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Sarakhs-Jask Pipeline; Which Gas to Transport?

Iran's deputy petroleum minister for international affairs announced recently that the studies for construction of Sarakhs-Jask gas pipeline to swap gas with a possible capacity of 30 million cubic meters per day is under way. He added that "with completion of the studies, the executive engineering operations and construction of this pipeline will shortly be started".

It is worthwhile to address this issue due to its importance regarding Iran's vital position in the regional energy geopolitics.

Undoubtedly, the construction of such a pipeline - with a diameter sufficient for the gas volume mentioned and considering its approximate length of more than 2000 kilometers - requires a huge investment. And the period of return of its investment will naturally be very long. Such a huge investment can only be made when a minimum volume of gas for passing through the pipeline is guaranteed



economically within the framework of a valid international contract. It is unlikely that a mere initial debate with authorities from the three countries of Turkmenistan, Kazakhstan and Uzbekistan - pointed out by deputy petroleum minister for international affairs - will be sufficient to make such an investment.

In addition, even the conclusion of such a contract with these countries which lack long-term and well defined planning systems, does not seem logical. It will surely be required to conduct

necessary investigations with respect to issues such as the volume of reserves, investment capability for development of gas production capacities, the trend of domestic energy and gas consumption and also their previous commitments for exporting gas.

Based on the latest BP statistics year book, the three countries of Turkmenistan, Kazakhstan and Uzbekistan possess 1.5, 1.1 and 1 percent (totally 3.6

percent) of the remaining world reserves of gas respectively. While in 2007, the three countries produced respectively 2.3, 0.9 and 2 percent (in total 5.2 percent) of total world gas production. It shows that the ratio of reserve to production or the duration of the three countries' gas production is about 40, 70 and 30 years respectively. Considering these figures, it does not seem that there is a very large potential for more increase in the production of their gas at least with regard to the two countries of Turkmenistan and Uzbekistan. In addition, most gas fields in Turkmenistan which will be exploited in the future contain sour gas (with high sulfur content) increasing investment costs significantly.

Following disintegration of Soviet Union, the growth of domestic gas consumption in the three countries also experienced a growing and relatively accelerated trend.

In 2007, all the Turkmenistan gas (with the exception of the gas purchased by Iran amounting to about 6 billion cubic meters) was exported to Ukraine or Europe via Russia.

In the past, the Russian government was seeking to purchase gas with lowest price from these countries by taking advantage of existing limitations in the gas export routes from these countries. At present, however, this policy has to a large extent changed. Russia's distinguished position in European gas market and their monopoly on the network of Central Asia's and Caucasian's oil and gas transportation pipelines to world markets has currently more significance for the Russians. Thus, Russia has settled its previous differences over gas price with most regional countries. The Russians have taken advantage of their historical influence in these republics and their limitations to maintain its monopoly. Based on latest agreements between Turkmenistan and Russia, Turkmenistan has undertaken to sell 50 billion cubic meters per year of its gas to the Gazprom company or transfer the gas to Europe through this company.

Uzbekistan has also delivered half of its exportable gas to Russia in 2007 selling the other half to countries in the region. Also recently, Russia and Uzbekistan reached an agreement regarding the construction of a new pipeline to transport Turkmen gas through Russia to consuming markets. It has been mentioned in the agreement that the price of gas will be calculated based on the formula used for gas sale to Europe.

On the other hand, the construction of a pipeline with an approximate length of 2600 kilometer transporting Turkmen gas to Urumchi in the west of China via Uzbekistan and Kazakhstan, has been commenced in 2007. It is expected that it will be operational by the year 2010. Based on an agreement made between China and Turkmenistan, it was agreed to transfer to China some 30 billion cubic meters of gas per year from Turkmenistan via the said pipeline. But lately, a new agreement in Ashgabat was signed between Chinese prime minister and his Turkmen counterpart raising the volume to 40 billion cubic meters per year. And possibly a part of gas from Uzbekistan will also be exported to China through the same route. Some analysts believe that when the said pipeline becomes operational, Turkmenistan will not be able to fulfill all its commitments. And there is also a concern that the Turkmen reduce the volume of gas currently delivering to Iran.

In the era following Soviet Union's disintegration, intense rivalry started over the transportation routes of oil and gas from Central Asia to the world markets. The Americans have always opposed both Iran and Russia routes preferring the Turkish – Mediterranean route to the other two routes. However, the US success in this respect was limited (after 10 years) to the transport of Azerbaijani crude oil to the Ceyhan Port in Turkey in the Mediterranean. Of course, since Azerbaijan and Turkey have no common borders, the pipeline had to be passed through Georgia. The recent crisis in Georgia also presented a challenge to this

Reserve, Production and export of Gas by the three countries in 2007

Country	Reserve (trillion cubic meters)	Ratio of Reserve to Production (years)	Gas Production (billion cubic meters)	Gas Consumption (billion cubic meters)	Gas Export (billion cubic meters)
Turkmenistan	2.67	39.6	67.4	21.9	45.5
Kazakhstan	1.90	69.8	27.3	19.8	7.5
Uzbekistan	1.74	29.8	58.5	45.6	12.9

Source: BP statistical year book and calculations made by this writer

pipeline. But sending oil and gas from countries located east of the Caspian Sea to Turkey necessitated constructing pipelines through Iran or on the bed of the Caspian Sea. The Iranian route was neither favored by the U.S.A nor by Russia. And the Russians who gradually awakened from winter sleep - and pursuing increasingly the policy of exclusive control on transport pipelines - prevented the initiation of the plan to cross pipelines from Caspian Sea bed under pretexts such as uncertainty about the Caspian Sea's legal regime and the importance of environmental and marine issues. These rivalries continue today much more intensively than in the past. And it must be determined what political circumstances would benefit Iran. While the most transportation routes are controlled by Russia, the American and Western companies are in control of most plans and programs for development of oil and gas in these countries.

We must wait and see which challenge will be more important for the new US president and government: The new challenge which has occurred between U.S.A and its allies with the Russian government after Russia attacked Georgia or the old US challenge with Iran? Perhaps the Americans become aware of their geopolitical blunder that their opposition to transportation of central Asian oil and gas through Iran has practically opened the way for consolidation of Russia's monopoly on these routes

and consequently strengthening Russia's energy leverage in Europe.

But the next question is: if a part of gas resources of the three countries is to be transported from the Iranian route, will it be logical to transfer the gas to Jask despite all that was said?

Iran has the largest gas reserves in the south while the country's northern regions use most of domestic energy production. Iran can receive any volume of gas from these countries with much less investment costs and deliver equivalent volume from the south of the country or even in the Turkish border. Currently, the Turkmenistan gas pipeline to Iran has a capacity about double the current volume of this country's gas export to Iran. The deputy petroleum minister for international affairs emphasized in his speech that Iran's intention is to swap gas with these countries and not transit of gas. And this same issue increases the ambiguity regarding the need to construct Sarakhs-Jask pipeline. Even if the intension was to transit gas (which is of course not logical for a country in a position of Iran) it must be noted that plenty studies have been carried out in the past with respect to the transportation of Turkmenistan gas from the south of the Caspian Sea to Turkey. Also, the Europeans are determined to diversify the sources and routes of their gas supply. And especially following the crisis in Geor-

gia they have decided definitely to initiate the plan for the pipeline known as the “Nabucco Pipeline”. Won’t the said route be more logical?

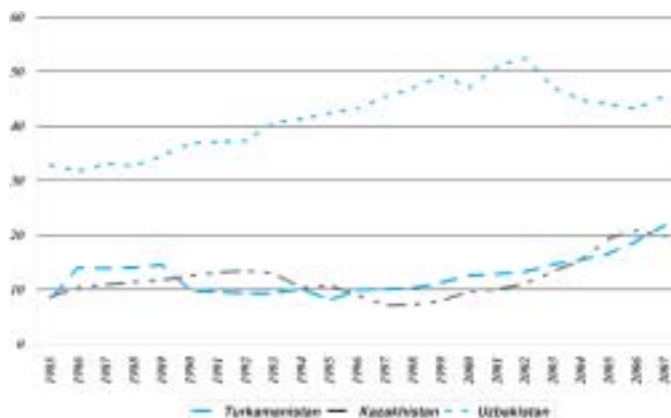
During the interview with the petroleum ministry’ official, the issue of a pipeline for transferring central Asian crude oil from Neka to Jask was also discussed. What has so far been said is mainly concentrated on the subject of gas. But there are also similar issues regarding crude oil and the mentioned pipeline. Among the three countries in question, only Kazakhstan is the main crude oil exporter. The other two countries lack significant oil reserves. Based on BP statistical year book which has recently been published, Kazakhstan produced 1.480 million barrels of oil per day in 2007 with a domestic crude oil consumption of 219,000 barrels per day. Therefore, this country has a significant crude oil export. Kazakhstan exported more than 1.2 million barrels of crude oil per day in 2007. The country transferred about 408,000 barrels per day to world markets through pipelines and Russia’s railway network. Kazakhstan also transferred about 620,000 barrels per day through the pipeline called CPC crossing Russian territory to Novorosysk Port on the Black Sea. Some 85,000 barrels per day have been exported to China through the west pipeline while about 70,000 to 80,000 barrels per day has also been transported to Neka Port in Iran via the Caspian Sea and delivered to the Tehran refinery through Neka-Rey pipeline. In fact, the crude oil delivered to

Iran has been in the form of swap. It means that an equivalent amount of this crude oil (after deduction of related costs) has been delivered to Kazakhstan or its customers. It should be noted that the Neka-Rey pipeline has been designed to transport 350,000 barrels per day of crude oil from Kazakhstan. Its capacity can be increased up to 500,000 barrels per day if the necessary pumps are installed. As was pointed out, at present less than one fourth of its capacity is under operation. The US pressures, the difficulties to transport oil from the Caspian Sea and the problem related to the quality of Kazakhstan crude oil which is not suitable for processing at Tehran and Tabriz refineries has been among the problems preventing to get more crude from Kazakhstan. The volume of oil production in Kazakhstan will continue to rise in the future years. And the partners in the Kazakhstan oil fields and especially the huge oil field “Kashagan” which will provide the most increase in future production are making efforts to establish a system of sea shipping to transport a part of Kazakhstan crude oil to ports in the republic of Azerbaijan via Caspian Sea. From there, it will be connected to Baku-Tbilisi-Ceyhan (BTC) pipeline. Taking more Kazakhstan crude oil by Iran necessitates the development of sea transportation route or construction of a pipeline to carry crude oil to Iran via Turkmenistan. Both cases will have their own complexities.

Anyhow, what is certain is that the recent crisis in relations between Russia and the West can provide a new opportunity for the Islamic Republic of Iran for taking advantage of its distinguished geographical position to transport central Asian energy resources. Undoubtedly exploiting this opportunity needs close cooperation between the country’s oil and foreign policy departments, formation of active oil diplomacy as well as presenting well-defined plans and proposals.

Director

gas consumption in central asian countries





World Economic Crisis and Its Impacts on Oil Market

Descending world oil prices simultaneous with occurrence of economic crisis in the world indicated that fundamental factors (mainly excess demand over supply) and lack of spare production capacities have been the most important factors influencing the increasing trend in prices in the past. In the “Views on News” published in the Eghtessad –e-Energy issue No. 103 (June 2008) titled “Continued Rise in Oil Prices; Wiping off Myth from Oil Market”, it was predicted that only the occurrence of a widespread economic crisis in the world could change the trend of oil prices. This phenomenon has now occurred.

The course of developments in the economy especially when it is on the decline is like a domino effect. This effect suggests that if a domino drops, it will cause all dominos to fall. The recent crisis has

in particular influenced both the consumption and production of goods and services especially in the largest economy in the world. The unprecedented crisis in the US banking system, bankruptcy of several banks and major credit institutions - with some other banks and credit institutions close to bankruptcy - as well as reduction in bank lending is a phenomenon hindering both new investments as well as the continuation of the current output. The falling output naturally means reduction in demand and energy consumption in the production of goods and services’ sector. But the crisis has not been limited to this sector. The very same crisis along with banking needs to quickly convert their assets into cash (including selling shares to meet their commitments) has caused a crash in the stock exchange markets. The crash in stock exchange markets is also mostly a

self-increasing phenomenon. Due to concern over its crash to a greater extent in the near future, all the stocks' holders try to sell their shares. Thus, the value of shares would drop even more since supply of shares would outrun its demand. On the other hand, in a society in which a part of most people's assets is in the form of stocks and the value of the public's other assets like housing had previously collapsed, an ever-increasing concern will grow with respect to the future. The consumers' confidence facing fall in the value of their assets would drop. As a result, in a consumption society the consumers would control their consumption reducing their demand for all commodities and services including energy carriers. Diminishing demand for energy carriers directly causes the reduction of the oil price. And the decrease in demand for other goods and services causes intensification of depression in the production sector aggravating the decrease in energy demand in the production sector.

The USA is the biggest energy consumer and consumer of one-fourth of the world oil. Based on the report released by the Energy Information Department (EID), the country's oil demand reached its lowest level in July compared to the same period during the past 11 years. According to the report, the oil consumption was reduced in July by 736,000 bpd compared to previous estimate and by 1,335,000 bpd compared to the same period last year.

The crisis of the crash of the banks and stocks' markets is not limited to the U.S.A. Meanwhile, the US is considered as the most important and biggest market for most major exporters in the world. Falling economic activities and especially decrease in demand and consumption in this country creates restrictions for markets in many producers in the world. China and India have had the highest potentials for the growth of crude oil

demand during the past years. Therefore, reduction of demand for crude oil will also be intensified if the dimension of the crisis also spreads to these countries – and especially china – reducing economic growth rate and production activities in this country.

If a comparison is made between an increase in world oil prices during the past years and the first oil shock, it will be observed that during the first oil shock the greater part of excess oil revenues earned by OPEC member countries (particularly Middle East countries) turned into demand for goods and services from the US economy. And it made a great contribution to the US economy. This time, however, the oil producing countries did not increase their demand for commodities and services to a great deal by learning from the negative experience of irregular injection of windfall oil revenues into their domestic economy during oil shocks of the 1970s. If they had done so, it was possible that the severity of the US economic crisis would have been reduced or such a crisis would be delayed.

The rush of traders and speculators to buy prosperous oil bourses (future oil markets) and an increase in future transactions was another factor responsible for a hike in oil prices in recent years. With a decrease in prices, it might be possible that the volume of these transactions also decrease contributing to more reduction of prices.

As it was mentioned, the decreasing trend of world oil prices will be intensified in case of continuation of the current economic crisis in the world. And it may be possible that such a trend accelerate further in case the crisis deepens.

The organization of OPEC and its members will most probably adopt a policy of output reduction proportional to reduction in demand which is of course unavoidable. However, it appears as though that such a policy will not have much

effect. Since firstly, reducing OPEC's oil output would mean that there is a spare production capacity. The lack of spare production capacities in OPEC during the past several years has been one of the influential factors for the rise of the prices. However, an increase in spare production capacities creates a kind of confidence in the market although it will physically reduce the supply. But it can create a kind of psychological confidence in the market causing the decreasing trend of the price to be intensified. Secondly, it might be possible that most OPEC members do not observe their reduced quotas because they have got used to high revenues during recent years.

It seems that some non-OPEC members like Russia, and many international oil companies are worried about the reduction of oil prices. Russian economy is severely dependent on oil and gas revenues (world gas prices are also following oil prices). Recent interest of Russia toward OPEC can be analyzed in this direction. Certainly in view of its particular condition, Russia will not seek permanent membership within OPEC. However, under prevailing conditions the country is prepared to establish more active attitude towards OPEC encouraging the organization to have more control on the market and output reduction. Russia will also cooperate with OPEC in this connection. If Russia is serious in this respect and in view of its influence in central Asian countries and its collaborations with countries of that region, it may be possible to also seek assistance of regional countries with itself and OPEC. The oil companies are also anxious about the price drops. The value of the shares of these companies has crashed in parallel with the crash in stock exchange markets along with other companies. The reduction of prices can cause further collapse in the value of the

shares and reduction of their revenues. Thus, it might be possible that these companies also establish indirect cooperation with OPEC.

It should not be forgotten that oil is an essential commodity having very low price tension with respect to demand. Thus, a tiny extra supply can cause prices to drop with much higher intensity. Countries dependent on oil should have more anxiety proportional to the degree of their dependence on the increased oil incomes during recent years. They must apply more rigid controls on their economies.

Meanwhile, it must be noted that the decrease of revenues in countries dependent on oil reduces demand for the import of goods and services from those countries. This will in turn contribute to intensifying worldwide stagnation.

Irrespective of the oil issue and the consequences of the current economic crisis on its market, this crisis will undoubtedly leave widespread repercussions and impacts on world developments and even the science of economy. Up to now, this crisis has also revealed many inefficiencies of the capitalist system. And most policies adapted to confront it, is an evident violation of the principles of the market policies. The slow down of the speed of the phenomenon of globalization is one of the possible consequences of this crisis. The speed of globalization of the capital, economy and commerce has not been proportionate to the speed of formation of the systematic and controlling international structures and institutions. This issue has made it hard to control crisis.

The recent crisis has also created splits in the European Union. The countries of this Union have employed policies – in contradiction with unity of monetary and financial policies of the Union - to save their economies. Intensification of the crisis can aggravate this split.

Russia Seeks Co-operation with OPEC

Russian President Dmitry Medvedev told the Organisation of Petroleum Exporting Countries (OPEC) secretary-general yesterday he wanted closer co-operation with the cartel, as Russian officials focused on falls in the price of crucial oil and gas exports.

"For our energy institutions, co-operation with Opec in forming energy policy is a key priority," Medvedev told Opec secretary-

general Abdalla Salem El-Badri, who was in Moscow before a meeting on Friday at which Opec is expected to cut output.

"Russia is also a major producer and exporter of oil and is interested in supporting stable, predictable oil prices," Medvedev said.

Earlier, the Opec secretary-general said he would not ask Russia, which is not a member of Opec, to join any arrangement to support prices.

"I will not ask Russia to cut production. I will request an

exchange of information about the situation on the market and the financial crisis," he said.

Newspapers and analysts said Medvedev's meeting with El-Badri and the gas producers' meeting in Tehran were signs of Russian concern that falling prices could damage the country's heavily oil- and gas-dependent economy.

The world financial crisis and falling oil prices had exposed Russia's vulnerability to banking problems, commodity prices and private sector debt, ratings agency Fitch warned yesterday. It said foreign exchange reserves of \$531bn left the state relatively well placed but that the indebted private sector and recent capital flight posed threats, although the rating was safe.



Iran, Bahrain to Establish a Joint Gas Company: NIGEC MD

For the purpose of exporting Iran's natural gas to Bahrain, the two countries should establish a joint company, says Reza Kassaie Zadeh, managing director of National Iranian Gas Export Company (NIGEC).

According to the news agency of Iran's oil ministry,

Kassaie Zadeh went on to explain the reason for his suggestion, saying: "Bahrain is about 250 km away from the South Pars and that is why export of Iran's gas to that Persian Gulf emirate needs some joint investment by the two sides".

He also disclosed that in the recent meeting with Bahraini authorities, the investment scheme, volume of gas export and sources of gas supply were

discussed.

Saying no gas pricing formula was set in that meeting, the NIGEC MD added: "Iran has a uniform 'base price' for its gas export to the neighboring countries. This price varies only on the basis of the distance of the recipient country from the source of gas supply".

Seemingly, Iran's oil minister will next be visiting Kuwait for talks on export of Iran's gas to that emirate.

CNPC is Keen on Major Stake in Pars LNG

China National Petroleum Corporation (CNPC) has expressed its interest in participating in the integrated operation of Total's South Pars liquefied natural gas project in Iran.

Chinese industry sources said CNPC and National Iranian Oil Company (NIOC) are negotiating terms to allow the CNPC to gain a majority stake in Pars LNG.

The discussions started a few years ago but were suspended as a result of United Nations sanctions over Iran's nuclear programme and Total's concern over the project cost.

"If it were not for the sanctions, the deal would have been concluded a long time ago," said one source familiar with the project.

NIOC reportedly is now keen to get the project off the ground by getting CNPC on board as the dominant shareholder, reducing the role of French company Total, which is under

pressure from its government not to invest in Iran.

Talks between NIOC and CNPC overseas business unit China National Oil & Gas Exploration & Development have been going on since early October after a visit by NIOC managing director Seyfollah Jashnsaz to CNPC.



IPI Gas Pipeline Project Can Become IPC: Pak

The Iran-Pakistan-India (IPI) gas pipeline project could become the Iran-Pakistan-China project in view of New Delhi's delay in joining the venture, Foreign Minister Shah Mahmood Qureshi said today.

India would be welcome to join the project whenever it chooses to do so but Pakistan could not delay the venture any further due to its growing energy requirements, Qureshi told a news briefing here after President Asif Ali Zardari's

just-concluded visit to China.

"The IPI project can become the IPC (Iran-Pakistan-China) project or even if it is the IP (Iran-Pakistan) project, China can invest in it," he said, adding the pipeline could feed energy-deficient areas in China bordering Pakistan.

Pakistan has been actively pursuing China to join the 7.4 billion-dollar project ever since India stayed away from several meetings held last year to discuss the finalisation of the pipeline. China has given no firm commitment on joining the project as yet.

Referring to talks held recently between Pakistani and Iranian leaders on the sidelines of the UN General Assembly in New York and in Islamabad, Qureshi said there had been a "qualitative change" in the project as the two countries had agreed to proceed bilaterally on the pipeline without waiting for India.

"As we are not prepared to wait for the third partner, we will proceed bilaterally," he said. "Iran and Pakistan will welcome India (whenever it chooses to join the project), but it has not reached the stage of making a decision."

UAE Tapping Gas Reservoir Shared with Iran

The project to develop the gas reservoir of Iran's Persian Gulf oil/gas field of Salman is at commissioning stage and will be coming on stream latest in six months' time.

Salman and the UAE's Abu-Al-Bukhoosh gas fields share the same reservoir, 70% of which was initially on the Iranian side. However, Abu-Al-Bukhoosh has been producing 540 Mln cubic feet of gas per day (mcf/d) for the past ten years, and the plan is to raise that output to 720 mcf/d in two years' time. Such volumes of gas productions will surely reduce Iran's share in the common reservoir.

Salman's gas output was foreseen to be exported to the UAE by end 2005, using the famous Crescent gas deal. The Crescent deal has since run into

complications and been bogged down.

Iran's Petroleum Engineering & Development Company (PEDEC) is currently constructing a 287 km long 36" subsea pipeline to carry the gas yields of Salman to Assalouyeh. This line is

expected to be ready for service by the end of this (Iranian) year.

When this pipeline is fully constructed, the gas output of Salman can at least be used in Iran, if the Crescent gas price dispute with NIOC remains unsettled even by then.



Kala Naft Tehran to Open Office in China

Ali Kayvanara, managing director of Kala Naft Tehran, said his company would soon be opening a branch office in China.

Kala Naft is a subsidiary of NIOC and is in charge of purchasing goods needed for Iran's oil industry.

According to the news agency

of Iran's oil ministry, he explained that the office would be used for purchasing the requirements of the oil industry and transferring the technology of parts to Iran.

In compliance with Iran's 4th Development Plan (Apr 2005-Apr 2010), all overseas offices of Kala Naft were earlier closed and only an office to replace them all was opened in Iran's Kish Island.

Kala Naft used to have representative offices in Britain, Canada, Japan and the UAE.

Establishment of Kala office in China represents a 'turn to the east' policy of NIOC for securing the parts and equipments needed in Iran's petroleum industry. The action should be seen in the light of the Western sanctions against Iran over the country's nuclear activities.

Iran Sees Consensus to Set up “Gas OPEC”

Iran’s oil minister said on Tuesday there was a consensus to set up a “gas OPEC”, after talks with his Qatari counterpart and the head of Russia’s Gazprom.

“We have made major decisions,” Iran Oil Minister Gholamhossein Nozari told a news conference, saying the three sides would form a committee of senior officials.

“There is a demand to form this gas OPEC and there is a consensus to set up gas OPEC,” he said.

Europe and the United States

Gazprom Chief Executive Alexei Miller told the same news conference: “We have decided to be in close contact and we can say that today a major gas troika was formed.”

Russia, Iran and Qatar are ranked the first, second and third biggest holders of natural gas reserves in the world.

“Surely this gathering of gas exporting countries is to give assurances over gas supply to the world,” Miller said.

Some analysts say any gas OPEC could be expected to share insights on upstream contract terms with investments rather than act on restricting gas supply as the oil cartel OPEC

Iran wants to turn the forum into a more formal organisation akin to OPEC, the 13-member grouping which makes output decisions that can sway the global oil price.

“This conference is a turning point to expand cooperation between Iran, Qatar and Russia,” Nozari said. “A committee will be formed from senior officials from the three countries.”

Miller said the committee would “review projects and implement joint projects. This will range from exploration, refining and selling gas”.

He said gas officials from the three countries would meet in Moscow, Tehran, Doha.

Qatar Energy Minister Abdullah al-Attiyah said: “God willing, in the next meeting of the gas exporting countries, they will affirm the establishment of the organisation.”

Russia, the world’s largest gas exporter, has hinted at its interest in the creation of an OPEC-style gas group, working with Iran, Qatar, Venezuela, Nigeria, Algeria, Egypt, Indonesia and Libya.

Russia’s former president and current prime minister, Vladimir Putin, has said the “gas OPEC” idea is interesting, but requires deep analysis.



have warned against such a grouping, saying it could pose a danger to global energy security and create room for price manipulation.

does.

Major gas exporters have met informally for several years at the annual Gas Exporting Countries Forum.

Iran, Oil and OPEC

Interview with the Governor of Iran in OPEC

Iran as a founder of the Organization of the Petroleum Exporting Countries (OPEC) and its second exporter has played an important role in the cartel. The political-economic role of crude and its impact on the other countries' economies have added weight to the subject. However, after over a quarter of the century, Iran has decided to replace its representative in the cartel which would probably culminate in reviewing policies. In an exclusive interview carried by Eqtesad-Energy with the newly appointed representative Mohammad Ali Khatibi, he has shed light on several critical issues.

What are representatives in the OPEC's board of governors tasked with?

Every OPEC member has three representatives in three different levels of the cartel and in charge of different tasks, while the one representing companies in the OPEC's board of governors is considered the most pragmatic. They hold the most high-ranking posture trailing the members' oil ministers. The representatives as members of the governing board hold all session and lead the secretariat. Unlike the secretary-general, head of the governing board is elected on a revolving basis. The board is responsible for making decisions over the financial matters, the costs, the

budget and the human sources. However, in some cases, OPEC ministers ponder the issue. The third-level representative links the country with the secretariat, assigned with participating in the cartel's sessions and conducting researches. Iran also won the accession to the executive board of the Riyadh-base International Energy Foundation (IEF) this year. Further-



more, Iran, lying on the world's second largest gas reserves, together with other gas exporting countries is finalizing a charter for the OPEC-style gas cartel.

Do you represent Iran at IEF sessions?

OPEC members are allowed to put forward other representatives in the IEF executive board rather than those who represent them in the OPEC board of governors, but they usually file same persons.

Is it the same with Gas Exporting Countries Forum (GECF)?

Those members of OPEC typically field their OPEC representative, but there may be exceptions.

Do you think if it is possible for the board of governors' members to take part as oil diplomats in dealing with other countries?

Subjects to be mooted at sessions have been formerly set up and they are mostly related to the secretariat. However, the members usually go under consultations with oil ministers before the meetings. Therefore, their stance over an issue illustrates their countries' viewpoint. They mostly facilitate OPEC ministers via their decisions: Members get to know each other better, thanks to consecutive sessions held by the board and several discussions over supply and demand, storage and etc are easily made.

Actually, national representatives (the members of the board) hand over their reports to the higher-level officials to inform them with other countries' point of view.

Does appointing you as the new OPEC representative signal a chain of changes in Iran's policies toward the cartel?

It is the oil minister and even higher authorities who set out policies, thereby a replacement does

not necessarily call for considerable changes.

Having a person ruled the body for a longtime, on one hand, made the system contingent upon the person. On the other hand, with assigning one from outside the system, it would be the system leading the person. But with picking up one who has grown in the system, you hit the target. He would even be able to reorganize subsidiaries, due to his knowledge over the system. So, they must be given chance to carry out their plans.

What are your plans for a better use of secretariat's potentials?

As an OPEC member, we are responsible for a part of the secretariat's costs. So we are entitled to benefit the facilities there. Although it is not possible for the research institutions inside the country to contact the secretariat directly, they may utilize facilities taken into the country. Furthermore, we have to establish better connections to the research centers in order to get to know their requirements better. Iran-OPEC ties are not confined to some figures, so we have to expand transactions with academic centers and universities.

Do you consider your responsibilities less than what others expect you to handle, due to the performance of your predecessors?

It is possible that former Iranian representatives delivered stance concerning their personal responsibilities and regardless their tasks in the cartel. Taking a look to the other members' representative, you may find some holding other jobs in unison; therefore, part of their standpoint favors their other posts not the cartel. All the same, some duties are purely related to the OPEC. For instance, when Mr. khalil shakil, head of OPEC ministers an-

nounces that the OPEC can not compensate the lack of Iran's production in the market, it may seem political to some people. That must be considered as an oil issue, oil is a political item though, according to which many political activities are being conducted.

Politics and oil share a common area with no demarcation. You may find such common in politics and economics more clearly.

What are the reasons behind the surge in the oil price in the past years?

Like other fossil fuels, oil will run out one day. The closer we get to the depletion, the more expensive the oil becomes. Currently, the world is at the peak of oil recovery with most of its reserves reaching the end. So it has to face high costs, difficulties in oil recovery and extracting from small newly-discovered oil fields. It is pushing the human being to replace fossil fuels. However, those consuming fuels are wrestling with high prices. The energy crisis has spilled over into food crisis. So we must recognize the real value of the fossil fuel and benefit its natural value. But the main reason lying behind the recent leap is the low prices during 80's and 90's. Besides, many of the current figures are

misleading, given the US dollar sliding. In 2003, the Euro was traded at 0.8 US dollar, while now you have to pay 1.6 dollars for the Euro. So the price of 140 dollars per barrel (dpb) is an equivalent of crude price in 2003 which was hovering around 70 dpb. Comparing to two decades ago, the crude price has increased solely 36 dpb.

Are the industrial countries still prone to the surge in crude price? Would it paralyze their economic growth like the sudden leap occurred during 70's?

Contrary to what happened those days, today industrial states have found out that they need the energy for their economic growth. Besides, members of the Organization for Economic Cooperation and Development (OECD) claimed the lion's share of the demand during two last decades. However, the story has changed in the past few years. Countries other than OECD's members such as China and India and the Middle Eastern countries have raised the global demand. While Asian economic giant China and the over-populated India have made 40% of the rise, and the same share has gone for the oil-rich Middle East, only 20% of the growth has been

caused by other countries. As it turns out, Asian countries, who are undergoing fast economic growth despite high prices, have given rise to the demand and as long as they are on the road of development, the global demand will not decline. This suggests the producers and the consumers collaborating on projects of increasing capacities. That would be better for the consumers to avoid interfering in the market, since any interference spawns higher price.



Are producers making better use of petrodollars than what they did in 70's?

If the producers do not utilize their oil revenues properly, they would loose once their oil reserves ran out. They have to invest their petrodollars so that they would be no longer subject to their crude. Countries such as Kuwait and Norway are undergoing such process; we have to follow the same way. Otherwise, we will squander our petrodollars. We must avoid overspending them for daily consumptions.

Energy Intensity Index is so high in OPEC members. Is it possible to optimize domestic consumption in order to increase exports?

To move toward optimization, development stages are important.

Since the OPEC members have just stepped into the road of development, high consumption does not sound extraordinary.

Developed countries have already passed all the stages. Mooting such issue in the beginning steps would hinder the process. Moreover, they have much higher per capita income, comparing to the oil producers, so we can not put the screw on our people for energy optimization. Although prices must be liberated and subsidies must be scrapped, we have to consider the per capita to carry out the procedure in a proper time span.

Is it possible to ward off the ensuing pressures on the people under the auspice of Energy Service Company (ESCO) and Clean Development Mechanism agreements?

No one disagrees with an economical solution without drawbacks for the people. For that



purpose, the country must be facilitated by essential state-of-the-art technologies; however, developed countries offer you their dated technologies. So we, ourselves, have to reach the technologies. We need research and development (R&D) units to operate as the heart of the industry. Having the R&D units marginalized, we will be technologically dependent forever.

What do think about the theory of leaving the OPEC?

We have to contemplate the issue and avoid absolutism. Once disadvantages outstripped advantages of its membership, we have to decide whether to leave or to stay. At the present time, it is beneficial for us to be a member of the cartel. In general, one benefits from moving in a group rather than alone.

Iran and the New Game of Oil and Gas

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Abstract

The significant growth in international traded oil and gas in recent years due to dramatic growth in global demand has been accompanied by a rapid expansion of transportation and distribution networks. Lengthy supply chains and growing interdependence underlie the growing geopolitical tensions relation to oil and gas. The geographical distribution of petroleum resources and the global pattern of industrialization have created an increasing separation between consumers and producers of oil and gas. Issues of physical supply of oil and gas become important because of this separation and indeed because of the need to transport oil and gas across international spaces (land and water) to reach consumers.

Related to these are key concepts such as transit, transportation and storage. There is a significant difference between oil and gas transportation. The transportation of gas by pipeline requires large fixed infrastructure raising a distinct set of questions about investment, and vulnerabilities that do not apply to large parts of globally traded oil market.

Today the world is encountered with basic structural shifts in global oil and gas markets that have made a new pattern of trade and new oil and gas geography. These evolutions are going to

form a new oil and gas game in the world that Iran with impressive oil and gas resources and specific geopolitics and geo-economics situation has a strategic role.

This paper attempts to describe the new features of this oil and gas game and the strategic role of Iran in this game. The paper shows that Iran has a high potential for increasing the oil and gas security of consuming countries specially Europe and at the same time producing countries especially in the Caspian region. But all of these opportunities available to these countries require a good and active cooperation with Iran in investment and technology.

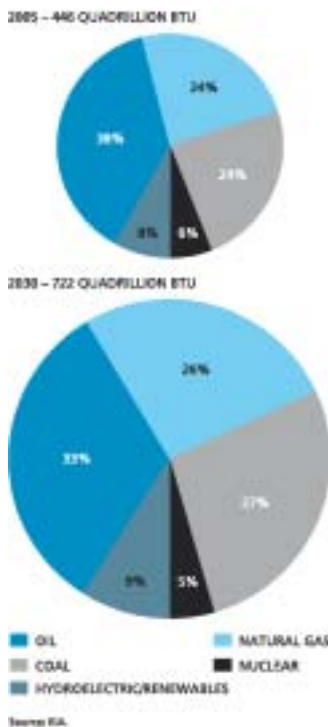
Introduction:

The literature on energy security reveals a wide diversity of meaning, reflecting different priorities and perspectives on energy and energy markets. As we have already noted, contemporary notions of energy security because of the difficulties in the formulation of a balanced energy policy that entails security, liberalization and sustainability goals – called the trilemma of three E³s- and at the same time emergence of the new players in the energy game refer to a much wider range of phenomena than those that gave content to this notion in 1970s.

The dramatic global energy demand growth that coincided with the emergence of new players as China and India and the reduction of the domestic energy supplies in energy consuming has changed the pattern of energy trade and bring about a large

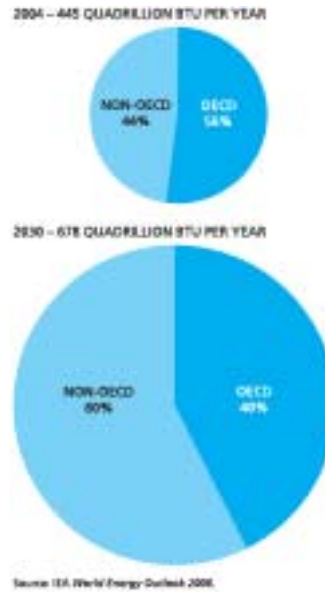
demand for the new infrastructure and facility to provide the required energy demand. Besides this happening in the demand side the geography of energy has changed from middle-east to a new axis as Saudi Arabia-Caspian-Siberia and Canada (SCSC) and new energy sources mainly Natural gas has emerged as a partial solution for the previous dilemma. Natural gas has a more diverse resources and low carbon emission in comparison with oil and according to the recent progress in the technologies that use natural gas such as combined cycle electricity plants it seems this energy source can inhibit a fraction of global oil demand. Regarding such a characteristics for natural gas the demand for it has increased in the previous years and reliable references predict that this trend of natural gas demand will be continued. Despite all this positive properties for natural gas the required infrastructure for natural gas supply has not developed enough specially in the transportation segment. This problem has raised the natural security challenge for the consuming countries and specifically Europe. These countries nowadays are trying to diversify their natural gas supply routes and importing countries to enhance their natural gas supply security. As it is stated in many documents, Iran has a strategic location in this regard. Iran has second largest natural gas reserves of the world after Russia and it is located in a geogra-

Figure 1.



tries and specifically Europe. These countries nowadays are trying to diversify their natural gas supply routes and importing countries to enhance their natural gas supply security. As it is stated in many documents, Iran has a strategic location in this regard. Iran has second largest natural gas reserves of the world after Russia and it is located in a geogra-

Figure 2.



Source: IEA World Energy Outlook 2006.

phy that has easy access to the east and west natural gas markets in Indo-china and Europe market. Iran has the broadest frontier with Persian Gulf that enables it to enter the promoting LNG market of the world.

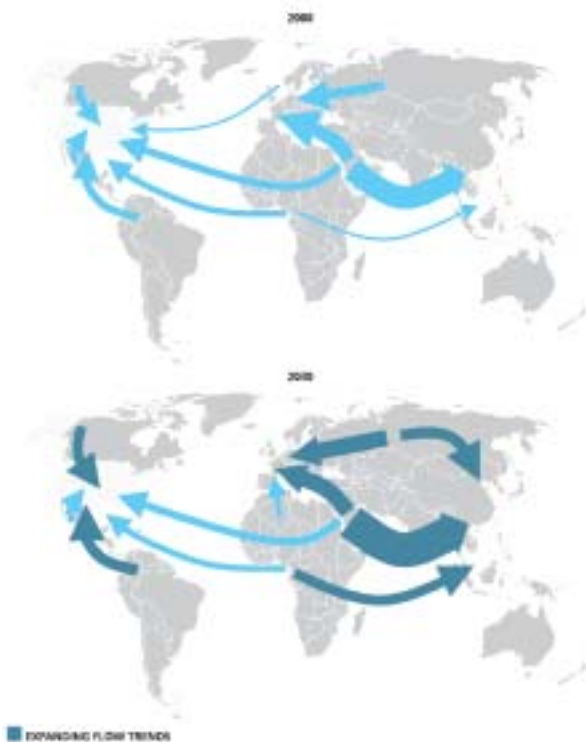
In this paper we are trying at first to examine the forces that are creating the new oil and gas

game. Then, we have highlighted the role of natural gas and its restrictions. Finally we have argued about the potentials of Iran to be a source and at the same time a hub for the natural gas trade in the world.

Dramatic Growth in Global Demand

Current forecasts are for continued increases in global energy demand and changes in the pattern of energy flows, with a decided shift eastward on the "world energy map" due to higher demand in Asia. To appreciate the scale and pace of demand expansion, consider that it took world oil demand 18 years (1977-95) to grow from 60 to 70 million barrels per day, but only eight years (1995-2003) to increase from 70 to 80 million barrels per day. If present projections prove accurate, demand could exceed 90 million barrels per day by 2010 and 115 million barrels per day by 2030.

Continued world population growth will lead to rapid increases in demand for food, housing, and other products and services that invariably require energy to produce and deliver. In addition, over a

Figure 3.

billion of the world's inhabitants currently have little or no access to the most basic forms of energy, an unsustainable predicament with potentially ominous consequences to the welfare of that population.

Most forecasts predict that during the next 25 years, the world will continue to rely essentially on the same forms of energy as it has for the past century—oil, natural gas, coal, and nuclear power—along with a broad range of renewable sources that includes solar, hydroelectric, biomass, and wind energy. Although global energy demand is forecast to double between 2001 and 2030, little change is expected in the relative shares of the major fuel sources (Figure 1) with over 80 percent of demand in 2030 projected to be met by fossil fuels.

Energy use in North America, which currently accounts for about 30 percent of worldwide consumption, essentially followed larger global trends. By contrast, greater reliance on nuclear energy in Europe slightly altered the total mix, with lower demand for

coal and natural gas. In developing countries, often the least able to afford or employ the best available technology, fossil-fuel use approaches 90 percent.

Given the long lead times necessary to develop and introduce new conventional fuel supplies and alternative energy forms, demand for fossil fuels (oil, natural gas, and coal) is expected to continue to dominate the global energy mix for at least the next two decades—absent radical changes in economic or foreign policies, environmental crises, terrorist or war devastation, or a major technological breakthrough.

The trend is particularly dramatic in the developing world. Both the International Energy Agency (IEA) and the Energy Information Administration (EIA) predict that developing countries in Asia, including China and India, will continue their current economic expansion, driving the doubling energy demand in the developing world by 2030 (Figure 2).

New Patterns of Trade

As demand rises in Asia, a new global energy picture is emerging that requires an increased focus on investment, transportation infrastructure, security, environmental, and geopolitical considerations, as well as a reevaluation of overall strategies by government and industry.

In the global oil and natural gas market, demand will continue to shift to emerging economies with growing populations. These nations will not only emerge as large energy consumers, but some will also control a large share of energy resources. At the same time, conventional oil and natural gas production in the developed world is declining.

The major regions of expanding production are the Middle East, West Africa, Russia, the Caspian Sea Region, together with a few areas where non-conventional production is rising (e.g., oil sands in Canada and extra-heavy crude in Venezuela). The three major consuming areas are North America, Europe, and Asia.

The growing need for transportation of energy between these areas raises important concerns over geographical “choke points,” both for oil shipments and, increasingly, for natural gas—whether delivered by pipeline or in the form of liquefied natural gas (LNG).

The most potentially congested, difficult, or dangerous transit passages, such as the Straits of Hormuz and Malacca and the Bosphorus, pose both security and environmental challenges (Figure 3).

As patterns of demand and transportation change, new regional and international, commercial and strategic alliances may emerge, marking the beginning of a “new game” in the geopolitics of oil and natural gas, in which different countries and corporations will develop new strategies and techniques to secure access to resources.

The new energy geography:

As the following changes occurred in the energy pattern, the world has encountered an important change in energy geography as well. The global energy landscape in the 20th century was dominated by two facts: supplies were concentrated in the Middle East and the Union of Soviet Socialist Republics (USSR), while demand was dominated by

North America and Western Europe. Over the past decade, a quiet but critical shift has been taking place. On the supply side, the center of gravity has shifted north, while revitalization of Russia’s oil industry and the intense development of the Caspian Sea’s energy resources. On the demand side, China and India are the major stories; their booming population and economies will have a tremendous impact on the global energy picture, as well as international relations, in the 21st century.

Over the last 15 years, the crude oil supply hub has expanded from more or less a single point—Saudi Arabia, at the heart of the Persian Gulf OPEC region—to the Caspian sea, Across Russia to the Siberia, and on to the Canada (figure 4) may hold the world’s largest oil reserves in the form of heavy oil sands estimated to total 1.7 to 2.5 trillion barrels (although it can’t be extracted at the same high recovery rates as conventional crude oil). Other areas also will continue to be strong sources of oil supply among them Iraq, West Africa, Brazil, Venezuela, Mexico and Argentina. But it is SCSC axis that will drive the energy of geopolitics in the 21st century.

This new energy axis becomes even more important in light of another shift in the energy marketplace: Natural gas, the clean fuel that is the key traditional energy resource today, will be increasingly important as the world moves toward more sustainable forms of energy, including solar, wind and other new and renewable sources. The inherent clean burning properties of natural gas with growth in long distance Liquefied Natural Gas (LNG) shipping make gas more prominent in the global economy while new energy sources and technologies are developed. Since the natural gas corridors of the 21st century follow a similar route to the SCSC axis, the importance of the axis is magnified.

Figure 4.

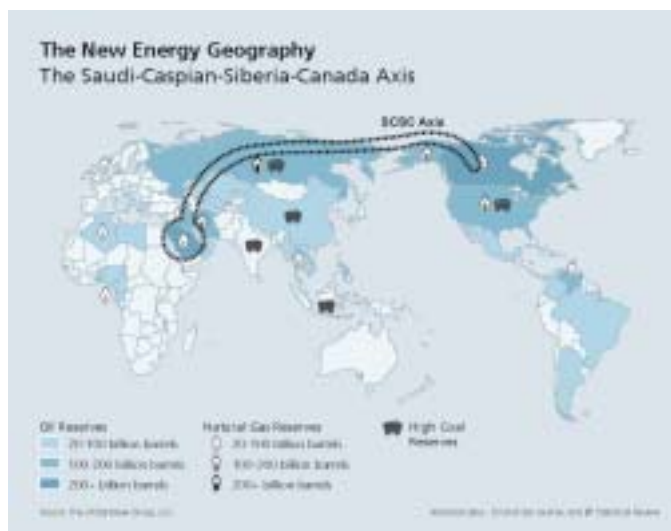
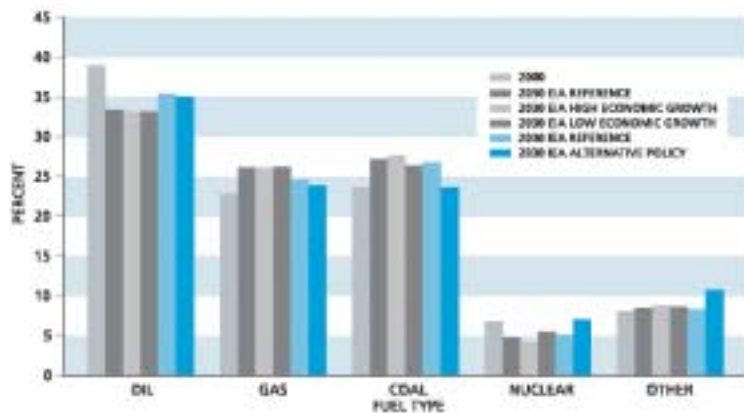


Figure 5.



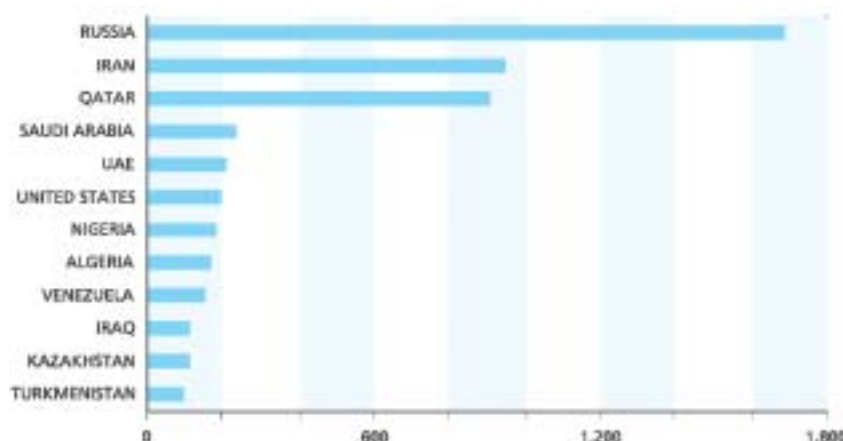
Natural gas significance:

Natural gas as a new energy source is going to have a significant share in the world's energy mix. Development of combined-cycle plants beside less carbon dioxide emission properties of this energy source made it a favorite source for many countries especially North America and Europe.

World natural gas demand is projected to range from 356 to 581 billion cubic foot per day in 2030, compared with 243 billion cubic feet per day in 2000. On the world basis, natural gas use is generally expected to gain share, while, oil use share is predicted to decrease (figure 5)

Current proved reserves of natural gas are concentrated in a few countries, with Russia, Iran, Qatar, and

Figure 6.



Saudi Arabia comprising more than two-thirds of the global total (Figure6). Of the 12 largest resource owners, 11 are outside the OECD, comprising more than 75 percent of global gas reserves. Such concentration raises issues about risks and the costs of developing and producing the reserves to meet growing gas demand.

Global gas production to 2030 is forecast to grow faster than the historical rate since 1980 of about 50

billion cubic feet per day per decade. These prediction shows average gas production of about 450 bcf per day in 2030.

But if we look at regional supply patterns some important trends can be derived.

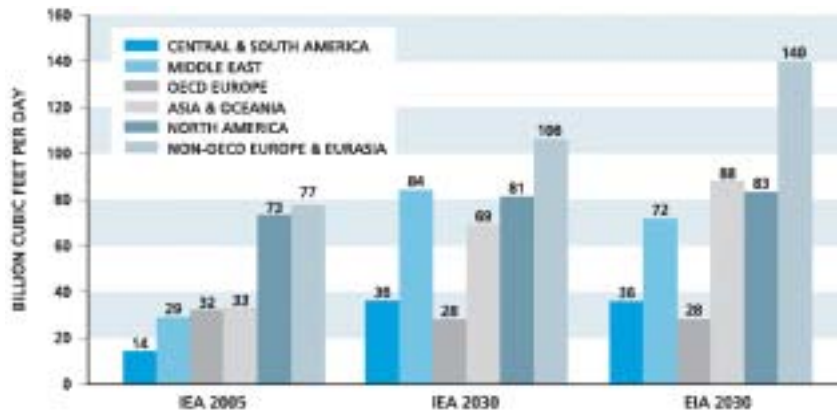
Regional supply patterns for natural gas are shifting. Forecasts show that production and exports from the Middle East, non-OECD Europe (Russia), and Asia (Australia) will increase substantially over the next 25 years, although in total Asia will probably remain a net importer of natural gas (Figure7). The United States and OECD Europe are likely to increase their dependence on gas imports, since most projections show continued growth in demand but flat or declining production in these regions.

Most growth in natural gas production is expected to occur in exporting countries.

Transporting the gas to consuming regions will require substantially increased investment in production and transportation infrastructure, particularly:

- Liquefaction plants in producing countries and re-gasification terminals in consuming countries for

Figure 7.



LNG.

- Long-distance, high-capacity natural gas pipelines.

Figures (8, 9, and 10) show the increasing importance of imports in the main OECD demand regions that were traditionally supplied from indigenous sources. Domestic supply in North America is expected to decline and then, possibly, to reach a plateau as unconventional resources (e.g., tight gas, coal bed methane, and shale gas) supplement domestic conventional gas production. Most forecasts assume that pipeline supplies from Alaska and the Mackenzie Delta will reach North American markets in the study time frame. However, projected demand growth will ultimately be met by increasing LNG imports.

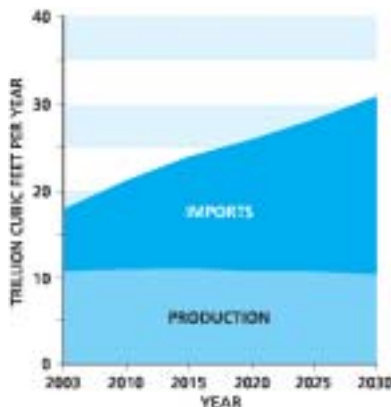
Domestic production in Europe is expected to be

flat or declining, with pipeline imports increasing dramatically, primarily from Russia and the Caspian region. LNG imports will also play a growing and more significant role in meeting Europe's gas requirements.

Unlike other major consuming areas, Asia Pacific is expected to see a significant increase in domestic production of natural gas. Much of this growth will be traded between producing countries such as Indonesia and Australia and consuming countries such as Japan and China.

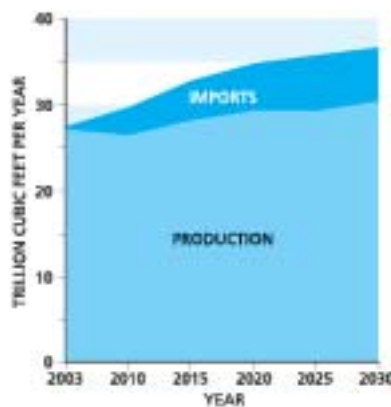
The region will also need greater supplies of LNG to meet about 30 percent of projected regional demand. Long-distance gas pipelines to Russian, Caspian, and Middle East supplies are also potential options. Considerable uncertainty surrounds the growth of natural gas production from mature areas as well as the timing of new projects in specific countries and regions. (Table 1) summarizes various challenges that may constrain gas production. They include restricted access to resources; uncertain investment and fiscal frameworks; requirements for high-capacity,

Figure 8.



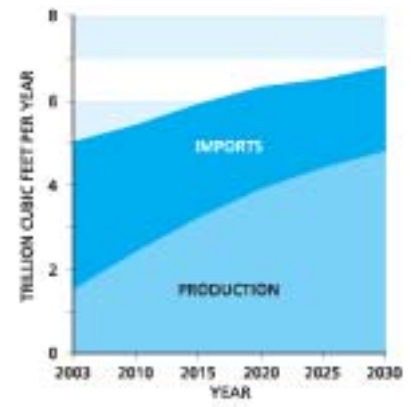
Data Source: Energy Information Administration (EIA), International Energy Outlook 2006.

Figure 9.



Data Source: Energy Information Administration (EIA), International Energy Outlook 2006.

Figure 10.



Data Source: Energy Information Administration (EIA), International Energy Outlook 2006.

Table 1.

		Geo-politics	Access	Investment	Infra-structure	People and Equipment
Large Producers	<i>Current Production (Billion Cubic Feet per Day)</i>					
Russia	~100	x	x		x	
United States	~ 50		x	x	x	
Indonesia	~ 10			x		
Production Growth	<i>2005-2030 Expected Growth (Billion Cubic Feet per Day)</i>					
Russia	+ 30	x	x		x	
Qatar	+ 15					x
Iran	+ 15	x	x	x	x	x
Nigeria	+ 10			x		
Australia	+ 10			x		

Note to Table S3B3: An x in any column means that the matter is problematic or open to question.

long distance infrastructure; shortages of skilled people; escalating costs and possible shortages of vital equipment; geopolitical tensions; development policies of major gas resource holders; and the time required to develop and deploy new technology. The challenges are dynamic and will have different combinations in time and place over the time frame of the study.

Considering investment alone, the IEA estimates that the required investment in natural gas supply will amount to \$3.9 trillion over the next 25 years. This figure includes large capital investments in Russia, Qatar, Iran, Nigeria and Australia to increase exports.

Russia, the largest regional supplier to Europe, will be challenged to meet European demand growth while initiating exports to Asia and supplying its large and growing domestic market.

The IEA projects that the Middle East and Africa will provide more than two thirds of global inter-regional exports. At the same time, the Middle East will see increased domestic demand. It will also need

natural gas to maintain pressure or enhance recovery in its oil fields.

Iran in the global gas trade

Gas is speedily turning into a valuable commodity. In the next 10 to 15 years, it will occupy such a strong position that the chief fuel in the world that it would be considered a substitute for the declining oil reserves. Gas will supply power plants and industrial and civil activities with energy.

Consequently, there will be an economically privileged position for gas owners in the world.

Today gas is seen as tomorrow's fuel. In less than 20 years, oil reserves will reach their lowest point, and the reserves of oil and gas will be put in a focal point to global perspective. This will bring about an exceptional advantage for states hosting gas reserves in their countries. The world will have to supply its demands for energy with the mentioned resources, leading to an approach that cannot be blissfully ignored.

Iran is located in the Middle East between two gas rich regions: Caspian region in the north and the Persian Gulf region in the south. More than 70% of the proven gas reserves of the world are in the Persian Gulf and the Caspian region, and half of the world's gas reserves are placed in Iran, Russia and Qatar. Gas reserves in the Persian Gulf region, particularly those in Iran, are in their beginning stages of production and the reserve-production ratio (R/P) for the region is 130 years, compared to that of the world's

66 years. This is in contrast with other gas reserves in other regions like the North Sea which are mature and are dying.

In this regard, Iran enjoys an added bonus by means of having the most extended marine frontier with the Persian Gulf and the Oman Sea, having free seas at hand and covering a vast geographical extension, while its main rivals are either too small geographically (e.g. Qatar) or are landlocked and have no access to free seas (e.g. Turkmenistan and Kazakhstan). The bonus enables Iran to benefit from the world's leading markets by contributing to 14.9% of the world's proven gas reserves (= 26.74Tcm) and 20.9% of the Persian Gulf and the Caspian region. The EU along with its gas-thirsty market and fading reserves from west of the country, in addition to India, China and Pakistan with their newly-developed economies, high energy consumption and meager gas reserves in its east, herald a potential market.

Iran and the European gas market

In 2005, the EU contributed to only 40% of its demands and the rest was supplied by overseas producers, 56% of which (151.3 bcm) came from Russia (Table 2). Using its domination over the EU, Russia has managed to create a monopoly in the market. In the recent two years, the country has employed its domination over gas in the pricing dispute with Ukraine and Belarus and has conveyed the message that in case of emergency it may take advantage of gas as a strong lever for putting pressure on the European states. Consequently, these states try to avoid total dependency on Russia's oil by locating new resources to meet their growing demands for energy. This trend, as far as gas marketing is concerned, has created a historic opportunity for our country.

Moreover, it should be noted that the EU's gas consumption growth is so high that it is estimated

that in the next two decades the dependency of the Union on gas imports will increase dramatically. In 2030, the EU would have to supply 81% of its demands by overseas suppliers. It is also estimated that in the same year, India and China, parallel to their high growth in demands, will be supplying 27% and 40% of their need via foreign imports respectively.

Iran and the Indochinese gas market

With regards to the geographical and population of India and China, these countries are considered the world's two biggest energy consumers. Economic growth of them will be one of the reasons to their energy consumption growth in the coming years.

The well known feature of natural gas as an environmentally-friendly fuel together with the rapid growth in population and economy of the aforementioned countries are the biggest motives to the growth in demand for natural gas. With high oil prices in the recent one or two years and low natural gas prices, it has become a reasonable source of energy in the recent years.

India and China's demand for natural gas in recent years has proved that despite their developed internal energy resources, they have to compensate for the confronting energy shortage by means of pipeline or LNG shipments. As a result, India and China will be considered two of the biggest natural gas consumers in near future. (Table 2) shows the supply and demand balance for natural gas in the

Table (2): Natural gas import dependency

	2004		2015		2030	
	bcm	%	bcm	%	bcm	%
Europe	214	60	333	49	488	37
China	0	0	27	73	56	67
India	3	92	10	81	27	70

Source: IEA (WEO 2006)

Table (3): Iran natural gas position in the world

	Proven reserve (tcm)	Production (bcm)	Consumption (bcm)	Export (bcm)		Import (bcm)	
				pipeline	LNG	pipeline	LNG
Quantity	28.13	105	105.1	5.69	0	5.8	0
percent	15.5	3.7	3.7	1.05	--	1.07	--
rank	2	7	5	16	--	21	--

Source: BP statistical review of world energy 2007

two states.

Iran has a privileged advantage in supplying of gas owing to its sea and land accessibility to Indochinese markets. In spite of all these potentials, Iran does not produce more than 3.1% of the world demand which equals that of England. It's interesting to note that the in-place gas reserves of Iran are 50 times more than those of England, 16 times more than those in Canada and 11 times more than those in Norway.

Iran, with 21.6% of the world's production in 2005, much less than Russia contributed the global supply. In the same year, Iran, producing 87bcm and consuming 88.5bcm gas (3.2% of the world's consumption), was a net importer (5.8bcm via the Turkmen pipeline). Meanwhile, Iran exported 4.32bcm of natural gas to Turkey and had no import or export of LNG in the mentioned period. (Table 3) shows the position of Iran in global production, consumption and reserves of gas. As can be deduced from the table, despite the fact that Iran is the second biggest gas reserve holder in the world, its production has not developed commensurate to its reserves. Considering Iran's exceptional condition due to restrictions and sanctions, it's not very surprising to see the country as the sixth biggest gas producer in the world. However, the high rate of consumption in the country makes Iran the 16th biggest exporter in the world and makes it a net importer.

As mentioned earlier, Iran with the huge potentials for supplying the required Natural gas of the

consuming countries is facing some obstacles that restrict its ability. These restrictions can be divided in two categories:

- 1- technical and financial restrictions
- 2- political restrictions

The cause of breeding such obstacles is mainly the external affairs and specially unilateral and multilateral sanctions imposed by the United States against Iran. Domestic issues such as policy failures and ensuing irregularities that lead to the high rage of natural gas consumption are notable in this regard. However, it seems that external problems have more weight than domestic ones. The external problems have made some political restrictions which in turn are considered the most crucial factors underlying financial and technical restrictions in Iran. The imposed sanctions have not only delayed the investment projects in oil and gas fields but had the worst effects on the development contracts. Nowadays, the lead time of the South Pars projects is much more than initial estimates. All of these factors give rise to increase implementation costs in terms of both capitalization and time. At first sight, the developments might appear beneficial for the consuming countries such as the United States and Europe; but considering mounting needs of these countries to natural gas and security of energy supply, the current trend will put them at a disadvantage in the long run. The less investment in natural gas sector of Iran due to external obstacles; the more disruption and insecurity evolve in the gas market

with the most significant effects on the consuming countries and specially Europe and the United States.

Conclusion:

As Professor Lester Thurow describes in his valuable book "The Future of Capitalism", there are some movements in tectonic plates of the energy world pressurizing the magma and evolving a new order. The dramatic growth in the global energy demand that coincides with a decided shift eastward due to higher demand in Asia and a quiet but critical shift in the energy geography toward a new axis as Saudi-Caspian-Siberia-Canada are influencing the traditional oil game and emerging a new oil and gas game. The most significant aspect of this game is the growing interdependency and, at the same time, lengthy energy supply chains.

The emergence of natural gas as a substitute energy source of declining oil supply that owns less environmental impact with comparison to oil has attracted many countries specially the developed and developing ones to invest in the production of natural gas. But there are some economic challenges and uncertainties facing the development of natural gas production growth in the world including restricted access to resources, uncertain investment and fiscal frameworks, requirements for high capacity, long distance infrastructure, shortages of skilled people, escalating costs and possible shortages of vital equipment, geopolitical tensions, and development policies of major gas reserves holders and the time required to develop and deploy new technologies. In addition to these economic challenges, there are some political challenges as well. The growth in the dependence of the developed countries to the imported energy sources especially natural gas has led to their vulnerability. The case of Russia and Europe is an evident witness to this issue. According to these economic and political chal-

lenges confronting the natural gas market, the developed and developing countries are trying to enhance diversification and flexibility of their natural gas supply sources. Therefore, access to new sources and routes for importing natural gas is the most important concern of the developed countries specially Europe.

The new situation of natural gas market shows that Iran has a strategic role in terms of geopolitics and resources for increasing the reliability of natural gas supply system of the industrialized countries, particularly Europe and Indochinese market. Some obstacles have restricted the abilities of Iran to play its decent role in the new order of natural gas market where cooperation from the industrialized countries, in terms of technology and fair ties are required. At the end, it is necessary to reiterate that natural gas supply and its ensuing problems do not specifically confront Iran but the industrialized countries face such problems as well. If these countries are interested in reliable gas supply dependant on Iran's capabilities, they had better enter a win-win game with Iran and try to leave political pressures from Iran's oil and gas industry.

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Endnotes

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Kazakhstan Set to Increase Energy Cooperation with Iran

Source: Trading Markets

KazMunaiGaz, Kazakhstan's state-owned oil and gas company, is charting a new course under the leadership of its new president, Kayrgeldy Kabyldin, who took over in August. Kabyldin is guiding the company toward closer cooperation with Iran, and he has made it clear that international sanctions against the Islamic Republic will not stand in his way.

Kabyldin — the third chief of KMG already this year — addressed the Kazakhstan International Oil and Gas Exhibition (KIOGE) in Almaty last week, where he said that “there are proposals from Iran regarding the shelf of the Persian Gulf.”

That suggestion of potential cooperation may have been a surprise for some, but it was only one

of the recent statements Kabyldin has made about Kazakhstan and Iran increasing their oil industry ties.

On state television last month, Kabyldin said “the Iranian route is a potential direction for transporting oil to the south” that “would allow us to reach the Persian Gulf and get access to the Asian market.”

The Russian newspaper “Nezavisimaya gazeta” on September 25 quoted Iranian Interior Ministry official Morteza Safari Natanzi as saying talks between the two countries were already being held to construct an oil pipeline from Kazakhstan to Iran via Turkmenistan. Natanzi reportedly said the oil could be pumped into existing Iranian pipelines to Iran's Kharg Island for export to Asian markets.

Bolat Auelbekov, an expert with Kazakhstan's presidential Economic Research Institute (ERI), told RFE/RL's Kazakh Service that a similar plan is already under negotiation.

Kazakhstan is “already in talks with Turkmenistan about the North-South project,” Auelbekov said. “Turkmenistan itself proposed the initiative that includes Iran, Kazakhstan, and Russia to join in a transportation route. But so far this plan centers primarily on railways.”

KMG officials have not confirmed any plans for building an oil pipeline south to Iran. But Kazakh Deputy Energy and Mineral Resources Minister Lyazzat Kiinov, speaking at the KIOGE conference, said there is an Iranian proposal for exchanging “oil and gas assets.”

Kazakhstan and Iran already have been exchanging



ing oil assets for a decade in a deal that even the U.S. government approves of, because it mostly benefits Kazakhstan. Kazakhstan ships oil via tanker across the Caspian Sea to the northern Iranian port city of Neka. In exchange, Iran delivers Kazakhstan's foreign customers crude oil of comparable quality, sending it to those clients from a Persian Gulf oil terminal.

Kazakhstan's business newspaper "Ekspress-K" on September 24 reported that KMG chief Kabyldin has acknowledged that current international sanctions complicate deals with Tehran. But he was quoted as saying "there are a number of Kazakh companies, not bound by these obligations, that are shipping their oil through Iran."

The ERI's Auelbekov agreed that an increase in the volume of oil involved in the swap seemed the most likely way of boosting Kazakh oil exports through Iran. "If we are talking about transporting our oil to the Persian Gulf, then that would be complicated. I think that Iran would insist, again, on the swap system," Auelbekov said. "Oil could be processed at a refinery that would be built in northern Iran and mixed with Iranian oil [in the Persian Gulf] for export."

Joint construction of a new refinery in northern Iran seems almost certain. The same "Nezavisimaya gazeta" article that cited the Iranian Interior Ministry official also reported that Kazakhstan and Iran were discussing building a new refinery.

Kabyldin was quoted in the September 16 edition of the Kazakh newspaper "Panorama" as saying there a proposal to build a refinery in Iran is being considered. He said KMG would look at a feasibility study that Iran is to prepare by the end of the year.

"Why not, if this is business and moreover, good business?" Kabyldin was quoted as saying. "If we can take part in this project we will have access to the Asian market and, currently, about 80 percent of Southeast Asia gets its oil from the Persian Gulf."

Some in Kazakhstan are against the idea of increasing cooperation with Iran for oil exports, such as Kanat Berentaev, a senior researcher at the Kazakh Civic Research Institute. "Kazakhstan already has two markets: the West via Russia and the Chinese market. We don't have enough oil to be exporting to another market," Berentaev said.

Maybe not enough oil yet, but estimates show Kazakhstan's oil exports could be 84 million tons by 2010 and 150 million tons by 2015. That would greatly exceed the capacity of the Russian and Chinese pipelines and the tankers that currently are landlocked Kazakhstan's means of exporting its oil to world markets. Even with the first Kazakh oil expected to be pumped into the Baku-Tbilisi-Ceyhan pipeline in the coming days, KMG needs new ways of getting oil out of Kazakhstan to foreign customers.

But Auelbekov cautioned that there are two drawbacks to the Iranian route that should be considered — the foremost being security. "Iran is also not the safest route. Iran is a sufficiently stable state but Iran has borders with two unstable countries — Afghanistan and Iraq," Auelbekov said.

The second drawback is the political entanglements Kazakhstan could wind up in if it goes ahead with such plans for Iran. "I think that naturally the United States and the West in general will, of course, be unhappy," he said. "Why? Because the Baku-Tbilisi-Ceyhan pipeline was built with enormous investment and great hope was placed in it as a guarantee of energy security. If this is put in jeopardy there will naturally be some [negative] reaction, political reaction."

As one further sign of the growing ties between Kazakhstan and Iran since Kabyldin took over at KMG, the first Kazakhstan-Iran investment forum was held in the Kazakh Caspian port city of Aktau at the start of October.