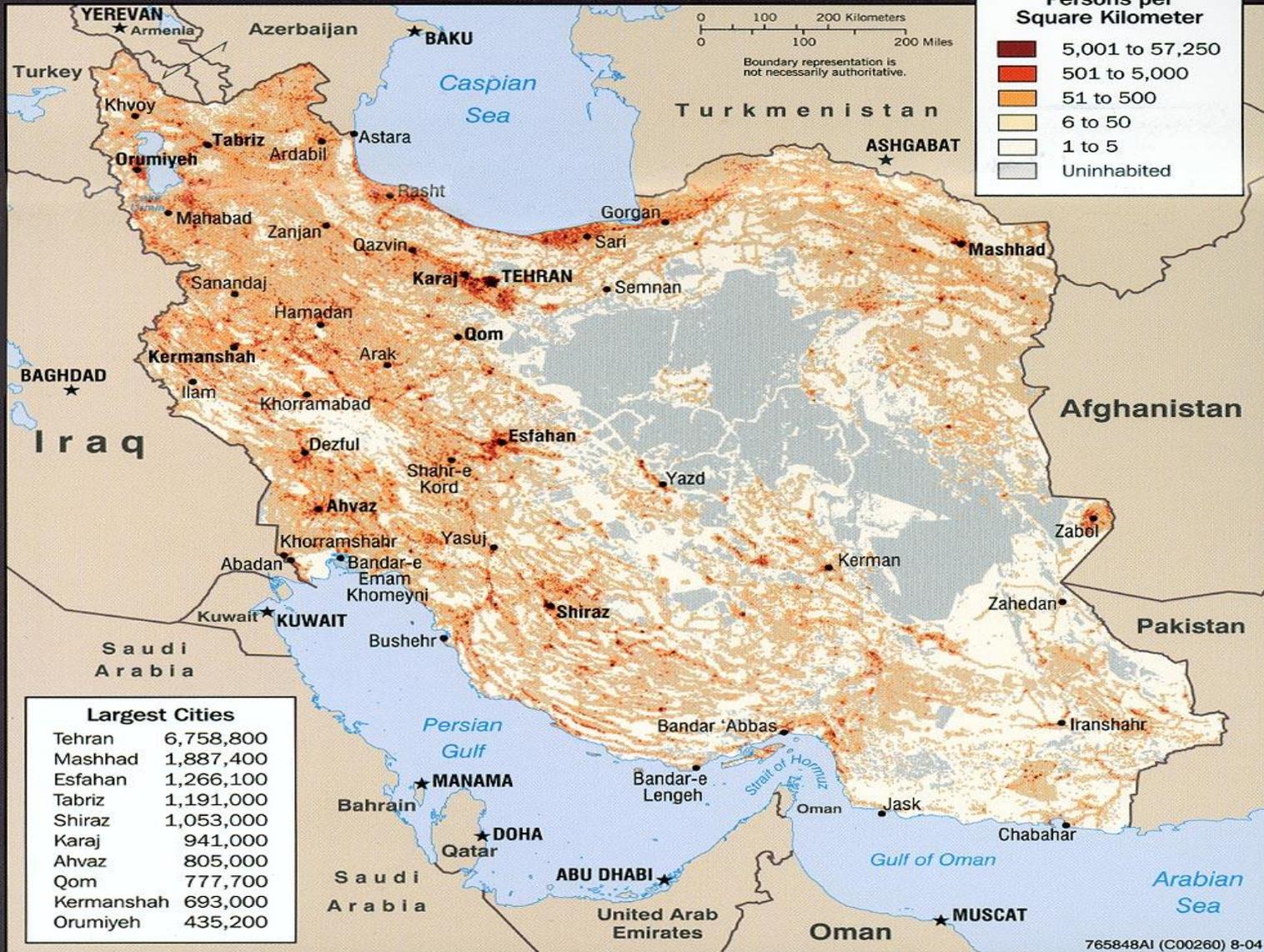




# Caspian and EU Energy Security: Iran, an Inevitable Partner

# Population Density



# Main Issues

1. World and EU energy needs (present, future)
2. EU potential energy partners in with emphasis on Caspian Sea
3. Iran as an inevitable partner
4. Conclusion

# World and EU energy demands

- 2012 was a mark in energy consumption in the world; it reached to a record high of 88.9 million barrels per day.
- Latest estimation indicates that it will grow from 524 quadrillion British thermal units (Btu) in 2012 to 630 quadrillion Btu in 2020 (eia.gov).
- Although Europe is still recovering from its long and deep economic recession, and try to reduce its fossils demand but is, and will remain, one of the world's three top petroleum-consuming regions.
- Energy security for Europe, especially after new developments in oil and gas industry, and uprisings in the ME has become more important than any time before.

# World and EU....

- Although other types of energy resources (Nuclear and renewable) are growing fast but conventional fossil fuels “continue to supply almost 80 percent of world energy demand even through 2040”
- Natural gas is the most favorable fossil fuel. Global natural gas consumption increases by 1.7 percent per year, amounts to 185 trillion cubic feet in 2040. (iae.gov).

# Iran's Energy Resources

- Based on the latest released official Report of OPEC, few days ago, Iran holds the world's third-largest proven oil reserves and the world's second-largest natural gas reserves.
- Based on OPEC facts sheet Iran proven crude oil reserves on 2012, with 1.8% increase, amount 157, 300 (m/b), which is roughly 10.6% of the world's total proven petroleum reserves.
- Iran is also world's second largest reserves after Russia at approximately 33,780 (billion cu. m.) of Proven natural gas reserves, which is about 16.8 % of world's total reserves (with 0.5% increase on 2012).
- Without any new discovery of fossil energy, Iran's reserves would last almost for the next century, though it has high potentials for new significant discoveries. Offshore and Onshore
- Iran oil reserves in Caspian Sea amounts 20 billion barrels

# Iran's Structural Factors: Technology, Infrastructure and History in Oil Industry

- In 2011 Iran's refineries had a combined capacity of 1.457 Mbbbl/d (231,600 m<sup>3</sup>/d).
- Iran has 14000km of oil pipelines and its related equipments, and 35000mm of Gas pipelines, with the developing plan for 60,000 km in 2015. (NIOC.ir)
- Currently, pipelines conveys more than 70 percent of total refined products.
- Iran has more than a century of history in exploration and production activities, since the first exploration in 1908.
- Iran has a brilliant record of contracts, trade, co-projects, etc. in the field.
- High-skill experts and human resources, technologies, infrastructures, etc.
- In fact Iran is the only country in the whole ME and Central Asia which has the indigenous knowledge and know-how to build machineries and necessary equipments for different sectors in the oil, gas, petrochemical and related industries.

# Situational Factors: Political Aspects

- Iran as an anchor of stability in the region.
- Why Iran is a regional power?
- Geopolitics
  - Among for important regions: Persian Gulf, South Asia, Central Asia, ME and Caucasus
- Geo-culture
  - Iranian cultural influence from Central to South Asia
  - Influence in Islamic world from North Africa to South East Asia
- Geo-economics
  - Oil and Gas resources, Population, innovation
  - Increasing Regional Economic interdependence through ECO

# Iran: The only Linkage

- Iran is the only country connecting the two oil and gas rich-regions of Persian Gulf and Caspian Sea.
- Persian Gulf is the largest single source of oil in the world.
- Caspian proven resources of fossil energy amounts 50 billion/b and 257 trillion cubic foot gas.

# Caspian Sea: Opportunities and Challenges

- The Caspian Sea as the largest world inland lake, with a surface area of 371,000 km<sup>2</sup>, has a complicated geography and legal status; since:
- It is shared and bounded to the south by Iran (820km), Northwest by Russia (695km sea border), To the West by Azerbaijan (600km sea border), to the southeast by Turkmenistan (650km sea border), and to the northeast by Kazakhstan (1600km sea border).
- Its legal status is not yet agreed and settled down.
- Since the Caspian is a landlocked lake and far from major and large energy markets, there are transportation difficulties.

# Caspian Sea: Opportunities and Challenges

- All major pipelines in the region, have routed through Russia or they are, kind of, under control of Russia. How?
- West Route: through Georgia and Turkey to Europe; include: Baku-Tiflis-Ceyhan-Pipeline (1760km); Baku–Supsa Pipeline (833km)
- North route: through Black Sea and Russia to Europe; include Baku–Novorossiysk pipeline (1330km); Atyra-Samara pipeline (695km)
- Russia has also made the contract with Turkmenistan for its gas transfer through a North-route pipeline.
- Central Asia and Caucuses is a volatile region under the political monopoly of Russia. Regional conflicts include the Armenia-Azerbaijan dispute, militia activities in Chechnya, and Georgia's problem.
- Long pipeline routes are less favourite both for producers and the market (economically, technically, politically, environmentally, etc.)

# Iran in Caspian



# Iran in the Caspian

- Iran's share of oil in the Caspian Sea estimates to amount 20 billion oil barrel.
- Iran mainly with KEPCO, in 1998, began its activities in the Caspian.
- Iran has, up to now, discovered 5 oil fields, among which Sardar-e Jangal is the biggest with 2.5 billion barrels oil.
- The Iranian indiginously designed and made Amir kabir platform (submersible drill rig) and Caspian ships are operating in Caspian sea area; there are also one active shipyard (Khazar) and one under construction.
- Iran's capacity for oil swap (currently 100,000 b/d, which can reach to 500,000 b/d) and its existing pipeline (Neka route) is the only reliable route. (Without passing through Russia or Georgia)

# Some Questions

## 1- If sanctions against Iran have worked?

- The answer is No; they have failed. Why?
- Technically it is very difficult to impose embargo on Iran's oil, because many refineries in the world as well as Europe have built based on Iran oil. This is why they are obliged to purchase Iran's oil even with higher price through dealers and brokers.
- Iran's oil and gas market is so diverse. Even before sanctions, only 18% of Iran's oil was exported to Europe, and the major Iranian oil costumers were Asian and neighboring countries which are largely dependent to Iran's resources and have already high volume of trade with Iran.
- Facts indicated themselves clearly: Based on the latest OPEC annual report, Daily crude oil production in Iran has reached to 3,739.8 (m/b) which shows 4.6% increase. Natural gas production in Iran has reached to the record of 231,332 (million standard cu m), which shows 3.2% increase.
- History of world sanctions indicates this reality that they do not work.
- Iran's Economy (size, substance, resources, etc.) is hard to be sanctioned; furthermore nature of international economy has changed from past.
- Realities on the grounds show: Not only Iran's peaceful nuclear activities have continued but also Iran has sold its oil and gas production.

## Q2: Can alternative energy resources substitute Iran fossil energy?

- Shale oil and gas?
- Renewable Energy?

Q3: If the unsettled legal status of the Caspian Sea lets the full exploitation of the resources?

- Iran-Soviet 1921 Treaty
- Iran-Soviet 1940 Treaty
- Post-Soviet developments and raised arguments
- Latest developments and status

# Conclusion

## **Europe major suppliers:**

- Middle East and North Africa
  - Russia
  - Caspian
  - Iran
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- Iran by far is the superior choice for future security of Europe's energy supply (in terms of its reserves, technical as well as economic capacities, political stability, independent source of energy,...).
  - It is now up to Europe to make its choice !

Thank you very much  
for your attention