

PD-ABQ-971

99684

**LONG-TERM ADVISORY SERVICES  
CLAUDE W EGGLETON-KAZAKHSTAN  
PERIOD COVERED AUGUST, 1997-SEPTEMBER, 1998**

**NIS INSTITUTIONAL BASED SERVICES UNDER THE  
ENERGY EFFICIENCY AND MARKET REFORM PROJECT  
CONTRACT NO CCN-Q-00-93-00152-00  
DELIVERY ORDER No 17**

**CENTRAL ASIAN REPUBLICS  
REGIONAL ENERGY SECTOR INITIATIVE**

*Final Report*

*Prepared for*

U S Agency for International Development  
Bureau for Europe and NIS  
Office of Environment, Energy and Urban Development  
Energy and Infrastructure Division

*Prepared by*

Hagler Bailly  
1530 Wilson Boulevard, Suite 400  
Arlington, VA 22209-2406  
(703) 351-0300

September 1998

---

## CONTENTS

<b>EXECUTIVE SUMMARY</b>	<b>2</b>
<b>ACCOMPLISHMENTS AND MAJOR ACTIVITIES</b>	<b>2</b>
Status of Pipeline Tariff Project	2
July 1997-September 1997	3
October 1997-December 1997	4
January 1998-March 1998	6
April 1998-June 1998	8
July 1998-September 1998	9
<b>LESSONS LEARNED</b>	<b>9</b>
<b>SUGGESTIONS FOR IMPROVEMENT</b>	<b>11</b>
Pipeline Tariff Methodology	11
Institutional Development for Foreign Investment in Oil & Gas	11
Creation of Independent Regulatory Agency	11
Related Activities	12

## **EXECUTIVE SUMMARY**

Initially joining in August of 1997 a project, already underway, to assist the Government of Kazakhstan in the development of an internationally acceptable oil tariff methodology, principally as a senior financial consultant, my role eventually evolved into the long term oil and gas consultant for the country of Kazakhstan. The principle success achieved during the period of my contract was the formal adoption by the Government of Kazakhstan of the pipeline tariff methodology. The principal lessons learned were the value of a USAID consultant providing institutional memory and continuity in the face of constantly changing governmental and institutional structures and personnel, and the need for patient education and communication with counterparts on a peer basis which insured that translation not only transferred the words, but also the concepts behind the words.

Though the transition to long term advisor in the course of this agreement, the Kazakhstan office of Hagler Bailly is also the Chief of Party's office for all contract activities for the Central Asian Region. Therefore most of the administrative activities inherent in being long term manager were not performed. My role was principally as a technical supervisor. Operations management, administration, local staff and short term advisor supervision were primarily handled by the Chief of Party, Michael Biddison, ably assisted by the Assistant Regional Manager, Svetlana Ivanova, who is day to day supervisor of local administrative and related regional operations. In Mr. Biddison's absence, I acted as regional technical liaison with USAID and embassy staff. In terms of counterpart relations, I have worked extensively with senior staff at KazTransOil, the Agency for Strategic Planning and Reform, the Ministry of Energy, Industry and Trade, Ministry of Finance, and a number of non-Kazakhstan organizations such as the World Bank, the European Bank for Reconstruction and Development, and the Kazakhstan Petroleum Association.

## **ACCOMPLISHMENTS AND MAJOR ACTIVITIES**

The following constitutes a review of accomplishments and major activities on a quarterly basis. Lessons learned and suggestions for improvement of effectiveness are covered in later sections of this report.

### **Status of Pipeline Tariff Project on August 15, 1997**

I joined the pipeline tariff project on August 15, 1997, in which significant progress had already been achieved. After the initial request for assistance from the Kazakhstan government, a pipeline steering committee had been formed with participation from the national oil pipeline company, whose former name was KazakhNefteProvod and current name is KazTransOil (KTO),

most of the key ministries in the government, the primary economic regulatory authority, then identified as the AntiMonopoly Committee (AMC) and now identified as the Monopoly Committee (MC), and the Kazakhstan Petroleum Association (KPA) The steering committee was chaired by Mike Biddison of Hagler Bailly and a senior vice president of KTO The committee had developed a lot of historical research and international comparisons for educational purposes In addition a model had been under development by Dr Helmut Merklein which utilized theoretical data to approximate the costs of operation and form a foundation for tariff development The asset valuation utilized in the system was based upon a replacement value estimate which Dr Merklein insisted would have to be adjusted to meet the current state of operation, maintenance, and physical condition of the system This was one of the first true integrated pictures of the KTO system as single operating company

### **July 1997 - September 1997**

Two major aspects marked this period of performance (1) field audits and derivations of preliminary rates based on international tariff methodology, (2) initial development of standardized methodology procedures for consideration

Upon arrival in Kazakhstan on August 18 integrated into the pipeline tariff methodology team August 20, 1997, I participated in Fourth Meeting of Oil Pipeline Committee, Kazakhstan Pipeline Project

The first key event occurred during the week of August 25, when I traveled with John Sanders, HB, Svetlana Ivanova, HB, and Rasima Salakhovna Zakirova, Kazkhnefteprovod, to the headquarters of Yuzhnefteprovod, the Western operating division of the pipeline This field audit produced the first indication that solid maintenance and operating data was available and allowed me the opportunity to develop a comparative analysis of Kazakhstan tariff calculation methodology on a side-by-side basis with Western International tariff methodology This educational tool along with the data developed from the Yuznefteprovod field audit proved absolutely crucial in the rate design effort that followed in September

On September 2, Mike Biddison, Chief of Party, was contacted by the staff of the president of KazakhNefteProvod The president of the pipeline was given the opportunity to brief members of the Council of Ministers The president wanted to have supportive documentation from the staff of Hagler Bailly on a comparative basis of the North American tariff methodology, the results of the model, and rationales for modifying the law and tariff operations I drafted a chart of Kazakhstan rate design compared to North American rate design on a generic sample basis As a communication tool this proved highly effective This briefing led to a meeting with the key officials of KazakhNefteProvod I and other Hagler staff rapidly developed revised briefing

materials which were adopted and incorporated into an afternoon briefing of the Cabinet of Ministers

On September 9, 1997, met with President, Nourlan D Kapparov, of KazakhNefteProvod and all his senior vice presidents. He asked us to prepare rate recommendations for the three primary operating divisions and an average rate for the entire system. He offered the full access of his staff and records, but asked that we provide the rates on a timely basis.

On September 10, 1997, the Deputy Minister of the Economy blessed the effort. Thus began an intensive effort. A field audit was performed of the pipeline headquarters which was integrated into the field audit of Yuznefteprovod. I was principal author of report text, which was critiqued and edited by Dr. Bhamy Shenoy and Mr. Biddison. The final publication, "Proposed Pipeline Tariff Methodology and Recommended Tariff Rates for the Government of the Republic of Kazakhstan," was delivered to KazakhNefteProvod on September 17, 1997.

The pipeline company was extremely satisfied and requested a procedures manual be developed. This led to the presentation of the results of the rate analysis and the contents of the procedures manual on September 25, at the Fifth Pipeline Steering Committee Meeting.

Accomplishments for July - September, 1997: field audit of western pipeline operating division, preparation of side-by-side tariff analysis communication tool, principal author of "Proposed Pipeline Tariff Methodology and Recommended Tariff Rates for the Government of the Republic of Kazakhstan", preparation and presentation of methodology procedures.

#### **October 1997 - December 1997**

Four major aspects marked this period of performance: (1) finalization of the procedures manual, resolution and statements of principles for the Seventh Pipeline Steering Committee meeting, (2) expanded role as advisor to the Anti-Monopoly Committee, (3) strategic planning cash flow analysis for KazTransOil, and (4) regional representational activities for Hagler Bailly.

Early October saw continued efforts in formal drafting of a methodology in a step-by-step guide in coordination with KTO. Additional interest was shown by KTO in utilizing these procedures in strategic planning models and analysis of cash flows.

In mid-October, I focused on preparations for the seventh steering council meeting on October 29, 1997. Modified the procedures manual, reflecting changes proposed by KTO, and assisted Mike Biddison in development of resolution and additional guiding principles to be approved by steering council in nomination to the AMC.

During this period a faction had formed in KazTransOil proposing an alternative rate of return methodology. Recent employees of KTO, with no background in utilities and no participation in the development of the methodology, began lobbying for a change from a regulatory rate of return design to a radical departure. Extensive efforts were spent in attempting to educate the new people.

The seventh pipeline steering council meeting on pipeline methodology was held on October 29, 1997. The resolution, the amendments to the resolution, and the procedures guide were discussed extensively. On November 11 - 12, met with V. P. Kabyldin, KazTransOil, and chairman of the steering committee, who approved the final changes to resolution, amendments, and procedural guide. The next phase of the approval process shifted to the AntiMonopoly Committee.

At this point the focus of consultive assistance shifted to the AntiMonopoly Committee, the principle economic regulatory organization for natural monopolies and the key communicator for recommendation to the Ministry of Energy and Agency for Strategic Planning for procedural approval. In accomplishing these efforts, met extensively with AMC staff.

On November 5, met with Ms. Popondopola, who briefed on the current status of the legislation and government reorganization. Discussions examined the creation of a regulatory commission, possibly formed from the AMC. The AMC had modified its charter to adopt HB recommendations for the development of an independent regulatory commission. There appeared to be agreement in principle to accept the HB recommended tariff methodology. To facilitate acceptance of the pipeline methodology, I reviewed and recommended changes to the operational documents used by the AntiMonopoly committee.

On November 24, in meeting with the AMC, their status had changed to a legal entity and they could approve the methodology. On November 25, met with Mr. Radostovets and Ms. Popondopola of the AMC. The fundamental concepts of the resolution, amendments, and methodology were acceptable.

On December 10, we provided copies of final version of Steering Committee resolution, recommendations, methodology procedural guide, and letters of support from oil companies. Provided copies of recommendations for changes to AntiMonopoly Committee procedural instructions. Hagler Bailly was formally requested to join a committee of experts to examine a current gas pipeline tariff filing.

On December 11, began a series of meetings and discussions on the gas pipeline tariffs. Dr. Helmut Merklein and I eventually gave a series of recommendations that were acceptable to the AMC and gas pipeline monopoly.

In early and mid December, in response to KTO requests, prepared special spreadsheets to look at future cash flow analysis for capital construction utilizing the Western tariff methodology. Worked continued on the preparation of a multi-scenario cash flow analysis. Five scenarios were developed in a sensitivity analysis examining such factors as used and useful, debt versus equity ratios, and repayment schedules. In addition to short term analysis, a long term analysis through the year 2030 was prepared. Held training session for KTO staff discussing all data elements, logic of analysis, and presentation of results - including the impacts on cash flow analysis and the respective shippers rates. KTO senior staff for project management expressed satisfaction with the results. The cash flow provides validation of the tariff methodology's ability to produce the necessary cash flow to support a strongly needed capital improvement program, yet maintain stable or moderately increasing transportation rates through the 30 year period. It also introduced to the Kazakhstani's key concepts of adopting a structured portfolio of debt and equity financing, the importance of negotiating appropriate terms in addition to rates, and balancing costs with cash flow to maintain stable rates.

During this quarter assumed increased representational activities with USAID staff as long term oil and gas advisor for Kazakhstan, and somewhat for the region - including representational activities at the ambassadorial level.

During this period, also began activities in support of development of export pipeline development with initial involvement, under the lead efforts of Dr. Helmut Merklein and Dr. Bhamy Shenoy, in modeling of the rate structure for the proposed Chinese oil pipeline negotiated by KazTransOil.

During the mid to late December period, the KTO faction, mentioned earlier, through internal politics, built support for and filed a rate application which incorporated most of the concepts of the Steering Council recommended methodology, but diverged radically to incorporate extensive forecasted financial data and extremely inflationary rates of return - the latter not supported in international regulatory structures. This application dominated the educational efforts of the following quarter.

Accomplishments for October - December, 1997: drafted methodology, participated in drafting of Steering Committee resolution and amendments, initial consultation of gas pipeline tariffs, preparation of tariff methodology cash flow analysis, and oil and gas representational activities.

#### **January 1998 - March 1998**

Four major aspects marked this period of performance: (1) education and comparative analysis demonstrating weaknesses in proposed KTO application and foundation of recommended

methodology, (2) expanded role in development of export pipelines, and (3) continued regional representational activities for Hagler Bailly

Because of a consultant ordered freeze, activity in January was minimized

In February began an exhaustive series of analyses of the December KTO application and the series of revisions that followed. This was complimented by an extensive series of educational discussions at all levels of government on an individual basis as well as an official forum basis

The initial request to analyze the KTO filing derived from the Agency for Strategic Planning - at that time the superior agency to the AMC. Initially, the KTO application sought a 28% rate of return. The completed analysis was provided to the Agency for Strategic Planning on February 14. Drafted a letter for ambassadorial signature in support of steering committee recommended tariff methodology

On February 25, received a crucial request from the AMC for analysis support of KTO filing. In addition, received a formal request from the Agency for Strategic Planning to be in Akmola (now called Astana) to participate in a full forum discussion of the KTO filing. Drafted a support letter for USAID director Patty Buckles signature in support of methodology and coordinated support letters from the KPA

On February 26 attended a critical meeting in Astana, chaired by the Vice Chairman for the Strategic Planning Agency, with attendance by all the key agencies and ministries. KTO had tried to bypass the AMC and proposed their methodology directly to the vice chairman after its rejection by the AMC in December. The team of Svetlana Ivanova, Dr. Merklein and I presented replete technical analysis such that the KTO proposal was tabled for further study. The AMC immediately moved to reinstate its jurisdiction. The Hagler analysis detailed the methodology, responded to criticisms, and tried to place the methodology in perspective to international norms and to its impact on the economy of Kazakhstan

In early March, detailed analysis was again sought by the AMC and the Agency for Strategic Planning for a revised filing by KTO. The revised filing had moved further in the direction of the Steering Committee recommended methodology

In late March, performed intensive international research, since to be successful in the discussions, it was necessary to test the actual calculations of applicable returns on equity, since Kazakhstan lacked any historical development that would be normally utilized to generate returns on assets of this nature

During this period issues also began to arise concerning a tender issued by KTO to re-evaluate the assets of KTO. Concerns were raised that inflated values of assets would be generated which would balloon transportation rates in a period of decline in crude oil prices. Consultation was sought by the AMC on asset valuation.

Continued ambassadorial level representation of Hagler and oil and gas at status meetings, for example at meetings chaired by the German Ambassador, and representational activities at USAID team meetings for regional activities in electric, oil and gas contracts. Participating in discussions about the development of the Caspian Export Pipeline conference. At the request of the Commercial Attache provided broad prospective of oil and gas investments and development in Kazakhstan for CMS Energy.

Continued to provide advise to KTO Investment Department on development of Chinese export pipeline - examining financial factors and route development. Later participated in the Caspian Export Pipeline Conference on March 31 as well as provided comments to panel of experts performing after conference analysis.

Accomplishments for January - March, 1998. Exhaustive detailed analysis of various KTO rate applications and methodology changes, and successful education of various ministry personnel on fundamentals of rate design and tariff methodology.

#### **April 1998 - June 1998**

This quarter was characterized by intense discussions with various parties on the development of viable export pipeline routes, in-depth discussion on the development of a Kazakhstan rate of return methodology, strategic planning on development of export pipeline routes, the holding of the official approval public hearing on the tariff methodology, and increased administrative planning activities in support of DO17.

April began with continued discussions related to the export conference routes and their respective viability. It continued into April and May in strategic discussions with the addition of a new consultant, Dobie Langenkamp.

On April 10, a formal meeting in Astana before the AMC and other ministries resolved many issues in the tariff methodology and narrowed the focus to equity rate of return - with KTO being ordered to work with us in the development of a Kazakhstan specific solution. A key issue that was resolved at this meeting was the acceptance of our recommended elimination of the export surcharge on oil. This will equalize the treatment of oil transportation through the system.

On April 13, profound meetings were held with KTO financial staff. Newly hired, business educated staff had recently joined the KTO operations and were better able to comprehend the issues involved in the development of an equity rate of return. Eventually, Hagler staff signed a joint letter on April 24, recommending a procedure to the AMC. The difficulties involved the use of a standard regulatory approach based upon stable risk coupled with unstable risk, however, the historical factors available for its calculation in more developed free market societies were not available in Kazakhstan and alternatives had to be developed.

Late April into early May was spent developing documents for the holding of a public rate or tariff hearing - the first of its kind in Kazakhstan, and in early May the review of KTO's final application - which did not contain actual rates, but represented the final compromise methodology.

The formal public hearing on the pipeline tariff methodology was held on Friday, May 22, 1998, in Astana. It was chaired by the minister of the Strategic Planning Agency, was nationally televised, and had the direct personal interest of the President of Kazakhstan. Michael Biddison was the featured USAID consultant spokesperson and responded as an expert witness in the proceeding. I provided technical consultive assistance.

June 5, the pipeline tariff methodology was formally and administratively adopted by the government of Kazakhstan. New rates were to be filed pursuant to the methodology on July 1, 1998.

June involved extensive administrative duties related to preparations of DO17 planning documents and export pipeline discussions.

June 15, marked a significant re-opening of our activities in the development of gas distribution rules. Because of the success of the oil pipeline tariff program, aggressive activity was sought in the development of similar efforts for gas distribution. The Ministry of Energy invited us as expert consultants to develop comprehensive regulations and laws to regulate gas production, gas sales, gas procurement, transmission and distribution - to include international trade agreements. As part of the process we sponsored the creation of an oil and gas regulatory authority.

Redrafted and submitted to the Ministry of Energy a law to create an Oil and Gas Regulatory Agency.

These and related activities continued through the end of June, 1998.

Accomplishments for April - June, 1998 the successful adoption by the Government of

Kazakhstan of an internationally acceptable oil pipeline tariff methodology, the preparation on guidance on holding the first regulatory public hearing, the elimination of the export pipeline surcharge, the preparation of guidance on rate base asset valuation, the preparation of rate design principles such as gradualism, the preparation of documents on the international sale of natural gas products, the preparation of a law on the creation of an oil and gas regulatory agency currently under consideration, and the preparation of letter for ambassadorial signature seeking involvement in specialized high level Kazakhstan committee on export pipelines

### **July 1998 - September 1998**

This quarter is characterized by (1) completion of Delivery Order 17 final products, (2) the next phase development beyond the pipeline tariff methodology, (3) the expanded efforts in the development of natural gas regulation, (4) continued involvement in the development of export pipelines, and (5) expanded administrative duties

In early July, the AMC became the Monopoly Committee and instead of being housed in a ministerial organization now, because of its greater importance, reports directly to the president of Kazakhstan. As such, revised implementation instructions and filing documents for all natural monopolies were being developed. I have spent an extensive amount of time producing far ranging documents based upon the success of oil pipeline tariff methodology

In terms of final deliverables under Delivery Order 17, I have joint responsibility for four of the primary documents and joint responsibility for the final report

Continued on development of public tariff and rider sheets, describing tariff terms, conditions and rates for all services, establishment of shipper/customer complaint process to respond to service issues, recommending a mechanism to resolve non-payments of shippers, and providing quick response services responding to specific requests from the Government of Kazakhstan

Accomplishments for July - September, 1998: Preparation of instructions and filing forms for Monopoly committee, completion of DO17 deliverables, completion of gas monopoly rule analysis, creation of service issue standards, and provision of quick response requirements for Kazakhstan government

### **LESSONS LEARNED**

The fundamental lessons learned as most succinctly stated in the executive summary as the value of the USAID consultant providing institutional memory and continuity in the face of constantly changing governmental and institutional structures and personnel, and the need for patient

education and communication with counterparts on a peer basis which insured that translation not only transferred the words, but also the concepts behind the words

## **SUGGESTIONS FOR IMPROVEMENT**

### Pipeline Tariff Methodology

The continued provision of service to the Monopoly Committee in the development and expansion of evaluative skills for review and approval of rate applications the creation of mechanisms to adopt tariff terms and conditions, establish procedures to publish and make available the terms, conditions, and tariff rates for all services, and establish consumer complaint process to hear and respond to service issues related to the pipeline service

### Institutional development for foreign investment in oil & gas

Review of existing process and capabilities, including the organization/institutional structures and recommendations for improvements of such arrangements to make them more streamlined, transparent, and investor friendly development of a prioritized plan of action for improvement in the process and institutional/organizational structures in key entities, and assistance in the implementation of a selected set of improvements in the process and institutional/organizational structures, subject to the availability of resources

### Creation of independent regulatory agency

A draft law has been submitted for consideration to create an independent regulatory authorities for oil and gas The responsibilities will encompass licensing and permitting of production, technical, health, and safety regulation of production, transmission, and distribution, and economic regulation of rates for service Legislative action must be pursued to create an independent regulatory body - establishing the appointment procedures for commissioners, establishing staffing requirements and funding mechanisms (lastly probably through user fees) legislative action will need to be completed to transfer responsibilities from current agencies to the regulatory body, authority will need to be granted to the regulatory to suspend or abolish regulations that do not require legislative action and to draft legislation to suspend or abolish regulations and laws that do require legislative action, organization and staff consultation will be needed to establish and regularize operations consistent with international standards, for example, creating divisions for customer complaints, docketing and recording applications and

data, economic analysis and tariff design, hearing officers, legal, administration, etc, training will also be required in the function and performance of these duties

Related Activities

Provision of technical assistance in technical, economic/financial and legal matters for (1) design and implementation of new oil and gas sector projects and supply of background information necessary for the finalization of contracts

Provision of expert assistance to examine and facilitate issues related the development of east to west oil and gas pipeline transportation routes

Provision of advice to Kazakhstan Government on foreign investment emergent issues

Provide technical advice on the assessment of data and information presented at Transportation alternatives conference

Provide technical assistance to the Kazakhstan ministries, and other related parties on the development and implementation of cost-based oil and gas pipeline tariff methodologies