IRANIAN ASSOCIATION FOR ENERGY ECONOMICS

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Energy Economics

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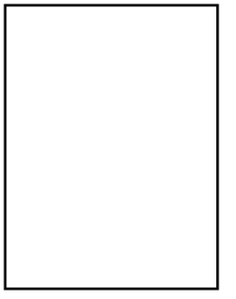

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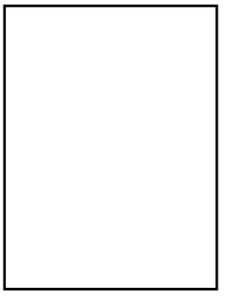

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Torkan added: "The said MDP is to be made available to an engineering consultant for carrying out the basic engineering design of the plan".

He stated: "The project's basic engineering design stage, which will take 8 months to complete, will be followed by an EPC tender for it".

On the other hand, informed sources believe that POGC is preparing the workscope of the project's basic engineering design and the required documents for a subsequent tender. These will be ready by late Jan 2006.

According to Torkan the Australian BHP had shown interest in investing in the project.

Eskandar Bavarian, NIOC deputy managing director for planning had put the condensate content of North Pars gas field at 4-5 thousand barrels per each billion cubic feet of gas to be produced by the field (as compared to 40 thousand barrels in the South Pars gas field), and said: "Since the repayment of the costs of development of both North and South Pars gas fields are to be secured by selling the condensates of the fields, the low volume of condensate of North Pars will not generate adequate incentive for contractors. That means some other way has to be found for development of North Pars gas field".

Buy-back contract being modified: NIOC MD

Mehdi Mirmoezzie, the managing director of NIOC, told ISNA: "The draft of the modified version of buy-back contracts has been prepared and the NIOC board has even debated the subject several times but as yet no firm decision has been made on it. The issue needs to be discussed further".

Kamal Daneshyar, chairman of Energy Commission of Majlis had earlier said that there were some one hundred faults in buy-back deals and the "Committee for Revision of Iran's Petroleum Industry Deals" had submitted to the country's President a new model of the contract for oil/ gas upstream projects.

Regarding the kind of buy-back contract to be used for the development of Yadavaran oil field Mirmoezzie said: "The issue of modifying the buy-back contract for this field is taken seriously and I believe we can finalize it very quickly. As it is the draft has to be fully prepared before the end January 2006".

Hadi Nejadhosseinian, Iran's deputy oil minister for int'l affairs had earlier revealed that certain negotiations were held with the Chinese side about the modification in buy-back contract text and the production volume of the field.

Latest with the drilling of 9 Iran's central oil fields

The latest with the drilling operation for 9 central oil fields of Iran, the development of which is underway by OEID, is as follows:

1. For Khesht oil field

NDC was declared the winner of the tender for drilling three wells in the field in March 2005; however, no executive work has begun yet and NDC has not secured the required drilling rig of the plan. Moreover, the relevant L/C of the project has not been established either.

2. For Dehloran field

The project, inclusive of changing two vertical wells into horizontal, converting a well into a water injection type, stimulation of a well and drilling a horizontal well, is currently utilizing rig "Fath 80" of NIDC.

3. For Sarvestan and Sa'adat Abad fields

The project, which includes repairing two wells, abandoning of another in Sarvestan field and converting a well into a gas injection type, is underway by NIDC. The MDP based drilling for the fields depends on the outcome of the said drilling jobs. The MDP of the project has foreseen eight wells in these two fields.

4. For Paydar and West Paydar

Based on the MDP of this project, two wells have to be repaired and two new wells drilled in each field. NIDC is busy drilling the second well in Paydar field, using rig "Fath 52". In addition, Oriental Kish is carrying out drilling operation in West Paydar started in April 2005.

5. For Sarkan and Maleh Kouh fields

The project, inclusive of drilling two wells in each field, has been completed by NIDC.

6. For Cheshmeh Khosh field

The project is inclusive of drilling of six new horizontal wells and two injection ones. NIDC has so far completed two horizontal wells. The tender for drilling the remaining four horizontal wells and the two injection ones, which was to be held in Oct 2005, has not been issued yet.

Drilling for Homa, Shanul & Varavi gas fields to end by March 06

The drilling works for the development of Iran's Homa, Shanul and Varavi gas fields are nearing conclusion. So far, Iran's NIDC and Chinese GWD have managed to drill 24 of the planned 27 wells.

The development initiative entails drilling of 14 wells for Homa, 4 well for Shanul and 5 wells for Varavi. The number of drilled wells is 13 for Homa, 3 for Shanul

Torkan added: "The said MDP is to be made available to an engineering consultant for carrying out the basic engineering design of the plan".

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As for the surface facilities of the initiative such as a gas-separating unit, manifolds and the pipelines, given that some needed goods have not been made available; the surface facilities will most likely be ready by mid 2006.

Iran's Satrap-e-Jonoub is the contractor for constructing the gas-separating unit for the three fields. Arya Petro Gas is building the manifold for Shanul field. Iran's Ramshir, Maroun Mechanic and Tehran Persia are working on the pipeline sector of the project.

The first phase of Parsian II Gas Refinery, which is to treat the gas yields of the three fields, was supposed to have come on stream in October this year but was later deferred to December. No definite date on its completion is available.

ONGC likely to start Farsi Block drilling in Feb

Exploration of Farsi block, which has been almost suspended for around nine months because the required drilling rig was not made available to the project, is now set to be resumed once a drilling rig arrives at the site, around late Jan 2006.

Since the Indian ONGC, as the contractor of the project, failed to secure an offshore rig for the plan, it has decided to use 'Kedanat', a rig of its own for the job.

This rig has been working in another Indian project and was to arrive in the region by Oct 2005; however, this has been delayed, and based on the latest information; "Kedanat" is now scheduled to arrive at the site on Jan 19th 2006.

Mehr block drilling operations suspended

Austria's OMV has suspended drilling at the Mehr block for six months after becoming the first foreign explorer to file a declaration of commerciality for a new oilfield in Iran earlier this year.

Sources said the suspension is at the initiative of the National Iranian Oil Company (NIOC), and appears to be based at least partly on disagreement on how to proceed with further drilling and other work. Reimbursement for drilling costs is another main issue.

The suspension is intended to allow technical problems with the drilling programme to be sorted out and the two sides to carry out potentially wide-ranging negotiations over reimbursement terms, budgets, commerciality and contract extension.

OMV country manager Klaus Angerer confirmed that drilling operations have been suspended, but refused to elaborate further. He would not comment on other issues.

The suspension "seems to be for technical reasons, but there are bureaucratic and budgetary issues as well and there may be more to this than meets the eye", said a source.

OMV still regards Mehr, where proven reserves are thought to be about 400 million barrels, as promising. But the suspension will mean a delay of at least nine to 10 months when and if the two sides agree a compromise.

A rig belonging to Great Wall Drilling of China is at the site of East Moshtaq-1, the ill-fated second of two exploration wells, but has been demobilised and will be moved to another project or taken out of Iran, said the source. OMV, which is at least temporarily downsizing its activities in Iran, filed for a declaration of commerciality in July, months after completing a first well, which tested at just over 1000 barrels per day of 22-degree API crude. NIOC may make an announcement on the declaration before the end of 2005.

The second exploration well encountered technical problems, including an unexplained casing collapse. Drilling at East Moshtaq-1 had been problematic throughout, with the drillers reaching only 3000 instead of the target depth of 4650 metres in mid-year. There were apparently other casing collapses.

OMV halted drilling in early October and asked NIOC for more time to carry out investigations over the casing collapses.

NIOC in turn asked OMV to continue with exploration but to cancel an appraisal well originally scheduled to be spudded late this year. The next drilling job expected by NIOC was apparently for a third unplanned exploration well, but the state company was said to be unable to acquire and provide the land for the rig site at the 2500 square kilometre block on the border with Iraq.

Details of the other items on the negotiating agenda are not known, but are said to cover budgets and reimbursement.

A source said that NIOC blames the casing collapses on OMV and has rejected a reimbursement claim.

OMV's contract, signed in 2001, was on the basis of the traditional buy-back formula, which unlike the modified formula only guarantees a minimum 30% stake for the explorer in the development phase. The original contract was extended by one year to April 2006 and another one-year extension will be part of the talks in the coming months.

OMV, with 34%, heads a consortium also comprising Repsol YPF of Spain and Sipetrol of Chile, each on 33%.

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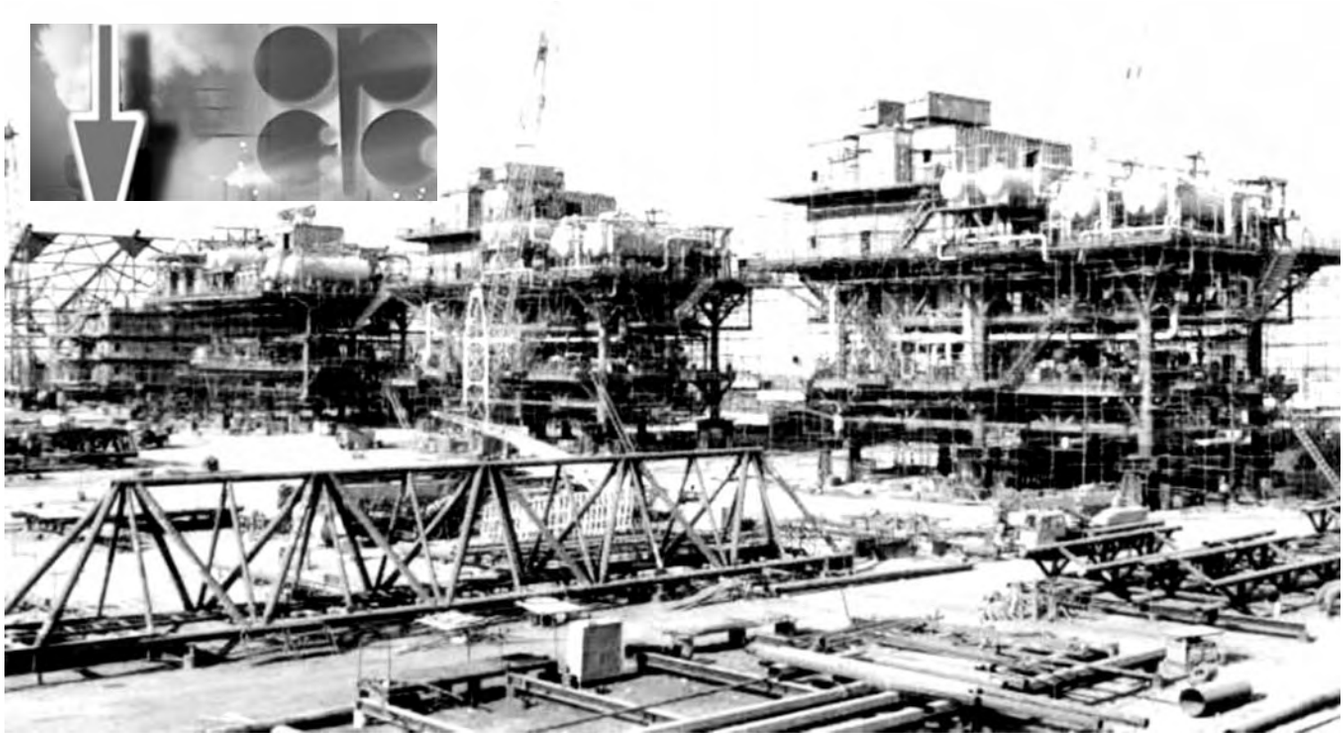
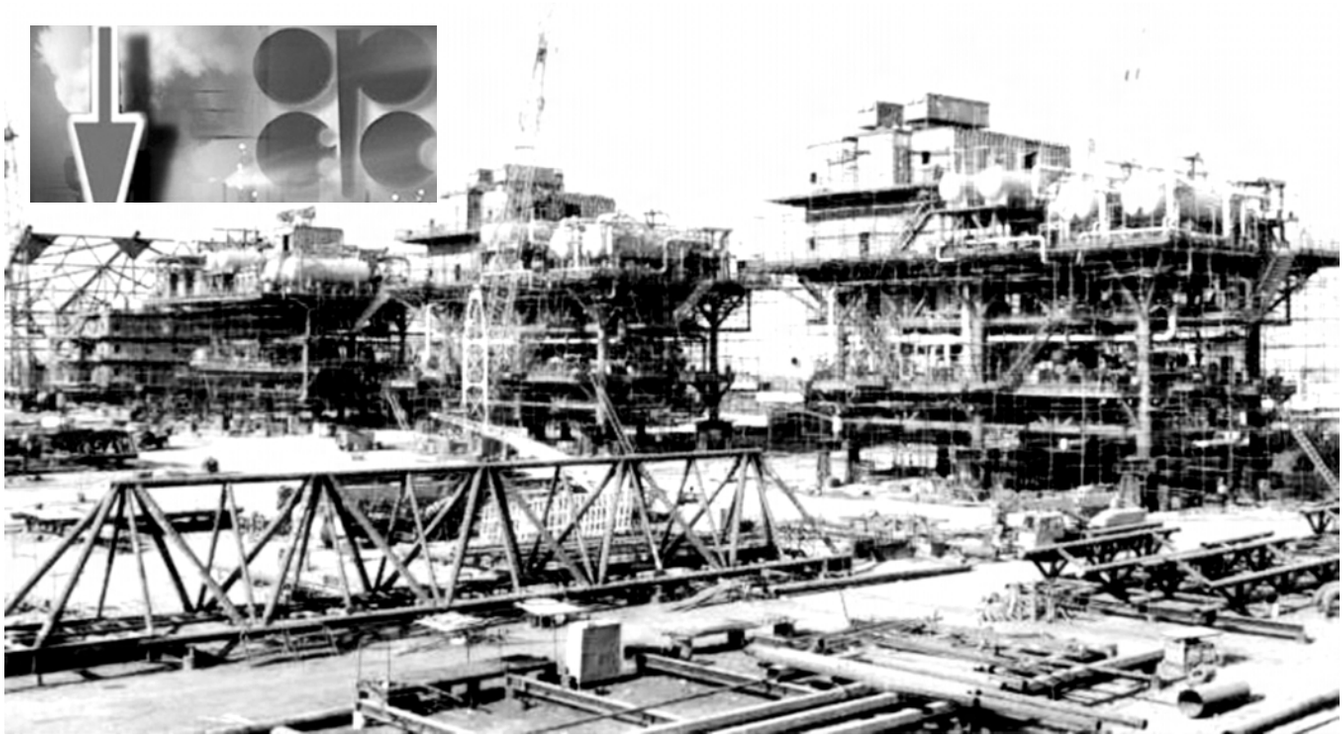


Iran's Oil Minister: Low Oil Prices Era is Over

Iran's Minister of petroleum Seyed Kazem Vaziri Hamaneh said high oil prices in recent years are mainly caused by lack of sufficient oil spare capacity and production, and also refining capacity shot falls.

Addressing the 10th Annual conference of Iran's Institute for International Energy Studies (IIES) held from December 4-5, 2005, the then acting minister of petroleum called on major consuming countries to make sizable investments in oil and gas production in producing countries.

The following is his full address at the opening



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The following is his full address at the opening

session of the conference:

The annual conferences which are organized by the Institute for International Energy Studies provide us an ample opportunity to open up various topics relating to economics of energy on which the government officials, academia, and executives can have deliberations and exchange their views. Nonetheless, the meeting of officials with the distinguished delegations provides further opportunity to exchange views on energy-related matters. Thus, I hope this conference would achieve significant results which could meet the expectation of all participants.

Recent developments have led to new conditions in global oil markets which are virtually incomparable with those of oil markets in last decades. Certainly, the status quo will not last too long but it is possible for us to plan for what is expected and materialize goals through collaboration. In this way, existing problems of oil markets caused by lack of cooperation and coordination among oil market major players will be avoided. Restoration of previous market conditions is quite a fallacy since current conditions are the result of a number of factors.

Current conditions of global oil market can be portrayed as follows:

1. Oil prices have doubled in last three years. However, taking the purchasing power into consideration, oil prices (real prices) stand at lower levels compared to early 1970's and late 1980's. But it is notable that previous low oil prices hamstrung the financial potency of oil exporting countries and deprived them of effective investments in their oil industry. It is self evident that lack of timely investments in the upstream sector will lead to disruptions in the supply side. Unwillingness to invest in oil industry is a result of an unsound attitude towards oil prices since weak oil prices enfeeble financial resources of oil exporting countries on the one hand and discourage international investors to invest in the upstream sector on the other hand. Therefore although low oil prices apparently seem to work to the consumers' short-term advantage, in the long-run, they are detrimental to consumers' interests.

High oil prices mainly due to existing limits in upstream and downstream sectors are reminiscent of the fact that insufficient and delayed investments would give rise to damage in these sectors although with some time lag and the compensation for such losses will not be quick.

Existing uncertainties regarding development of oil and gas production capacity have led to worries among consuming countries. Oil prices hovering at 70 dollars per barrel and natural gas prices reaching 18 dollars per BTU are merely some of the aftermaths of such prolonged worries at present and in coming years.

2. Despite the statements by some pro-consumer organizations in the backdrop of recent high oil prices, statistics show that global economy never experienced a recession in recent years. Last year. The annual growth rate of global demand for oil hit a 20 year record high of more than 3 million barrels per day. Economic growth rate of the world this year was at an acceptable rate despite the rapid rise of oil prices and natural disasters such as the hurricanes hitting the United States. The Global economy has so far weathered higher oil prices which are indicative of smaller impact of energy prices, especially oil and gas on global economic growth. It should be added that increased oil products taxes exert double pressure on end users. Therefore, it would be wise if governments of major energy consuming countries pursuing plans to cut energy tariffs eliminate or at least cut oil products taxes. It is not fair that consuming countries' tax revenues accrued from oil products taxes should be higher than oil revenues of oil exporting countries. International observers believe that low oil prices era is over and that, under current conditions, global recession due to high oil prices is improbable. Projections also indicate that, next year, the world's economic growth rate will be some 4% and the growth rate of global demand for oil will be less than 2 million barrels per day. Although the current impact of energy prices on global economic growth is less than previous years, undoubtedly uninterrupted flow of energy would play a crucial part in materializing a sustainable economic growth in the world. Therefore, oil production capacity should increase considerably to ensure sustainable economic growth of the world.

3. In recent years, not only global demand for oil was growing but also the supply hit the highest level. OPEC production in recent months exceeded 30 million barrels per day which is the organization's highest production rate in last 25 years. Regrettably, despite the transparency and diligence shown by OPEC to maintain stability in the market, some consuming countries, ignoring their own shortcomings, attribute all blames to this organization. Although such an organization which comprises states with different policies is not flawless; however a review of OPEC's performance shows that the organization

session of the conference:

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has satisfactorily passed previous tests.

Major oil producing countries, particularly OPEC member states of the Persian Gulf are struggling with two main problems: Firstly, natural decline of oil production, secondly creating a new capacity to meet the prospective global demand. Solving these two problems is beyond the capabilities of oil producing countries alone and requires multilateral cooperation between consuming and producing countries.

Such objectives as transfer of technology, investment, and above all security and stability conducive to investments will not be materialized unless major consuming countries take steps forward to cooperate.

Encouraging investors, especially international companies to invest in oil-rich regions is one of the approaches to overcome future energy crises.

However major consuming countries in need of energy imports cause insecurity through uncalled for interference in main oil-rich regions such as the Persian Gulf on one hand and prevent international companies from investing by putting sanctions against some major producing countries on the other. Such hasty measures will be to the detriment of consuming countries interests rather than to those of producing states. Despite the fact that the United States, the biggest energy consuming and importing country, is in desperate need of security of energy supply, the US government directly or indirectly has applied sanctions against some major energy supplying countries in the last two decades. It is worth mentioning that, under current conditions, the success rate of such unilateral sanctions is decreasing and they prove to be costly to enforce.

Such embargoes even in case of success are to the consumers' disadvantage since insufficient production capacity caused by sanctions will lead to disruptions in supply and rising prices. Moreover, rivalry between suppliers will vanish when they learn that they are threatened in the same way.

4. Decline of OPEC spare production capacity is indicative of the supply side incompetence to meet demand. Spare oil production capacity which was the result of weak demand in the past has been exhausted steadily in recent years due to growing demand. Oil market players do not consider any spare production capacity for OPEC member states since a rapid rise of demand in the context of steady growth of supply will lead to little spare production capacity which will not be able to meet demand in case of emerging any unexpected problems. Oil market experts believe that a decline in spare production capacity has played a decisive role in increasing oil prices since it has put the security of supply in jeopardy. Current measures to increase oil production capacity are not sufficient to compensate for the natural decline and to meet the prospective demand and at the same time to provide producing countries with a reliable spare production capacity. Lack of agreements between oil consuming and producing countries bars producers from creating a spare production capacity aiming to maintain the security of supply to consumers.

5. Restrictions in downstream sector seem to be more critical than those in upstream sector. Oil market players and experts unanimously admit that refining capacity shortfalls in the world have played a pivotal part in increasing oil prices.

In recent months, although oil supply followed an ascending trend, oil prices have been still stuck to high levels. This revealed that recent high oil prices are not accounted for by oil supply shortages rather by insufficient refining capacity especially in major consuming countries which leaves no spare refining capacity in the time of unexpected events. The question of why major oil consuming countries and international oil companies with a strong financial and technological background have not had any tendency to build refineries remains to be answered. Today comprehensive plans to develop refining capacity are announced in both producing and consuming countries hoping to eliminate current shortages of refining capacity for several years. But if the refining capacity is not developed in tandem with the growth rate of global demand, the world will face a severer shortage of refining capacity which will affect global oil markets more deeply.

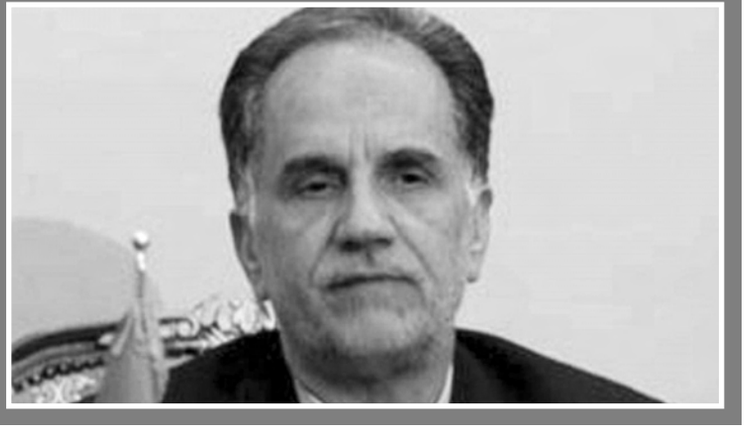
It is worth mentioning that the quality of oil supplied

has satisfactorily passed previous tests.

Major oil producing countries, particularly OPEC member states of the Persian Gulf are struggling with two main problems: Firstly, natural decline of oil production, secondly creating a new capacity to meet the prospective global demand. Solving these two problems is beyond the capabilities of oil producing countries alone and requires multilateral cooperation between consuming and producing countries.

Such objectives as transfer of technology, investment, and above all security and stability conducive to investments will not be materialized unless major consuming countries take steps forward to cooperate.

Encouraging investors, especially international companies to invest in oil-rich regions is one of the approaches to overcome future energy crises.



However major consuming countries in need of energy imports cause insecurity through uncalled for interference in main oil-rich regions such as the Persian Gulf on one hand and prevent international companies from investing by putting sanctions against some major producing countries on the other. Such hasty measures will be to the detriment of consuming countries interests rather than to those of producing states. Despite the fact that the United States, the biggest energy consuming and importing country, is in desperate need of security of energy supply, the US government directly or indirectly has applied sanctions against some major energy supplying countries in the last two decades. It is worth mentioning that, under current conditions, the success rate of such unilateral sanctions is decreasing and they prove to be costly to enforce.

Such embargoes even in case of success are to the consumers' disadvantage since insufficient production capacity caused by sanctions will lead to disruptions in supply and rising prices. Moreover, rivalry between suppliers will vanish when they learn that they are threatened in the same way.

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It is worth mentioning that the quality of oil supplied

by the upstream sector should be also considered because the new capacity of the refineries may not be able to take throughputs of various specifications.

6. Rising natural gas prices in recent years had revealed the fact that energy consumers are threatened not only by shortages of oil flows but also by the shortfalls in natural gas supply which are able to turn to serious threats in coming years. The golden era of natural gas as the clean, inexpensive, environment friendly fuel of choice may come to its end since major energy consuming countries are increasingly willing to establish nuclear power plants. In this case, nuclear power will soon overtake natural gas in these countries. Now another question arises here that why highly industrialized countries do not consider the same necessity for developing countries to prioritize their nuclear programs? With existing restrictions in oil and gas upstream and downstream sectors which seem to become more acute in future, utilizing nuclear energy in developing countries will lead to creation of a new spare production capacity which is considerable and helpful to alleviate the severe tightness of oil and gas markets.

7. Oil producers and consumers' joint meetings in the past decades which were not very fruitful, have in recent months been pursued more seriously and diligently in different forms which have given rise to more improved conditions for cooperation between producers and consumers. It seems that oil market problems are able to be solved through sincere cooperation. Oil consuming countries will not succeed to solve market problems by blaming oil producing countries and OPEC in particular because this is not reasonable to expect for this organization to solve problems single-handedly.

The government of the Islamic Republic of Iran pursues fairness in its dealings with domestic and international issues. Therefore, the government considers its duty to play an active role in interactions with oil and gas consumers where the theme of equity predominates ties between the producers and consumers.

The Islamic republic of Iran with more than 135 billion barrels of recoverable oil reserves and more than 26 TCF recoverable natural gas reserves has comprehensive plans to develop its oil and gas upstream and downstream capacity. Oil and gas development plans which are in line with the goals defined by the country's 20-year outlook and in the framework of the Live-year economic, social, and cultural development plan play a key role in materializing the country's progress and development.

Iran's Ministry of Petroleum is willing to cooperate with foreign partners in oil and gas upstream and downstream sectors in line with the aforementioned objectives.

Despite some obstacles imposed by US officials, Iran's Ministry of Petroleum, relying on its capacity and expertise and benefiting from regional and international cooperation, attempts to reach its appropriate position in global energy markets. Iran is planning to become:

A) the biggest producer of petrochemicals in the region

B) the second biggest natural gas producer supplying 10% of global demand for natural gas

In view of long-term outlook of the country's oil and gas industry, the following goals should be achieved as

first steps:

1. Enhancing oil production capacity to 5.23 million bid by the end of the 4th development plan;
2. Producing 700 mmcm/d of natural gas the end of the 4th development plan.
3. Increasing sales of petrochemicals to 15 billion dollars per year by the end of the 4th development plan;
4. Focusing on energy intensive industries aiming at gaining more value added;
5. Attracting capital to provide financial resources of around 70 billion US Dollars needed to develop the country's oil industry by the end of the 4th development plan: and solidifying the market while enhancing global interactions;
6. Expanding Iran's refining capacity by one million barrels per day focusing on refining condensates and ultra-heavy crude oil and optimizing existing plants.

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"WTO as a Forum to guarantee Oil Supply"

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Introduction

I would like to start this paper by quoting what Dr. Rilwana Lukman, Ex-OPEC Secretary General, said in the forward of the OPEC Annual Report 1999, "It has become almost a cliché to describe the 20 century" as the age of oil, and not without reason, for it was during the past hundred years that inventions such as the car, the airplane and, perhaps most important of all, the internal combustion engine, gave rise to the era of mass transportation and the consequent enormous demand for oil to fuel the world economy(1)". What Dr. Lukman said goes well with the opinion which considers oil as the livelihood of industrial civilization, both as a fuel and as chemical feedstock. Nearly every economic activity in industrial nations use oil directly and indirectly. The question that imposes itself here, however, is, will oil continue the same level of importance in the 21st century? and for how long?

In fact, nobody knows the answer. Politicians and experts differ on the matter.

Their difference, however, can be categorized into two main groups or schools which I have called: the "physical exhaustion school (2)", and the "economic exhaustion school 2)". The former argues that physical exhaustion of oil will precede economic exhaustion; while the later, argues that economic exhaustion will precede the physical one i.e. oil, as it happened to coal before, will be replaced by other sources of energy; and thus its importance diminishes although plenty of it will be still underground. Both schools have their arguments and evidence. Surely, their concerns is the long term trends rather than short terms fluctuations, since the latter are affected by temporary events which are mainly political and/or of speculative nature.

Since the late seventies and the eighties of the last century, when the first and the second international oil price adjustments took place, oil-consuming countries have been demanding oil exporting countries members of OPEC to guarantee oil supply. OPEC from its side, has been offering to enter into a dialogue with oil-consuming countries on the subject, because any commitments to guarantee supply cannot be achieved without cost, which can be very high. In order to justify such cost, oil producing-countries require demand guarantee. OPEC, however, has not been able to achieve any success to make oil-consuming countries accept to enter into a serious dialogue in this respect. Developments in the world trading system, since the conclusion of the Uruguay Round in 1994 and the establishment of the WTO in 1995, have brought challenges and opportunities to the future of trade in this important commodity.

Because trade in crude oil did not receive explicit mentioning in the WTO Agreement, or appeared as a separate agreement in the Agreement' s annex 1 A, many, including some oil-exporting countries, believed that crude oil was exempted from the WTO Agreement. This, of course was not true. Though oil was not explicitly mentioned, it was not explicitly exempted either, as it was the case with textile and agriculture before the Uruguay Round.

Since the doubt on the inclusion of oil in the WTO Agreement has definitely been cleared by the WTO itself and by other relevant organizations like UNCTAD and the European Union, as well as accepted by OPEC, a close examination of the WTO Agreement and its annexes, has shown that many of their articles are relevant to trade in oil and can, negatively or positively, affect the future of this important commodity(3).

Positively or negatively, will depend on the attitude of oil- exporting countries, members in the WTO, and their success in using the WTO as a forum to raise their concern about many of the oil-importing countries' policies and attitudes, which have not been in favor of oil, and are expected to have more negative effect on it in the future.

One of the very relevant issues that can be brought into the WTO forum is the dialogue between oil- consuming countries and oil-producing countries in order to settle

(1) OPEC Annual Report 1999 p. 5

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the issue of security of supply and security of demand. Due to the nature of WTO as a rule-based organization which includes in its membership both oil-consuming and oil producing countries, especially when the accession of Iraq and Saudi Arabia take place, it can be a better forum to bring concerned parties to discuss mutual issues than OPEC, which is still not looked at positively by many oil-consuming countries, or the International Energy Agency IEA. Neither OPEC nor IEA are rule-based organizations; thus a complicated issue like this is better discussed under the WTO agreement. This is not the only reason why oil-consuming countries have not yet entered into an official dialogue with oil-producing countries. The main two reasons, in my opinion, are: first, oil consumers do not want to commit themselves to the issue of demand security because they do not know, as nobody else knows, the future demand for oil since no definite answer is available to future demand or future supply of oil. Second, any commitments by oil-consuming countries to security of demand will impose restrictions on their domestic policies which they are unwilling to undertake as long as they have the option to refuse them.

The oil-exporting countries, which have been requested to guarantee supply of oil, have very strong reason to request demand security, not only as a pre-condition to achieve supply security, but also to protect their interest as many of them are still heavily dependent on oil as the main source of income, while it is subject to economic and/or physical depletion there is much to threaten the interest of oil-exporting countries under the new multilateral trading system.

In addition to the introduction, this paper consists of three sections:

Section I — Future of Oil in the World Economy

Section II — Projected demand for and supply of oil.

Section III — WTO as a Forum to guarantee oil Supply

Section I — Future of oil in the World Economy

When we ask what is the future of oil in the world economy, we mean will oil continue its importance as a strategic commodity; or alternatives to oil, as fuel and as inputs into industry, are underway, and rather soon? What makes the latter possible: Exhaustion of oil resources that forces the world to turn into other alternatives? or technological developments that make new replacements to oil cheaper, easier to obtain and more friendly to the environment?

Experts, politicians and officials differ greatly on the subject. The majority, however, argue, that the world oil supply has already reached its peak and is on the decline; the proven revenues available is only enough for a maximum of twenty years. Another group argues, that there is no evidence of future shortage in oil supply but to the contrary, oil supply will be abundant and nobody will need it because better alternatives will be available at more advantageous conditions.

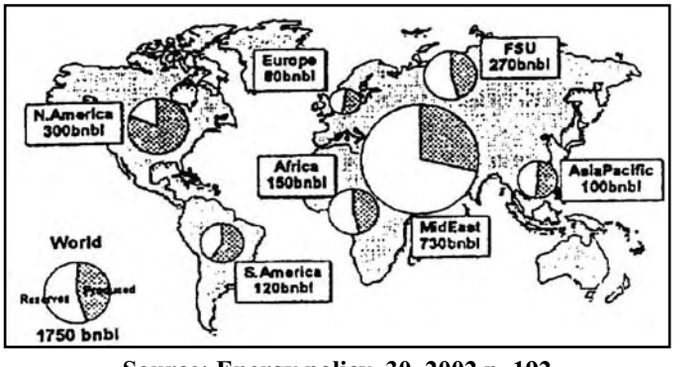
These two groups I have called: the "physical exhaustion school," and the "economic exhaustion school". Under the former, oil will be exhausted physically while its economic value is still very high; under the latter oil will be exhausted economically, while there is abundant of it underground. Outside these two schools are those who are either not sure and believe that either situation can be true or hold a more moderate view regarding the future demand for and the future supply of oil.

Both schools base their arguments on their assessments of the world situation of demand for, and supply of oil. The purpose of both schools, however, is not to present an academic exercise but rather to warn against certain policies and/or require new ones. The issue of supply security and demand security is strongly based on the argument of these two schools.

The Physical Exhaustion School

Followers of this school argue that a realistic assessment of the current sources of oil supply makes it difficult to avoid the conclusion that the world will face conventional oil limits within the next few years. More optimistic assessments would delay the global peak by no more than 10-15 years. Also, if Middle East production were to be increased radically, it would simply have the effect of making the global peak much higher and sooner, and lead to a steeper subsequent decline[4]'

A country's or a region's oil production peak occurs when, about half the recoverable resources has been consumed as is shown in the figure below.



Source: Energy policy, 30, 2002 p. 192

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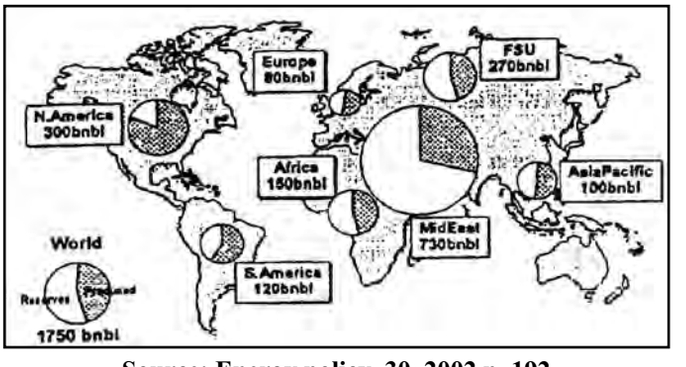

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recoverable resources base;

•This is essentially true for all regions of the world except the Middle East, giving the latter potential control of the marginal barrel.

•North America has burnt about three-quarters of its recoverable conventional oil resources.

The result of a model built in this respect indicates that once past the peak, the global production of conventional oil will decline at about 2 mbd each year. Also, if the world demand growth trend of the last few years is to be satisfied, an annual increase in the supply of petroleum liquids of roughly the same magnitude is required. Accordingly, the combined output from enhanced recovery and the non-conventional hydrocarbons must increase by something like 4mbd each year. This size of increase looks unlikely [5].

For enhanced recovery, various studies indicate that the amount of extra oil that can be made available within the time scale that affect, global peaking will be rather small [6].

The school attributes why these facts have not been better known earlier to a number of factors: First, there is a number of misconceptions that still dominate much of the thinking about the hydrocarbon supply. One of the misconceptions is the confusion between reserves and the total recoverable. Reserves are the amounts of oil expected to be produced from known fields, while total recoverable includes oil recoverable in fields that have not yet been discovered.

Second, is the confusion between proved reserves and (proved + probable) reserves. The latter is of the order of 50% larger than the published proved reserves. Proved reserves should consist of real oil being discovered or recovery factors improving. But sometimes reserves are simply recategorized, coming out of probable reserves and being placed in proved reserves for different reasons. The most obvious one among them is the so-called "quota wars" among OPEC countries during the late eighties and early nineties. In order to increase their quota production, fictional changes were recorded in reserves that misled many to think that the world was running into oil. In 1988, four OPEC countries namely: United Arab Emirates (Abu Dhabi and Dubai), Iran, Iraq and Venezuela revised their reserves upward by at least double their levels in 1987. Saudi Arabia followed suit in 1990 by revising its reserves by 52 percent. (See table 1).

Table (1) Annual Data on proved oil reserves of some OPEC member countries 1980 — 2000

Year	Abu Dhabi	Dubai	Iran	Iraq	Kuwait	Neutral Zone	Saudi Arabia	Venezuela
1980	28.0	1.4	58.0	31.0	65.4	6.1	163.4	17.9
1981	29.0	1.4	57.5	30.0	65.9	6.0	165.0	18.0
1982	30.6	1.3	57.0	29.7	64.5	5.9	164.6	20.3
1983	30.5	1.4	55.3	41.0	64.2	5.7	162.4	21.5
1984	30.4	1.4	51.0	43.0	63.9	5.6	166.0	24.9
1985	30.5	1.4	48.5	44.5	90.0	5.4	169.0	25.9
1986	30.0	1.4	47.9	44.1	89.8	5.4	168.8	25.6
1987	31.0	1.4	48.8	47.1	91.9	5.3	166.6	25.0
1988	92.2	4.0	92.9	100.0	91.9	5.2	167.0	56.3
1989	92.2	4.0	92.9	100.0	91.9	5.2	170.0	58.1
1990	92.2	4.0	92.9	100.0	91.9	5.0	257.5	59.1
1991	92.2	4.0	92.9	100.0	94.5	5.0	257.5	59.1
1992	92.2	4.0	92.9	100.0	94.0	5.0	257.9	62.7
1993	92.2	4.0	92.9	100.0	94.0	5.0	258.7	63.3
1994	92.2	4.3	89.3	100.0	94.0	5.0	258.7	64.5
1995	92.2	4.3	88.2	100.0	94.0	5.0	258.7	64.9
1996	92.2	4.0	93.0	112.0	94.0	5.0	259.0	64.9
1997	92.2	4.0	93.0	112.5	94.0	5.0	259.0	71.7
1998	92.2	4.0	89.7	112.5	94.0	5.0	259.0	72.6
1999	92.2	4.0	89.7	112.5	94.0	5.0	261.0	72.6
2000	92.2	4.0	89.7	112.5	94.0	5.0	259.2	76.9

Source: Oil & Gas journal, various issues

(5) Ibid p.195 Campbell/Laherrese modelling

(6) Ibid

recoverable resources base;

•This is essentially true for all regions of the world except the Middle East, giving the latter potential control of the marginal barrel.

•North America has burnt about three-quarters of its recoverable conventional oil resources.

The result of a model built in this respect indicates that once past the peak, the global production of conventional oil will decline at about 2 mbd each year. Also, if the world demand growth trend of the last few years is to be satisfied, an annual increase in the supply of petroleum liquids of roughly the same magnitude is required. Accordingly, the combined output from enhanced recovery and the non-conventional hydrocarbons must increase by something like 4mbd each year. This size of increase looks unlikely [5].

For enhanced recovery, various studies indicate that the amount of extra oil that can be made available within the time scale that affect, global peaking will be rather small [6].

The school attributes why these facts have not been better known earlier to a number of factors: First, there is a number of misconceptions that still dominate much of the thinking about the hydrocarbon supply. One of the misconceptions is the confusion between reserves and the total recoverable. Reserves are the amounts of oil expected to be produced from known fields, while total recoverable includes oil recoverable in fields that have not yet been discovered.

Second, is the confusion between proved reserves and (proved + probable) reserves. The latter is of the order of 50% larger than the published proved reserves. Proved reserves should consist of real oil being discovered or recovery factors improving. But sometimes reserves are simply recategorized, coming out of probable reserves and being placed in proved reserves for different reasons. The most obvious one among them is the so-called "quota wars" among OPEC countries during the late eighties and early nineties. In order to increase their quota production, fictional changes were recorded in reserves that misled many to think that the world was running into oil. In 1988, four OPEC countries namely: United Arab Emirates (Abu Dhabi and Dubai), Iran, Iraq and Venezuela revised their reserves upward by at least double their levels in 1987. Saudi Arabia followed suit in 1990 by revising its reserves by 52 percent. (See table 1).

Table (1) Annual Data on proved oil reserves of some OPEC member countries 1980 — 2000

Year	Abu Dhabi	Dubai	Iran	Iraq	Kuwait	Neutral Zone	Saudi Arabia	Venezuela
1980	28.0	1.4	58.0	31.0	65.4	6.1	163.4	17.9
1981	29.0	1.4	57.5	30.0	65.9	6.0	165.0	18.0
1982	30.6	1.3	57.0	29.7	64.5	5.9	164.6	20.3
1983	30.5	1.4	55.3	41.0	64.2	5.7	162.4	21.5
1984	30.4	1.4	51.0	43.0	63.9	5.6	166.0	24.9
1985	30.5	1.4	48.5	44.5	90.0	5.4	169.0	25.9
1986	30.0	1.4	47.9	44.1	89.8	5.4	168.8	25.6
1987	31.0	1.4	48.8	47.1	91.9	5.3	166.6	25.0
1988	92.2	4.0	92.9	100.0	91.9	5.2	167.0	56.3
1989	92.2	4.0	92.9	100.0	91.9	5.2	170.0	58.1
1990	92.2	4.0	92.9	100.0	91.9	5.0	257.5	59.1
1991	92.2	4.0	92.9	100.0	94.5	5.0	257.5	59.1
1992	92.2	4.0	92.9	100.0	94.0	5.0	257.9	62.7
1993	92.2	4.0	92.9	100.0	94.0	5.0	258.7	63.3
1994	92.2	4.3	89.3	100.0	94.0	5.0	258.7	64.5
1995	92.2	4.3	88.2	100.0	94.0	5.0	258.7	64.9
1996	92.2	4.0	93.0	112.0	94.0	5.0	259.0	64.9
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Another reason, is for many countries, the reported reserves are simply not updated apart from one year to the next as shown in table (1) apart from some exceptions. This applies not only to OPEC countries but also to some other large-resource countries such as countries, but also Russia and China.

Third, most analysis of the oil supply still relies on using the global oil reserves-to-production ratio (RIP ratio). This ratio indicates that current oil reserves are enough to provide, at current rate of production, 40 years of supply. While what should concern us is the peak production date, after which the production of global conventional oil goes into steady decline. It is this declining production or unsatisfied demand that is the key factor about future oil supply. In other words, the problem will be one of managing decline, not an all-out problem of absolute lack of resources.

It is adamantly held in many quarters that all past hydrocarbon forecasts have been wrong, and the conclusion is drawn that uncertainties, primarily of technology and the effect of price, make the forecasting of hydrocarbon production impossible (for further explanation see the source mentioned in the footnote [7].

Fourth, exploration geologists have not started to warn of increasing discovery difficulties but recently, due to lack of a global overview to see the world final rates were declining, as they have mainly been concentrated on their own patch.

Fifth, on the side of oil companies, whether public or private, they do not carry out any serious research work including quantitative modeling but mainly depend on ad-hoc estimates. Thus they believe that oil supply can easily match demand for at least the next twenty to thirty years.

Although, the world is further from the peak point for gas than for oil, the end of conventional gas is already insight; probably about half the gas needed to reach the world' s resource-limited conventional gas production peak has been burned[8].

Though a large amount of gas probably available in tight reservoirs, and in brine aquifers, the question is how much of these are practical to extract at a reasonable cost level? The decline in conventional oil supply is expected to be offset to some extent by non-conventional oil & gas through:

(i) Improvement in oil recovery factors due to the use of tertiary recovery methods;

(ii) Natural gas;

(iii) Natural gas liquid;

(iv) Liquid from non-conventional oils: heavy oils, tar sands and shale oils; other non-conventional liquids: gas to gasoline, oil from coal, biofuels, etc...;

The often quoted figures for the recoverable portions of tar sand and heavy oil held to be "immense" at about 300 bb in each case, enough to meet a total of 22 years of world demand.

The rate that non-conventional could be brought on-stream needs more analysis. The TEA in its 1998 world energy outlook indicated that some 19mbd of supply from unidentified unconventional oil would be required by 2020 if demand were to be met; yet then the key driver for non-conventional is energy content[9].

Alternative Energies:

On the subject of alternative energy, the noted economist Kenneth E. Boulding has written that no substitute for oil and natural gas offers the same combination of reasonable prices, ease of transportation and low pollution. For example, although, coal can play a role in enabling a country to reduce its oil consumption, coal is not regarded as a clean fuel, or easy to transport. Moreover, alternative energies are in general of limited use especially for transport as shown below:

Solar Energy

The development of solar energy often aims to bring power to villages that are too remote to be connected to the power grid.

Biomass and Biogas

Biomass is mostly used as a source of energy for home industries in suburban areas. Biogas is an energy source which can easily be produced from organic waste in cities to utilize the gas as a fuel for cooking.

Nuclear Energy

It is mainly used for electrical power. However, the future development of the nuclear energy industry faces many challenges because of concern over nuclear waste and public opinion. A number of countries, for these reasons, have postponed further nuclear energy development.

The sum-up, the physical exhaustion school argue:

• The world is more or less at its non-OPEC-conventional oil peak.

• The all-world conventional oil peak is 5 — 10 years away, after which production will decline at 3% a year.

• Non-conventional oil production will increase, but significant constraints, including cost, energy, energy content and C02 emissions will likely prevent these sources from fully offsetting conventional oils decline.

(7) Ibid p.198
(8) Ibid p.193
(9) Ibid

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OPEC : Quit or quit not?

In a seminar in Tehran about two years ago the Research Institute of Iran's Oil Ministry presented the idea of market quota and the proposition of leaving the Organization of Petroleum Exporting Countries (OPEC) at a juncture that was quite different from the present-day conditions of global oil market, an idea that was welcome by both the sponsor and the organizer of the seminar. In an article in the 60th issue of the monthly "Energy Economics" the flaws and pitfalls in the market quota theory were reviewed in detail. The idea of quitting OPEC likely to have persisted with its peculiar appeal in the minds of certain ranking officials I think it fit to offer certain observations in that connection.

From the point of view of the political economics of oil what reasons have prompted that proposition? I said in an earlier article of mine that over the past eight years the advertised decisions of the Oil Ministry of Iran have been based on domestic consumption so that even at the international forums those decisions rather than promote Iran's national interests have been in consequence of internal developments in Iran and have been adopted with the idea of consistency with internal trends so that they will not be disputed by decision makers and legislators. It seems that the proposition of quitting OPEC has been just one example of the same consideration.

As I said elsewhere earlier on in contrast against the present-day conditions by that time OPEC had long since been facing a slump in the demand for crude which prompted the organization to adopt decisions for preventing the fall of global oil prices by reducing the organization's output ceiling and individual quotas of member states. As the situation persisted it was seen likely that majlis deputies as well as relevant authorities with the Iranian government would pose the question "why is it that while market conditions indicate stagnant global demand for crude and while OPEC has been consistently cutting down on production you have entered into various by-back agreements for increasing Iran's crude output?"

On the strength of forecasts by sources in consumer countries such as the International Energy Agency the then executives of Iran's Oil Ministry consistently presented forecasts of increasing global demand for OPEC's crude. They also argued that in a bid to maintain her quota at OPEC Iran must increase her production output by entering into diverse agreements with international companies. They had also convinced Iran's policymakers of the veracity of their point of view, and at that juncture a group of Oil Ministry executives believed that once by-back agreements have been implemented Iran's production capacity would exceed five million bpd. Later on, however, it proved that contrary to those expectations the said projects did not compensate even the slump in Iran's annual crude production, and sadly enough at the present-day circumstances Iran is producing nearly four million bpd under hard circumstances and without protective conditions. In view of the fear of the management of the Oil Ministry of confronting that question at that time the seminar was organized to promote the following propositions:

1.Within OPEC and outside of it attention should not be directed solely to oil prices or how to hike them or stabilize them but more important is production ceiling and market share.

2.In the event oil production capacity should realize as the result of investments on buy-backs without demand for same and the same remaining as surplus capacity it will not be an issue over which to agonize because surplus capacity is important

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The Economic Exhaustion School

The former Saudi oil Minister, Sheikh Ahmad Zaki Yamani, is reported to have said that the Stone Age did not end when mankind ran out of stones; and that the oil age will not end when mankind runs out of oil. It will end when a better alternative is found [10].

The school argues that there are plenty of oil underground in OPEC member countries and elsewhere in the world, while demand for oil is on the decline for a number of reasons. The school's main argument is that the oil high price levels, since the first international oil price adjustment, have caused dramatic changes in the energy and international oil industry.

These changes have been augmented by technological changes which have left profound impact on the balance of supply and demand for oil in the world. The school main concern is that higher oil price levels are not in the interest of OPEC member countries as this will encourage further shift from oil to other sources of energy, as well as encourages oil exploration in high cost areas and, thus reduces demand for oil from OPEC member countries.

The school relies in its argument on the dramatic changes in the world consumption of basic sources of energy and the decline in the share of oil for the interest of natural gas and nuclear energy (except the ex-Soviet Union).

Table 2 shows the developments of demand for oil vis-à-vis natural gas, nuclear energy, coal and hydro energy by the main developed countries and groups between 1979-1999. Japan, for example, reduced its demand for oil from 67.4% of its total consumption of basic energy to 50.1%, while more than doubled its consumption of natural gas, from 5.2% to 13%; at the same time increased consumption of both nuclear energy and coal from 12.8% to 17.7% each. On the other hand, the US reduced its oil consumption from 46.8% to 40%, and Western Europe from 55.7% to 44.4 percent. The Soviet Union, also made a drastic reduction in its consumption of oil from 3 5.2% to 20% in favor of natural gas which almost doubled and nuclear energy which more than quadrupled. The whole world, in total, reduced its oil consumption over a twenty-year period from 47.5% to 40% mainly in favor of natural gas and nuclear energy.

The School believes that the two major price shocks in the seventies and the eighties of the last century caused further decline in demand for oil from OPEC, in general, and the major Arab countries in OPEC in particular. This was because newly oil producing countries with high cost of production found it profitable to start their own production. As a result, the North Sea production increased from zero in 1970 to 7mbd in 1999. Moreover, oil produced by non-OPEC oil producing countries increased by 15mbd.

The two main price shocks not only created a major shift from oil to other sources of energy, but also encouraged rationalization of energy consumption and a better use of all kind of energy.

All these factors have caused sudden decline in the demand for oil to meet the requirements of economic growth. In another word, what happened was a substantive drift between oil consumption and the rate of economic growth [11].

The relation between demand for energy and the world economic rate of growth used to be homogenous of degree one, i.e. an increase in the world economic rate of growth by 1 percent, leads to an increase in demand for energy by one percent.

Recent research, however, have shown that the percentage relation has declined to 0.65% in the industrial world, while it remained at 1:1 in newly industrialized countries [12].

In the US, for example, the rate of economic growth in 1999 was 4.7 percent while the rate of increase in oil consumption did not exceed 1 percent. Also, the level of oil consumption by OECD countries was in 1999 as much as 1979 i.e. 40 thousand b/d [13]

Advocaters of this school cast doubt on forecast of the future need for oil in general and for oil from the Middle East in particular as published by TEA and the USDOE, and consider them with strong political drive. TEA is accused of exhaustion of forecast while USDOE put less importance on the need of oil from the Middle East).

According to this school, one should study current trends and examine them in light of technical developments and, political, environmental and fiscal policies in oil-

(10) OPEC Bulletin, December 2003 p.11

(11) Chulabi, F. (2000) "Fluctuations in oil prices in the world market: causes and impact on the economies of oil producing countries in the ESCWA region" p. 29, a paper submitted to the symposium on the "Role of oil in the Economies of Arab Countries under International Developments", jointly organized by ESCWA and the Arab Association for Economic Research, 3 —4 October 2000, Beirut - Lebanon

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Table (2) World Consumption of Basic Energy (Percentage)

Oil %		Natural Gas %		Nuclear Energy %		Coal %		Water Energy %	
1979	1999	1979	1999	1979	1999	1979	1999	1979	1999
The United States									
46.8	40.0	27.9	25.2	3.7	9.0	20.3	24.6	1.3	1.2
Western Europe									
55.7	44.4	14.5	22.3	3.8	14.9	23.2	15.5	2.9	3.0
Japan									
67.4	50.1	5.2	13.0	12.8	17.7	12.8	17.7	1.8	1.5
Other OECD Countries									
47.9	36.9	22.4	25.1	3.3	5.5	18.3	22.8	8.1	9.6
Total OECD									
52.5	42.5	20.8	22.9	3.8	11.5	20.6	20.7	2.4	2.5
Ex-Soviet Union									
35.2	20.0	28.4	53.2	1.3	5.8	33.7	18.9	1.3	2.1
Total World									
47.5	40.6	19.8	24.2	2.5	7.6	28.0	25.5	2.2	2.7

Other OECD includes Australia, Canada and Newsland. Source: BP Arnsco Statistical Review 1999

consuming countries. The shift in economic growth from sectors highly dependent on oil as inputs, like manufacturing industries, to high technology industries with very low oil inputs is a major factor in reducing demand for oil in developed countries.

In addition, the environmental pressure which reached its peak in the UNKYOTO Protocol which targets significant reduction in C02 will impose great reduction in oil consumption in favor of other sources. What more important is the technological developments in the transport sector. Such as the hybrid compressor which uses batteries as well as gasoline as well as the use of hydrogine energy cells instead of energy engine.

This school does not only consider expected changes in demand for oil, but also expected changes in supply. In this respect two factors will affect the quantity of oil produced by countries outside OPEC:

Price levels and economic factors. Higher price levels encourage more exploration for oil in difficult areas and areas with high cost.

At the same time, large increases in oil supply are expected as a result of more advanced technological methods in spotting oil potential areas and in drilling. Both types of technological developments are expected to make drastic increases in oil supply in the future.

For this reason, the school believes that before new technological developments makes new oil discoveries easier and bring into the market further alternatives to oil, OPEC member countries should not target high price levels but increase output to make the financial revenues they need. Time, according to them, is not in favor of oil in the long term [14].

In conclusion, the school believes that a large number of factors, including high oil price levels adopted by OPEC, technological developments, environmental concern, economic restructuring which encourage investment in high technology sectors instead of traditional ones, and political pressure will all lead in the future to decline in demand for oil while still plenty of it is underground.

Section II
Projected demand for and supply of oil

The British Petroleum (BP) Executive Director announced in a conference on Oil and Finance held in London in October 2004, that there is not yet an alternative to oil but the world current reserves is enough for forty years and that of gas for seventy years [15].

The IEA and the US department of energy (USDOE) forecast that global oil demand will grow from 76.2mbd in 2000 to 83.9mbd in 2005 and to 93.5mbd in 2010. with Middle East producers having to meet the major part of the additional demand [16]. However, this will depend on the

(14) Ibid p. 51
(15) Al-Hayat Business, 28 October 2004, No. 15189
(16) Salameh, M.G (2003), "Quest for Middle East Oil: the US versus the Asia Pacific", Energy Policy 31 (2003)pp. 1085-1091

Table (2) World Consumption of Basic Energy (Percentage)

Oil %		Natural Gas %		Nuclear Energy %		Coal %		Water Energy %	
1979	1999	1979	1999	1979	1999	1979	1999	1979	1999
The United States									
46.8	40.0	27.9	25.2	3.7	9.0	20.3	24.6	1.3	1.2
Western Europe									
55.7	44.4	14.5	22.3	3.8	14.9	23.2	15.5	2.9	3.0
Japan									
67.4	50.1	5.2	13.0	12.8	17.7	12.8	17.7	1.8	1.5
Other OECD Countries									
47.9	36.9	22.4	25.1	3.3	5.5	18.3	22.8	8.1	9.6
Total OECD									
52.5	42.5	20.8	22.9	3.8	11.5	20.6	20.7	2.4	2.5
Ex-Soviet Union									
35.2	20.0	28.4	53.2	1.3	5.8	33.7	18.9	1.3	2.1
Total World									
47.5	40.6	19.8	24.2	2.5	7.6	28.0	25.5	2.2	2.7

Other OECD includes Australia, Canada and Newsland. Source: BP Arnsco Statistical Review 1999

consuming countries. The shift in economic growth from sectors highly dependent on oil as inputs, like manufacturing industries, to high technology industries with very low oil inputs is a major factor in reducing demand for oil in developed countries.

In addition, the environmental pressure which reached its peak in the UNKYOTO Protocol which targets significant reduction in C02 will impose great reduction in oil consumption in favor of other sources. What more important is the technological developments in the transport sector. Such as the hybrid compressor which uses batteries as well as gasoline as well as the use of hydrogine energy cells instead of energy engine.

This school does not only consider expected changes in demand for oil, but also expected changes in supply. In this respect two factors will affect the quantity of oil produced by countries outside OPEC:

Price levels and economic factors. Higher price levels encourage more exploration for oil in difficult areas and areas with high cost.

At the same time, large increases in oil supply are expected as a result of more advanced technological methods in spotting oil potential areas and in drilling. Both types of technological developments are expected to make drastic increases in oil supply in the future.

For this reason, the school believes that before new technological developments makes new oil discoveries easier and bring into the market further alternatives to oil, OPEC member countries should not target high price levels but increase output to make the financial revenues they need. Time, according to them, is not in favor of oil in the long term [14].

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necessary investment being made to expand production capacity of the big five producers in the Middle East namely Iraq, Iran, Kuwait, Saudi Arabia and UAE.
To increase this capacity from 20mbd in 2000 to 26mbd by 2005 require investment of $ 63.6 billion [17].
Oil supply from non-OPEC producers are expected to start a slow decline between now and 2010, while OPEC supply is expected to increase from 30mbd in 2001 to 46.7mbd in 2010 in order to meet the increase world consumption as shown in table(3).

Table 3 - world oil demand and supply, 1998 — 2010mbd

	1998	1999	2000	2001	2005	2010
World Consumption	73.9	74.7	76.2	78.1	83.9	93.5
World Supply	74.9	73.6	74.5	76.1	81.8	90.6
Non-OPEC	44.5	44.3	45.2	46.1	45.0	43.9
OPEC	30.4	29.3	29.3	30.0	36.8	46.7
Stock Change	1.0	-1.1	-1.7	-2.0	-2.1	-2.9

Source: Ibid p. 1089/ copied from US Department of Energy

This means that the Middle East producers with 65% of the World proven reserves and just over one-third of global production will assume a clear-cut leadership of oil supply in the world. In the major Gulf-oil producing countries, both exploration and investment in capacity expansion are down to minimum because of declining revenues from oil exports. It is clear that the oil price eventually must accommodate the reality.
How high will the price level rise? No one can guess especially after the current rises in 2004. Prices will be affected by the healthy state of the global economy, a growing global oil demand, a widening gap between global demand and production capacity, declining discovery rates of new oil and a gradual decline in non-OPEC discovery production. Thus there are inherently destabilizing forces in the oil market that the goal of price stability may be largely unachievable.
The US is the world biggest consumer of oil accounting for 25% of current world consumption vis-à-vis only 7.7% of world production. A combination of a steady decline in oil production and rising cost of finding and developing new oil fields have created a major oil deficit in the country forcing it to become increasingly dependent on imports. Table 4 shows the US past, current and projected production, consumption and imports for the period 1996—2010:

Table 4 — US current and projected crude oil production, consumption and imports, 1996 — 2010mbd

	1996	1998	1999	2000	2001	2003	2005	2010	1996-2010
Production	6.5	6.3	6.0	5.9	5.8	5.5	5.3	4.7	-27%
Consumption	18.3	18.9	19.3	19.8	20.1	20.7	21.4	23.0	+26%
Imports	9.4	10.4	10.6	11.1	14.4	15.2	16.1	18.3	+95%

Source Ibid p. 1086

The table shows that between 1996 and 2003 the US oil production dropped from 6.5mbd to 5.5mbd. It is projected to drop further to 4.7mbd in 2010 i.e. by 27% compared to 1996. The consumption, however, rose from 18.3mbd in 1996 to 20.7mbd in 2003; and it is projected to reach 23mbd in 2010, i.e. by an increase of 26%. Due to the declining trend in production and increasing trend in consumption, imports are projected to almost double between 1996 and 2010. i.e. the US could be importing 79% of its oil need in 2010, two-thirds of which will come from the Middle East.
While North-American was the largest oil consumer until 2003, this situation is expected to change and gravity of demand will shift to Asia-pacific which is projected to overtake North-America including Mexico by 2010 to become the World biggest consumer of crude oil (table 5).

Table 5: Oil demand: North America and Europe versus Asia-Pacific 1992 — 2010mbd

	1992	1998	1999	2000	2001	2003	2005	2010	%
North America	19.4	21.6	22.1	22.5	22.9	23.8	24.8	27.5	+42
Europe	15.0	16.1	16.0	16.1	16.3	16.6	16.9	17.6	+17
Asia-Pacific	15.3	19.2	19.9	20.8	21.7	23.9	25.6	29.5	+93

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The table shows that while demand in Europe will grow by only 17 percent and by 42 percent in North America between 1992-2010, it will grow by 93 percent in Asia-Pacific by 2010, i.e, the Asia- Pacific region will be the world' s largest consumer of primary energy. The region already imports 69% of its oil needs, three- quarters of which come from the Middle East[18].

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The Asia-Pacific countries are increasingly concerned about their ability to obtain enough oil to fuel future economic growth. No where this is more obvious than in China, once the world's sixth largest oil producer when became a net oil importer in 1993. Table (6) below shows that the Asia-Pacific region's production will decline from around 7mbd in 1998 to 6.2mbd in 2010; i.e. by 11 percent, while consumption will increase from 19.2mbd to 29.5mbd or 54% during the same period; consequently net imports are projected to increase from 11.9mbd to 23.3mbd or by 95 percent by 2010, Asia-Pacific could be importing 79% of its oil need almost all of it will come from the Middle East[19].

China's spectacular economic growth has led to a growing dependence on oil imports. By 2005, China is expected to need to import 3.6mbd, rising by 2010 to 6.4mbd, or 76% of its needs. By then China would have undertaken Japan to become the World's second largest oil importer after the US.

Table 6— Current and projected crude oil demand, supply and imports in the Asia-Pacific region 1998-2010 mbd

	1998	1999	2000	2001	2003	2005	2010	% Change
Production	7.0	6.9	6.9	6.8	6.7	6.6	6.2	-11
Consumption	19.2	19.9	20.8	21.7	23.9	25.6	29.5	+54
Net Imports	12.2	13.0	13.9	14.9	17.2	19.0	23.3	+95

Source: Ibid

China new accounts for 6% of global oil consumption whilst its share of world production only amounts to 3.9% will make oil from the Middle East vital to China's economic development. Energy did not often register on the Asia security scale despite the region's negative energy balance. Only gradually, starting from mid-1990s, the issue of energy needs started to feature prominently in the dialogue about the future of the pacific.

During the period 1970-94, the Asian energy demand grew by an average annual rate of 11.4% compared to 2.6 percent in the rest of the world. The US Energy Information Administration (ETA) predicts that by 2020 the Asia-Pacific's oil demand will grow by 2 to 3 times more rapidly than that of the industrialized West assuming oil prices will average $15 - $20 per barrel.

The recent strength in oil prices raised the question if the market is insufficiently supplied with oil. There are a great variety of factors- both fundamental and non-fundamental that can affect oil prices. OPEC efforts to stabilize the market by adjusting production in order to balance supply and demand operate strictly on the fundamental level. It is very unwise for the Organization to try and address problems caused by other factors such as: massive speculations; new gasoline specifications and lack of refinery capacity and crude and product stock levels.

The recent gasoline price levels, in the US are affected by a number of factors unrelated to the fundamentals of crude oil supply and demand. Gasoline supply has fallen short of demand because many smaller refineries have closed down and no new ones have been built. There is a patchwork of gasoline specifications that vary greatly from state to state making the transfer of supplies in the event of shortage impossible. The recent introduction of stringent new specifications for reformulated gasoline mandating the reduction of sulphur levels and elimination of MTBE[20] has only made the difficult situation worse. Moreover, commercial crude oil stocks in the US have recently fallen to their lowest level since 1975, dropping through the perceived lower minimum operating level (LO1) set by the National Petroleum Council in 1998 and finally fall in the value of dollar[21].

Section III:

WTO as a forum to 2uarantee oil supply

The previous discussion has shown that the future of oil in the world economy is still controversial. Only future developments, mainly technical progress that causes drastic shift in demand and/or supply can settle this controversy. Accordingly, oil as a commodity that characterizes the world current civilization will continue its important role in the foreseeable future until further developments become evident. Despite attempts to neutralize oil, the geo-economics and geopolitical nature are still very strong and will continue to characterize it due to uneven distribution of supply, shift of gravity of demand and impact of political tension on smooth flow from sources of supply to final destinations of demand. Accordingly, it is very unwise if not impossible to leave determination of price levels to free market forces.

Despite the fact that OPEC is still a powerful organization, due to the continued importance of oil, its position has been weakened since it seized to determine trends of the oil market but, follows the trends. Moreover, there is still a negative opinion of OPEC prevail among developed countries and their institutions. A clear sign of this negative position is for the last thirty years, OPEC has been asking oil consuming countries to enter into

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a serious dialogue to agree on policies and strategies committed by both parties to achieve security of supply vis-à-vis security of demand but with no success.

Lack of balance between OPEC on the one hand, and oil-consuming countries as individual and as represented by TEA, on the other have been essential in making developed countries reluctant to accept OPEC invitation for a serious dialogue. The role of OPEC has not only weakened but is threatened. Despite its current low profile, still some voices come, from time to time, from political circles in oil-consuming countries calling for dismantling OPEC as a cartel. A recent example is, on July 8, 2004 one Democratic Senator, F.R.Lautenberg introduced a bill calling for WTO action against the OPEC quotas. Democratic Representative P.Defazio was to introduce a similar bill in the house of representatives. Calling OPEC an "illegal Cartel", Lautenberg declared, "While OPEC and their oil company allies have seen a boom, American families are paying a high price at the pump"[22].

The concept of security of oil supply became known after the maj or Arab oil-exporting countries in OPEC used oil sanction in the Arab-Israeli war in 1973. Oil-consuming countries wanted a guarantee against any similar action that causes supply interruption in the future. Yet, the concept now has been enlarged to cover immediate pumping of oil to meet not only significant and long- term insufficient supply of oil, but also short-term developments. While OPEC admits that it aims to stabilize oil price level in the long run, it does not see its role in dealing with short-term on unfundamental factors of political and speculative nature.

Moreover, the responsibility of security of oil supply in the long run to satisfy projected large increases in the world demand for oil is too large to be shouldered by OPEC alone.

Since such a commitment entails large investment which is much beyond the OPEC member countries' current means and even future one if oil price levels are not increased enough to pay for the large investment required. Even big transnational companies will be hesitant to undertake such investment if the price level does not pay them back in due time. Accordingly security of supply cannot be the responsibility of OPEC alone but it should be a shared responsibility by OPEC, non-OPEC oil-producing countries and oil-consuming countries; moreover, such a shared responsibility should, have the proper forum to handle it. Neither OPEC, in my opinion, nor TEA are the right one, but WTO provides a better forum.

If the US and China, as projected, going to be the first two main oil consumers and both have to increase reliance on the Middle East, the situation may cause strong dispute which needs to have a proper international forum to deal with it. Otherwise, it may lead to political or even military conflict.

Price stability in the long run does not mean price stagnation or decline in the oil real price index as it is the case with crude oil now. Since so far, neither OPEC nor oil experts have reached a proper formula to define the suitable oil price level which is important to make commitments to guarantee supply possible and meaningful, such a formula can best be found under WTO, with participation of all parties concerned.

The new multilateral free trading system, though advocates free movement of goods and services across borders, it puts into place the foundation of a sophisticated rule-based system, which is still evolving to govern the world trade in goods and services. It is in fact not a market system in the real meaning of the word but a managed market system. It is the effort of each individual country and/or a group of countries to reflect its interest on this evolving system despite difficulty of the task.

Despite severe criticism to the new multilateral trading system especially from developing and least developed countries, this system provides important advantages over a truly free market system. These advantages are:

• Provides a commercial and business forum for discussions and negotiations between parties concerned which is not available elsewhere.

• Provides a reasonable dispute settlement mechanism, which can be improved in the future by efforts made by concerned parties especially developing countries.

• Provides equal treatment to small and large member countries despite differences in political, economic, geographical and military powers.

• Provides a dynamic and evolving system, through continuous rounds of negotiations, which is capable of correcting itself to accommodate the need for developing countries which did not 51iave the chance to effectively participate in its evolution in the past.

In addition to the issue of supply security, the WTO agreement and its annexes have many implications for oil as a commodity in the future. It is for the very interest of oil-exporting countries to bring these issues to the attention of WTO in order to avoid negative consequences.[23]

The special nature of oil as an exhustable kind of natural resources should not be overlooked in any arrangement to secure supply and in reaching a suitable price level.

(22) Oil & gas journal online, July 14, 200453

(23) For a comprehensive analysis of the impact of the WTO Agreement and the Doha Declaration for the future of crude oil, petroleum products, natural gas and petrochemicals, see the author's two studies: ESCWA (1997), "Challenges and Opportunities of the New International Trade Agreements (Uruguay Round) for ESCWA member countries in selected sectors: Crude oil, petroleum products and petrochemicals" and; ESCWA (2003), "Doha Declaration and opportunities to discuss issues related to hydrocarbon products in Current and future negotiations" A paper submitted to ESCWA preparatory meetings to the WTO fifth ministerial meeting, ESCWA July, 2003.

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• Provides a reasonable dispute settlement mechanism, which can be improved in the future by efforts made by concerned parties especially developing countries.

• Provides equal treatment to small and large member countries despite differences in political, economic, geographical and military powers.

• Provides a dynamic and evolving system, through continuous rounds of negotiations, which is capable of correcting itself to accommodate the need for developing countries which did not 51iave the chance to effectively participate in its evolution in the past.

In addition to the issue of supply security, the WTO agreement and its annexes have many implications for oil as a commodity in the future. It is for the very interest of oil-exporting countries to bring these issues to the attention of WTO in order to avoid negative consequences.[(23)]

The special nature of oil as an exhustable kind of natural resources should not be overlooked in any arrangement to secure supply and in reaching a suitable price level.

(22) Oil & gas journal online, July 14, 200453

(23) For a comprehensive analysis of the impact of the WTO Agreement and the Doha Declaration for the future of crude oil, petroleum products, natural gas and petrochemicals, see the author's two studies: ESCWA (1997), "Challenges and Opportunities of the New International Trade Agreements (Uruguay Round) for ESCWA member countries in selected sectors: Crude oil, petroleum products and petrochemicals" and; ESCWA (2003), "Doha Declaration and opportunities to discuss issues related to hydrocarbon products in Current and future negotiations" A paper submitted to ESCWA preparatory meetings to the WTO fifth ministerial meeting, ESCWA July, 2003.

Restructuring OPEC, New Geopolitics of Oil Demands Urgent Changes

The following paper was presented by Reza Taghizadeh, Energy Security Consultant of university of Aberdeen, at the 10th IIES Oil & Gas Conference in Tehran on 4th December 2005

The current trend of the world oil market suggests that future demand for oil is set to grow significantly while oil production is only a few years from its peak. Oil production could start to fall in less than a few years never to rise again Today's disappearance of spare production capacity could soon lead to an inadequacy of world supply, regardless of the party in control of the world's remaining reserves. What seems crucial to the future stability of the world economy is a

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wider co-operation between oil producers and consumers. Therefore, the consumers' investment potential, together with their advanced technological abilities, should help the oil producers in maximizing the output of their production efforts in return for sharing the remains of the world's oil reserves' added value.

Demand for oil is expected to see a 150 percent increase by 2020. In less than 10 years China is expected to become the largest oil consumer in Asia with Japan in second place. India inevitably will be one of the biggest energy consumers in the world. The European Community and the USA are currently planning strategic co-operation with these two new giants. The oil producers of the Persian Gulf should try to join in the 'game' by forging strategic partnerships with them while offering their precious oil deposits at higher and longer lasting values.

The significance of oil to the oil exporting states can not be denied oil is by far the most important element of their economic performance. On the other hand sustainable security of oil supply is essential to the world economy. The new approach by oil producers to the market, could not only change the geopolitics of oil but also affect the dynamics of the international system and, as a result, provide both sides with enhanced security margins inspired by a new concept of comprehensive co-operation in the oil market.

Norway has already demonstrated success, and Russia is similarly pursuing this initiative. Almost three weeks ago, on 22 November, Russia removed the last barriers to completing a privatization program of its oil and gas industries. This followed the country's Minister of the Economy announcing that limitations on foreign investments in Russia's upstream oil and gas projects and companies will be removed. Russia's energy taxation system, far from ideal, has a few lessons to offer OPEC's oil producers of the Persian Gulf.

In this set of circumstances, energy security should be treated as a matter of common responsibility of producers and consumers alike. The old scenario, of setting the oil exporting countries' interests against the customers, can no longer serve the best interests of the world economy. What seems vital though to the interests of both sides is sustainable stability of the international energy market. The major oil producers, such as Saudi Arabia, Iran, Iraq, UAE and Kuwait, should move to draw up their economic outlook based on strategic partnerships with their existing and future energy customers. In that sense, the mega oil producers of the Persian Gulf would have much more to share with their major customers, than they pretend to have with fellow OPEC members in other regions of the world.

OPEC in its existing form seems to encapsulate a barrier standing against a wider co-operation that could otherwise take place in the oil market. OPEC symbolizes the old approaches to the market, but without having any power to exercise even the old pricing policies. In the past, OPEC's intervention has brought sharp fluctuations to the oil market (the 1973 and 1979 oil price rises followed by the 1985/86 oil price collapse; the 1990/91 Gulf wars and oil price rise; the 1997/98 Asian economic crisis and oil price collapse). The recent uncertainty in the oil market regarding terrorist threats, insurgency in Iraq, inadequacy of the refining capacities, Iran's nuclear issue, the Arab-Israel conflict, and increasing oil demands in Asia can not be controlled by OPEC or through implementation of its policies.

The oil consumers' perception of OPEC, as a closed circle of oil exporting states, has convinced them in the past to turn to a policy of diversifying their sources of oil supply in order to increase the security of supply. The increased oil investments in the Caspian Sea, Africa, and South America are the products of such a policy that deliberately bypassed OPEC countries in spite of cheaper production costs in the Persian Gulf. Production costs for Persian Gulf oil are about $1.5 per barrel compared to about $5 in the U.S., $5.5 in Canada, $7to $9 in the Caspian Sea, and more than $10 a barrel in Russia. Obviously investment in the Persian Gulf

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Increased oil investment outside OPEC has increased the amount of oil that the investors believed could help moderate the market. The oil investments trend, colored by political considerations, has ignored the new oil discoveries in the Persian Gulf and its increased share of world reserves. In 1980, the Middle East held 55 percent of the world's proven reserves and OPEC 66 percent.

Today, the Middle East's share has increased to 70 percent, while the rest of OPEC members now hold 10 percent of the world's reserves. It is estimated that non-OPEC countries' smaller reserves would be depleted in, say, 15 years while the Persian Gulf oil, according to BP, should last another 80 years. The giant oil producers of the Persian Gulf should not allow their out of date organization to continue to appear as an obstacle on their way to forging strategic partnerships with giant energy consumers. They should act now as a delay over the next 5 years may be too late.

The market developments of the last two years, and particularly the disappearance of OPEC's excess production capacity in 2005, are a loud and clear message emphasizing an urgent need for fundamental changes that can transform the old organization. This new period in the world economy does not suit OPEC's existing structure anymore, nor can OPEC serve the long term interests of its members. OPEC should therefore be restructured now, just as its rival institution (IEA) did in the past in order to regain lost ground. The existing membership of OPEC should divide, sooner rather than later, and then individually move towards forming strategic partnerships with the major oil consumers.

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Is it Worth Investing in Caspian Sea Oil?

With prices rising continually, and companies making substantial profits in tandem, oil seems one of the most sensible commodities to invest in. However, this overlooks underlying concerns about the security of the oil supply in Iraq and the political stability of other big producers in the Persian Gulf. So investors will consider alternative sources of oil.

Under the communist regime, several states in the Soviet Union where large reserves lie were left untapped and relatively unexplored. Kazakhstan, Turkmenistan and Azerbaijan are believed to contain 10 per cent of the world's potential oil supply and are believed to hold sufficient reserves for at least 40-50 years at current production levels. Indeed, average production among these former USSR states is projected to increase to 6.2 million barrels a day by 2025.

Kazakhstan itself has, at the most conservative estimates, nine billion barrels in proven reserves, but there are estimates of 29bn barrels; Azerbaijan is estimated to have 7bn-13bn barrels in proven reserves and Turkmenistan 1.7bn. However, it is thought that there are many undiscovered reserves.

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Sea oil, and why? Politically, the region has become much more unstable in the past two years. The overthrow of President Akayev in Kyrgyzstan was the first in this particular area. And there was a concern about a domino effect on other governments in the region, especially on big oil producers such as Turkmenistan and Kazakhstan. Governments ruling with an iron fist, whether backed by the US or Russia, were left on the defensive, fearing further revolutions. The uprisings in Uzbekistan also acted as a catalyst for a withdrawal of American presence in the region.

This US withdrawal could be considered a sensible step, to avoid being seen as propping up dictatorial regimes; on the other hand, it represents a loss of control. Turkey and Russia have held the key to Central Asia simply on the basis of linguistic and cultural links, but also the pipelines they provide to the West. This means, however, that one has to negotiate through an intermediary state to ensure one's investment is worthwhile because Central Asian countries are landlocked.

Turkey has managed to act effectively as a guarantor of security of oil and gas, and has had pro-western governments, which have facilitated the transfer of these commodities to the West. In years past, though, security issues related to the ongoing Kurdish conflict have arisen in eastern areas of the country.

Another principal concern is international terrorism. With emerging markets such as the states bordering the Caspian Sea, it is vital to ensure not only strong production but supply routes too. As is often the case with a developing market, however, the production is high and labour is cheap but there is underinvestment in security of supply. With the growth of extremist Islamist groups in these countries, the security threat posed is by no means matched by the security that a western company's pipeline receives.

For example, countries like Turkmenistan shares a border with Iran and Afghanistan and, with borders being porous, potential risks to supply are high. There is also a concern of an overspill of fighters from disputes ongoing in Chechnya and Dagestan and on the border of Armenia and Azerbaijan.

Having listed investors' primary concerns, there are obviously sound reasons to invest in oil in this area of the world. The growth of fundamentalist elements in the Caspian basin pales into insignificance when compared with the situation brewing in the Persian Gulf. Similarly, while certain governments are falling around the Caspian Sea region, there have not been disturbances in Kazakhstan, Azerbaijan and Turkmenistan.

All three countries have re-endorsed the old regimes, which are authoritarian in character but have opened up substantially to western investors, and if even more contracts fail to materialise, these countries may look to the East for business. The former President of Azerbaijan, the father of the current President, signed a 30-year contract with a BP-led oil consortium for $8 billion. Efforts have also been made to develop three oilfields in the east of the country to produce three to five bn barrels.

Turkey's prospective EU membership could also help, as it would see a reduction on duties on oil and natural gas entering the EU.

The growing political links between Russia and Turkey will also enable even more oil and gas to enter Europe more quickly.

Taxes on oil profits are considerably smaller in Turkmenistan (10 per cent) than in Russia (50 per cent). Kazakhstan and Azerbaijan also offer low-tax incentives to investors. Opec's taxes on oil profits are notoriously excessive and eat into margins substantially.

Negotiations over future oil contracts may not be in the palace of an Arabian prince in Manama or Jeddah, but in a yurt outside Almaty or Ashgabat. They may be an unusual experience, but ultimately look most likely to bring the largest rewards for those willing to enter into the unknown - and if one delves far enough, lots of that black commodity beckons.

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3.Because OPEC has restricted national production and imposed quotas on member states perhaps it would be worth while reviewing the proposition of quitting OPEC

Incidentally, about the same time a leading Iranian academic had published an article in which he had voiced the proposition academically and with a view to challenging what has long since been considered as axiomatic. The organizers of the seminar did their best to uphold that proposition. This being the history behind the proposition below I will review the proposition critically.

Quit or not?

The key issues in connection with the question are the following:

1.The ruling industrialized nations and western oil consumer countries have designed a mechanism for balancing oil prices by OPEC which at all events would have to be undertaken either by a nation or by an organization. I do not dispute the wisdom of this proposition, and I have previously dealt with it in my article entitled "A reexamination of OPEC and Patterns for Its Success" at which I said that the question does not imply that OPEC is a helpless or incompetent organization.

2.It seems that not only the proposition does not run counter to the essence and to the need for continued existence of OPEC but even considers the continued existence of OPEC as necessary. It proposes Iran's exit from OPEC so that the country will be able to benefit from sustained global oil prices and their increase as do non-members of OPEC and at the same time it will not be subject to OPEC quotas and so that it will be able to engage in 'free riding' with sufficiently enough elbowroom.

It seems that the proposition needs more scientific approach to its evaluation or else our examination will be bereft of historical facts without being based on a true knowledge of OPEC and its actual position.

To begin with, the 'cost-benefit' balance of continued membership at OPEC and of quitting the organization should be found out. If the costs of continued membership should be estimated to be much higher than that of continued membership one possible suggestion might be to quit the organization. Needless to mention that the issues involved in quitting an organization are one thing and those of initial subscription to that are another. As long as we are not yet member of an international organization the costs of membership in it if estimated to be higher than its benefits might discourage our membership. But having subscribed to an organization for forty years the situation would be more complex with possible expenses for our quitting it that must be made allowance for in our estimation of costs.

On the strength of estimations that will follow it is said that under the present circumstances Iran's continued membership at OPEC will ensure benefits for the country that in comparison with the costs involved will be almost nil. Quitting OPEC, on the other hand, will not be a cost-free alternative. The following is an outline list of opportunities and restrictions involved in continued membership at OPEC.

a.Opportunities and advantages

1.For a nation that is among the few leading countries with the highest reserves of oil and gas and that is among the leading producers and exporters of oil it is extremely important that it have some sort of connection channel for collecting intelligence on oil market and on rivals. Exit from OPEC will certainly entail a vacuum of information and intelligence and on the strength of all experience neither diplomatic nor research institutes will be capable of filling that information blackout. Interestingly enough, those same research institutions, mediocre as they are, have been developed as the result of membership of member states in the organization and for enabling us cope with OPEC and therefore in the event of exit from OPEC Iran will lose a great opportunity on the scene and will rush headlong into total isolation.

2.Membership at OPEC means presence in the oil games and in the oil diplomacy. For Iran this membership is a significant means for influencing the oil market and for playing an active role in its global market. Without presence at OPEC Iran will decline into a powerless, lone, and dependent member of the oil market. Iran is neither such a great producer to sway the oil market independently nor such a small one to make her presence in or absence from and international organization all the same to her. Meanwhile, for the time being there can be no conceivable substitute for OPEC.

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3.Within the framework of international relations

Regulations on the Entry and Residence of Foreign Nationals in the Free Trade, Industrial Zones of the Islamic Republic of Iran

Article 1

In this Decree the following terms are used in hey of other following phrases:

Country: The Islamic Republic of Iran

Zones: The Free Trade- Industrial Zone of the Islamic Republic of Iran

Authority: The Organization of each of the Islamic Republic of Iran.

Article 2

For direct entry into the authorized points of arrival and departure in the Free Zone, foreign nationals are not required to obtain visa beforehand.

Note 1

For individuals specified in this Article, law enforcement officials shall affix the respective residence permits on their valid traveling documents in the arrivals and departures in the Free Zone.

Note 2

Issuance of residence permit is prohibited for the following persons:

a- The nationals of the countries whose entry into the Islamic Republic of Iran has been banned by the government.

b - Persons who are banned to enter the Country.

c - Persons who are banned to enter Free Zones.

Article 3

To enter into the Zones adjacent to the other parts of the country where direct entry is not possible, the foreign nationals have to obtain entry visa from the Islamic Republic of Iran legations abroad.

Note 1

The Islamic Republic of Iran legations abroad shall grant double entry visa, each one bearing a three-day validity, with regards to the invitation made by the Authority and the return air ticket, without enquiring from the center (capital).

Note 2

The conditions mentioned in Notes Nos.1 and 2 of Article 2 of the present Decree shall be applied to the foreign nationals who, subject to this Article, have entered into the country.

Article 4

The foreign nationals who have entered into the Zones and intend to enter into the country shall submit their application to the Representative Section of Foreign National's Affairs located in the Disciplinary Forces Headquarters stationed in the Zone.

Note 1

The above- mentioned Section shall, within 48 hours, consider the pertinent application and make their response.

Note 2

In case the Representative of the Ministry of Foreign Affairs, subject of the Article 4 of the Executive by- law on the Issuance of Visa to Foreigners, in not located in the Zone, the foreign nationals subject of the Article 4 of the said by- law who intend to travel to the other parts of the country, shall submit their application to the Representative Bureau of Foreign Nationals Affair situated in the Headquarter of the Zone's Disciplinary Forces. The said Bureau, in coordination with the Ministry of Foreign Affairs is, within 48 hours, to make its response to the applicant.

Note 3

Residence permit is issued for the duration of two weeks and may he renewed, up to six months upon the proposal by the Authority.

Article 5

The permitted resident foreign nationals (in the mainland), do not have to obtain separate visa for entering into the Zones. Such individuals can, with a view to the domestic regulations and presenting the valid documents, travel to the Zones.

Article 6

Upon request by an applicant and at the discretion of the officials concerned, the issuance of transit visa and residence permit, subject of Note (1) of Article (2) of this Decree, affixed on a separate paper is allowed.

Article 7

Any foreign national who intends to reside in the said Zones is required, within the period of residence, to fill in and sign the forms relating to entry permit and residence permit and submit, together with other necessary documents , to the Foreign Nationals Affairs Section of the Zone in which he/she intends to reside; Foreign Nationals Affairs Section of the Zone shall issue residence permit or refrain from doing so, based on inspecting the documents of the applicant concerned.

Note

Application for issuance of residence permit for foreign nationals must be channeled through the Authority of Free Zones.

Article 8

The Officials of Public Places Office are obliged to record the identity and the time of their arrival in special forms within 24 hours after the arrival of foreign nationals and submit to the Foreign Nationals Affairs Section of the Law-Enforcement Unit ("NAJA") stationed in the Zone.

Note 1

From the standpoint of this Decree, Public Places include hotels, motels, inns, boarding houses and, in general, all establishments which receive guest in one way or the other.

Note 2

In cooperation with Foreign Nationals Affairs Section of the Zone, the special forms for the arrival of the travelers arc prepared by the Zone Authorities and are put at the disposal of the owners of public places.

Article 9

For employment of foreign nationals in the Zones, it is required to observe the provisions of the Regulations Governing the Employment of Human Resources, Insurance and Social Security in the Free Trade-Industrial Zones of Islamic Republic of Iran.

Regulations on the Entry and Residence of Foreign Nationals in the Free Trade, Industrial Zones of the Islamic Republic of Iran

Article 1

In this Decree the following terms are used in hey of other following phrases:

Country: The Islamic Republic of Iran

Zones: The Free Trade- Industrial Zone of the Islamic Republic of Iran

Authority: The Organization of each of the Islamic Republic of Iran.

Article 2

For direct entry into the authorized points of arrival and departure in the Free Zone, foreign nationals are not required to obtain visa beforehand.

Note 1

For individuals specified in this Article, law enforcement officials shall affix the respective residence permits on their valid traveling documents in the arrivals and departures in the Free Zone.

Note 2

Issuance of residence permit is prohibited for the following persons:

a- The nationals of the countries whose entry into the Islamic Republic of Iran has been banned by the government.

b - Persons who are banned to enter the Country.

c - Persons who are banned to enter Free Zones.

Article 3

To enter into the Zones adjacent to the other parts of the country where direct entry is not possible, the foreign nationals have to obtain entry visa from the Islamic Republic of Iran legations abroad.

Note 1

The Islamic Republic of Iran legations abroad shall grant double entry visa, each one bearing a three-day validity, with regards to the invitation made by the Authority and the return air ticket, without enquiring from the center (capital).

Note 2

The conditions mentioned in Notes Nos.1 and 2 of Article 2 of the present Decree shall be applied to the foreign nationals who, subject to this Article, have entered into the country.

Article 4

The foreign nationals who have entered into the Zones and intend to enter into the country shall submit their application to the Representative Section of Foreign National's Affairs located in the Disciplinary Forces Headquarters stationed in the Zone.

Note 1

The above- mentioned Section shall, within 48 hours, consider the pertinent application and make their response.

Note 2

In case the Representative of the Ministry of Foreign Affairs, subject of the Article 4 of the Executive by- law on the Issuance of Visa to Foreigners, in not located in the Zone, the foreign nationals subject of the Article 4 of the said by- law who intend to travel to the other parts of the country, shall submit their application to the Representative Bureau of Foreign Nationals Affair situated in the Headquarter of the Zone's Disciplinary Forces. The said Bureau, in coordination with the Ministry of Foreign Affairs is, within 48 hours, to make its response to the applicant.

Note 3

Residence permit is issued for the duration of two weeks and may he renewed, up to six months upon the proposal by the Authority.

Article 5

The permitted resident foreign nationals (in the mainland), do not have to obtain separate visa for entering into the Zones. Such individuals can, with a view to the domestic regulations and presenting the valid documents, travel to the Zones.

Article 6

Upon request by an applicant and at the discretion of the officials concerned, the issuance of transit visa and residence permit, subject of Note (1) of Article (2) of this Decree, affixed on a separate paper is allowed.

Article 7

Any foreign national who intends to reside in the said Zones is required, within the period of residence, to fill in and sign the forms relating to entry permit and residence permit and submit, together with other necessary documents , to the Foreign Nationals Affairs Section of the Zone in which he/she intends to reside; Foreign Nationals Affairs Section of the Zone shall issue residence permit or refrain from doing so, based on inspecting the documents of the applicant concerned.

Note

Application for issuance of residence permit for foreign nationals must be channeled through the Authority of Free Zones.

Article 8

The Officials of Public Places Office are obliged to record the identity and the time of their arrival in special forms within 24 hours after the arrival of foreign nationals and submit to the Foreign Nationals Affairs Section of the Law-Enforcement Unit ("NAJA") stationed in the Zone.

Note 1

From the standpoint of this Decree, Public Places include hotels, motels, inns, boarding houses and, in general, all establishments which receive guest in one way or the other.

Note 2

In cooperation with Foreign Nationals Affairs Section of the Zone, the special forms for the arrival of the travelers arc prepared by the Zone Authorities and are put at the disposal of the owners of public places.

Article 9

For employment of foreign nationals in the Zones, it is required to observe the provisions of the Regulations Governing the Employment of Human Resources, Insurance and Social Security in the Free Trade-Industrial Zones of Islamic Republic of Iran.

membership at internationally influential and important organizations and unions is considered as credit line for members on the diplomatic scene and in international transactions which status means that the player will have more cards to play on that scene. This opportunity may not be simply dispensed with. Additionally, in dealing with many countries one important element in mutual relations is their concurrent membership at OPEC.

4. Irrespective of the organizational buildup of OPEC and of the usefulness or inefficacy of its conferences the Secretariat of the organization at Vienna is in fact an energy research center with a standing of forty something years. By way of membership at OPEC Iranians can assume positions and roles with it and while benefiting from accumulated data at the organization Iran can find answers to national questions that will promote its interests.

5.Psychological elements sway the oil market, and by continued membership at OPEC Iran can somehow influence psychological expectations of the oil market.

Limitations and Costs

1.To maintain membership at OPEC members must pay an annual membership fee that will supply resources for maintaining OPEC and its Secretariat. Membership fee is the same for every member, big or small, of the organization. The annual fee may seem bigger to nations with lower production and export rates, but to Iran with the status that she has this fee is not high, and it is a fee that when taken advantage of the services of the Secretariat of the organization (which is not the case now), will be thereby defrayed. No one had previously discussed the proposition of exit from OPEC from this point of view.

2.Another restrictive arrangement, disentanglement from which has been the main the idea behind the proposed exit from OPEC, is the organization's quota arrangement and restrictions whereby the organization determines a production ceiling for each individual member state. Apparently, proponents of the idea of exit from the organization are not aware that compliance with the organization's quota arrangements has been mainly voluntary and for the purpose of promoting national interests and preventing global oil – as a depletable energy source – prices. OPEC does not exercise surveillance on the production of its member states by policing operations, nor are there practical sanctions against violation of production quotas of those states. The only cost to one member state for having not observed her assigned quota is that it will suffer blame by other member states. That kind of criticism, too, is often mild because member states publish their average production data post facto, that is long after the fact, and without finality or precision which, in the face of changing market conditions, is not especially consequential.

It seems proponents of the idea of exit from OPEC advocate the idea on the strength of forecasts that are not likely to happen: That is, they see it likely that at some future time Iran will be able to produce between 6 and 8 million bpd. This prediction was not originally based on technological feasibility studies and its likelihood is, therefore, truly questionable. On the strength of the same forecasts it was then predicted that once producing at those levels Iran would be greatly challenged by her assigned quotas. Now, those forecasts have proved unreliable, and all experience is evidence that Iran can continue as member of the organization and at the same time influence oil prices and take advantage of price hikes without being seriously hampered by production ceilings. Additionally, continued membership at the organization cannot be considered for ad hoc purposes that is for only as long as those challenges seem likely.

To sum it up, let us remember – as I noted earlier on – that proponents of the idea of Iran's exit from the organization do not essentially oppose the organization but rather look forward to an influential and powerful OPEC. There has been an implied assumption in the whole debate though, namely that even in the event of Iran's exit from OPEC the organization will continue to exist, that all the same the organization will be able to control and streamline the oil market with the same forcefulness as before, and that Iran will continue to avail herself of an oil market controlled by OPEC without being hampered by the restrictive arrangements of the organization. What seems to have been overlooked all along the debate is that the proposition of Iran's exit from OPEC may threaten the continued existence of the organization and cause its disintegration, and that even in the absence of this same eventuality after Iran's exit OPEC will certainly not be the same enterprising organization.

Having said all that, let us also remember, and admit without prejudice, that OPEC is now 40 years old with the same length of Iran's membership in it. In the meanwhile, obviously everything has changed. Iran cannot afford to say 'yes' to such important questions as her membership at OPEC mainly because it has been a time-honored habit. To continually challenge such issues scientifically and without prejudgments is a plausible endeavor. Such challenges and revisions in established practices will eventually prove useful if they are not myopic and if they are not exploited as ad hoc instruments for ad hoc private political indoctrinations.

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Gas o line...

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Advocates of neoclassical theories in Iran are inextricably attached to their own doctrines. That is so even though the original proponents of those doctrines have tended to think twice about the universality or timelessness of those doctrines in the face of the actual present-day circumstances in the various human societies. Euphoric dogmatism obviously breeds its own brand of superficiality. Despite the stark inefficacy of their ruling economic indoctrinations over national economy in Iran at least over the past year, and of the consequences of their economic leadership they are not yet ready to question the propriety of their beliefs and less of their dogmatism.

Irrespective of the more general considerations, one example of their dogmatism is their approach to the issue of gasoline and their dwelling on traditional sermons that has turned into some form of affront against the citizens of an entire nation. It seems as though the people of Iran, and more so of the metropolitan Tehran, are fated to suffer the scarcity of God's first blessing, i.e. oxygen, that He has bestowed on beasts and humans alike, in addition to their depravation of an acceptable urban and intercity transportation system, of a flowing traffic, of self-composure, of the blessings of driving or riding in a decent car with a reasonable cost, as much as they are destined to suffer a continual accusation on the part of the government of their tending to wastefulness and extravaganza, as well as suffer the blame for the mismanagement and improper policymaking of the administrations. In dealing with these issues in this part of the world the convention is to repeat stale judgments with an update of index of prices. But let's now look over the issue of gasoline even though with no consequence at all.

1. Despite the sporadically publicized official allegations of the Iranian market having been glutted with cars the total number of cars and motor vehicles in Iran is not yet too many. The average estimation is currently about only one car for each ten persons in Iran in contradistinction to one car for each 1.5 persons in Europe. Due largely to the absence of an integrated and well-planned transportation system in Iran motor vehicles in the country and especially in Tehran have a function far different from the usual function in progressive nations.

2.The universal experience is adequate conclusion that in great metropolises like Tehran there is no alternative to opting for an expanded subway system. A look at the only two presently functional subway lines in Tehran can teach us a lot in that respect. Few commuters can rely on any of the present subway lines in Tehran to go from their actual point of departure to their ultimate destination. Despite that, however, the subway in Tehran is greatly welcomed by commuters, and one cannot vision the status of traffic in Tehran in the absence of this infinitesimal subway lines. The increasing welcome by the public of the subway in Tehran is proof that once the subway network has grown and covered the city sufficiently enough private cars will then cease to be used as a means of transportation in the city and will instead be used as vehicles by which to get from suburban Tehran to the first subway terminal to get to Tehran, or which to use for pleasure trips during weekly holidays.

3.Plainly, those at the top who, continually and directly as well as indirectly, blame the people for their high consumption of gasoline, and who consider then as being indebted to the state and to the national economy are judging others on the assumption that the others were using their private cars in the same way as were those ranking officials. Perhaps they know absolutely nothing or only too little about how many different trips an average commuter has to make, that is how many get-downs and get-ons he has to make using both subway and street-way in order to get from A to B in a metropolis like Tehran. But while in their second homes in Europe, the same Iranian ranking officials use the tube.

Who would really desire to wait on a street in a polluted environment permeated with smoke and dust for sometime in the hope of eventually catching a crumbling car of the type that are commonly styled wrecks, and eventually trek to his final destination with patterns of frequent get-downs and get-ons? As one consequence of the absence of a functional urban mass transport system, of congested traffic, and of commuters' time running out big fleets of motorbikes are busy as alternative means of transport taking people from one point to another while the same bikes are risky, environmentally polluting, and problematic. Will the traffic crisis in Iran be solved solely by a government subsidy to fuels as a generosity to citizens? How about the citizens subsidy to the government which they pay drawing on their nerves, on their good health and on their own time? Have we studied how much of our national resource of gasoline is wasted away in the congested traffic in Tehran? Have we conducted a survey of how the severe traffic jams in Tehran cause societal and family problems and drop in the actual efficiency of manpower? If such surveys had been undertaken would the development of Tehran subway continue at the same snail's pace as it does

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now, and would it all the same play into the hands of rival factions as a ransom demanded by one side and received by another side in political battles? What will be the consequence of a hike in gasoline prices as long as there is no alternative mass transport system and as long as cars function as the principle means of transport? Perhaps if the present mode of mass transport that relies on cars should be technically updated and streamlined with reasonable costs in comparison with own-driven cars the problem of mass transportation will be solved for the short term with a decrease in the number of single-occupant cars.

4.Progressive countries have arrived at a conclusion in connection with cars: that is to manufacture inexpensive cars as consumer commodity backed by parts and maintenance, and also expensive fuel. As the result of the implementation of the idea in those countries within four to five years after manufacture the value of each motor vehicle drops to that of its scraps with its continued use and maintenance becoming uneconomical to the owner. Consequently, new fleets of technologically updated cars are supplied to the market everyday. The transportation problem in Iran is due in part to the same incongruities in the quality of the cars. Under the circumstances extremely substandard cars that consume twice or three times as much gasoline as the average cars with internationally-accepted standards cannot be manufactured in Iran and sold to the people at three to four times their actual world prices at an exclusive market, and at the same time blame the people for using this much gasoline. In the meanwhile, in industrialized nations while cars have become a consumer item with a short life, the auto industry has enhanced employment in addition to certain other advantages.

5.Have we conducted a survey with a view to finding out what percentage of trips in the cities are normally in consequence of inefficient administrative systems, and are therefore preventable? While in many world countries many routine businesses are undertaken electronically and through the internet Iranians have to personally visit government departments and agencies to do their simplest personal businesses. Ironically perhaps the current system of distributing Intelligent Fuel Cards among motorists is one good example in Iran: while an advanced fuel dispensation system is to replace the current traditional system, each and every one of the multitude of motorists have to personally visit post offices and fill out printed forms. Whereas, the form could have been received by at least tens of thousands of motorists who are familiar with the electronic (internet) system without having to personally visit the post offices. Is it likely that a hike in gasoline prices will solve the inefficacy of the administrative systems in force and of the inefficiency of the post and telecommunication systems in Iran?

6.Additionally, a comprehensive survey of motorists and commuters travels in the cities will eventually reveal the purpose for which they are traveling and urban planners will thereby be able to streamline urban projects and decrease trips.

7.More recently governments in certain progressive countries have been encouraging the public to walk shorter distances in the doing of some of their daily routines. Walking can contribute to public health and cut down on expenses for health care and physical fitness. Additionally, it can contribute to citizens social intercourse and to healthy relations between citizens and the society at large as well as help to reduce air pollution and noise. This encouragement of citizens will obviously depend upon a sound overall urban management system and creation of its infrastructure. Sadly for the time being, there are very few sidewalks in Tehran and other towns and cities along which to take a short walk free from distracting impediments and obstacles which situation worsens with the slightest rainfall.

At no circumstances can we copy and present in a collage form only those outlandish models that put all pressure on the masses. It is time intellectuals and people of learning in Iran, and especially those in the discipline of the humanities, pooled their knowledge and savvy consistent with the methodology of the humanities in the industrialized nations, naturalized the theories that have worked in the industrialized nations doing so without leaning towards blindfold acceptance of what is merely fashionable in certain foreign societies or towards trendy exotic fashions and protected Iran's national interests and put an end to the mismanagement of Iranian society.

The 138th OPEC Meeting: A Step Forward

The 138th OPEC Meeting was held on the 12 of December 2005 in Kuwait. The announcement of the summit's results was met with a positive reaction from the oil market and managed to increase the price of OPEC's crude basket by about a dollar, to over 54 dollars per barrel. Even though shortly after OPEC's crude basket dropped to 51 dollars per barrel, due to the warm weather in the northern hemisphere and forecasts for their continuation.

To realize what made this meeting appear successful one must pay attention to the fact that before the OPEC Meeting the market was sure that OPEC would renew its production quota of 28 million barrels per day; as a number of oil ministers from the organization had

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To realize what made this meeting appear successful one must pay attention to the fact that before the OPEC Meeting the market was sure that OPEC would renew its production quota of 28 million barrels per day; as a number of oil ministers from the organization had

in different situations announced that the production quota would not be change in the December meetings. In a press statement released after the meeting it was emphasized that the market's estimation about supply and demand shows that OPEC's production quota of 28 million barrels per day will be enough to stabilize the market in the first quarter of 2006, but in the second and third quarters of 2006 global oil demand will decrease and it is necessary for OPEC to decrease its production for the stabilization of the market. For this reason it was announced that another meeting will be held on the 31 of January 2006 to reinvestigate the situation of the market and make an appropriate decision about the production quota in the second and third quarters of 2006.

This announcement grabbed the full attention of the market; especially since a number of OPEC oil ministers, like those of Qatar, Libya, Venezuela, and Iran, went so far as to warn that OPEC may move to prevent the decrease of oil prices by decreasing its production.

Supply and demand forecasts show that in the first quarter of 2006, OPEC oil demand will actually reach 27.7 million barrels per day and in the third three quarter of 2006 it will stand at 28.1 million barrels per day.

Therefore if OPEC's production continues at the same level as that of the third quarter of 2005 (30/2 million barrels per day) the market will have 0.3 million barrels per day of spare crude oil in the first quarter of 2006 and in the second quarter of 2006 it will be faced with 2.5 million barrels per day and in the third quarter it will be faced with 2.1 million barrels per day of spare production. If current market conditions continue, this huge volume of spare crude will decrease oil prices. Therefore OPEC's plan for having another meeting on the 31 January 2006 gave the market some assurance that it is possible that OPEC will decrease its production quota due to decreasing prices and this was enough psychological assurance for the market to have an optimistic look on oil prices in the future.

Moreover, in their press statement OPEC also announced that it will no longer allocate its 2 million barrels of spare capacity to the market, as they had for the fourth quarter of 2005 (October to December), pursuant to decisions adopted in their previous meetings. Of course, market experts were more or less aware that OPEC didn't really have the spare capacity of 2 million barrels; but the announcement was still a way of emphasizing the fact that OPEC doesn't want a rapid decrease in crude prices. Even if OPEC's statement merely has a psychological effect on the market, it can still be considered a success for the organization.

Currently the oil market has become very sensitive to OPEC's actions, due to the low level of spare capacity in upstream and downstream sectors. Therefore if OPEC oil ministers give the market assurance in their speeches that they do not want oil prices to decrease, this topic can cause improvement in oil prices. The market has prepared itself for an appropriate decision for OPEC during its January meeting. If OPEC doesn't make a decision to decrease its production quota the market will witness a decreasing trend in crude oil prices.

Balance of global supply and demand of crude in 2006 (million barrels per day)

	First Quarter 2006	Second Quarter 2006	Third Quarter 2006	Fourth Quarter 2006	Year 2006
Demand	85.4	83.6	84.2	86.5	84.9
Non-OPEC Supply	55.6	55.8	56.1	57.4	56.2
Demand on OPEC	29.9	27.7	28.1	29.2	28.7
OPEC Production	30.2	30.2	30.2	30.2	30.2
Change in Reservation	0.3	2.5	2.1	1	1.5

Source: Monthly Oil Market Report, OPEC, December 2005

in different situations announced that the production quota would not be change in the December meetings. In a press statement released after the meeting it was emphasized that the market's estimation about supply and demand shows that OPEC's production quota of 28 million barrels per day will be enough to stabilize the market in the first quarter of 2006, but in the second and third quarters of 2006 global oil demand will decrease and it is necessary for OPEC to decrease its production for the stabilization of the market. For this reason it was announced that another meeting will be held on the 31 of January 2006 to reinvestigate the situation of the market and make an appropriate decision about the production quota in the second and third quarters of 2006.

This announcement grabbed the full attention of the market; especially since a number of OPEC oil ministers, like those of Qatar, Libya, Venezuela, and Iran, went so far as to warn that OPEC may move to prevent the decrease of oil prices by decreasing its production.

Supply and demand forecasts show that in the first quarter of 2006, OPEC oil demand will actually reach 27.7 million barrels per day and in the third three quarter of 2006 it will stand at 28.1 million barrels per day.

Therefore if OPEC's production continues at the same level as that of the third quarter of 2005 (30/2 million barrels per day) the market will have 0.3 million barrels per day of spare crude oil in the first quarter of 2006 and in the second quarter of 2006 it will be faced with 2.5 million barrels per day and in the third quarter it will be faced with 2.1 million barrels per day of spare production. If current market conditions continue, this huge volume of spare crude will decrease oil prices. Therefore OPEC's plan for having another meeting on the 31 January 2006 gave the market some assurance that it is possible that OPEC will decrease its production quota due to decreasing prices and this was enough psychological assurance for the market to have an optimistic look on oil prices in the future.

Moreover, in their press statement OPEC also announced that it will no longer allocate its 2 million barrels of spare capacity to the market, as they had for the fourth quarter of 2005 (October to December), pursuant to decisions adopted in their previous meetings. Of course, market experts were more or less aware that OPEC didn't really have the spare capacity of 2 million barrels; but the announcement was still a way of emphasizing the fact that OPEC doesn't want a rapid decrease in crude prices. Even if OPEC's statement merely has a psychological effect on the market, it can still be considered a success for the organization.

Currently the oil market has become very sensitive to OPEC's actions, due to the low level of spare capacity in upstream and downstream sectors. Therefore if OPEC oil ministers give the market assurance in their speeches that they do not want oil prices to decrease, this topic can cause improvement in oil prices. The market has prepared itself for an appropriate decision for OPEC during its January meeting. If OPEC doesn't make a decision to decrease its production quota the market will witness a decreasing trend in crude oil prices.

Balance of global supply and demand of crude in 2006 (million barrels per day)

	First Quarter 2006	Second Quarter 2006	Third Quarter 2006	Fourth Quarter 2006	Year 2006
Demand	85.4	83.6	84.2	86.5	84.9
Non-OPEC Supply	55.6	55.8	56.1	57.4	56.2
Demand on OPEC	29.9	27.7	28.1	29.2	28.7
OPEC Production	30.2	30.2	30.2	30.2	30.2
Change in Reservation	0.3	2.5	2.1	1	1.5

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Iran's oil minister opens Nakhichevan gas swap project

The inaugural ceremony of the project to deliver Azeri natural gas to Iran in return for Iranian natural gas supplied to Nakhichevan on Tuesday was attended by the Oil Minister Kazem Vaziri Hamaneh and president of Azerbaijan Republic state oil company (SOCAR), Natiq Aliyev.

Speaking at the ceremony, Hamaneh referred to the project as one of high importance and as a step towards expansion of economic and political ties between Iran and Azerbaijan.

"Once the project is implemented, over 2,000 families residing in the autonomous Republic of Nakhichevan will have access to natural gas," added the minister.

For his part, Aliyev termed the implementation of the project as a historical event which plays a crucial role in expansion of mutual relations.

He appreciated Iran's assistance to his country, in particular to the residents of Nakhichevan who had been deprived of the primary facilities for 15 years.

Aliyev referred to President Mahmoud Ahmadinejad's one-day visit to Nakhichevan as a sign of friendship and his special interest in the Muslim Azeri people and said that during the visit, two memoranda of understanding playing a decisive role in broadening of mutual political ties were signed.

Meanwhile, he said that delivering gas to Nakhichevan is quite necessary on account of industrial potentials of the area and thanked Iranian Ministry of Oil for its efforts to this effect.

Turning to Azeri gas reserves with a capacity of nine trillion cubic meters, he stressed that his country is determined to exploit them with assistance from Iranian oil and gas experts.

According to the 25-year contract, Azerbaijan Republic will deliver 80.5 million cubic meters of natural gas to Iran at Astara border point by the end of a year from the date the pipeline was commissioned (November 1, 2005).

Besides, the Iranian partner will reduce 15 percent of the gas delivered at Astara as the swap fee and deliver the remaining 85 percent of the amount to the autonomous Republic of Nakhichevan at Jolfa border point.

The amount of natural gas to be delivered to Nakhichevan by Iran is expected to increase gradually from 70 million cubic meters in 2005 to 350 million cubic meters from 2009-24.

National Iranian Gas Company has already completed the relevant measuring station and about 300 meters of gas pipeline in Jolfa area in Nakhichevan. It will take charge of the exploitation operations on behalf of National Iranian Gas Export Company.

The autonomous Republic of Nakhichevan with a 350,000 population has been facing many economic and social difficulties since disintegration of the former Soviet Union in early 1990s and establishment of Commonwealth of Independent States (CIS) due to lack of safety required for supply of energy.According to experts, talks on implementation of the contract to supply Nakhichevan's required energy through export of Iran's natural gas to the area, have been underway since 1992 and are now being realized at the last quarter of 2005. It will give the residents of Nakhichevan a chance to start a promising life.

Call for prequalification for Phases 17&18 of S.P

A consortium of the Iranian PetroPars, Oil Industries Engineering & Construction (OIEC) and Iranian Offshore Engineering & Construction (IOEC) has announced its intention of inviting companies/contractors to attend a meeting wherein the project to develop Phases 17&18 of South Pars gas field will be raised and the preferred execution method and project schedule will be presented.

The project will be in EPC mode and capable companies wishing to be invited to the said meeting have been asked to submit documents, max three pages, proving their capability to undertake huge EPC projects latest by January 15, 2006. PetroPars office in Tehran has been chosen as the place for submission of the said documents.

Certain details of the workscope of the project are as follows:

The onshore part of the project will be constructed in Assalouyeh.

South Pars Phases 17 & 18 Project is a replica of South Pars Phases 4-5, comprising of:

Two Offshore Complexes consisting of:

Two unmanned wellhead platforms, one for each phase of the project, equipped with the required production facilities. Four relief platforms, two for each Phase, each connected by bridges to the associated wellhead platform and one flare for each complex.

Sealines:

Two 32" export Sealines of 1,000 MMSCFD nominal capacity with one 4" piggyback line for each pipeline for

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Sealines:

Two 32" export Sealines of 1,000 MMSCFD nominal capacity with one 4" piggyback line for each pipeline for

chemical injection. Each will be installed to transport the raw offshore production from wellhead platforms up to the onshore gas treatment plant.

Onshore facilities:

One gas treatment plant of 2,000 MMSCFD capacity with gas and condensate processing units, LPG and Ethane extraction, utilities generation and distribution, general facilities and necessary buildings. After treatment, the lean gas will be sent to the domestic gas network, ethane gas to a petrochemical complex at the required specifications while maximizing liquid recovery as C3/ C4 LPG and stabilized hydrocarbon condensate and sulfur storage and recovery for export.

Aghajari POSFR to have new 'Gas-NGL' plant

The Gas-NGL 1800 plant, to be constructed as part of Production Optimization & Surface Facilities Renovation (POSFR) plan of Aghajari oil field, will be replacing similar plants of 100, 200 and 300. Gas-NGL 1800, capable of enhancing the Ethane recovery, will be constructed 20 km off north-west of Omidieh city in Khouzestan province, adjacent to Gas-NGL 300 plant, and is foreseen to come on stream in two years.

Gas-NGL 1800 plant consists mainly of; incoming liquid stabilizing, gas sweetening, gas dehydrating, Ethane plus recovering, gas liquids treating and auxiliary units. Construction of Gas-NGL 1800 plant is estimated to cost $ 130 Mln.

The plant will be producing 40,000 bpd of Ethane plus composites and 187 mcf/d of sweetened light gas. The Ethane plus composites will be dispatched to the separating unit in Mahshahr for further treatment and the light gas will be injected into oil fields.

The associated gases of Aghajari oil field will supply 210 mcf/d of the feed of Gas-NGL 1800 plant and an additional volume of 60 mcf/d will come as its feed from the associated gases of Ramshir and Pazanan oil fields.

Petropars in the market for 2 jack-up rigs

Iran's Petropars has issued a pre-qualification tender for two jack-up drilling rigs for development project of phase 12 of South Pars gas field.

Pertropars said companies interested in being pre-qualified have until 20 January to submit proposals.

The two jack-ups will have to drill 36 directional wells for three platforms, from November 2007 to November 2010.

Drilling in water depths of 75 metres in the Persian Gulf, about 100 kilometres offshore, will be to depths of 3200 to 4500 metres, it said. The invitation comes as the National Iranian Gas Export Company (NIGEC) proceeds with selection of bidders for storage tanks.

NIGEC is the downstream client for the NIOC liquefied natural gas scheme based on the Phase 12 upstream development.

Petropars and NIGEC are proceeding with one of the country's three LNG projects, despite the failure so far to enlist support from foreign partners. Indian and Chinese companies may be brought in at a later stage.

Earlier, BG Group was negotiating for a partnership in the NIOC LNG liquefaction facilities, but was dropped by NIGEC about one year ago. South Korea's Daewoo Engineering&Construction has emerged as the low bidder at about $200 million in response to NIGEC's tender for five LNG and liquid petroleum gas storage tanks, according to MEED magazine. Clarification talks are said to be imminent.

The NIOC LNG project is scheduled to produce 7.5 million tones per year of LNG.

At Pars LNG, the second of Iran's three proposed LNG projects, France's Total was expecting bids for storage tanks at Tombak before the end of the year.

A basic engineering study is being completed in anticipation of a final decision to invest in the project by early 2006.

The third scheme Persian LNG involves Shell as the potential integrated developer.

A five-member consortium including Germany's Linde Engineering is in final talks with Shell to carry out front-end engineering and design work Linde, which is lined up to supply LNG technology for both the NIOC LNG and Persian LNG projects, said it is keen to dispel "totally unfounded" rumours that it has pulled out of Iran.

Iran remains "a key market" for all of Linde's products, said Thilo Schiewe, the company's vice-president for LNG and gas processing business development and sales.

North Pars basic engineering tender on the way

Akbar Torkan, the managing director of Pars Oil & Gas Company (POGC), revealed that the MDP of phase 1 of the project to develop North Pars gas field, to produce 1.2 bcf/d of gas, has been prepared.

Stressing that the project would be executed in three phases, each with the production capacity of 1.2 bcf/d,

chemical injection. Each will be installed to transport the raw offshore production from wellhead platforms up to the onshore gas treatment plant.

Onshore facilities:

One gas treatment plant of 2,000 MMSCFD capacity with gas and condensate processing units, LPG and Ethane extraction, utilities generation and distribution, general facilities and necessary buildings. After treatment, the lean gas will be sent to the domestic gas network, ethane gas to a petrochemical complex at the required specifications while maximizing liquid recovery as C3/ C4 LPG and stabilized hydrocarbon condensate and sulfur storage and recovery for export.

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