



TOGETHER
for a sustainable future

OCCASION

This publication has been made available to the public on the occasion of the 50th anniversary of the United Nations Industrial Development Organisation.



TOGETHER
for a sustainable future

DISCLAIMER

This document has been produced without formal United Nations editing. The designations employed and the presentation of the material in this document do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations Industrial Development Organization (UNIDO) concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries, or its economic system or degree of development. Designations such as “developed”, “industrialized” and “developing” are intended for statistical convenience and do not necessarily express a judgment about the stage reached by a particular country or area in the development process. Mention of firm names or commercial products does not constitute an endorsement by UNIDO.

FAIR USE POLICY

Any part of this publication may be quoted and referenced for educational and research purposes without additional permission from UNIDO. However, those who make use of quoting and referencing this publication are requested to follow the Fair Use Policy of giving due credit to UNIDO.

CONTACT

Please contact publications@unido.org for further information concerning UNIDO publications.

For more information about UNIDO, please visit us at www.unido.org

RESTRICTED

20892

DP/ID/SER.A/1712
19 December 1994
ORIGINAL: ENGLISH

qcp.
table
graph

**RESTRUCTURING OF THE MINISTRY OF MINERAL RESOURCES AND ENERGY,
AND OF THE CORPORATIONS UNDER ITS SUPERVISION**

DP/ALB/93/003

REPUBLIC OF ALBANIA

Technical report: Restructuring of Albpetrol

Prepared for the Government of the Republic of Albania
by the United Nations Industrial Development Organization,
acting as executing agency for the United Nations Development Programme

**Based on the work of A. Boe and A. Hamrour,
UNIDO consultants**

Backstopping Officer: Ph. R. Scholtès
Institutional Support and Private Sector
Development Branch

United Nations Industrial Development Organization

* This document has not been edited.

V.94 28888

Table Of Content

PART I:	THE OIL AND GAS INDUSTRY IN ALBANIA, AND ALBPETROL	
1.	Introduction	1
2.	The Albanian oil and gas activity in an international perspective	1
3.	Present Status	3
4.	The role of a national oil company	5
5.	Present status of Albpetrol	9
	5.1. Present activities	9
	5.2. Legal Status and Statutes	10
	5.3. Economic situation of Albpetrol	11
	5.3.1. Operating revenues, cost and profits	11
	5.3.2. Albpetrol's capital base	15
	5.4. The organization of Albpetrol	16
	5.4.1. The present organization	16
	5.4.2. The need for organizational changes	18
	5.4.3. Privatisation of service functions	20
6.	The Restructuring of Albpetrol	21
	6.1. Transformation of Albpetrol into a commercial company	21
	6.2. Focusing Albpetrol on the role of an oil company	22
	6.3. Dismantle the tight integration between Upstream and Downstream activities	23
	6.4. Further restructuring of the Upstream Division	24
	6.5. Further restructuring of the Downstream Division	24
PART II:	DOWNSTREAM ACTIVITIES	
7.	General presentation	25
	7.1. Refining	25
	7.2. Distribution network	25
8.	The present situation of this sector	26
	8.1. Capacity of the plants	27
	8.2. Utilization rate of the plants	27
	8.3. Product specifications	27
	8.4. Other considerations	28
10.	The challenges	29
	10.1. The new international situation	29
	10.2. The market	30
	10.3. The comparative advantages	30
	10.4. The downstream organization trends	30
11.	Action Programme	31

SUMMARY

This report discusses the need for restructuring of the Albanian oil and gas sector in particular related to the national oil company, Albpetrol. The report is a part of a UNIDO project aiming at assisting Albania in their restructuring of the industrial sector in Albania.

The report is based on extensive discussions with various members of the management team of Albpetrol carried out during the period October 17th. to October 28th. 1994. Their openness and willingness to assist in all possible way is greatly appreciated by the UNIDO project team. We would like to underline, however, that all opinions and conclusions expressed in this report are those of the project team and they do not necessarily coincide with those of Albpetrol or the Albanian Government.

The main findings of the project team can be summarized as follows:

- The conditions in Albania may favour the existence of a national oil company, provided this company is allowed to act as a commercial oil company and the overall policy is open and pluralistic allowing both international and the national oil company to participate in the Albanian oil and gas activities.
- Although the national oil complex, Albpetrol, is presently operating with profits, the economic situation for the complex is going to be very difficult within two to three years due to rapidly increasing operating cost per volume produced.
- To make Albpetrol into a profitable company a profound restructuring of the present complex is proposed. This restructuring is envisaged to be carried out in five phases:
 - (i) Reorganization of the present state enterprise into a commercial company.
 - (ii) Installation of and training in a proper economic and financial management system to allow Albpetrol to operate in a market economy based on sound commercial judgements.
 - (iii) Further restructuring of the company to focus on the role of an oil company. This would involve "outsourcing" of various service functions presently included in Albpetrol.
 - (iv) Restructuring of the upstream part of Albpetrol's activity aiming at reducing operating cost and securing long term profitability.
 - (v) Restructuring of the downstream part of Albpetrol's activity.

This is discussed in more detail in Part II of the report.

PART I: THE OIL AND GAS INDUSTRY IN ALBANIA, AND ALBPETROL

1. Introduction

Being almost seventy years old, the Albanian oil and gas industry is one of the oldest and from an economic point of view most important industries in the country.

Due to the collapse of the Albanian economy, the oil and gas production experienced a rapid decline in the early 90'ies, mainly due to lack of capital and spare parts. At the same time, the Albanian Government has been active in attracting international companies with capital, technology and experience to participate in the Albanian oil and gas sector. So far international companies are mainly involved in offshore exploration whereas onshore exploration is about to be started with international participation.

The national activity within the oil and gas sector is organised in a state enterprise, Albpetrol, presently having 16,000 employees. This state enterprise is based on the previous oil and gas complex, DPNG, and in many ways still operates like the old DPNG complex.

This report is part of a project financed by UNIDO to assist the Albanian Government in the restructuring of the Albanian oil and gas sector. The findings reported is primarily based on extensive discussions with various representatives of the management of Albpetrol during the mission of the UNIDO project team in late October 1994. The openness and willingness of the Albpetrol management to assist in all possible ways is greatly appreciated by the project team. Without their active support and participation, the project team could not have carried out their work. At the same time it should be underlined that all opinions expressed in the reports are those of the project team and not necessarily those of Albpetrol or the Albanian Government.

Part I discusses the Albanian oil and gas sector in an international perspective, the present status of the Albanian oil and gas sector, and the role of the national oil company with special emphasis on the conditions in Albania. The report also discusses the present status of Albpetrol and outline the need for and main elements in the further restructuring of this state enterprise.

Part II discusses in more detail the situation for the downstream part of the Albanian oil and gas sector and details the need for further restructuring of the downstream activities.

2. The Albanian oil and gas activity in an international perspective

Despite its vital importance to the Albanian economy, the Albanian petroleum resource base is a marginal one in an international perspective. The recovery factors from these fields are in general low on an international scale, partly due to the difficulty to produce, heavy, highly viscous oil and partly due to inadequate reservoir management. Today's production from these fields is of the order 500.000 tons per year. Although the present production could be substantially increased by relatively simple well rehabilitation and more advanced IOR technologies, the production potential from the existing fields is still marginal on an international scale. An

international investor in the oil and gas sector is likely to view the existing oil and gas fields in Albania as a "low risk - low reward" investment opportunity. The risk is low since the field is already proven, but there remains a risk related to the conditions of the field, environmental liabilities and the economic viability of continued or improved production. The reward is low because even in the most optimistic case, the potential recovery is small on an international scale. It should be noted that this would not imply that field rehabilitation is uneconomical or that international investors would not be interested in participating in the rehabilitation of the existing fields in Albania. It merely states that in competing for international capital and expertise to be involved in the rehabilitation of the existing oil and gas fields in Albania, the Government must realise that seen from an international investor point of view, these fields are likely to be considered "low risk - low reward". This will normally indicate that it will be difficult to attract major international oil companies to participate in such rehabilitation and that other attractions, such as access to market and fiscal terms, will be necessary in order to attract the international investor.

Exploration has recently started offshore Albania. The offshore area is divided in 5 blocks each block operated by a major international company. The contracts are of a Production Sharing type whereby a certain percentage of the future production will belong to Albania. Although it is fair to say that the most optimistic expectations have not been fulfilled, it is far too early in the exploration to draw any firm conclusions concerning the hydrocarbon potential offshore Albania. From an international investor point of view, the situation is likely to be considered as one of "medium to high risk - medium reward". The risk increases as continued exploration does not lead to commercial discoveries, the reward increases if substantial discoveries are made and decrease if the discoveries are small or uncommercial. Based on the results of the offshore exploration so far, an international investor will probably be of the opinion that the risk has increased whereas the reward is unchanged or slightly reduced. In such a situation the companies participating in the offshore exploration can be expecting to re-negotiate their terms and conditions to reflect these perceived changes. The challenge for the Albanian Government in this uncertain situation will be to combine flexibility with stability and establish terms and conditions that give the investor a reasonable profit for small to medium sized discoveries while securing a fair share for Albania in case of a major discovery.

Exploration is about to start onshore Albania and 80% of the surface of Albania is open for exploration by international companies of which 20% is included in the first concession round. From an international investor point of view, the blocks offered in the first concession round varies from "low to medium risk - medium reward" to "high risk - medium reward". Hence it is reasonable to expect that the response will be quite diversified, but the most promising blocks should be able to attract interest from major international oil companies, provided acceptable terms and conditions.

After the democratic changes in Albania, the oil and gas policy has undergone fundamental changes. These changes are partly a consequence of adapting to market economy and partly a necessity since the challenges in the Albanian oil and gas sector demanded capital and technology not available in Albania.

One important aspect of the policy change was the move to attract international oil companies, having capital and technology, to participate in the Albanian oil and gas sector both in the offshore

and onshore exploration as well as in the rehabilitation of the already existing oil and gas fields in Albania. To facilitate this move, several important steps have been taken such as adopting a new Petroleum Law, protecting international investments by issuing a presidential decree: "On the Fiscal System in the Petroleum Sector", by clearly separating the role of the national oil company from that of the government as the Competent Authority and by adopting a flexible and open attitude towards the international oil companies. Although these changes are still in the early implementation phase and hence will mature as experience is gained, it seems a fair assessment that the basic elements in this structure are appropriate and in accordance with international practice.

3. Present Status

The present status in the Albanian oil and gas sector can be briefly summarised as follows:

- The offshore exploration is ongoing and is likely to continue based on Production Sharing type co-operation with international companies. Continued offshore exploration would, however, require some modifications in the present terms and conditions to reflect the results so far. Such negotiations are under way and no major changes in policy or structure seems presently necessary.
- The onshore exploration is about to start. Some major international oil companies have stated their interest in some of the blocks offered and negotiations are presently under way. Exploration in one area reserved for Albpetrol is planned as a part of a joint venture between Albpetrol and an international oil company.
- The rehabilitation of existing fields is moving slowly. The move to attract international oil companies to participate in this area has so far had limited success. Recently Albpetrol signed a Joint Venture Agreement with an international oil company involving perhaps the most important field, the Pathos Marinza field that is a large heavy oil field.
- The Government has adopted a Petroleum Law and protected international investments through a Presidential Decree. The Government has also separated the role of the national oil company, Albpetrol, from that of the Competent Authority and has established a Petroleum Agency being responsible for negotiations with international oil companies, preparing exploration and production licences and supervising that the activities are carried out in accordance with these licences.
- The operations on the existing fields, consisting of 7 oil fields and 11 gas fields, as well as services, refineries and transportation are presently the responsibility of the national oil company, Albpetrol. Being based on the old integrated oil and gas complex, DPNG, Albpetrol is today a large, state owned enterprise encompassing functions which one expect to find in an integrated oil company as well as functions which in the international market is normally provided by the service industry, such as drilling, workover, drilling mud, cementing, logging, seismic surveys, mechanical factories and construction facilities. This enterprise currently employs approximately 16,000 people.

Given the marginality of the Albanian petroleum resource base, it is perhaps somewhat surprising that Albania has been able to attract international oil companies to participate in their oil and gas sector. Today's global environment is characterised by a low oil price leading to a limited investment ability combined with a substantially increased accessibility to petroleum resources resulting from the recent changes in the Middle East, former Soviet Union, Far East and South America. As a result there is presently a strong competition in attracting international investments to the various investment opportunities in the oil and gas sector. In such a perspective, the results obtained in Albania, although limited and fragile, are quite promising. It underlines that a nation's competitiveness in the oil and gas sector is not given by the resource potential alone.

Albania would seem to have several competitive advantages as seen from an international investor's point of view:

- Albania is close to the market
- Albania has been able to establish an appropriate legal structure
- Albania has been able to establish a clear and transparent structure for the role of the Competent Authority.
- Albania has been able to establish a basic credibility in their wish to co-operate with the international oil companies on acceptable terms and conditions.

All of the above factors could and should be improved in order to consolidate the continued participation of international oil companies in the Albanian oil and gas sector. In this consolidation process it is natural to expect frequent discussions with the companies already present in order to arrive at terms and conditions that could satisfy the international investor as well as secure Albania's interest. These improvements will mainly result from a continued and open dialogue between the governmental bodies already created and the international oil companies. For the governmental bodies to better fulfil their role, it will be necessary to give priority to appropriate training of their staff. From time to time, the governmental bodies may also find it useful to consult with international experts to have an independent second opinion on difficult issues.

It is natural and appropriate that the issue of creating the basis for the participation of international oil companies has been given priority in the first phase of the restructuring of the Albanian oil and gas sector. The basic elements in this first phase are now in place and the participation of the international oil companies will enter into a phase of continuous improvements based on experience, training and above all a consistent policy.

In this first phase, the necessary restructuring of the national oil company, Albpetrol has been given less priority. One important step in the first phase of the restructuring was to separate the role of Albpetrol from that of the Competent Authority and to define the role of Albpetrol as a national oil company to be run as a commercial company. In this first phase, Albpetrol's primary objective has been to curb the rapid decrease in the Albanian oil and gas production that occurred in the early 90's. This seems to have been accomplished, since the oil and gas production is now slowly increasing.

As Albania is now entering into the second phase of the restructuring of their oil and gas sector it is natural to give more attention to the restructuring of Albpetrol; to define in more detail the company's role in the future Albanian oil and gas sector, to provide it with a sound legal and organizational basis, to implement appropriate management systems and training and to define the main directions for the company's development. This is a complex and challenging task. If left undone, however, the company is likely to run into severe difficulties in just a few years' time.

4. The role of a national oil company

Before entering into a more detailed discussion on the restructuring of Albpetrol, it may be useful to discuss more generally the role of a national oil company in an international perspective. It is not given *a priori* that a country needs or wants to have a national oil company and many developed countries have not found it necessary or fruitful to establish national oil companies. Hence a general discussion can be useful in order to clarify whether Albania needs a national oil company and what role that company in that case should have.

Internationally there seems to be three different main reasons for wanting to have a national oil company.

- Petroleum is regarded as a vital strategic resource and a national oil company is regarded as a vehicle to maintain national control of the nation's petroleum resources and hence, of the production and supply of petroleum products.

There is little doubt that oil and gas are of vital importance in today's societies. Despite this, many governments and governmental agencies tend to pay less attention to the strategic nature of the petroleum resources today than they did a few years ago. As a consequence of the fundamental changes in the global geopolitical picture, petroleum products tend to be more regarded as a normal commodity that can be provided with sufficient security by the international market. This may still be a controversial issue, but there is little doubt that the strategic nature of oil and gas is given less importance today than a few years ago.

In the former communist Albania that saw itself as an island surrounded by hostile countries, it is quite obvious that securing the supply of oil and gas was regarded as an issue of vital strategic importance. As a consequence it was logical to create an Albanian oil and gas enterprise encompassing all the various elements necessary to secure the supply of petroleum products independent of whether or not they could be justified from a strictly economical viewpoint.

It would seem that this argument, important in the past, gives little support for a national oil company in Albania today.

- (ii) A national oil company is seen as a vehicle to secure that an oil producing nation gets its fair share of the value of that production. This has in particular been the case for less developed countries having a substantial resource potential or in developed countries with a substantial resource potential but with a weak private industrial base in the oil and gas

sector. In this context it is worth mentioning that the Norwegian state owned oil company Statoil was established 7 years after the oil and gas activities offshore Norway started and after initial discoveries had made it clear that the resource potential was indeed substantial.

In the initial phase of the Norwegian oil activities, characterised as a "High risk - high reward" situation, the participants were all international oil companies with the necessary capital and technology. After the initial exploration had made it likely that the Norwegian resource potential was indeed substantial, i.e. that the Norwegian situation moved towards a "low risk - high reward" situation, the Norwegian state created a state owned, national oil company. This development is generally observed in the international oil and gas business; State owned national oil companies are created in the "low risk - high reward" situation in cases where the nations private industrial base is insufficient to secure that the producing nation gets its fair share of the value generated from the petroleum activities.

This argument may have relevance to Albania in the present situation, especially if the ongoing offshore and onshore exploration should indicate that the Albanian resource base is indeed substantial. It is also unlikely that Albania in the years to come will be able to develop any private industrial base that can participate in the Albanian oil and gas sector.

- (iii) A national oil company may be seen as a vehicle to carry out petroleum operations that are marginal on a global scale yet of great economic importance for the nation in question.

This is the situation for a number of less developed countries with limited petroleum resources in particular if they are far from the main international markets. In such situations it can be difficult to attract international companies to participate in the development of the country's oil and gas sector and a national oil company could be more attractive than costly import of petroleum products.

This would typically correspond to situations of proven marginal resources or mature fields where continued operation is marginal, i.e. for "low risk - low reward" situations.

This would seem to be a valid argument for Albania in its present position. Most of the existing fields are to be regarded as marginal and with limited interest to international oil companies, yet they could be a viable economic base for a national oil company.

There are in general two arguments against national oil companies:

- (i) Exploration for and production of oil and gas is highly capital intensive and involves considerable risk. One may hence argue that state capital should not be exposed to such high risk investments.

This is in particular an argument against state participation in the early "high risk - high reward" situation.

- (ii) State enterprises should not be involved in industrial activities which private companies themselves can handle, especially since state enterprises in many instances prove to be less economically effective than private enterprises.

These arguments are based on a strong believe in market economy, and both in Europe and in South America previously state owned oil companies are now being privatised. These arguments do not seem to be relevant for Albania in the present situation, partly because of lack of sufficient private capital in Albania. partly because the present value of Albpetrol would be low.

One should, however, bear these arguments in mind, since they have some strong implications towards the role of a national oil company:

- (i) It would be a grave mistake to base the policy on international companies participating in the "high risk - high reward" period while the national oil company would take over in the "low risk - high reward" period. This policy has been implemented by several countries in the past, resulting almost inevitably in reduced international participation, less capital, reduced technology transfer and hence, reduced and/or less effective petroleum activity.

In order for a national oil company to play a constructive role in the "low risk - high reward" situation, it is imperative to find a fair balance between the role and activity of the national oil company and those of the international oil companies, securing on the one hand a sufficient development of the national oil company and attractive opportunities for the international oil companies. The coexistence of a national oil company and international oil companies in the "low risk - high reward" situation must hence be based on a balanced, pluralistic approach.

- (ii) There is also the definite risk that a national oil company will continue the operation even if it is no longer economically justified, i.e. even into the "high risk - low reward" situation. The more the national oil company is regarded as an integral part of the governmental structure, the higher the risk. This means that the oil activities are directly or indirectly being subsidised and the country would normally be better served by ending the petroleum activities and instead importing the necessary petroleum products.

The best safeguard against such a development is to clearly separate the role of the national oil company from that of the government and require that the national oil company has to act as any other commercial company. This separation must be clearly stated in the company's statutes and implemented in its organizational principles.

In summary, the following general conclusions concerning the role of a national oil company can be drawn:

For a national oil company to play a meaningful role, the country's resource potential must be either in a "low risk - high reward" or in a "low risk - low reward" situation.

A national oil company is particularly relevant in situations where the private industrial sector of the country does not have the capital, technology or resources necessary to fully

participate in the country's oil and gas sector.

The policy for the oil and gas sector must be based on a balanced, pluralistic approach allowing the national oil company as well as the international oil companies to participate in the country's petroleum activities on acceptable economic terms and conditions.

The role of the national oil company must be clearly separated from that of the government and the national oil company must be given the freedom and objective to act as a commercial company.

The national oil company must be focused on its core activities and not include all the various service functions that are more effectively provided by the market.

There must be a clear strategy for securing that the national oil company develop the necessary capital and technology base to be able to operate effectively in the inevitable risk exposed and capital intensive oil and gas industry.

In analysing the present situation for the Albanian oil and gas sector in view of the above, the following comments seem appropriate:

Presently, the main justification for a national oil company in Albania would be the "low risk - low reward" existing oil and gas fields. The Offshore exploration is definitely in a "high risk - high reward" situation and would not justify the participation of a national oil company. The Onshore exploration varies from "high risk - high reward" in new virgin areas to possibly "low risk - high reward" in prospective areas surrounding present discoveries and could justify participation from a national oil company.

The present Albanian policy for the exploration and exploitation of their petroleum resources seems in general to be based on a balanced and pluralistic approach which could provide the basis for a fruitful coexistence of a national oil company and international oil companies in the Albanian petroleum sector.

The role of the national oil company and its relationship with the government as owner, seems presently to be insufficiently stated. There is a clear need to revise the Statutes of Albpetrol and its organizational principles. The main objective in this revision should be to clearly define Albpetrol's role to be that of a commercial company and to implement organizational principles accordingly.

Albpetrol is an integrated structure including both the oil company function as well as the various service functions. The overall strategy for the further development of Albpetrol as a national oil company is presently insufficient, and will have to be elaborated and detailed once the role and the organizational principles are clarified.

5. Present status of Albpetrol

Below is given a brief review of the present status of Albpetrol, its present activities, formal framework, organization and financial and economic situation. The review is based on written reports and discussions with various members of the Albpetrol management team. Due to the time constraint it has not been possible to control all information received. The information provided is hence the full responsibility of the UNIDO team and does not necessarily reflect official Albpetrol figures or opinions.

5.1. Present activities

Albpetrol operates at present 7 oil fields and 11 gas fields. The annual production is approximately 570.000 tons of oil and 100 million Nm³ of natural gas.

Most of the fields are mature fields in their decline period. The oil production is mainly heavy, highly viscous oil with a high content of bitumen. The peak of the oil production occurred in the late 70'ies with an annual production of 2.5 million tons. In the 80'ies the production stabilised around 1 million tons, whereas the production declined sharply in the 90'ies, mainly because of the closing of wells due to lack of spare parts and equipment. The oil production is mainly based on pumping. The technology used for drilling, well completion and production is in general obsolete. In a short to medium time frame, the annual oil production could be brought back to the previous level of around 1 million ton per year by relatively simple rehabilitation involving recompletion, sand control and optimised pumping operations. In a longer time frame, there is a potential for a further increase of output combined with a prolonged lifetime of the fields, by applying various IOR methods like steam injection, gas/water injection and horizontal well technology.

The production of natural gas peaked in 1982 with a production of more than 900 million Nm³. The peak was followed by a sharp decline and throughout the 80'ies the production stabilised around 200 million Nm³ per year. As for the oil production, the production fell sharply in the 90'ies to the present level of around 100 million Nm³. The gas production could be increased, but the present resource potential for natural gas is limited and the increase in gas production is from an economic point of view probably less important than the increase in oil production.

Albpetrol also carries out some exploration in its reserved onshore area. The 1993 exploration expenditure was in order 2 million US\$, mainly used for 18 exploration wells. The success of the exploration efforts was limited, 16 wells were dry, whereas 2 gave indications of hydrocarbon deposits.

All of the oil produced and most of the gas is used as feed for the downstream activities of Albpetrol. The company has 4 refineries, of which 2 are presently in operation, with a total capacity of 2.5 million tons per year. The technology is old, obsolete Chinese and Rumanian technology with poor cost efficiency.

Albpetrol has recently entered into a Joint Venture with an international oil company, Premier, for the rehabilitation and improved recovery of one of the major Albanian fields, the Pathos-

Marinza field, and for joint exploration in a defined area, Dumre. Albpetrol is also presently discussing several other possible Joint Ventures with various international companies concerning petroleum services, downstream activities and distribution of petroleum products.

5.2. Legal Status and Statutes

The legal basis for Albpetrol's activity is defined by "The Law on State Enterprises" (92), "The Petroleum Law" (93) and the Presidential Decree "On the Fiscal System in the Petroleum Sector" (94).

"The Law on State Enterprises" defines the legal platform for the continued operation for all the previous state enterprises in Albania. According to this law, Albpetrol and the other state enterprises are not stock companies and the legal status of the enterprises are more in line with that of a Foundation than that of a Company since the Law states that the owner, the State, is not going to receive dividends from the profit of the enterprise. "The Law on State Enterprises" was necessary in order to provide a legal basis for the various enterprises during the transition from socialism and planned economy to democracy and market economy. The law is hence of a provisional nature and not very suited as a permanent legal basis for a state owned, commercial company. It is strongly recommended to transform Albpetrol from a state enterprise under the present law to a state owned stock company under the "Law on Commercial Companies" as soon as feasible. In the meantime, however, the "Law on State Enterprises" does not seem to present any major legal obstacle for the further restructuring of Albpetrol.

"The Petroleum Law" defines the rights and obligations for Albania as "landowner" and the various companies participating in the exploration and exploitation of the Albanian petroleum resources. The Law is a modern law of well-accepted international standard. In this law, Albpetrol and other, international oil companies are basically treated equally on the basis of a system of Exploration and Production Licences. The Law contains provisional articles that grant Albpetrol the right to continue their operations in the existing fields and exploration in the area reserved for Albpetrol and to enter into Petroleum Agreements with other companies to this aim. The "Petroleum Law" will not present any legal obstacles for the further restructuring of Albpetrol.

The Presidential Decree "On the Fiscal System in the Petroleum Sector" defines the fiscal conditions for the various companies participating in the Albanian petroleum sector. Although fiscal conditions will always be subject to negotiations, the Presidential Decree on the one hand defines the principles and on the other hand gives necessary flexibility and as such should not be a major obstacle either for the international oil companies or for Albpetrol.

The present Statutes of Albpetrol was made in 1992 and basically reflects the conditions for state enterprises as set forth in "The Law on State Enterprises". The present Statutes of Albpetrol is unclear as to the role of Albpetrol as a national oil company, insufficient in defining precisely the relationship between the company as a commercial company and the State as a owner, unnecessarily detailed in outlining the organizational structure and the decision-making process in the company as well as based on a philosophy reflecting collective, rather than individual, responsibilities. In short, the Statutes is more reflecting the functioning of an enterprise in the old centrally decided planned economy than the functioning of a commercial company under market

economy conditions. The present Statutes leaves both Albpetrol and the Government in an unclear situation whereby Albpetrol presently can not be considered as a commercial company nor can it or should it be considered as a governmental body.

The revision of the Statutes of Albpetrol and the implementation of proper organizational principles are matters of primary importance in the further restructuring of Albpetrol towards a commercial, national oil company. This revision should be carried out with the following objectives:

- To establish clearly and in principle the role and functioning of Albpetrol as a commercial, national oil company.
- To establish clearly and in principle the relationship between Albpetrol as a commercial company and the State as the owner of the company.
- To establish clearly and in principle the governing bodies of Albpetrol and their rights and obligations as responsible bodies in the company.

It would be preferable if the revision could be linked to the transformation of Albpetrol to a state owned stock company. Since, however, this may take time and be a difficult political issue, the necessary revision of the Statutes should be carried out independently of the transformation of Albpetrol to a stock company. Once the Statutes has been revised as outlined above, it will be the responsibility of the governing bodies of the company to detail the organizational principles, to implement the organizational structure and to formulate the development strategy of the company according to the Statutes.

5.3. Economic situation of Albpetrol

In order to evaluate the need for restructuring; its objectives, importance and time frame, we have analysed the economic situation and the economic outlook for Albpetrol. In this we have received all assistance asked for. Still the economic analysis of Albpetrol in the present situation is quite complicated, partly because economic data has to be retrieved manually and partly because the definitions and parameters used differ from normal market economy methods. Within the time available and with good assistance from Albpetrol employees, we have, however, made an initial economic analysis. It should be stated that the numbers given are no necessarily official Albpetrol numbers and hence, are the full responsibility of the UNIDO team.

5.3.1. Operating revenues, cost and profits

For convenience and consistency, all numbers given below refer to the 1995 budget of Albpetrol. Since the production and cost structure are relatively stable, these numbers are also representative of the present situation. The various costs and revenues are given in Albanian Lek (US\$1.00 equals approximately Albanian Lek 90). Although the present situation may seem quite satisfactory with a pre-tax profit of about 15%, a number of comments should be made.

The capital costs involved in both the upstream and the downstream part of the activity are unrealistically low. This reflects partly the fact that most of the equipment used are old and obsolete. It also reflects the fact that the depreciation factors used in Albpetrol are in general very low. This underestimate the real capital cost and overestimate the value of the assets.

The crude produced by Albpetrol is sold to the refinery part at a price that is approximately 15% below comparable world market price. Although there are no rules preventing Albpetrol from using such prices in their internal trade, one should be very cautious in applying regulated prices for two main reasons; (i) It tends to distort the monitoring of the real profitability of the various parts of the activity. If comparable world market prices had been used, the profitability of the upstream part would have been more than 1000 million Lek whereas the downstream profitability would have been close to a break even. (ii) More serious is perhaps the fact that international investors may find it even more difficult to participate in the rehabilitation of the existing oil fields if the produced oil is to be sold at a price 15% below the comparable world market price. The rehabilitation will in most cases be a marginal activity even with world market places. This concern has been expressed by international investors considering such investments. In addition to the above arguments, it is fair to add that such a tight integration between the upstream and downstream side of the business leaves the company with very little flexibility to optimise their profitability by using the market. All these arguments point to the necessity of dismantling the present tight integration between the upstream and the downstream part of Albpetrol.

The revenue is based on the assumption that all the petroleum products are in fact sold in the market. This may be a questionable assumption especially since the prices for the petroleum products produced by Albpetrol are regulated and based on cost multiplied by a factor 1.15. For the time being, the resulting products prices are about the same as comparable world market prices. Due to a rapid cost increase, this will, however not be the case in the future. When the prices calculated as described above exceed world prices, Albpetrol will either have to reduce the present profit margins, or the government will have to reduce their present revenue from the various taxes on petroleum products, or else Albpetrol will have to face the competition from imported petroleum products being sold to the market at lower prices. In the first case Albpetrol's profit will be reduced due to a lower profit margin, in the second case the governmental revenue is reduced, which may be considered as a form of subsidies and in the third case Albpetrol's revenue and profit may be reduced since not all the products may be sold in the market.

ALBPETROL REVENUES (1995)

ITEM	MILL. LEK
PRODUCTION	3941
INTERNAL SALE	3732
GAS EXPORT	209
REFINED PRODUCTS	6014
TOTAL GROSS REVENUE	9955
TOTAL NET REVENUE	6223

ALBPETROL OPERATING RESULTS (1995)

	UPSTREAM	DOWNSTREAM	TOTAL
	MILL. LEK	MILL. LEK	MILL. LEK
TOTAL REVENUE	3941	6014	9955
TOTAL COST	3283	5161	8444
OPERATING RESULT	658	853	1511
TAX			453
RESULT AFTER TAX			1058

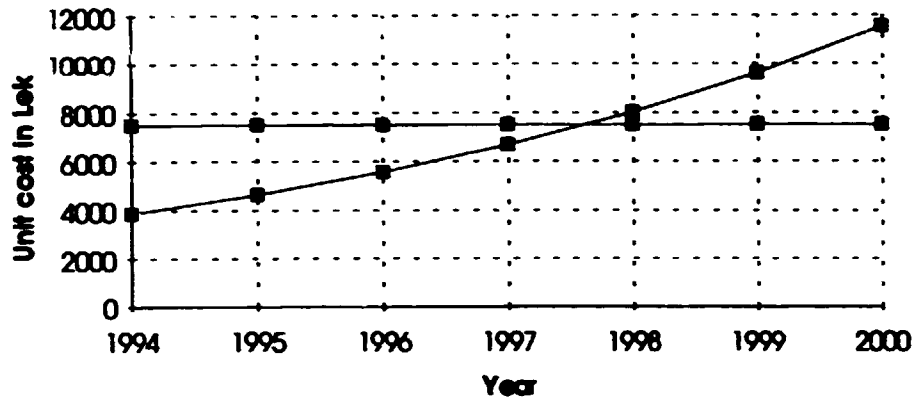
The cost structure for the upstream and downstream parts of Albpetrol's activity is given below and calls for two serious comments:

- With an anticipated production of 630,000 TOE, this indicates that the unit production cost is about 4,600 Lek/TOE. Although it can be difficult to compare the unit production cost due to different definitions, this seems to be a high unit production cost on an international scale. The cost structure indicates three different reasons for the high unit cost; (i) The Albanian fluids are heavy and difficult to produce. Hence the production per well is low and one normally finds that the unit production cost is comparably higher for such heavy crudes, (ii) The technology used is old and not very effective and (iii) The Albanian production seems to be extremely labour intensive. Even with low salary levels, the total labour cost is high and the labour cost per produced unit is presently at the same cost level as the total operating cost per unit produced in many other countries. The present unit production cost can make it difficult to justify new investments in the existing fields using a realistic return on capital.
- The situation is even more alarming since the unit production cost is expected to increase by approximately 20% from 1994 to 1995, mainly due to increased labour cost. As indicated in the Figure below, the unit production cost will be higher than the comparable world market price for the oil produced in two to three years' time, unless there is a profound restructuring leading to increased productivity. If this situation should occur, Albpetrol will be unprofitable even without considering capital costs related to new investments or exploration costs. This is an extremely serious situation and although two to three years may seem a reasonably long time period compared to all the other pressing problems in Albania, it is a very short time for carrying out the restructuring required.

ALBPETROL COST STRUCTURE (1995)

COST ITEM	UPSTREAM	DOWNSTREAM	TOTAL
	MILL. LEK	MILL. LEK	MILL. LEK
LABOUR COST	1022	249	1271
FUEL	261	205	466
MAINTENANCE	862	533	1395
FEED		3732	3732
OTHER OPERATING COSTS	757	390	1147
TOTAL OPERATING COSTS	2902	5109	8011
DEPRECIATION	381	52	433
TOTAL COST	3283	5161	8444

Unit production cost and estimated world market price for Albanian crude



5.3.2. Albpetrol's capital base

The capital base of Albpetrol is given below:

ALBPETROL CAPITAL BASE

ASSETS	MILL. LEK
DEPRECIATED ASSETS	550
WORKING CAPITAL	320
BANK ACCOUNTS	30
LIABILITIES	
CURRENT LIABILITIES	13
GOVERNMENTAL LOAN	70

Some comments should be made to the above numbers:

- Since the depreciation rate used is very low, the value for the depreciated assets is likely to be grossly overestimated. One problem that could result from this is the value to be given to the assets in case of "outsourcing" of service functions. If the assets are given a value equal to their depreciated value this would result in a far too high price compared to the realistic market value of this equipment. If the assets are sold based on realistic market price, this would result in an extraordinary loss for Albpetrol. Still it would probably be preferable to carry out the "outsourcing" as a part of the restructuring and to consider the losses as restructuring costs.
- The working capital consists of spare parts and stock. The market value for these items can be difficult to estimate without more detailed analysis. One would expect, however, that the value given to working capital is closer to the real market value than what is the case for the depreciated assets.
- Taking the above comments into consideration, the capital base of Albpetrol is small compared to the revenue and expected future investments. It would seem necessary to strengthen the capital base considerably, either by share capital, governmental loans or financial support from international development banks.

5.4. The organization of Albpetrol

In the previous Chapter, we have outlined the economic conditions that necessitate a profound restructuring of Albpetrol, aiming at increased productivity. It is hence of considerable importance to analyse the present organization of Albpetrol, partly to find out if the present organization is likely to be capable of carrying out the necessary restructuring and if not which basic changes would be necessary.

Albpetrol is facing a major challenge and it should be pointed out at the onset of the analysis that the present Albpetrol management seems both to understand the need for profound restructuring and to be willing to carry out the necessary changes. Hence a fundamental prerequisite for such a transition seems to be met.

5.4.1. The present organization

The present organization of Albpetrol is basically defined in the Statutes, which also means that any substantial change in the organizational structure necessitates a change in the Statutes.

The governing body of Albpetrol is the Board headed by a Chairman. The Board is appointed partly by the Council of Ministers (Chairman and Executive Director), the remaining 7 members are appointed by the Minister of Fuel and Energy according to a system whereby one is to be a representative of the Ministry of Finance, one is to be a representative for the Ministry of Foreign Economic Relations, the 2 Executive Vice Directors of Albpetrol and 3 experts. The appointment

is for a two-year period, the Board members can be reappointed. This also implies that the top management of Albpetrol, the Executive Director and the 2 Executive Vice Directors are appointed by the Council of Ministers and the Ministry of Fuel and Energy respectively and not by the Board.

According to the Statutes, there is also an Auditing Council of Albpetrol appointed by the Ministry of Fuel and Energy (?) responsible for the auditing of the company's economic and financial transactions. The Auditing Council reports to the Board.

The operation of the company is headed by an Executive Director. As described above, he is appointed by the Council of Ministers for a two-year period with possible re-appointment and is also a member of the Board. The Executive Director together with the Executive Vice Director, Technical and the Executive Vice Director, Economy and Finance, both appointed by the Ministry of Fuel and Energy and members of the Board and 4 other Directors of Albpetrol; the Director of the Production Directory, the Director of the Refinery Directory, the Director of the Economy and Planning Directory and the Director of the Exploration Directory constitute the Executive Board of Albpetrol. In addition there is a Legal Directory reporting to the Executive Director. The Executive Board of Albpetrol can be compared to a Corporate Management Group. According to the present Statutes of Albpetrol, most of the executive power of the company is defined as a collective responsibility of the Executive Board rather than the responsibility of the Executive Director.

There is presently 9 different Directories within Albpetrol each headed by a Director:

The Production Directory includes 7 production units with related services and the Technological Institute, in total 7,500 people.

The Drilling Directory includes 3(4) drilling units and a stimulation unit with a total of 1,300 (1,600) people.

The Exploration Directory includes seismic enterprises, logging enterprises and the Geological Institute, in total 600 people.

The Refinery Directory including 4 refineries of which 2 is presently in operation, in total 3,100 people.

The Mechanical Directory including mechanical factories, electrical workshops, construction facilities and telecommunication workshop, in total 2,000 people.

The Marketing Directory being responsible for export of petroleum products produced by Albpetrol and import of spare parts and equipment to be used by Albpetrol (procurements), in total 250 people.

The Financial Directory being responsible for accounting, pricing, bank accounts and financing.

The Economy and Planning Directory, being responsible for planning, budgets, organization developments and human resources.

The New Venture Directory being responsible for the promotion, negotiations and agreements with foreign companies.

In total Albpetrol today consists of 32 different organizational units with a total workforce of 16,000. Both the numbers of organizational units and the number of employees have been reduced during the last two years of operation, partly due to privatisation of non-core activities and partly due to reduced activity. Still the number of employees and organizational units is very high compared to the present activity of Albpetrol. One reason is the integration of functions that would normally be acquired as external services into Albpetrol. Such functions include, seismic surveying, drilling, cementing, drilling fluids, stimulation, logging and the various mechanical and electrical support functions. It is also fair to assume that the various functions both in the upstream and the downstream side are overstaffed as compared to international oil companies due to low labour cost and ineffective technologies.

Based on the organizational principles outlined in the present Statutes of Albpetrol and discussions with Albpetrol managers in different positions and levels, it is our understanding that the organizational structure of Albpetrol is characterised by:

- *A collective rather than an individual responsibility.* The main responsibility rests in the Executive Council, not with the individual directors.
- *A strict division of technical and economical responsibilities.* The technical Directories are responsible for meeting technical objectives only and their planning and proposals are based on technical merits only. The balancing of the technical objectives and proposals towards economic targets is done by the Directory for Economy and Planning and the decisions are made by the Executive Council.
- *A centralised structure* whereby all major decisions are made by the Executive Council and no economic authority is delegated to the various Directories.

5.4.2. The need for organizational changes

There is clearly an urgent need for profound changes in the organization of Albpetrol. If this is not done properly, one may reasonably expect that the organization will not be able to handle the necessary restructuring.

The organizational changes should in the first phase aim at:

Streamlining of the present organization

Organizational principles based on individual rather than collective responsibilities

Integration of technical and economical responsibilities. The manager at the various levels

should be fully responsible for the economic results of his particular unit.

Delegation of responsibility and authority to the various operational levels.

The revision of the Statutes will be the natural first step, but this must be followed up by immediate actions by the management and the Board of Albpetrol. There are several possible models for implementing an organizational model for Albpetrol in line with the above objectives. As a basis for further discussions by the Albpetrol management, the Board and the Ministry the following organizational model for Albpetrol could be considered.

The governing body of Albpetrol is the Board. The Board and the Chairman of the Board are appointed by the Competent Authority, presently the Ministry of Fuel and Energy. The Board appoints the Managing Director of the company and approves the other members of the Corporate Management Group based on proposals from the Managing Director. The Board approves budgets, investments, development plans, strategies, annual accounts and financial statements, major organizational changes and any other matter of major importance for the company, based on proposals from the Managing Director. The Board supervises the overall activity of the company based on regular reports from the Managing Director to ensure that the activity is in accordance with the decisions of the Board, the Statutes of the Company and relevant Albanian Laws.

The Managing Director proposes the other members of the Corporate Management Group to be approved by the Board. The Managing Director has the overall responsibility towards the Board for the company's activities and has the responsibility for the execution of the decisions of the Board. The Managing Director is responsible for proposing budgets, investments, development plans, strategies, annual accounts and financial statements, major organizational changes, regular reports and any other matter of major importance for the approval of the Board. The Managing Director approves and co-ordinates budgets, investments, development plans, strategies and major organizational changes in the Operating Divisions based on proposals from the General Manager of the Operating Division. The Managing Director co-ordinates, monitors and corrects the activities in the various Operating Divisions or in projects of major economic importance for the company based on regular reports from the General Manager/Project Manager. The Managing Director is responsible for the formulation and implementation of management procedures and policies at the corporate level. The Managing Director has the mandate to delegate authority to General Managers and other senior Managers in the company, but retains the final responsibility. In order to secure sufficient management capacity at the corporate level, one could consider to appoint a Deputy Managing Director with authority delegated from the Managing Director. To facilitate the necessary co-ordination between the Operating Divisions and secure the implementation of the overall objectives, the Managing Director may establish a Corporate Management Group. The final responsibility should, however, remain an individual one and not a collective one.

The General Manager is responsible for an Operating Division. The General Manager is nominated by the Managing Director and approved by the Board. The General Manager has the full economic responsibility for the activity of the Operating Division within the

frames and objectives as set forth in the approved budgets and plans. The General Manager is responsible for proposing budgets, investments, development plans, strategies, major organizational changes in the Operating Division and other matters of importance for the Division or the Company to the Managing Director for approval and execute the decisions made by the Board and/or the Managing Director.

Albpetrol could be organised in 3 Operating Divisions; (i) An Upstream Division, (ii) A Downstream Division and (iii) A Service Division, primarily consisting of those service functions that gradually could be privatised. Each Operating Division is headed by a General Manager and is to be fully responsible for the economic result of the Divisions activity within the approved frames and objectives, i.e. each Operating Division is a Profit Centre.

In addition to the Operating Division, there will have to be various support functions such as Economy, Finance, Legal and Human Resources. These support functions will support the Managing Director as well as the General Managers.

This organizational model is based on delegation of responsibility and authority to the operating level and requires an economic management system that enables both the Managing Director and the General Managers to monitor the economic results of the activity on a regular basis. Implementation of such an organizational model, or any other model based on the same organizational principles do require a modern economic and financial management system. The establishment and implementation of and training in such a system will hence be a vital element in the first phase of the restructuring of Albpetrol. This task could be carried out with the assistance of an international expert with relevant experience.

One may argue that instead of divisions or profit centres, Albpetrol should be organised in subsidiaries. In our mind this would not be advisable as a first step, primarily because this would require even more advanced financial and economic management systems. The obvious first step would seem to be consolidating Albpetrol as a commercial company, implementing sound economic management principles and then considering moving to subsidiaries as the experience in applying such principles is gained.

5.4.3. Privatisation of service functions

A considerable part of the present Albpetrol organization consists of units that should normally not be part of an oil company, but rather be services purchased from the market. There are two main reasons why Albpetrol should as soon as possible try to "outsource" these activities; (i) It is not cost effective to maintain these activities within Albpetrol and in light of the previous discussion on the development of the production cost, this would be a matter of vital importance to Albpetrol. (ii) Due to the expected onshore activities of the international companies participating in Albania, one may envisage a market outside Albpetrol for such services.

The primary objective for Albpetrol in this process should not be to make profit on the "outsourcing" as such, but rather to create more cost effective services that could help reduce the overall operating cost for the company. There are several ways this "outsourcing" could be carried

out, but participation of international companies providing capital, technology and managerial expertise would seem to be preferable to secure a competitive service industry. This "outsourcing" process should in fact be regarded as a vital element in the restructuring of Albpetrol and a necessity for reducing operating costs to a level that secure long-term profitability for Albpetrol. These service functions presently included in Albpetrol would include among others, drilling, drilling fluids, workover operations, logging, cementing, seismic surveying

As a consequence Albpetrol should focus on their role as an oil company. An oil company must have the expertise to plan and supervise drilling operations, but does not have to carry out the drilling operations themselves. Similar arguments could be made for the other service functions. As an oil company, Albpetrol must have the right to buy these services based on competition. For a transition period, Albpetrol could enter into longer-term (3 years) agreements with such newly "outsourced" service companies, provided the services could be delivered at competitive quality and price. One may say that the first step in the restructuring is to transform Albpetrol from its present unclear position to that of a commercial company, whereas the second step, the "outsourcing", is to transform it from an integrated commercial company to an oil company.

6. The Restructuring of Albpetrol

It seems clear from the above discussions that Albpetrol has to carry out a major restructuring in order to ensure that the company can play its role as a profitable national oil company. Any major restructuring of the scale needed in this case, takes time and involves a restructuring cost. In light of the expected economic development of Albpetrol it is vital that the restructuring process is started immediately and carried out consistently.

The various elements that should be considered in the restructuring process have been discussed in the previous paragraphs and are briefly summarised below.

6.1. Transformation of Albpetrol into a commercial company

The first step in the restructuring process should be to transform Albpetrol from its present unclear position to that of a commercial company. There are three main elements in this first step:

- *1. Revise the Statutes of Albpetrol:*

The objective of this revision would be to clearly define Albpetrol as a commercial company, to separate the role of the commercial company from those of the Government and to establish appropriate Governing Bodies for Albpetrol.

This should be done as soon as possible since it would define the frame for the further restructuring process.

- **2. Reorganise Albpetrol**

As a direct consequence of the revision of the Statutes Albpetrol should be reorganised into a divisional structure (profit centres). One possible model would be to establish an Exploration & Production Division, a Refinery & Marketing Division and a Service Division, where each division is responsible for the economic results of its activities.

The Board of Albpetrol should be responsible for approving the organizational model and for monitoring the reorganization process.

- **3. Implement sound commercial management principles**

In order to function as a commercial company with a divisional structure it will be necessary to change the current management system of Albpetrol. The main objectives of this change should aim at; (i) Individual rather than collective responsibility, (ii) Integration of technical and economical responsibility at the divisional level and (iii) delegation of economic responsibility to the various operational levels.

Such a change will necessitate the implementation of an economic and financial management system. Such a system should be developed, and implemented using an international expert working with the management of Albpetrol and also providing necessary training in economic and financial management. Without such a system it is difficult to see how the objectives of the new management principles could be met.

6.2. Focusing Albpetrol on the role of an oil company

Albpetrol in its present form consists of functions that are relevant for its role as an oil company as well as functions that are normally found in various service companies. This integration of oil company functions and service company functions will often lead to operations that are less competitive both in terms of price and quality. One of the main reasons for the sharply increasing cost per unit production that Albpetrol is presently experiencing can be related to this integration of service functions into the oil company.

In order to get this sharply increasing cost per unit production under control and hence to secure the long-term profitability of Albpetrol as an oil company, it would seem essential to "outsource" as much as possible of the present service functions from Albpetrol. This approach will be even more justified as an external market related to the operations of the international oil companies in Albania develops. In this "outsourcing" process the main objective of Albpetrol should be to secure the services needed at competitive prices and quality. The profit from the "outsourcing" as such should only be a secondary objective.

There are several ways in which such an "outsourcing" can be carried out, and Albpetrol should probably explore these various opportunities and select the most appropriate for the service function considered. The small and less technology intensive functions could be privatised, whereas the service functions requiring capital, technology and managerial experience would probably need international partners in order to develop a competitive service.

This "outsourcing" process will have to be structured in several steps;

All service functions should primarily be gathered in the Service Division as a result of the reorganization of Albpetrol.

The service functions should be restructured to give more effective operational units. One way would be to collect all drilling operations into one "Drilling Company" and so on.

Albpetrol will have to formulate a strategy for the "outsourcing" process, clarifying the objectives and the implementation of this process. In this Albpetrol would probably need some assistance from international experts.

The various units or functions would have to be "marketed" and there would have to be negotiations with potential parties.

6.3. Dismantle the tight integration between Upstream and Downstream activities

Albpetrol is presently operating with a complete integration between their upstream and downstream activities with no real possibility for exporting or importing crude. This tight integration is also linked to a fixed price on the crude produced different from the world market price.

This tight integration leads to a sub optimal, inflexible and distorted situation which will have to be changed;

It is not *a priori* given that an Albanian refinery aimed at a niche in the world market should be limited to Albanian crude only. This would strongly reduce the possible opportunities for such a refinery. "Swapping" of crude whereby some Albanian crude is sold in exchange of a different crude could provide more attractive solutions.

The present tight integration makes each part extremely vulnerable to operational or financial difficulties in the other part. Problems related to the refineries could seriously influence the production of the crude and difficulties in the crude supply could likewise seriously influence the operation of the refineries.

As more and more of the Albanian production is planned to be produced in joint ventures with international partners, the comparable world market price is the only acceptable price. If an international investor is bound to sell the crude to a price lower than the comparable world market price, this would give a strong negative incentive for participating in the rehabilitation of the already marginal existing oil fields and it would make it more difficult to attract such investors.

There are two initial steps to be made in this dismantling process;

The transport pipeline to the export terminal in Vlore and the export terminal itself would have to be repaired and made operational.

The trading of crude between the upstream part and downstream part of Albpetrol should be based on comparable world prices.

6.4. Further restructuring of the Upstream Division

Once the organizational model is established, the further restructuring of the Upstream part of Albpetrol's activity should start immediately. The management of Albpetrol will have to develop a Restructuring Plan to be approved by the Board. The key elements in this plan would have to revolve around:

- Clearly defined objectives and strategies for the restructuring process
- Development plans for each field based on sound economic principles
- A defined strategy for reducing operational costs. This should include an evaluation of functions to be maintained within Albpetrol and services to be purchased.
- A financial plan for the restructuring process.

We consider it outside the present scope to detail the Restructuring plan further. It could be a useful approach to develop the Restructuring Plan in co-operation with international development banks if they are to participate in the financing of the restructuring process.

The overall objective in this restructuring will have to be the implementation of sound economic evaluations as a basis for investment decisions. In addition to the economic and financial management systems already discussed, this would require the implementation of and training in modern technology for reservoir management.

In the first period of the restructuring process it would seem natural to give priority to investments related to the existing fields. When these operations are brought to an acceptable level in terms of cost and profitability, more emphasis could be given to investments related to exploration.

6.5. Further restructuring of the Downstream Division

The downstream part of Albpetrol's activities is discussed in greater detail in Part II of this report.

In this context, we merely state that a Restructuring Plan for the Downstream part of Albpetrol's activity will have to be developed by the management and approved by the Board. The basic elements in such a Restructuring Plan will be equivalent to those discussed for the restructuring of the Upstream Division.

PART II: DOWNSTREAM ACTIVITIES

Usually oil and gas companies include in their organization downstream activities related mainly to Refining (and Distribution of petroleum products) and Petrochemicals. These processing operations generate added-value which allows the oil companies to increase their profits and to recover some of financial losses occurred by oil price variations. However most of the latter had, since about two decades, to get rid of another downstream activity with regard to Fertilizers, and sometimes to shift to other agricultural needs (such as seeds selection and production, pesticides,...). The main reason of that was and is still the influence of natural gas price in the production cost of fertilizers which badly affects buyers of natural gas from abroad, and fertilizers production via other technologies.

In that context, the organization of Albpetrol is up to now unclear with respect to the downstream sector. Albpetrol produces and delivers natural gas to the albanian fertilizer company but is not concerned by this activity. Albpetrol produces, or was supposed to produce BTX (Benzene, Toluene, Xylenes) which play an important role in petrochemical area, without any interest in it.

In fact, most of the efforts spent for the promotion of downstream activities of Albpetrol have been devoted to refining and distribution systems.

7. General presentation

7.1. Refining

Four refineries with very small capacities and outputs constitute the refining producing tool of Albpetrol, which can be described as follows:

- One main refinery (Ballsh) integrating fuel production as well as lube oil and other derived petrochemical products such as aromatics, solvents and petroleum coke.
- Three treatment units aiming at the production of bitumen and some (atmospheric) distillation withdrawals (FIER, KUCAV, CERRIK).

Until a recent past these installations were operated even in unsuitable conditions, but decisions have been made presently to shut down the two last plants. Nobody could give us during our mission any firm statement about dismantling, rehabilitation or any consideration defining the "post conservation" programme implemented for KUCAV and CERRIK units.

7.2. Distribution network

The recent political and economic changes that occurred in the country, have given rights to private people - either foreign or local - to invest in this activity, from the importation and storage of petroleum products to the erection and operation of refuelling stations.

It is why, to the nearly 100 stations and the existing storage facilities within industrial and agricultural areas, managed by Albpetrol and its distribution affiliate company (RHSK), it has to be added about the same order of magnitude of refueling stations owned by private albanian investors, and (quickly) erected since two years thanks to used and somewhat obsolete equipments (pumps, flowmeters...) imported from european countries.

Last but not least, one has to highlight new opportunities that have been, identified with foreign private companies such as Italian A P I Spa, Roma to promote and develop cooperation through joint venture devoted to LPG bottling and marketing. A first project with a minimum capacity of 2500 Tons/year in under discussion, whereas some 5 or 6 similar ones are prospectively foreseen.

8. The present situation of this sector

The following introductory statement is borrowed from the general presentation of the industrial activity (chemical, oil and gas, fertilizers...) elaborated by the Albanian authorities. This well-known presentation emphasizes one the most important problems that the Albanian industrial sector is facing, and that are divided into :

- Problems of the technical readiness which have come as a result of a long term usage without making important investments for their renovation and rehabilitation.
- Problems generated by the supply of raw materials such as oil and gas as well as other inputs and which resulted in an insufficient rate of utilization of the plants or even which led to close down the new facilities just after being commissioned.

Besides these points it has to be recalled that the plants built up in Albania have been erected according to heavy and non efficient design and technological concepts used by Romanian and Chinese manufacturers and contractors. So the present installations reflect these countries state of the art in the sixties and the seventies.

Their obsolete nature comes from the fact that since the design and construction phases they were already out of the modern standards - Presently this situation is more dramatic as far as technical and economical matters are concerned because of the tremendous advances that occurred in western (worldwide) technology since the sixties in many areas = design standards, implementation with respect to operation and maintenance needs, equipment sophistication, pollution and environment constraints on products specifications, and many other criterias to fulfill in order to lower unit cost production and to keep playing in the strong existing competition.

All these elements which have been the major guidelines for worldwide investors in refining and petrochemical industry have given birth to the present "dichotomy" which makes the border line between an efficient and a non-efficient plant.

In other words if we are to recommend a decision to make on the sole basis of this considerations it would not be worth to keep even Ballsh and Fier units under operation according to the present conditions.

Non performing technologies, inadequate equipments and design, have been, as said before, among the main reasons behind the obsolete Albpetrol plants. This handicap is furthermore compounded by the following factors:

8.1. Capacity of the plants

Apart from some units such as coking and hydrodesulphurization which approach normal (economical) size, all the other facilities and specially the topping (atmospheric distillation) are far below the usual and profitable level of refining operations sizes, which is at least from 2 to 3 million T/year.

8.2. Utilization rate of the plants

This factor is also on the down side of economic profitability. Ballsh refinery is treating about 50% of the existing distillation plant, whereas Fier refining unit is operating 70,000 T per year for a nominal capacity of 500,000 T/year (14%). Even for huge refineries worldwide, practice shows utilization rates of 80 to 90% at least.

In Ballsh, the FCC (Fluid Catalytic Cracking) built to treat the gas oil feed stock (300,000 T/year) has to be dismantled just after having achieved performance test - runs (3 days) because of non availability of raw material, whereas Crude oil association gas treating plant never runs for the same reasons.

Presently the BTX plant will probably need to be closed because of the changes of the reformer catalyst, and the need to use these aromatics in the gasoline pool to produce expected 86 RON fuels.

The sulphur extraction plan (HDS) and the coking facilities will also be affected in the same manner, if the local and foreign markets requirements continue to decline.

8.3. Product specifications

Because of the nature of the Albanian crude oil (high content of impurities - salt and metals, ashes, sulphur...) and because of the obsolete technology and equipments involved, the products specifications were to be satisfactory only for the local market demand but out of normal western oil products' specifications:

- Gasoline (unleaded) 66-72 RON, then 70-85, instead of 92 to 102 RON lead free or slightly leaded gasoline in western Europe.
- Lube oil VI (Viscosity index) equal to 80 instead of minimum of 95 to 110 or 130 in the world market.
- Coke with high content of sulphur and metals which does not enable the production of

more valuable needle coke for aluminium production.

8.4. Other considerations

The facts highlighted above show that quantity as well as quality wise, the refining scheme is no more adapted to the world regional or sub-regional situation - In order to reach the economical profitability, the refining sector, which is far below the current standards, has to reconsider its actual organization in order to get rid of negative parameters such as :

- **Excessive employment:** more than 3,000 workers for a refining installed capacity of about 2 million tons (for an output of just half million tons per year) due also to activities far from core downstream business...
- **Unexpected activities,** for refineries due to the ancient concept of plant self reliance in equipment manufacturing and in maintenance... which led Ballsh refinery to operate a foundry, to design and manufacture heat exchangers and many other equipment.
- **Large implementation areas** (80 ha for Ballsh) suitable for ecological consideration but adversely affecting plants operation practices and cost investment (pipeline, or regulation and communication devices length...)
- **Lack of policy in investment** devoted to immaterial activities, which results in very poor performance of human resources. Here, it has to be noticed the "deficiencies" in R&D activities promotion, in acquisition and distribution of technical information, in field activities computerization, in recycling and training of technicians, engineers and managers, and even top management to new developments in economics, technology and management of development strategies (partnership, alliance, joint-ventures, overseas development,... etc...)
- **Non integration,** in the daily practice, of modern refining concepts and operations in order to maximise plant efficiency through a variety of different raw materials (light crude oils blending) and energy savings within the processing plants.

9. Recommendations

The recommendations that will be presented at this early stage of restructuring and re-organization of the main activities and divisions of Albpetrol should be taken as major guidelines for the next phase of this programme of actions. The latter will take into consideration the present situation of Albpetrol considering :

its own resources (raw materials, human skills, infrastructure...)

the environment (market supply) rules of the game in the oil industry

other constraints and other actors in the sub-region.

In that framework, it is needless to say that, in compliance with the first part of the report related to the whole restructuring of Albpetrol, and the concepts defined therein, this company must be reorganized on the basis of criteria defining commercial activities. In other words Albpetrol should no longer be seen as a company in charge of production (raw materials oil and gas, or petroleum products like gasoline and gas-oil, whatever the economic results, but rather as a commercially performing company, whose objectives are to make profits for the shareholders, and in order to achieve this goal, to provide (local or international markets) with price competitive products.

Should these objectives not be reached, Albpetrol will enter, because of the pressure of the world market conditions and the impact of the country opening to market economy, a dangerous situation full of uncertainties for its medium term future. Responsibles of Albpetrol will have to deal with daily warnings and complaints from by petroleum products consumers for public transport network or other branch of the economy.

In that segment also, due to the scale economies which considerably affect downstream activities, Albpetrol will have to reconsider its strategy and try to strengthen its various abilities in order to enter in good conditions, in partnership operations with foreign companies.

10. The challenges

Because of the new trends of the world economy, enhanced in fact by new political and social mutations the challenge is in fact a global one, that of entering new approach of development through market economy. The latter is characterized by a very strong competition between, on one hand, the developing countries in their race to attract investments, and on the other hand between developed countries themselves in order to safeguard their position in front of the newly industrialised economies.

10.1. The new international situation

is defined through:

- technological mutations
- international restructuration process
- lack of economic "visibility"
- demographic trends, as far as the characteristics and the specificities of countries manpower are concerned: working hours per day, labour costs, social insurance, excess of workers availability and level of qualification
- economic de-regulation
- new socio-cultural trends.

These policies and events are making more and more difficult to non industrialised countries to enter and share substantial part of the world market.

10.2. The market

is no more restricted to a country local market. Almost all domestic markets are in a way or another considered too small. Either they really are, like in states with low income and population, which does not allow to reach economical size plants, or they are quite important but subject also to a strong competition between worldwide producers and multinational companies, which explains the emergence of regional economic communities: EEC, NAFTA (North America), ASEAN...

So, entering an industrial activity involves the broadening of the market to sub-regions, regions and continents. In this framework, and when the constraints are too severe, many countries with low population adopt a strategy of "niches": identification and specialization (see the case of Luxembourg, Hong Kong or Singapore).

10.3. The comparative advantages

They can be defined as specific advantages a country can develop (general infrastructure, skilled manpower, low cost raw materials and energy, duty free zones) in the process of competing successfully for the economical development.

It also can be the result of well-defined laws and incentives to attract foreign investment and the consequences of specific strategies for niches identification and quick reaction to opportunities - ("success is no longer the fact of the biggest (companies) but of the quickest"), which in turn supposes efficient management.

10.4. The downstream organization trends

The oil and gas industry gained a powerful position in all countries after the second world war. Among the developed countries many oil and gas companies enlarged their activities to nuclear, agriculture, mining, chemistry, and renewable energy.

Among producing countries, almost the same trends occurred: because of the importance of energy in the process of development and because of the "miracle" assured by hydrocarbon chemistry to substitute new products to wood, cotton, leathers, or glass.

This situation is being over and many companies are restructuring around their basic activities (core business) and some downstream ones.

In that context, despite the fact that refining and (petro) chemicals are considered as "modulating" factors of the cash flow, because of their "natural" ability to mitigate cyclical impacts, it is no more question to oil and gas companies to commit their strategies in all directions on the basis of their sole know-how, but more and more they try to go where synergy due to partnership and alliance with others may lead them.

It is clear, among oil and gas companies or players that profitability of oil, gas refining and

petrochemicals do not often coincide. This explain why diversification combined with integration are supposed to provide a sound improved basis to avoid profit downturns. This could be applied particularly to the Fier fertilizer complex where competitiveness could be improved if feedstock is properly delivered.

Thus, it could be interesting to define the role that Albpetrol could play, within the subregional or even the regional market in partnership with other players either foreigners or Albanian public companies, when entering some downstream chemical industry using Albpetrol gas or products, that Albanian authorities wish to privatize or rehabilitate.

Shortcomings and inefficiencies of the centralised economy approach could be overcome through increased regional cooperation. Albpetrol's experience in refining and distribution as well as in petrochemicals (BTX, solvents, sulphur and coke production) may be a link between industrialized countries of the sub-region or the region and new countries of the neighbourhood entering to market economy with no hydrocarbons resources.

11. Action Programme

The most important changes deemed necessary in the status and the organization of Albpetrol have been discussed earlier. Consequently, downstream activities which are still limited to refining and distribution operations, should be in priority restructured in accordance with the company status as future profit centres, while petrochemicals although to our views at a nursing stage, warrant, even though with less urgency, to be included within the restructuration programme of actions.

This process whose aim is to lead to a higher, if not a "normal", efficiency level for an oil and gas company, will be achieved through two important directions :

- substantial rationalization in the near term through :
 - privatization of activities not related to core business
 - concentration and eventual increase of production in most performing plants
 - creation of affiliate companies (joint-ventures) in servicing areas
- consolidation of the managerial level of the company through:
 - special and intensive management programmes to top Albpetrol managers, and training courses and continuing professional development programmes to other responsibilities
 - major improvements in modern equipment for key technical and economic operations (computerization...).

The actions identified in each direction will certainly contribute to maturity advances needed by Albpetrol :

- by improvement of competitiveness through better management of the company resources (equipment, manpower, financing, logistics) on the one hand

- and, on the other hand, by improving the credibility of the company during negotiations process with foreign companies. Key factors of success in promoting alliances and partnership with oil and gas companies often are subject to mutual good understanding. We do believe, in that framework, that management and technical training programmes proposed are of a significant impact to update managerial behaviour of Albpetrol responsables, to enhance their reliability, and to give them confidence thanks to a better appreciation of world new trends and ventures in the oil and gas industry and to achieve new goals of co-operation with foreign companies.

The proposed Programme should include :

Action N°1:

Identification of the main unnecessary items - process, equipment, services and activities that are to be given up in the short term within downstream plants, in view of privatization (if possible) or dismantling.

Action N°2:

Definition of a strategy for an efficient bitumen production facility (ies) with respect to :

- concentration of production in one plant to feed the local market (road and industrial bitumen such as insulating and roofing asphalt)
- opportunity to extend the production of bitumen to sub-region or regional market provided the existence of a comparative advantage due to raw-material quality and manpower low cost.

Action N°3 :

Definition and implementation of a national strategy for petroleum products marketing and distribution in order to :

- avoid anarchy due to wild investments from main distribution public and private players in storage areas and refuelling stations
- select and impose specifications and standards for the creation of such facilities with respect to lay-out, environment matter, hazards and safety.

Here it could be recommended to Albpetrol to create a new affiliate company or to revamp and remove the existing one with a foreign partner to enhance its "image de marque" and improve the public image of Albpetrol as a mature oil company.

Action N°4 :

Launch a pre-feasibility study for the definition of a refining development strategy with respect to:

- the existing installations and their rehabilitation - readaptation to local or regional market needs
- the new trends of the local and (sub) regional markets, boosted by economic changes and tourism expansion, and by other factors such as new product specifications in relation to environmental legislation in Europe, and their impact on plant capacity
- feed-stock possibilities of exchange of low-sulphur and metal content crude oil or condensates in order to increase production yields through suitable blendings or adequate treatments.

Action N° 5 :

Definition of a platform of co-operation with any foreign oil company presently operating upstream in the country, on the possibility to develop a joint venture in the refining and distribution activity for the whole sub-region, based on:

- Albanian and/or partner's unused production capacity
- addition of imported light crude oil to achieve a better response to the market needs for petroleum products
- high-quality and standards of management and operation in all aspects of cost reduction.

This action is not contradiction with the previous one:

- the prefeasibility study will have also to determine priorities to consider in this process of restructuring. Rehabilitation of a plant is certainly "unavoidable" but how to cope with it if the processing capacity is not increased and stay on the lower side of profit.

It is indeed fundamental to reduce losses of energy and feedstock, to save the gasoline which is wasted in fixed roof tanks by providing for floating roofs, and to improve the quality of products but it is not sure that the processing cost will drop significantly from its presently high value.

The question of reshaping a new strategy disconnected from the fact that petroleum products are said to be of a strategic importance to justify small and uneconomical plants while imports could be highly profitable for the country, stay valid. A State-owned refining company certainly has many responsibilities to assume vis-a-vis the state, the workers, the market, but the first of them is presently to provide products at competitive prices. If not, privately imported products will cover all the needs of the market and be the cause of the local refinery closing down. This fact might be also "unavoidable" for the medium term. Albpretrol ought to take care of this right now.

Action N° 6 :

Creation of a specialized task-force in charge of the development of new ventures tied with all downstream opportunities.

Adoption of measures and incentives in order to secure and give success to joint-venture development with:

- a company such as CASTROL for lube oil blending in Ballsh and marketing in the sub-region
- a company such as API Spa (Roma) for the import, bottling, and marketing of LPG in the sub-regional market, and with a reliable LPG producer for association on the basis of long-term delivery.

LPG utilization will certainly know an interesting growth rate in the sub-region for domestic and other industrial/residential applications within the coming decade, and despite the fact that an important natural gas terminal is foreseen in the region to secure connection to the European gas network. This important methane terminal (5 to 7 billion m³ of natural gas expected to be built in Croatia, and fed with Algerian or Middle East gas), will prove a vital contribution to boosting the regional economy.

Action N° 7 :

Launch an overall study about the present situation of the petrochemical industry.

- this study should review the main products which could be produced if raw materials or intermediate basis were available by Delvina natural gas field expansion for the fertilizers production, BTX... and in the framework of the sub-region and the country's economy restructuring.

Special care should be given, even at this early stage, to the project of the natural gas terminal future implementation in the region (presented above) which may offset present constraints, such as, for instance, the lack of feedstock to the Fier fertilizer plan).

A market survey for the region will focus mainly in the possibilities of joint plastic processing industry between operators in the region. As everybody knows, this industry is based mainly on independant small or medium enterprises which are of a great help to produce household or industrial goods and satisfy the needs of the population, for the global economy as well as to provide work to educated and skilled people.

Action N° 8 :

Define and launch a training programme in management, for Albpetrol top managers and managers of profit centres.

Although all over the world, engineers or technology-minded authorities dit not pay attention for

a long while to management as a science, this discipline is now reckoned to be of a prime importance to operate any profit centre or industrial enterprise.

Even in the most advanced countries, managers are offered special courses delivered by organizational and high-level fields experts, to update their knowledge in the various aspects of the business and to broaden information, ability and skills with respect to:

- market economy and competition throughout the world
- basic and detailed calculations on profitability and viability of projects
- cost production determination and prices fixation concept
- role of the logistic and maximization of its impact in the production field
- management of human resources (from the selection of new employees to the evaluation of agents' potential, definition of appropriate training programmes, determination of wages policy,
- international challenges and the new approaches in co-operation through
 - joint venture and
 - strategic alliances
 - research of synergy with other oil and gas players

This programme is of a major importance, and all top ranking companies in many fields including oil and gas (Exxon, Elf, BP, Sonatrach, Total, or Fina) have recognized its importance.

Great consideration must be given to the reinforcement of the managerial capabilities inside Albpetrol, because :

- hardware restructuring and rationalization is not enough
- management courses will urge executives to overcome career-minded approaches
- no or little initiative from plants or companies operators, with no individual responsibility.

Employees must develop new attitudes. They should not need any more to be told "what to do" according to a top-down driven, control-oriented management. They must develop intrinsic motivation to work, that enable them to deliver

Action N°9:

Define and launch a training programme for technicians, engineers or other authorities, with a view to improving their ability fo master the production techniques and equipment and the performances of the plants.

These training programmes are also considered of utmost importance in oil and gas companies:

- because of new knowledge and management concepts developed in various fields (equipment operation, corrosion and maintenance advances, control and regulation, on-line controls, computer monitoring)
- to bridge the passage between theory and practice at the technicians' level

- to enhance motivations of the employees. Such training courses must be adopted as a continuing professional development programme. It should gradually involve key people in plants and commit the technicians. It could be organized within suitable institutions abroad and in Albania, with the participation of skilled Albanians, on a continuous basis and with the co-operation (and cost-sharing) of third parties.

Action N°10:

Definition of cycles of conferences of (top) managers and staff, on various fields related to local and foreign environment constraints for Albpetrol. Lecturers could be hired or invited from international institutions, oil and gas companies (operating or not in Albania) and individual experts.

- This is of a major concern, because changes and mutations that Albpetrol is willing to establish through restructuring of the hardware have to be accompanied by changes in behaviour of Albpetrol human resources. The latter has to be aware of the type of management of the enterprise, whether of "Anglo-saxon" type, based on the importance given to the work to be achieved, or the "Latin" type based on the hierarchical links and relationships between employees:
- The nature and the depth of the world economy changes with new geostrategic considerations
- The on-going reasons such as competition, market needs and constraints, and emerging countries, new-players which are continuously reshaping new horizons and which oblige to integrate partial or total strategic planning tools
- This will result in the promotion of an "industrial culture" (culture d'entreprise), one the most-needed basis for industrial success. Staff and employees need to share some values upon which they intend to fulfill the objectives of their company:
 - ethics: transparency of decisions, fairness in responsibilities, reward on skill and competency
 - professionalism: adoption of professional standards, consideration given to the customers and to the partners.

As F. Richardson from Shell Oil Company underlines it, "the knowledge, initiative and creativity of each individual are essential to continuous improvement... but when the strengths of many are focused on a common goal, results can be exceptional".

One last suggestion will be the creation of a special task force composed of Albanian and foreign oil and gas experts to, in order to :

- assist the Managing Board of Albpetrol in the definition of the medium/long term policy as well as on specific concerns
- monitor the on-going reforms and facilitate them
- extend advises on oil and gas world or regional developments and analyze their impact

in order to generate a dynamic process of industrial actions

Its composition would be of about six to eight persons coordinated by a secretariat under the supervision of a member of the Board of the company.

Each session of the task force will have to be devoted to one or two important themes with other less acute ones.

This task force would meet two or three times a year for 1 or 2 days.

Similar task forces are acting for the benefit of large companies in the appraisal of hydrocarbons industry future. They are acknowledged to be of a valuable effectiveness in this era of profound changes.
