the Czech Republic	December 1996	Arthur Andersen
Czech Regulatory Development Study Tour	December 1996	Bechtel, Pierce Atwood & the US Energy Association
<u>HUNGARY</u>		
Draft Electric Tariff Methodology Report issued to the HEO Tariff Group	March 1995	Bechtel
Public Hearing Process Memorandum issued to the Hungarian Energy Office (HEO)	February 1996	Bechtel & Pierce Atwood
Comments on the Operational Code in Hungary	April 1996	ECC/KEMA
Licensing procedures for new capacity and direct sale power plant licenses for the HEO	October 1995 - April 1996	Pierce Atwood, Arthur Andersen & Bechtel
Draft New Capacity Tender Guidelines	June 1996	Bechtel & Pierce Atwood
Draft Tender Request for Proposal	June 1996	Bechtel & Pierce Atwood
Memoranda on legal issues and questions raised by the HEO	Through February 1998	Pierce Atwood
Computer Hardware for the Hungarian Energy Office (HEO)	July 1996	Bechtel & ComputerLand Budapest
Workshops for the HEO, distribution and supply companies on demand and load forecasting	November 1996 and April 1997	Arthur Andersen
Competitive Model & Restructuring Study	December 1997	Bechtel, Arthur Andersen Pierce Atwood, NERA Kema/ECC
Information Management Advisory Assistance – Phase I Design and set up of the HEO s system	March 1997	Bechtel, California Energy Commission & ComputerLand Budapest
<u>LATVIA</u>		
Final Report in Energy Tariff Methodologies for the Latvian Energy Council	February 1997	Bechtel
Memoranda on revising the Latvian Energy Law	Continuous through December 1997	Pierce Atwood & Bechtel

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Report/Deliverable Title	Date Issued	Author(s)
<u>LITHUANIA</u>		
Draft gas heat and electricity tariff methodologies issued to the Pricing Commission	March 1995	Bechtel & Gaffney Cline and Associates
'Regulatory Organizational Structures in Other Countries'	September 1996	National Economic Research Associates
Accounts Receivable Assistance to the Lithuania Power Company (LPC or AB Lietuvos Energija)	December 1996	Bechtel & Arthur Andersen
Oracle Database Training and Computerization of Accounts Receivable function at LPC	September 1996 - December 1997	Bechtel, Arthur Andersen & Information Technologies
Energy Sector Restructuring and Energy Pricing Reform, Economic Restructuring Series to the Members of the Seimas of the Republic Of Lithuania USAID and World Learning Inc	October 1997	Bechtel
<u>POLAND</u>		
Participation in drafting and negotiating the Energy Law in Poland	July 1995 - April 1997	Bechtel & Consultant team
Input to the review and revisions to the secondary legislation	June 1997 - Current	Bechtel and Consultant team
ERO Information Management Plan	February 1998	Bechtel and Consultant team
ERO Organization and Staff Plan input	Summer 1997	Bechtel and Consultant team
Utility Tariff Workshop - Naleczow Poland	June 1996	Bechtel & Consultant team
Implementing Energy Regulation in Poland Concepts and Practices - Jachranka Poland	October 1996	Bechtel, N/E/R/A, Pierce Atwood
Implementing Energy Regulation in Poland Concepts and Practices II - Economic Regulation - Warsaw, Poland	December 1996	Bechtel, N/E/R/A, Pierce Atwood
Comments on the World Bank - ESMAP ERA Training Project	Fall 1996	Bechtel & Consultant team
Executive Summary for the Privatization Plan for three (3) Distribution Companies (full reports in	July 1996	Arthur Andersen

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Polish)		
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Report/Deliverable Title	Date Issued	Author(s)
Executive Summary and Privatization Concept for the Rybnik Generation Station (excerpts translated)	March 1997	Arthur Andersen
Privatization "Roll-Out Conference	March 3, 1998	Bechtel & Arthur Andersen
Draft Privatization Manual	March 1997	Arthur Andersen
<u>ROMANIA</u>		
Interim Report – Romanian Power Options Study	November 1995	Bechtel, Arthur Andersen N/E/R/A, & Pierce Atwood
Study of Options for the Long-Term Structure of the Power Sector - Phase I Option Report	March 1996	Bechtel, Arthur Andersen, N/E/R/A, & Pierce Atwood
Supplemental Analysis of Issues regarding the Study of Options for the Long-Term Structure of the Power Sector - Phase I Option Report	March 1997	Bechtel
White Paper on the "Target Structure" for the Romanian Power Sector	August 1997	Bechtel
Rationalization and Critical Investment Summary Report, Vol I and Vol II for Romania	March 1996 Issued Fall 1997	Bechtel & Arthur Andersen
Privatization Proposal for the Downstream Petroleum Sector in Romania (DRAFT)	September 1996	Bechtel & IntraTech
<u>REGIONAL</u>		
Regional Mineral Management Seminar	June 1996	Bechtel, Gaffney, Cline & Assoc , in cooperation with the US Dept of Interior
CEE/NIS Energy Regulatory Conference	November 1997	Bechtel Pierce Atwood
2 nd CENTREL Regional Roundtable – Prague, Czech Republic	January 1998	Bechtel with support from Pierce Atwood