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ROMANIA

REVIEW OF REVISED DRAFT FINAL REPORT

Petroleum Product Pricing
And Crude Oil Transport Rate Study In Romania

Prepared for
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World Bank

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Section I

Introduction

In November, 1996 Bechtel International reviewed drafts of two studies prepared for the World Bank and the Romanian National Agency for Mineral Resources (NAMR) by the French firm Beicip One of them, the Petroleum Product Pricing And Crude Oil Transport Rate Study In Romania (the "Petroleum Report"), has since been revised by Beicip and issued for comments This report presents Bechtel's review of that revised report Section II of this report summarizes our findings

The other report, Romania Gas Pricing And Tariff Study, is still being revised by Beicip Bechtel will conduct its review of that report after it has been issued for comments

Chapter 1 of the Petroleum Report provides an overview of the general structure of the proposed petroleum products pricing system Chapter 4 covers the cost of the use of the transport system that moves crude oil from the oil fields or the importation point to the refineries Chapter 2 covers the calculation of ex-refinery prices Chapter 3 completes the chain of cost from production to sale to the consumer by presenting the calculation of the cost components from the ex-refinery price to the retail level The core of our review is Sections III, IV, and V of this report, consisting of three separate evaluations, one of each of the Beicip report's three main sections

Chapter 5 discusses the economic value of petroleum products in alternative uses Chapter 6 discusses taxation of petroleum products Chapters 5 and 6 are new and were not part of the document Bechtel reviewed last year We comment on them briefly in Section VI of this report

Compared to the version of the report reviewed last year, there appears to be little or no change regarding the tariff calculations for any of the sections, and no evidence that Beicip addressed any of Bechtel's comments on that version (Some more current data was used, changing the resulting tariff only slightly) Therefore, our earlier comments regarding the study still apply The most important of those comments are incorporated in this report Some of what appears below (primarily the descriptions of the tariff calculations) is identical to what appeared in that earlier review We refer the reader to that report for more detailed information regarding the different tariff calculations than we include here

Bechtel's assumption this time is that NAMR intends to use the Beicip work to calculate tariffs, probably in the form of a computer program Thus the key question we address this time is whether the report is adequate for that purpose, and if not what would be necessary to make it adequate

Another important issue is the policy choices that the tariffs imply and that can or need to be made to implement the tariffs Throughout this report we describe what these policy choices are

Finally, we emphasize that having the capability to calculate tariffs mechanically from given inputs is only part of an effective regulatory process Steps taken thus far, including designating regulatory authority to NAMR, developing draft regulations,

and arranging to acquire tariff calculation capability from Beicip, represent an excellent start Building upon this start, Section VII summarizes other legal, regulatory, and institutional issues that should be addressed over time so that the process can fully achieve its objectives

Summary

II 1 Recommendations

With respect to the crude oil pipeline tariffs, the proposed approach appears to be conceptually sound, to offer significant advantages over the current approach, and therefore to be suitable for immediate application in calculating tariffs in Romania

With respect to the ex-refinery product prices, the proposed approach appears to be conceptually sound, to offer significant advantages over the current approach, to provide a convenient mechanism for phasing in the higher prices, and therefore to be suitable for immediate application in calculating tariffs in Romania

However, we emphasize that this should be considered very much a **FIRST STEP** in rationalizing the crude oil pipeline tariffs and ex-refinery petroleum product prices Many other issues need to be addressed Whatever computer programs are supplied to perform the tariff calculations should be capable of having substantial modifications made to them as more information develops We contemplate an iterative process as data availability, data needs, and conceptual improvements evolve to a common end point NAMR, USAID, and the World Bank may wish to have Bechtel review these programs when Beicip delivers them, as a final step in the overall review process

We have noted a number of possible conceptual improvements in the body of this report Over time, others may be identified by NAMR or other interested parties in Romania, or could be determined through additional work by consultants

With respect to the pricing system for transport and distribution of petroleum products, the approach has a number of serious flaws which argue against accepting it for immediate application in calculating tariffs in Romania at this time There is no doubt that the existing system produces transport and distribution prices that are too low for a healthy industry The shortfalls in revenues have negative consequences poor service, inadequate investment, environmental concerns, costs imposed on users due to lack of product and service availability, and so on The higher tariffs that Beicip's approach produces cannot be perfectly accurate, but very well may be a substantial net improvement

Accordingly, although we advise against implementation in the short term, we strongly recommend that the approach be revised to address the key flaws Some of these flaws could be addressed in the short term through modification of the work to date Most importantly, the approach should be tailored to the Romanian situation, rather than based on western European experience

II 2 Suggested Beicip Action Items

Crude Oil Pipeline Tariffs

Several changes that probably are easy to accomplish would improve the accuracy and usability of the approach They could be considered for implementation before putting the computer programs in place for initial tariff calculations

- The basis for calculating specific depreciation values is not explained and we cannot reproduce the numbers However, the values used in the cost-of-service buildup appear to be within a reasonable range An explanation should be included

- The calculations should account for a small amount of non-payment, such as 1% This could be accomplished by dividing the final tariff values by 0 99

- The procedures should be set up to permit monthly indexing of the tariff values between full tariff revisions The tariffs should be updated monthly based on changes in inflation-related indices whenever there is significant change to the indices Full tariff revisions might be done on a yearly basis and should include asset revaluation each time they are done When inflation has been brought under control, these yearly revisions may be the only updating necessary

Ex-Refinery Petroleum Product Prices

Two changes that probably are easy to accomplish would improve the accuracy and usability of the approach They could be considered for implementation before putting the computer programs in place for initial tariff calculations The third listed below might be more difficult, but would be worthwhile to undertake

- The cost-of-service calculations should account for a small amount of non-payment, such as 1% This could be accomplished by dividing the final tariff values by 0 99

- Frequent revision is important when prices are volatile, as is the case for petroleum products The procedures are meant to accommodate updating these parameters as frequently as monthly However, frequent revision is also necessary when high inflation drives up costs Most of the cost parameters are to be updated monthly based on inflation-related indices, but amortization is to be updated monthly based only on changes to refinery capacity factor The amortization costs should also be updated monthly based on an inflation-related index The tariffs should be updated monthly based on changes in petroleum product prices and inflation-related indices applied to costs

- When tariffs are designed to be based on costs, as these are in some circumstances, it is important that all costs be included The approach does not re-

value assets, which means that asset-related costs included in the tariffs are probably not reasonable In general, the refinery costs appear to have been taken as a given, without much evaluation or discussion The approach should include all costs and in particular should provide for revaluation of assets, and incorporate all asset-related costs, including depreciation, return, and taxes If such costs are important for the crude oil pipeline tariffs, they should also be important for petroleum product prices (However, if NAMR chooses to implement a large band, in effect using border prices for the petroleum products, then the refinery costs are irrelevant for petroleum product pricing purposes Refinery costs would still be important to the firm and its owners)

The 10% profit margin allotted to the refineries may be designed to cover some asset-related costs Accordingly, the approach may be usable in the short term without this suggested modification However, in the long run closer scrutiny of all costs and asset revaluation should be undertaken

Pricing System For Transport And Distribution Of Petroleum Products

We have recommended that substantial revision be undertaken before applying the approach outlined in the Beicip report The body of this report lists some of the flaws that need to be addressed The most important issue is that the approach should be tailored to the Romanian situation, rather than based on western European experience Key factors include

- Identify differences, if any, between how the industry is organized in Romania and how Beicip assumed it was organized for the purposes of its calculations Based on those differences, modify the approach accordingly

- Determine what data is or could reasonably be made available regarding costs Set up the calculation procedures based on data in that form This may in effect require what amounts to a separate tariff calculation for each cost component, including all the key elements of such a calculation

- Determine pricing policy as it relates to transport and distribution and incorporate all appropriate elements that contribute to the degree of price differentiation implied by that policy

II 3 Other Action Items

Having a computer program available to calculate tariffs is only part of an overall system of regulation We emphasize that other important issues must be addressed for the system to achieve its goals The items listed below are among the areas largely within NAMR's control Work should proceed on these and the other items noted in the Institutional Development section in a process that will refine and improve the regulatory system over a period of years

- Adopting a transparent process for setting the tariffs
- Developing expertise and organizational groups within the regulator and within the regulated firms to support tariff processes
- Providing for public participation in the tariff process
- Providing for performance incentives to encourage regulated firms to achieve cost and performance objectives

II 4 Policy Choices

A common view is that the role of government is to set policy and the role of the regulator is to create regulations and procedures that implement those policies, or are at least consistent with them Governments sometimes delegate to the regulatory body the authority to make policy decisions in certain areas

Each of the tariff approaches proposed implies certain national policy choices In addition to those implied by accepting the approach, NAMR (or a higher level within the GOR, if authority does not rest with NAMR) must make additional policy choices to define the details of the approach, and has other policy choices that it could make if it chose to

Policy Decisions Required

- Where will funds come from or go to when revenues and expenditures do not balance
- How to handle any substantial levels of non-payment
- Because the crude oil pipeline tariff calculation produce both distance based and non-distance based tariffs, NAMR must decide as a matter of policy whether or not to impose distance based tariffs on existing refineries as well as on open access users If distance-based tariffs are to be used for open access users of the system, it would be appropriate to use them for the refineries as well
- What is to be the size of the band within which no adjustment due to refinery costs is made for the ex-refinery petroleum product prices
- For each of the tariff calculations, whether or not to have uniform national prices, and if so, what principles should guide the price differentiation

Policy Decisions Possible Or Helpful

- The calculations do not provide for any phase-in of higher prices or for any special social protection features Nevertheless, NAMR could, if it chose to, implement such features as a matter of policy
- Whether or not to develop open access tariffs for the crude oil pipeline system
- Domestic crude oil pricing principles
- Whether or not to have ex-refinery petroleum product prices calculated for individual refineries

Section III

Tariff Of Crude Oil Supply By Pipeline

III 1 Calculating The Tariffs

The proposed approach estimates all of the costs of the various components of crude oil supply by pipeline, including the cost of storage It is strictly a cost-based approach, incorporating no elements of market prices However, it avoids the shortcomings of embedded cost methodologies through asset revaluation A similar process, resulting in different prices, is repeated for the imported (IPLS) and domestic (DPLS) pipeline subsystems The result is tariffs in which the charges depend on both the tons transported and the ton-km of service provided For example, charges under the IPLS tariff would be ($1 64/ton) * (tons transported) + ($0 01/ton-km) * (tons transported * km transported)

Separately for the IPLS and the DPLS, the cost buildup tabulates over the next five years the operating costs, costs associated with future investments, and costs associated with existing assets Costs were obtained from CONPET records and forecasts The operating cost estimates are based on 1995 budget figures For the years 1996-2000, escalation was applied to different components at rates of 1% to 10% per year

The book value of existing assets was ignored because it was clearly unrealistically low Domestic inflation has rendered figures based on expenditures made many years ago almost meaningless Instead, the assets were based on estimated current replacement cost new less accumulated depreciation based on that replacement cost and current age Future investment includes substantial rehabilitation and modernization The costs include return on investment and income and other taxes

Yearly costs for the period 1996-2000 were levelized at 10% discount rate Each levelized cost component was assigned to (or divided into) one or more categories Different categories were summed to produce two kinds of costs those costs that depended on the distance the crude oil was transported, and those that were distance-independent The distance-independent costs were divided by the annual tons transported to produce one coefficient, and the distance-dependent costs were divided by the annual ton-km of service provided to produce a second coefficient

Although the report describes the tariff design as straight fixed-variable, in fact the tariffs are not tied to peak usage and there is no capacity reservation (or similar) charge The "fixed" charges are based on tons transported, while the variable charges are based on ton-km of service provided

Overall charges under the new tariffs would average $3 26/ton on the DPLS, compared to a current charge of $2 03/ton On the IPLS new charges would average $3 88/ton compared to a current charge of $1 33/ton

The revised draft contains an expanded sensitivity analysis section which, while interesting, does not affect the tariffs themselves

III 2 Evaluation

The proposed approach would establish a tariff system based on cost of service principles It has the following positive qualities

- Since the pipeline system has an effective monopoly on an important service, cost-of-service based tariffs are appropriate
- The approach revalues assets, which means that asset-related costs included in the tariffs are reasonable
- Full cost-of-service tariffs and distance-based charges are a step in the direction of rationalizing the petroleum sector in Romania
- It would eliminate the direct and indirect subsidies created by the current tariff system, producing more appropriate price signals for users
- If NAMR accepts the tariff calculations generally as they have been proposed, in effect it has made a policy choice to implement cost-based tariffs, eliminate most subsidies in this area, and increase prices to users
- It has the ability to calculate distance-based rates, which could be suitable for "open access" users of the system, and which could also be applied to the existing refineries if NAMR chose to take that approach This would mean that pipeline transportation costs would differ among the refineries
- It provides revenues which, if collected, would be sufficient to provide for the financial health of the firm

Several changes would improve the accuracy and usability of the approach

- The basis for calculating specific depreciation values is not explained and we cannot reproduce the numbers However, the values used in the cost-of-service buildup appear to be within a reasonable range An explanation should be included
- The calculations should account for a small amount of non-payment, such as 1% This could be accomplished by dividing the final tariff values by 0 99
- The procedures should be set up to permit monthly indexing of the tariff values between full tariff revisions The tariffs should be updated monthly based on changes in inflation-related indices whenever there is significant change to the indices Full tariff revisions might be done on a yearly basis and should include asset revaluation each time they are done When inflation has been brought under control, these yearly revisions may be the only updating necessary

The proposed approach appears to be conceptually sound, to offer significant advantages over the current approach, and therefore to be suitable for immediate

application in calculating tariffs in Romania However, we emphasize that this should be considered very much a **FIRST STEP** in rationalizing crude oil pipeline tariffs Many other issues need to be addressed Whatever computer program is supplied to perform the tariff calculations should be capable of having substantial modifications made to it as more information develops We contemplate an iterative process between CONPET and NAMR as data availability, data needs, and conceptual improvements evolve to a common end point NAMR, USAID, and the World Bank may wish to have Bechtel review these programs when Beicip delivers them, as a final step in the overall review process

In addition to the policy choices implied by accepting the approach, NAMR (or a higher level within the GOR, if authority does not rest with NAMR) must make additional policy choices to define the details of the approach, and has other policy choices that it could make if it chose to

- The calculations are approximate and should be refined For example, rail transport costs might logically be separated from pipeline transport costs All CONPET's costs appear to be allocated to the pipeline systems based on their flows, ignoring the volumes delivered by rail This may produce excessive revenues The tariff calculation for the DPLS was based on partial flows into Ploiesti only In many places in the previous draft of the Beicip report, a phrase similar to "[data] will be confirmed and validated with the transport company" appears, which does not appear in this revised draft However, it seems likely that this was not done, because all the data are the same as before

- The calculations do not provide for any phase-in of higher prices or for any special social protection features Given that all the customers will be large firms, and that the pipeline transport costs are a small fraction of the ultimate cost to the consumer of the delivered final product, this may not be an important issue Nevertheless, NAMR could, if it chose to, implement such features as a matter of policy

- NAMR must also decide as a matter of policy how to handle the issue of any substantial levels of non-payment

- The calculations produce distance-based tariffs that could be suitable for open access users of the system Open access would require other rules and procedures in addition to prices, such as technical restrictions on inputs and outputs, batch size, product quality, and so on

- Because the tariff calculation produces both distance based and non-distance based tariffs, NAMR must decide as a matter of policy whether or not to impose distance based tariffs on existing refineries as well as open access users If distance-based tariffs are to be used for open access users of the system, it would be appropriate to use them for the refineries as well

- The approach does not address other issues such as how to handle bottlenecks, curtailments, lack of storage, and so on

- Given that the pipelines now run at well below capacity on average, it is probably not important to address peak usage and capacity reservation charges at this time These features could be added later, as conditions change, but might substantially change the calculation procedures that produce the tariffs

- The approach does not address where will funds come from or go to when revenues and expenditures do not balance

- In its role as regulator, NAMR should be responsible for promoting efficient investment and operation of the pipeline system This means that it should carefully review historical and forecast costs with respect to whether they would be necessary for an optimally run pipeline system NAMR should also try to design tariff incentives to achieve this objective

Section IV

Determination Of Ex-Refinery Product Prices

IV 1 Calculating The Tariffs

The proposed approach is a hybrid of international market prices for petroleum products and the refinery costs of the products in aggregate, including the cost of crude The international market prices are used as product prices unless the result of a calculation of the aggregate value of all products produced (V) based on international market prices falls outside a band centered on the refinery cost of producing the products in aggregate (RC) For each product i, the ex-refinery price (RPi) will be set at either the border price (BPi) based on the international price for that individual product, or at some common multiple (the same for each product) of the border price if V falls outside the band

The calculations are based on the aggregated costs from all refineries The methodology could be modified without undue difficulty to calculate prices for each refinery based on its specific costs, including the cost of its crude supply Other cost data at individual refineries may not be readily available, however

A key feature of the proposed approach is the use of a band within which ex-refinery prices are set equal to border prices for individual petroleum products The size of the band can be varied over time to achieve different objectives For example, if the band were set to zero, then RPi would be set at a level sufficient to recover all costs A larger band, say 5%, exposes the refineries to some risk Revenues would fall short of costs when V fell below RC, but would exceed costs when the converse occurred The band protects against losses (or gains) beyond a certain point, but does not eliminate them

The band could provide a vehicle for the transition to free market prices An initial narrow band would protect the refineries Over time an increasing band would progressively move Romanian product prices toward free market international levels As the band increases, the incentive to improve refinery performance will also grow

The proposed approach provides mechanisms that could be used to promote efficient operation It ties product prices to international market levels Part of the crude supply is from international sources, and domestic crude also could be priced at comparable levels With input and output prices both tied to international levels, there would be pressure on the refineries to achieve technical and cost efficiencies comparable to other refineries supplying the international trade Inefficient or low load factor refineries could be forced to improve or be shut down

However, this depends on how the approach is implemented Continuing to use low domestic crude prices or establishing a small band would reduce or eliminate the competitive pressure

One can define the overall "value" of products as being the gross proceeds of sales, that is the sum of price times production for each product The report implies that the overall value of petroleum products in Romania is roughly comparable to international levels, but cross subsidies cause significant distortions for individual

products In their examples the ex-refinery price of gasoline and jet fuel will fall by about 30%, while the prices for other products will rise by somewhat smaller percentages

IV 2 Evaluation

The proposed approach appears capable of establishing the principles of a petroleum product pricing system which has the capability to phase in liberalized prices over time It also ties ex-refinery prices to international products prices It has the following positive qualities

- Both crude oil and petroleum products are potentially competitive market goods Therefore, for the long term competitive market prices are appropriate In the short term, cost-of-service based tariffs may be appropriate, to protect against abuse of power if a local monopoly exists, or to provide time for the affected firms to adjust to competitive conditions The proposed approach provides a convenient vehicle for a transition from cost-of-service tariffs to international market prices for petroleum products

- International market prices for petroleum products are a step in the direction of rationalizing the petroleum sector in Romania

- It would eliminate existing inter-product cross subsidies and could eliminate some of the direct and indirect subsidies created by the current tariff system, producing more appropriate price signals for users

- If NAMR accepts the tariff calculations generally as they have been proposed, in effect it has made a policy choice to implement a form of cost-based tariffs, tie prices to international levels, eliminate inter-product cross subsidies in this area, and increase prices to some users while reducing prices to other users

- The approach is suitable for calculating uniform national prices for petroleum products However, it could readily be modified to produce refinery specific prices

- If NAMR chooses eventually to make the band large and to tie domestic crude prices to international levels, it will put strong pressure on the refineries to achieve technical and cost efficiencies comparable to other refineries supplying the international trade Inefficient or low load factor refineries could be forced to improve or be shut down - a step in rationalizing the sector

Several changes would improve the accuracy and usability of the approach

- The cost-of-service calculations should account for a small amount of non-payment, such as 1% This could be accomplished by dividing the final tariff values by 0 99

- Frequent revision is important when prices are volatile, as is the case for petroleum products The procedures are meant to accommodate updating these parameters as frequently as monthly However, frequent revision is also necessary when high inflation drives up costs Most of the cost parameters are to be updated monthly based on inflation-related indices, but amortization is to be updated monthly based only on changes to refinery capacity factor The amortization costs should also be updated monthly based on an inflation-related index The tariffs should be updated monthly based on changes in petroleum product prices and inflation-related indices applied to costs

- When tariffs are designed to be based on costs, as these are in some circumstances, it is important that all costs be included The approach does not re-value assets, which means that asset-related costs included in the tariffs are probably not reasonable In general, the refinery costs appear to have been taken as a given, without much evaluation or discussion The approach should include all costs and in particular should provide for revaluation of assets, and incorporate all asset-related costs, including depreciation, return, and taxes If such costs are important for the crude oil pipeline tariffs, they should also be important for petroleum product prices (However, if NAMR chooses to implement a large band, in effect using border prices for the petroleum products, then the refinery costs are irrelevant for petroleum product pricing purposes Refinery costs would still be important to the firm and its owners)

  The 10% profit margin allotted to the refineries may be designed to cover some asset-related costs Accordingly, the approach may be usable in the short term without this suggested modification However, in the long run closer scrutiny of all costs and asset revaluation should be undertaken

The proposed approach appears to be conceptually sound, to offer significant advantages over the current approach, to provide a convenient mechanism for phasing in the higher prices, and therefore to be suitable for immediate application in calculating tariffs in Romania However, we emphasize that this should be considered very much a **FIRST STEP** in rationalizing petroleum product tariffs Many other issues need to be addressed Whatever computer program is supplied to perform the tariff calculations should be capable of having substantial modifications made to it as more information develops NAMR, USAID, and the World Bank may wish to have Bechtel review these programs when Beicip delivers them, as a final step in the overall review process

In addition to the policy choices implied by accepting the approach, NAMR (or a higher level within the GOR, if authority does not rest with NAMR) must make additional policy choices to define the details of the approach, and has other policy choices that it could make if it chose to

- Because the band within which border prices apply directly can be varied, NAMR must select the band size as a policy choice It also must choose the schedule (if any) for phasing in a large band Although not directly part of this tariff calculation, setting the price for domestic crude is also a key policy choice, which in some circumstances will affect the level of these petroleum product tariffs

- The calculations do provide for a possible phase-in of higher prices, but not for any special social protection features Nevertheless, NAMR could, if it chose to, implement social protection features as a matter of policy

- NAMR must also decide as a matter of policy how to handle the issue of any substantial levels of non-payment

- If it chose to as a matter of policy, NAMR could have the approach modified to produce refinery-specific prices This would put more pressure on individual refineries to improve or shut down than when the prices are uniform nationally

- The calculations are approximate and should be refined

- The refineries could experience a shortfall in revenues for two reasons If there is a large band, in some circumstances revenues will fall short of costs It appears that not all costs were included, because assets were not revalued and not all asset-related costs were included Thus revenues that depend to an extent on the refinery costs presented may not be sufficient to support a financially strong refinery industry The 10% profit margin allotted to the refineries may provide adequate revenue to cover these costs, but not necessarily

- The approach does not address where will funds come from or go to when revenues and expenditures do not balance

- In its role as regulator, NAMR should be responsible for promoting efficient investment and operation of the refineries This means that it should carefully review historical and forecast costs with respect to whether they would be necessary for optimally run refineries NAMR should also try to design tariff incentives to achieve this objective

Section V

Pricing System For Transport And Distribution Of Petroleum Products

V 1 Calculating The Tariffs

The proposed approach estimates all of the costs of the various components of transport and distribution It is strictly a cost-based approach, incorporating no elements of market prices A similar process, resulting in different prices, is repeated for each of three products gasoline, diesel oil, and fuel oil The report indicates that each of those represents a "class of product", but does not state which class each of the other products would fall into, or whether any modifications would be necessary to determine individual prices for those other products

The cost of transport and distribution is presented as the sum of the refinery supply cost differential, delivery costs (including transport costs, depot operating costs, cost of losses, and final haulage costs), mandatory storage costs, and the retail (or wholesale) margin Adding the ex-refinery price to the sum of those components would give the final retail price, exclusive of VAT (value-added tax) and similar charges The proposed approach takes into account forecast demand by district and estimates of transport and distribution-related costs between refineries and the districts It is therefore suitable for calculating district specific prices

By excluding them from the cost calculation, any or all individual cost components could be excluded from the final cost For example, if final haulage were deemed sufficiently competitive, a free market in that service could be allowed Deregulating different services in the cost chain over time would permit a transition from fully regulated and controlled costs to free market prices

Each cost component is defined in a general enough manner that all contributing sub-components (salaries, materials, losses, investment-related costs, etc) could be included This implies the need for something similar to a tariff calculation for each cost component However, no such calculations were done, the actual values used apparently were based on western European experience

Each component in the transport and distribution cost chain could be district and/or product source refinery specific, although in the examples there was limited variation This would enable the process to provide more precision in the district-specific final cost of transport and distribution, and ultimately in the final product cost to the customer

The calculated prices for transport and distribution vary by district and product, but averaged over the country they range from 2 5 times current prices for gasoline to 4 times current prices for fuel oil

V 2 Evaluation

The proposed approach would provide a framework for establishing a tariff system based on cost of service principles It has the following positive qualities

- Full cost-of-service tariffs and charges tied to costs to the extent practical are a step in the direction of rationalizing the petroleum sector in Romania

- All of the cost components are potentially competitive market services, with the possible exception of the product pipeline costs Therefore, for the long term competitive market prices are appropriate In the short term, cost-of-service based tariffs may be appropriate, to protect against abuse of power if a local monopoly exists The proposed approach provides a convenient vehicle for a transition from cost-of-service tariffs to competitive markets as they develop for one or more of the cost components

- It would eliminate some existing cross subsidies and could eliminate most of the direct and indirect subsidies created by the current tariff system, producing more appropriate price signals for users

- If NAMR accepts the tariff calculations generally as they have been proposed, in effect it has made a policy choice to implement cost-based tariffs, eliminate most subsidies and cross subsidies in this area, and substantially increase prices to all users

- It provides a framework for calculating district-specific prices which could be extended to provide even more price differentiation, such as separate costs to and prices from individual service stations, if NAMR chose to take that approach This would mean that prices to consumers would differ among the outlets

However, the approach has a number of serious flaws which argue against accepting it for implementation at this time

- The proposed approach will be applied to Romania, but virtually all of the components in the buildup of transport and distribution costs are based on experience outside Romania The lack of Romanian-specific information raises the question whether the report's model of transport and distribution reflects the Romanian situation with acceptable accuracy Even if it does, there is another question regarding whether the model fits properly with available data that will be necessary to calculate any actual tariffs

- The proposed approach provides no guidance at all regarding product pipeline tariffs It provides a place where the cost of pipeline product transport can be used, but ignores pipeline transport in its examples, assuming that all transport will be by truck or rail Since the report's own cost figures for transport by pipeline show it to be by far the least costly mode, one must wonder what complexities will result when pipeline transport is incorporated

- To be properly implemented, it would require what might amount to a separate tariff calculation for each cost component, before the calculation of this tariff itself Those calculations would need to address basic key issues such as assuring the financial strength of the affected organizations, promoting their efficient operation, asset revaluation and depreciation, transition to higher tariffs, social protection, and non-payment

- It calculates different prices for gasoline, diesel oil, and fuel oil, each being representative of a "class of product", but does not state which class each of the other products would fall into, or whether any modifications would be necessary to determine individual prices for those other products

- It does not address the question of eventually providing for free market treatment of some or all of the cost components

- The bulk of the effort was devoted to calculations that produce relatively small price differences among districts It is not clear that NAMR has made a policy decision to implement non-uniform national prices However if it has it would be logical to account for other, more important cost differences, such as retail margins

- Beicip includes as a cost something it calls "refinery supply cost differential" to account for differences among refineries in the cost of transporting their crude supply to them The treatment of refinery supply cost differential is unclear at best and possibly incorrect Only crude oil transport costs are part of the calculation of refinery supply cost differential, not crude oil prices themselves If ex-refinery prices are to be uniform nationally, it is unclear what is the relevance of the cost of the transport of crude to the refinery If they are not to be uniform nationally, it is unclear why relatively small differences in the cost of crude transport are included but potentially greater differences in the cost of the crude itself and the cost of refining are not included More fundamentally, the cost of crude transport to the refinery is (or should be) included in the calculation of the ex-refinery price It would appear to be double-counting to include it again in the cost of transport and distribution

- The approach does not provide for distinguishing among transport and distribution customers for the same product For example, should purchasers of large lots pay the same unit prices as purchasers of small lots? Should long-term purchasers pay the same as infrequent purchasers?

There is no doubt that the existing system produces transport and distribution prices that are too low for a healthy industry The shortfalls in revenues have negative consequences poor service, inadequate investment, environmental concerns, costs imposed on users due to lack of product and service availability, and so on The higher tariffs that Beicip's approach produces cannot be perfectly accurate, but very well may be a substantial net improvement

Accordingly, although we advise against implementation in the short term, we strongly recommend that the approach be revised to address the key flaws Some of these flaws could be addressed in the short term through modification of the work to date Most importantly, the approach should be tailored to the Romanian situation, rather than based on western European experience Key factors include

- Identify differences, if any, between how the industry is organized in Romania and how Beicip assumed it was organized for the purposes of its calculations Based on those differences, modify the approach accordingly

- Determine what data is or could reasonably be made available regarding costs Set up the calculation procedures based on data in that form This may in effect require what amounts to a separate tariff calculation for each cost component, including all the key elements of such a calculation

- Determine pricing policy as it relates to transport and distribution and incorporate all appropriate elements that contribute to the degree of price differentiation implied by that policy

Section VI

Chapters 5 And 6 And The Annexes

Chapters 5 and 6 and the annexes discuss issues that are not fundamental to the tariff calculations Chapters 5 and 6 are new, but the annexes are virtually identical to those provided with the earlier draft report We note here a few key points

- The tradeoff calculations noted in Chapter 5 might be useful in determining incentives or tax policies that would encourage preferential use of certain fuels in certain applications

- The discussion of taxes in Chapter 6 indicates that apparent tax rates appear to be much lower in Romania than in other European countries However, the current pricing system produces distortions that are in effect hidden taxes After tariffs have been rationalized, the GOR may wish to re-evaluate its taxing policies with respect to petroleum products With rationalized prices, it should be easier and more direct to design taxes that achieve the GOR's objectives for generating revenues and providing incentives or disincentives for certain activities

- The data in Annex 1 demonstrates that margins for transport and distribution in Romania are much lower than such margins in western Europe, by implication contributing to the weak state of that function in Romania

Section VII

Institutional Development

Given the importance of the oil industry and the certainty that price increases will be required, developing the regulatory institutions to produce the tariffs is sure to be challenging The report is silent regarding the institutional development needed to support the process of tariff development

Researching the state of existing law and regulation in this area in Romania was beyond the scope of our review However, the general idea is that a broad range of laws, regulations, and institutional development is necessary to create an environment in which the regulated entities are treated fairly, the interests of consumers are considered and weighed equitably against those of the owners, and foreign investment comes in Part of this is the laws that set up and govern the operation of the regulator Other laws would involve general economic conditions such as banking, ownership rights, ability to repatriate profits, and so on In the long run, independent regulation is generally desirable, and NAMR as presently set up is not an independent regulator The regulatory process involves much more than just the regulations For example, the regulatory body and the regulated firms need people with expertise in a variety of areas to make informed judgments regarding the tariff calculations and other rules and procedures The process needs to provide an opportunity for all interested parties to put forward their views And so on Vaguest but perhaps most important, a mind-set needs to develop in the people involved regarding how the process should work and the rights and responsibilities of those involved in it It is clear that creating such an environment cannot be accomplished overnight, or without cost

We emphasize that having the capability to calculate tariffs mechanically from given inputs is only part of an effective regulatory process Steps taken thus far, including designating regulatory authority to NAMR, developing draft regulations, and arranging to acquire tariff calculation capability from Beicip represent an excellent start The GOR, NAMR, and the other participants in the regulatory process should continue to move forward to improve the process on several fronts by addressing the following issues

- Further developing the legal framework governing the regulatory process and other issues important to interested parties, including foreign investors
- Clarifying the policy framework within which the regulatory body makes its decisions
- Completing the establishment of the regulatory body, its role, and its initial regulations
- Adopting a transparent process for setting the tariffs
- Adopting transparent processes with reporting (regulated) firms for developing and implementing the information and analysis required to set tariffs

- Developing expertise and organizational groups within the regulator and within the regulated firms to support tariff processes
- Establishing the relationship between the regulator and the regulated firms
- Providing for public participation in the tariff process
- Providing for performance incentives to encourage regulated firms to achieve cost and performance objectives