Eghtessad-e-Energy
Energy Economics

In The Name of God

Dec2011-Jan 2012 / No.145- 146

Published by:
IRANIAN ASSO - CIATION FOR ENERGY ECO-NOMICS
(IRAEE)
ISSN 15631133-

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Articles on Oil & Gas in the English section,
in cooperation with IranOilGas.com

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Challenges Ahead of Ban on Oil Imports from Iran- Consequences

Saeed Khoshro

The question of banning oil imports from Iran has escalated more than in the past. Under US pressure, the European statesmen are pursuing to curb Iran's oil revenues and thus press the nation's economy, however, there resides skepticism whether or not Europeans can afford banning import of oil from Iran insofar as quantity, type and export destinations are concerned. For a host of reasons, implementation of this policy is going to be faced with a serious road spike:

1- According to the US Energy Information Association (EIA), Iran exported an average 2.5 million barrels of oil and gas condensates a day last year. Less than 7% of these products were supplied to the European states which are members of International Energy Agency (IEA). China and India in the east, purchased a total of over 65% of Iran's oil, thus, Iran is not seriously dependent on the European markets in terms of oil exports. Demand in the European oil market has proved to be subsiding. For instance, according to an IEA forecast, Europe's daily demand for crude in 2012 is expected to experience a fall of 300 thousand barrels. Turkey, Italy, Spain and Greece import a daily 196, 161, 185 and 103 thousand barrels of oil from Iran respectively and constitute Iran's major European light crude importers. Turkey which imports over 30% of its oil requirements from Iran has already finalized a contract for the purchase of crude from Iran in 2012 while other European states are following suit. Various refineries consume a specific type of crude and for that matter, in case they have to shift to a different source of crude feed, matters such as light, heavy, sweet and sour nature and quality of crude should be taken into consideration by any given refinery. Add to these other impurities that are contained in crude oil. In case of such a shift, refineries need to be fed with a blend of various crude qualities.

2- Iran's light and heavy crudes (produced in Soroush and Norooz fields as well as Forouzan blend) constitute

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Iran's major oil products mainly supplied to markets in the east. Iran's heavy and light crude API marks 33.4 and 29.6 and a sulfur content of 1.4% and 2% respectively. Should consumers plan to compensate for the shortage resulting from ban of oil imports from Iran, they need to have access to the kind of crude with specifications that are similar or at least close to the Iranian crude. Even if Saudis manage to increase their production, the quality of their crude is such that it will fail to make up for the Iranian oil. Heavy crude constitutes over half of Iran's oil supplies while the share of light crude is less than 35%.

This is under circumstances that Saudi Arabia's surplus production comes in the form of extra heavy crude. This type of crude can compensate for the crude oil produced in Iran's Soroush and Norooz oil fields and that does not exceed 110 thousand barrels per day. It will take Saudis a period of six months to utilize their surplus production capacity which is 1.5 million barrels of oil a day. For this purpose, Saudis need to operate oil fields which have not gone into operation to this date.

Saudi Arabia is utilizing all its capacity for the production of light, medium and heavy crudes. The latter's crude API is close to 33.6 and a sulfur content of about 2% which is similar to Iran's light crude in terms of quality. Medium crude has the largest share in Saudi Arabia's oil production. This type of oil is almost comparable with Iran's heavy crude, however, Saudis are not in a position to be able to add up to their production of this type of crude. That is the reason why Saudis' surplus production is unlikely to pose a threat to Iran.

Average Volume of Oil Imports from Iran (first nine months 2011)

Country	Quantity (1000 barrels)	Share of Total %	Share of Iran's Exports %
France	53	3	2
Germany	15	1	1
Greece	103	30	4
Italy	185	13	7
Spain	161	12	6
Turkey	196	29	8
GB	11	1	Scant
Total IEA member states	792	7	31
Total Asia/Pacific	555	6	22
Total IEA member states	1347	7	53
China	555	6	22
India	310	9	12
Total Asia	1655	5	44
Total world	2527		100

3- OPEC's reported 4 million barrels in surplus crude production per day is subsiding. According to an EIA report, OPEC member states' sustainable production capacity is less than 35 million barrels a day whereas OPEC's current production approximates the figure of 30.7 million barrels a day. Meanwhile, for some time now and due to discontinued oil supplies from Libya in the recent past, Saudis' production jumped significantly marking a record high of 10 million barrels a day in November 2011. OPEC's total production including that of Iraq reached to a total of 30.7 million barrels a day, insufficient to saturate the market and as a result crude stocks dropped. The US's crude stocks last week dropped by 10 million barrels and came to 328 million barrels. OECD member states' total stocks showed a slump of over 36 million barrels and fell to as low as 2.6 billion barrels enough to cover their crude requirements for 57 days only compared with the world's 60 day benchmark.

4- Demand for oil in the US and Europe has subsided due to economic downturn in those states. For instance, demand for oil in Europe in 2010 approximated 15.3 million barrels a day while this figure did not go beyond 15 million barrels a day in 2011 and is expected to drop to 14.8 million barrels a day in 2012. This is under circumstances that global demand for oil jumped from 88.3 million barrels a day in 2010 to 89 million barrels a day in 2011, a figure which is expected to climb to 90.3 million barrels a day in 2012. Share of China and India of globally climbing demand levels has been highest. China consumes 10 million barrels of oil and imports 5.5 million barrels a day. Chinese officials are well aware of the fact that through banning import of oil from Iran, no harm will be done to the US or Europe, for they are almost independent from Iranian crude supplies, however, China, India and the East market as a whole will have to look for other sources to compensate for the gap in oil supplies as a result of Iran's withdrawal from the market. Thus, the likelihood exists that the West may fail to convince the eastern consumers of crude to close their eyes to such a rich source of energy.

5- Non-OPEC production of crude has reached its peak and does not appear to be able to maintain its contribution to the global oil market. Non-OPEC production in 2011 increased by only 100 thousand barrels a day and touched the figure of 53.4 million barrels. For some time now, Russia has introduced itself as the world's leading producer of oil. Russians who produce 10.2 million barrels of oil a day, are doing all in their might to boost production, however, they are not expected to be able to do so in the short term. Domestic consumption of oil in Russia is on the rising significantly. Production of oil in the North Sea and Brazil is experiencing some impediments. For instance, Mexico's oil exports in November 2011 fell by 14.9 percent compared with the similar period of time in 2010 registering 1.4 million barrels a day. The same is true in the case of other non-OPEC producers of oil and the world is unable to rely on the non-OPEC producers. Additionally, political unrests can leave adverse effects on production in the non-OPEC oil producing states. Popular protests in Kazakhstan and Russia is an example. Unrests still continue in Syria and Egypt leaving an impact on oil market.

6- Typically, Iran sells 95% of its oil based on long term agreements at the beginning of each year and majority of European companies have so far finalized their agreements with Iran. European buyers are obligated to extract the specified quantities of crude in accordance with the terms and conditions stipulated in such agreements. Assuming that sanctions will work in the short term, what will be the fate of oil market like? The ever growing markets in the east have encouraged suppliers of oil to increase the share of these markets of their production. Markets in Asia are prepared to welcome the oil cargos which are likely to be rejected by the west. Under critical conditions however, some discount may serve to be an appropriate incentive for the consumers of oil.

Boycott of Iranian oil by the west will drastically impact pricing structure of various types of crude. In the first place, the western market is likely to experience backwardation. Meantime, oversupplies are expected to undermine Asian market compared to the European one.

Another scenario would be that difference of heavy and light crude prices will reduce in the West but jack up in Asia in which case arbitrage will be practiced in Europe instead of Asia. The result is clear. Iran's oil will be supplied to Asian market and other crude types from the Middle East region will be shipped to the European market. It is just shift of markets.

Crude Oil Cargos Shipped Through Hormoz Strait

	Volume State (million b/d)
Saudi Arabia	5
Kuwait	5/1
UAE	9/0
Iraq	7/1
Qatar	6/0
Total	7/9

7- Excluding Iran's oil, over 10 million barrels of oil produced in Saudi Arabia, Kuwait, Iraq, UAE and Qatar are shipped to overseas market through Hormoz strait every day. To the above figure should be added a daily 1 million barrels of gas condensates and oil products such as naphtha, fuel oil and gasoline. Qatar and UAE export 76 and 8 billion cubic meters of LNG through this waterway each year. Any threat posed to this strait will entail drastic surge of crude and natural gas prices in the market and that is the least danger menacing global economy. The psychological effect of such an event is way beyond its physical impact.

According to Yuhan Benini institute's forecast, such an incident will submerge global economy into such a state of recession that demand for oil will slip drastically and within a period of only five years, demand will drop by 4.4 million barrels a day. A tragic situation that global economy will not be able to handle or tolerate.

Iraq is expected to increase production in the medium term. Currently Iraq is producing close to 3 million barrels of oil per day. Three months ago, Iraq was hardly able to produce 2.6 million barrels of oil a day. Even if half of Iraq's oil field development plans go into effect, the region's economic, political and security balance will be jeopardized. This is under conditions that Libya is about to retrieve production records of the past and there is surplus production in the LNG market.

Imposition of a comprehensive oil embargo on Iran shall in the first place impact the growing economies of China and India and of course Japan to some extent. And Americans appear to be in favor of such a trend under current economic situation in the world.

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Qatar, Leading Producer of LNG and GTL in the World

It was only recently that the Emir of Qatar officially inaugurated the world's largest GTL plant known as Pearl GTL project. In this manner, Qatar which had already established herself as the world's leading producer of liquefied natural gas (LNG), this time turned into the world's leading producer of GTL (gas to liquid) products. Pearl has proved to be Qatar's largest energy project which has significantly boosted the latter's ability to extract gas from South Pars natural gas field which is shared by Iran and Qatar.

Pearl project which has been implemented jointly by Qatar's state run oil company and Shell is an integrated upstream to downstream project and ranges from drilling of wells in the Northern Dome field in Qatar to the production and loading of such products as natural gas and gas condensates and liquids. No precise reports have been released concerning the quantity of natural gas which is extracted here, however, Qatari government and Shell have put the volume of condensates produced in this project at 120 thousand barrels a day. This figure is suggestive of the fact that 75 to 80 million cubic meters of natural gas is produced here each day which approximates production capacity of three phases of South Pars. The natural gas extracted from this field is converted to gas oil and petrol in a GTL refinery.

What is GTL and how Significant the Technology is? Gas to liquid (GTL) is a technology employed for the conversion of methane to oil products. This technology is significant due to the fact that without it, natural gas cannot be converted to oil products. In fact, in the absence of this

technology, natural gas cannot replace crude oil. Crude oil has no direct applications, however, when refined, it produces a host of useful products with applications in industry, heating, transportation and generation of electricity and for that matter, crude oil maintains its critical role in the world's energy market. Oil prices serve to be the index for the pricing of gas. As a hydrocarbon fuel, natural gas is closest to crude oil and has replaced some oil products but not all. In the transportation industry in particular, gas oil and petrol maintain their unrivalled role but natural gas still lags behind the latter two. Currently, transportation sector consumes over 70% of the world's crude oil. Improved GTL technologies are likely to magnify the status of natural gas.

Qatar's recently launched GTL refinery which enjoys a remarkable industrial capacity is expected to bring about a historical evolution in the energy sector and compete with crude oil. Thus, with the spread of this technology worldwide, the prospects of natural gas market in future are bright and rewarding. Products derived from GTL process are high quality, more environment friendly and at the same time produce less emissions compared to similar oil products. GTL products such as gas oil and petrol are not supplied to markets directly rather, they are blended with similar oil products to boost their quality.

History of GTL GTL technology is 90 years old. In 1923, two German scientists i.e. Fischer and Tropsch managed to invent a process for converting gas to liquid products (FT process). However, that process lacked efficiency and the products thus produced were devoid of sufficient thermal value. Numerable technical impediments were as well associated with the process. The technology was developed during the 2nd World War when the Allied initiated to prevent supply of fuel to the Nazi Germany's military fleet. It was then that Germany and Japan employed GTL technology. Hitler and his agents mobilized chemists and chemical engineers to utilize methane gas extracted from coal mines and convert it to liquid fuel needed by their war machine. However, this technology still could not be commercialized. In the 1960s, UN oil embargo of the Apartheid regime in South Africa blew life into GTL technology one more time. The German engineers and specialists who had sought refuge with South Africa constructed two GTL refineries each with a capacity of 22500 barrels per day in that country. South Africa's SASOL became the world's leading producer of GTL technology. Then and there in South Africa, coal was abundantly available and therefore, coal to liquid (CTL) technology was deployed for the production of gas oil, petrol, etc. Though the process was not economically feasible, the Apartheid regime now under sanctions had no other alternative but deploying CTL technology to produce fuel. Since then and until 1990s many leading oil companies invested in GTL and FT process and conducted widespread research works.

And many companies are currently making use of pilot GTL units for research purposes. Amidst all these efforts, Shell Company took the biggest strive in 1993 and set up a gigantic GTL unit with the capacity of 12500 barrels a day in Malaysia. The plant was closed down until 2000 after an explosion occurred in it in 1997. Shell kept confidential any information concerning reasons underlying that explosion. In 2000 however, the plant was put into operation again. Oil products comprise 50% of the said plant's products while normal paraffin and wax constitute the remaining 50%. 100 to 120 million cubic feet of natural gas is injected into the plant each day.

A few years ago, the government of Qatar in partnership with SASOL Company constructed a 34 thousand barrel capacity GTL plant inclusive of two units each with a

capacity of 17 thousand barrels. One unit has already been commissioned and gone into operation. Low efficiency is an impediment in the way of GTL technology to become economically feasible. Of every one hundred thermal value which is injected into GTL process in the form of gas, less than 50 units of product is produced-thermal value wise. Shell, however, claim that they have boosted the degree of efficiency of this technology to 86% of which 70% appears in the form of oil products and 16% in the form of potable water. FT process takes place in the presence of oxygen where hydrogen is released as a result of the reaction. Combination of hydrogen and oxygen produces water. The water thus produced is much cheaper than the water produced in desalination units since such units consume much electricity. GTL process is more feasible and economical in countries such as Qatar where huge volumes of energy should be consumed to run desalination units and produce potable water. Shell claimed that Qatar's GTL plant construction cost is comparable with that of oil refineries. Several other GTL project agreements which had been signed between Qatar and leading oil companies were waivered following skyrocketing jump of oil prices worldwide in 2004 when cost of investment in oil industries almost tripled.

Promotion of Qatar's Standing in Global Energy Industries Relying on its rich oil and natural gas reserves, Qatar plays a key role in the world's energy industries and is home to the secretariat of CGEF. World's Petroleum Congress (WPC) was convened in Qatar for the first time recently. Qatar has meantime started investing in upstream and downstream oil sectors in other parts of the world and registered herself as the world's leading producer of LNG and GTL products.

Since putting into operation of this project, production of light oil products by Qatar has increased by 260 thousand barrels. The value of this volume of light products is comparable with over 300 thousand barrels of crude which is pumped into oil refineries and compensates for the shortage resulting from drop of oil production in Syria and Libya.

GTL technology and basically all technologies which have to do with the conversion of natural gas are vital and strategic for our country which is host to over 17% of the world's overall natural gas reserves, however, no comprehensive plan has been formulated so far in this area of industry in Iran. Inconsistent measures have been taken for the deployment of this technology in the past, but none has been sustainable.

Qatar extracts its export gas and half of her crude oil from the fields that are shared by Iran. Qatar has made multibillion dollar investments in the area of exploration, production and conversion of oil and natural gas. Likely pressure drop and production cut in these shared fields comprise Qatar's main future concern and for that matter, the government has already postponed new projects for the development of gas fields.

Under such circumstances, the likelihood does exist that Qatar may spend a portion of those billions of dollars in order to protect these fields and impede the rival.

Editor in chief

Iran, Saudi Arabia agree to develop shared gas field

"Iran and Saudi Arabia have signed an agreement on the methods to develop 'Farzad A' shared gas field in the Persian Gulf," said Rostam Qasemi,Iran Oil Minister, on Friday.

According to the IRNA, Qasemi added: "The two sides will also sign another agreement next week for developing 'Farzad B' and Arash gas fields.

Speaking to the reporters in Assalouyeh, he added that the oil ministry has made comprehensive plans to accelerate the development of joint oil and gas fields in the Persian Gulf, the report added.

Iran is presently producing 240,000 bpd of oil from its shared fields which is expected to reach 950,000 bpd by the end of its 'Fiver Year Development Plan' (2011- 2016).

According to NIOC officials, contracts would be signed for all Iran's shared oil/gas fields this Iranian year (ending March 2012) so that none would be left unsettled.

Baba-Habib development plan likely on NIOC's agenda

Mahmoud Mohaddes, director of Exploration Dept. of National Iranian Oil Co. (NIOC), pointed out that the details of the discovery of a new gas field in the south of Iran would be announced by the oil minister in near future.

Mohaddes added: "The details of the discovery of two other new fields will be also announced -as promised- by the end of current Iranian year (March 2012)."

"A total of 5 fields have been discovered, two of which are oil layer of Khayyam gas field and Madar gas field," added Mohaddes.

Stating that some $ 435 Mln has been so far invested in discovering new hydrocarbon fields this year, he pointed out that this amount was $ 420 Mln last year.

He continued: "In the first 9 months of this year, 1190 km of 2D and 1,031 sq km of 3D seismic data acquisition, 29,460 meters of exploratory drilling and drilling of 6 exploratory wells were carried out."

"There are presently 11 drilling rigs active in drilling exploratory wells in Iran, 10 of which are busy at border areas."

"We have also started drilling an exploratory well in Korand region (between MinooDasht and Gonbad Kavoos) in Golestan province in North-east of Iran, where there is a possibility of existence of oil and gas reservoir. But, we believe more gas reserves exist there."

Based on the results of the seismic data acquisition carried out, the location for a well has been spotted at Moghan hydrocarbon block, the drilling tender for which will soon be held.

Since the contracts for Danan and Dayyer hydrocarbon blocks were signed before imposing sanctions, the contractors are subject to fulfill their task, special arrangement for which are underway.

"Baba Habib oilfield was discovered in Kouhdasht hydrocarbon block in Lorestan province and the development plan of which was placed on agenda," continued Mohaddes. "However, since the terms and condition of the development contract with the exploration contractor of the block seemed not to be profitable for either NIOC or them, it was not signed. Yet, NIOC believes its development to be economically justifiable and intends to put development of Baba Habib oilfield on the agenda again."

Asian economies look to keep Iranian oil flowing

China, the biggest buyer of Iran's oil, has publicly rejected U.S. sanctions aimed at Tehran's energy industry while American allies Japan and South Korea are scrambling to find a compromise to keep critical supplies flowing.

Beijing is buying less Iranian crude this month, but analysts say China is unlikely to support an oil embargo. Instead, they say, the smaller purchases might be a tactic aimed at obtaining lower prices as the West squeezes Tehran.

The sanctions approved by US on New Year's Eve have highlighted the importance of Iranian oil supplies to East Asia's energy-hungry economies. They have led to a clash of interests between Washington and key commercial and strategic partners over efforts to stop Iran's nuclear program.

"We are considering our response and are closely discussing the matter with the U.S.," a Japanese Foreign Ministry official, Kazuhiro Kawase, said Friday.

A South Korean foreign ministry spokesman said this week Seoul is in talks with Washington aimed at "minimizing the negative impacts" of sanctions. South Korea imports 97 percent of its oil and depends on Iran for up to 10 percent of its supplies.

China's foreign ministry rejected the sanctions this week and called for negotiations, leaving unclear whether Beijing might defy Washington, straining relations between the world's biggest and second-biggest economies.

EU agrees in principle to ban Iran oil import

European Union governments have reached a preliminary agreement to ban imports of Iranian crude to the EU but have yet to decide when such an embargo would be put in place, EU diplomats said on Wednesday.

Diplomats said that EU envoys held talks on the issue in the last days of December and that any objections to the idea, notably from Greece, were dropped.

"A lot of progress has been made," one EU diplomat said, speaking on condition of anonymity. "The principle of an oil embargo is agreed. It is not being debated anymore."

6th Iranian oil, gas and petrochemical exporters' conference next week

'6th Annual Conference of Iranian Oil, Gas and Petrochemical Exporters' will be held in Tehran on 10th of January 2012.

This conference aims to strengthen the private sector presence in Iran's bunkering, crude oil and oil products' swap and transit as well as offering means to develop bank and insurance infrastructures in oil products trading, reported the Fars news agency.

In a press conference, Hasan Khosrojerdi, head of Iranian Oil, Gas & Petrochemical Products Exporters' Association, stated that in the first 7 months of the current Iranian year the Association has $11 Bln of $ 18 Bln worth non-oil exports of the country in its hand.

He added: "Some persons and managers in the body of Iran oil industry have not taken the oil minister's rulings and circulars seriously and do not allow the private sector to carry out crude oi and oil products swaps."

Khosrojerdi also complained about resources from National Development Fund (NDF) not allocated to the private sector and added: "Unfortunately, despite the huge amount of money which is available at NDF, the regulations governing the fund prevents the private sector from reaching financial resources."

Contractors waiting for Azadegan EPC tenders

Petroleum Engineering & Development Company (PEDEC) is still in talks with China National Petroleum Corporation (CNPC) to finalize master development plan (MDP) of developing first phase of Azadegan oilfield.

In summer and while delaying for several months, CNPC had submitted its proposed MDP to PEDEC for developing Azadegan oilfield; however, no final agreement on MDP has been so far reached and it is not known if any could be achieved so as to start the FEED stage of the project.

The FEED stage of the project which includes preparation of tender documents of various EPC packages of phase one of the project, will likely last for a year. Tenders for awarding packages will start afterwards.

Naji Sadouni, managing director of PEDEC, had earlier said that all tenders for phase I of this project would be held by March 2012.

The new MDP of phase 1 of the plan maintains that the following activities should be carried out:

Reconsideration of reservoir engineering studies, drilling and completion of about 165 new production wells, drilling 2 waste water wells, construction of a production unit which includes oil and gas separation unit, desalting, sweetening and oil treatment units of 350,000 bpd capacity, installation of artificial lift for Sarvak wells, installation of treating unit and gas pressure booster station, construction of oil and gas transfer pipeline from the field to West Karun oil pressure booster station and 'NGL 3200' plant, manufacturing about 10 collection manifolds, construction of separation centers, flow lines, construction of power generation and transfer installations and construction of water desalination plant.

The MDP of phase 2 is due to be submitted by the contractor company within 18-24 months after commissioning and production start-up of phase 1.

The total oil production from phases 1 and 2 of South Azadegan oilfield will be 600,000 bpd.

Having held 42 Bln bbls of oil-in-place, Azadegan huge oilfield was discovered in 2000. Counting in both north and south parts, this field covers an area of 900 sq km and is located 83 km off southwest of Ahvaz.

Iran's customs reports on gasoline and gasoil imports

As per the recent report released by Iran's customs office, the imports of various kinds of fuels like gasoline and gasoil have been dramatically scaled down during the period subsidy reform has been implemented.

According to the Fars news agency, the volume of gasoline imports in a period between Nov 2010 and Dec. 2011 was decreased by 78.93% and 83.53% weigh-wise and value-wise respectively.

In a similar period a year earlier (Nov.2009- Dec. 2010), 8,457,300 tons of gasoline- worth over $ 5.175 Bln had been imported. This figure came to $ 1,020,092 tons with $ 825 Mln worth in a similar period a year later.

Also, in the said period, the imports of gasoil have been comparatively decreased by 37.53% and 23.37% weight-wise and value-wise respectively.

The volume of gasoil imported in the period between Nov.2009- Dec. 2010 was 1,087,870 tons which was worth $ 549.9 Mln. However, this figure came to 673,096 tons –worth $ 421.39 Mln in a similar period a year later.

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EU May Believe it Can Afford to Ban Iran's Oil

Europe is edging towards an Iranian oil embargo despite worries a ban would hit enfeebled euro zone members hardest, propel global crude prices higher and only hurt Iran by obliging it to rely on China to buy more crude.

As the political heat rises, Italy and France are pressing their oil companies to consider abandoning purchases from Iran, officials say.

Traders and analysts say a prerequisite for action is that the European Union gets Saudi Arabia on board to fill any gap from Tehran.

The slowdown in Europe's economy at least means fuel demand growth is not an issue for Brussels as it calculates the economic impact of a French-led push towards further isolating Iran because of its nuclear ambitions.

"Quite honestly if a European recession scenario materializes, we can afford losing Iranian oil," said a top executive from a major oil company. That is key because the politicians will want reassurance from the oil industry before pressing ahead.

Washington has long forbidden imports of Iranian oil. EU foreign ministers at a December meeting will consider tougher sanctions; possibly including oil, to press Tehran to abandon what Brussels says is a nuclear weapons program.

"This is not problem" EU Energy Commissioner Guenther Oettinger told Reuters this week. "It can be

substituted by OPEC and others."

While Asian buyers led by China are Iran's biggest customers, Europe imports significant volumes with EU members taking about 450,000 bpd -- 18 pct of Iran's 2.6 million bpd of exports.

About the same amount again goes to non-EU European buyers led by Turkey which takes 200,000 bpd.

The EU portion accounts for less than four percent of its imports and half of what Europe lost when civil war halted supplies from Libya earlier this year.

Oil at $107 a barrel is already a problem for global growth and the calculation may be that with Libyan supplies coming back on-stream the impact on prices may not be too severe.

Iraq is also increasing output of Basra crude, similar in quality to Iran's main export grade Iranian Heavy.

"The question would be how would the EU source its new crude -- would the Greeks, Spanish and Italians be willing to pay a premium? Who's going to sell to the Greeks on credit?" said a Western diplomat involved in the work on new sanctions.

Debt-laden Greece has increasingly turned to Iran this year as supplier of last resort, importing 110,000 bpd in the second quarter of the year, or 23 pct of its oil imports.

Italy said it was looking to persuade oil firms to stop buying Iranian fuel and its oil industry lobby said the move looked inevitable.

Diplomats say consultations are needed with OPEC heavyweight Saudi Arabia, which has difficult relations with Tehran, to ensure it can reroute crude to Europe from Asia, a more important strategic market for Riyadh in the long-term.

A significant hole in supply could be met by a release of stocks from the International Energy Agency, whose industrialized members include most European Union members.

Traders and analysts are unanimous that should the EU-wide ban go ahead, China and other Asian buyers would emerge as beneficiaries because Iran would need to sell more oil at lower prices to them. South Korea said on Friday it might ban Iranian petrochemical products but not oil.

India has already faced major problems in paying for Iranian crude this year amid pressure from Washington, leaving China as Tehran's leading outlet for displaced crude.

China might be happy to swallow as much as Iran can throw at it, at a cost to Tehran of lower revenues from discounted crude.

"Finding new customers for Iran and the refineries finding their crude oil is usually not a cost-free process," said Bassam Fattouh from the Oxford Institute for Energy Studies.