

## **Persian Gulf Oil: US Challenges and Policies**

**MAHMOUD YAZDAN-FAM<sup>†</sup>**

**Abstract:** In the early years of the 21<sup>st</sup> century, public and private organizations in the US became concerned about their growing dependence on the Persian Gulf crude oil imports. For the same reason, they urged the US government to devise efficient and long-term policies and plans that could help minimize the risks of such dependency.

US crude oil imports from the Persian Gulf stands at just about 11.2 percent of its total world imports. The US has strategic and well-established relations with the majority of Persian Gulf littoral states. The question remains that how come the United States is still concerned about oil flow and why it seeks to further control the oil-rich region of Persian Gulf?

The following article delves into the main reasons and international objectives behind the US foreign policy in the Persian Gulf. It also reviews and analyzes the consequences of such policy for the US and other regional and international players.

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<sup>†</sup>Mahmoud Yazdan-Fam is PhD candidate of International Relations in Tehran University and board member and scholar of American Studies Research Group at the Institute of Strategic Studies.

## **Introduction**

The Persian Gulf region is home to three-fourth of the world's proven crude oil reserves. It is also world's main supplier of fossil fuel energy. The United States is the world's major energy consumer, spending almost one-fourth of the global energy. (BP, 2004 [internet]) Now the question is how dependent is the US on the Persian Gulf oil exports when it comes to satisfying its rising energy needs? Also, what are the threats and challenges confronting the energy flow from this region and what policies has the US devised thus far to secure oil supply from the region?

To answer these questions, first of all, the strategic position of Persian Gulf in supplying the world's energy in general and the United States' energy in particular will be discussed. Next, statistics and figures will be used to analyze US dependency on the region's oil for the next 25 years.

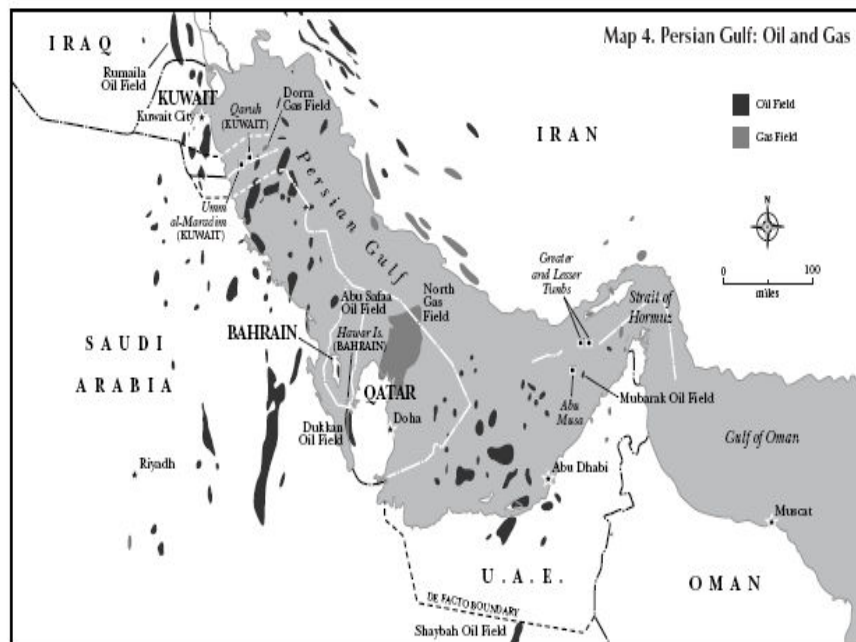
Other discussions will be about the new challenges, threats and processes in regional and international energy supply. The final part will review and discuss US policies on energy with an emphasis on the Persian Gulf.

### **A. Persian Gulf Position in Global and US Energy Supply**

With 715 billion barrels (bb) of crude oil, the Persian Gulf littoral states of Iran, Iraq, Saudi Arabia, Kuwait, Qatar, the UAE, and Oman hold 60 percent of the world's proven oil reserves. With well over 267 bb, Saudi Arabia is home to nearly 25 percent of the world's crude oil reserves, followed by Iran with 132.5 bb. Next in line are Iraq with 115 bb, Kuwait with 104 bb and the UAE with 97.8 bb respectively (Pennwell Corporation, 2005 [internet]). Therefore, the five Persian Gulf littoral states hold the world's main proven oil reserves. Venezuela, Russia, Kazakhstan, Libya, Nigeria, United States, China, Canada, Qatar and Mexico are next in line respectively. (Davies, 2005 [internet]) See table below.

Country & Regions	Reserves		Production			
	End of 2002 Billion Barrels	% of World Total	Real Production 2002 mbpd	% of World Total	Production Capacity mbpd	% of World Total
Iran	89,7	8.6	3,37	4.6	4,9	3.9
Iraq	112,5	10.7	2,03	2.7	5,2	4.2
Kuwait	96,5	9.2	1,87	2.5	5,1	4.1
Oman	5,5	0.5	0,90	1.2	--	--
Qatar	15,2	1.5	0,76	1.0	0,8	0.6
Saudi Arabia	261,8	25.0	8,68	11.7	23,8	19.1
UAE	97,8	9.3	2,27	3.1	5,4	4.3
Persian Gulf	679,0	64.8	19,88	26.9	45,2	36.3
USA	30,4	2.9	7,70	10.4	9,4	7.6
Canada & Mexico	19.5	1.9	6,44	8.7	8,9	7.1
North European Countries	16.3	1.6	6,16	8.3	4,5	3.6
Former Soviet Bloc	77.1	7.4	9,5	12.6	159	12.8
Africa	77.4	7.4	7,94	10.7	16,2	13.0
Asia	38.7	3.7	7,99	10.8	7,5	6.0
Central & South America	98.6	9.4	6,65	9.0	12,3	9.9
Other Regions	10.7	1.0	1,83	2.5	4,6	3.7
World Total	1047.7	100.0	73,94	100.0	113,5	100.0

With 743 billion barrels (bb), the Middle East also ranks first with regard to holding world's proven oil reserves, of which 715 bb are located in the Persian Gulf. With 213 bb, North America ranks second. World's total volume of proven oil reserves stand at around 1.293 trillion barrels. The Persian Gulf littoral states also score high in terms of crude oil production. In 2002, they produced 27 percent of the world's total production. At the moment, with 8.40 billion barrels per day (bpd) of crude, Saudi Arabia ranks first in the world. Also with 3.89 billion bpd, Iran ranks fourth after Russia and the United States. (BP, 2002 [internet])



The Persian Gulf littoral states also rank first in terms of holding the highest volume of proven natural gas reserves. According to the BP Statistical Review of World Energy, the proven gas reserves of the Middle East stand at around 72.83 trillion cubic meters (tcm). With 64.02 tcm, Eurasia stands second, followed by the East Asian

regions, Africa, North America, South and Central America with 14.21, 14.06, 7.32 and 7.10 tcm respectively. (Davies, 2005:18) The world's total proven gas reserves stand at around 179.53 tcm, of which 40.6 percent belongs to the Middle East, 35.7 percent to Eurasia, 7.9 percent to East Asia, 7.8 percent to Africa, 1.4 percent to North America, and 4 percent to South and Central American regions. (Davies, 2005:19)

Almost 80 percent of all proven natural gas reserves of the Middle East are located in the Persian Gulf, and the rest in the North African states as well as Syria and Yemen. Gas reserves of the region have more than doubled since 1982 and increased from about 26 tcm in 1982 to 49 tcm in 1992 and 63 tcm in 2002 (EIA, 2006: 34 [internet]). Iran and Qatar hold the region's biggest gas reserves. South Pars gas field, the biggest in the world, is shared by these two nations. The Persian Gulf littoral states produce less than 10 percent of the world's natural gas despite having well over 35 percent of world's proven gas reserves. See table below:

**Table. 2- World and Persian Gulf Gas Reserves & Production (2002)**

Country	Tcm	Tcf	%of Current World Reserves	% of Current World Production
Iran	23	812.3	14.6	2.65
Qatar	14.40	508.5	9.2	1.2
Saudi Arabia	6.36	224.7	4.1	2.2
UAE	6.01	212.1	3.9	1.8
Iraq	3.11	109.8	2.0	0.3
Kuwait	1.49	52.7	1.0	0.6

Oman	0.82	29.3	0.5	0.4
Bahrain	0.09	3.3	0.1	0.4
Persian Gulf Total	55.28	1952.7	35.4	9.55
Russia	47.57	1680.0	30.5	22.0
USA	5.19	183.5	3.3	21.7
Algiers	4.52	159.7	2.9	3.2
European Union	3.14	111.0	2.0	11.9
Egypt	1.66	58.5	1.1	0.9
Libya	1.31	64.4	0.8	0.2
Others	0.77	27.0	0.5	12.2
World Total	155.78	5501.5	100	100

Source: BP Statistical Review & World Energy 2003

Another point worth mentioning regarding the position of Persian Gulf in terms of global energy and the American policies on the region could be the volume of oil and gas exports. In 2003, North America imported 2.5 million barrels per day (bpd) of crude oil from the Persian Gulf. The figure was 2.7 million bpd for Europe and 6.1 million bpd for the Organization for Economic Cooperation and Development (OECD) member states. At the moment, the total volume of Persian Gulf exports to the organization stands at around 11.3 million bpd. In 2003, China also imported 0.9 million bpd of crude from the region, followed by the Asian nations with 4.4 million bpd and other countries with 5.9 million bpd. In the same year, the total volume of crude exports to these nations stood at 11.2 million

bpd. Therefore, the total volume of crude imports from the Persian Gulf was 22.5 million bpd for the OECD member states and other countries, or well over 70 percent of the total volume of OPEC exports. According to the Energy Information Administration's (IEA) 2006 International Energy Outlook Report, the industrial nations' dependence on Persian Gulf crude oil will continue to rise in the years to come. (EIA, 2006: 27 [internet]) Under the report, in 2030, North American imports from the region will increase from the current 2.5 million bpd to 3.5 million bpd. The figure for the OECD will also hit the 1.3 million bpd mark, which is still insignificant when compared to the imports of non-member states. In 2030, the total volume of imports from the Persian Gulf will increase by 34.3 million bpd, of which 10.4 million bpd will go to the OECD non-member states. This clearly translates into the fact that despite the 1.3 million bpd increase, the industrial nations of the West will depend less on crude oil imports from the Persian Gulf than other nations. On the other hand, the OECD member states will become sternly dependent on the PG oil in the next 25 years. As a consequence, Persian Gulf will continue to export a large portion of world's crude oil during the period. (Klare, 2004a: 5) (See table # 3) The Persian Gulf is the sole region in the world that- even with the current level of production output- will continue to have proven crude oil reserves in the next 100 years. The littoral states are among the most important oil suppliers to the US. In 2003, the US imported 2.5 million bpd from the region, which is expected to increase above 3.5 million bpd over the next 25 years. Although the US desperately tries to import crude oil from other regions, its dependency on Persian Gulf oil is still growing by the day. This is because the region is the only one in the world that has a greater capacity to meet the growing global demand for fossil fuel. Based on Dick Cheney Energy Strategy Report in 2001, the US imported just about 18 percent of its energy needs from the Persian Gulf that met 11.2 percent of its total consumption needs. (EIA, 2004 [internet])

Table.3- Global Oil Trade (Export/Import 2003 &amp; 2030) Mbd

Exporting Region	Importing Region								Total Exporting
	OECD Member States				Non- OECD States				
	North America	Europe	Asia	Total	China	Other Asia	World Other	Total	
2003									
<b>OPEC</b>									
Persian Gulf	2.5	2.7	6.1	11.3	0.9	4.4	5.9	11.2	22.5
North Africa	0.6	1.9	0.0	2.6	0.1	0.0	0.3	0.4	3.0
West Africa	1.1	0.3	0.2	1.6	0.2	0.0	0.2	0.4	1.9
North America	1.7	0.1	0.2	2.0	0.1	0.0	1.0	1.1	3.1
Asia	0.0	0.0	0.4	0.5	0.3	0.4	0.0	0.8	1.2
OPEC Total	5.9	5.1	6.9	17.9	1.6	4.8	7.4	13.8	31.7
<b>Non-OPEC Countries</b>									

European OECD	0.5	0.0	0.0	0.5	0.0	0.0	0.1	0.1	0.7
Brazil & Caribbean	0.7	0.3	0.0	1.0	0.1	0.0	0.1	0.1	1.2
Russia & Caspian	0.4	2.9	0.2	3.5	0.4	1.2	0.8	2.4	5.8
Other Non-OPEC Countries	5.9	2.5	1.0	9.4	0.7	1.1	2.2	4.0	13.4
Total Non-OPEC Countries	7.5	5.7	1.2	14.5	1.2	2.3	3.1	6.7	21.1
Total Oil Importing	13.5	10.8	8.1	32.4	2.8	7.1	10.6	20.4	52.8
<b>2030</b>									
<b>OPEC</b>									
Persian Gulf	3.5	3.3	5.8	12.6	5.8	8.4	7.4	21.6	34.3
North Africa	0.6	1.9	0.2	2.6	0.4	0.5	0.6	1.5	4.1
West Africa	1.1	0.7	0.4	2.2	1.2	0.2	0.4	1.8	4.0
North America	2.3	0.3	0.5	3.0	0.4	0.3	0.6	1.4	4.4
Asia	0.1	0.1	0.5	0.7	0.5	0.1	0.3	1.0	1.7
OPEC Total	7.5	6.3	7.3	21.1	8.4	9.5	9.4	27.4	48.5
<b>Non-OPEC Countries</b>									
European OECD	1.3	0.0	0.1	1.4	0.1	1.4	0.1	0.3	1.7
Brazil & Caribbean	1.6	0.9	0.4	2.9	0.2	2.9	0.2	1.5	4.4

Russia & Caspian	0.5	2.4	0.8	3.6	0.8	3.6	0.4	2.9	6.6
Other Non-OPEC Countries	8.5	1.9	0.6	10.9	0.6	10.9	1.9	5.1	16.1
Total Non-OPEC Countries	11.9	5.2	1.9	18.9	1.9	18.9	2.5	9.9	28.8
Total Oil Importing	19.4	11.5	9.2	40.1	9.2	40.1	10.9	37.3	77.3

At the same time, 70 percent of US imports come from Saudi Arabia which continues to be the largest exporter of energy to the US. The US gets the rest of its energy demands (30 percent) from Iraq, Kuwait and the UAE. (See, U.S. Department of State, 2006[internet]) US LNG imports from the Persian Gulf are also on the rise. Qatar ranks first in terms of exporting LNG to the United States. The US and Qatar have inked long-term energy contracts for gas reserves exploitation, once implemented, US companies will invest \$14 billion in the development projects of Qatar's gas fields. The aim is to meet part of its growing energy needs over the next 25 years. (DOE/EIA, 2006: 11 [internet]) Indeed, the strategic importance and position of the Persian Gulf in US energy policies becomes even more evident once we take a closer look at the energy production and consumption levels on its soil.

### **B. US Energy Outlook**

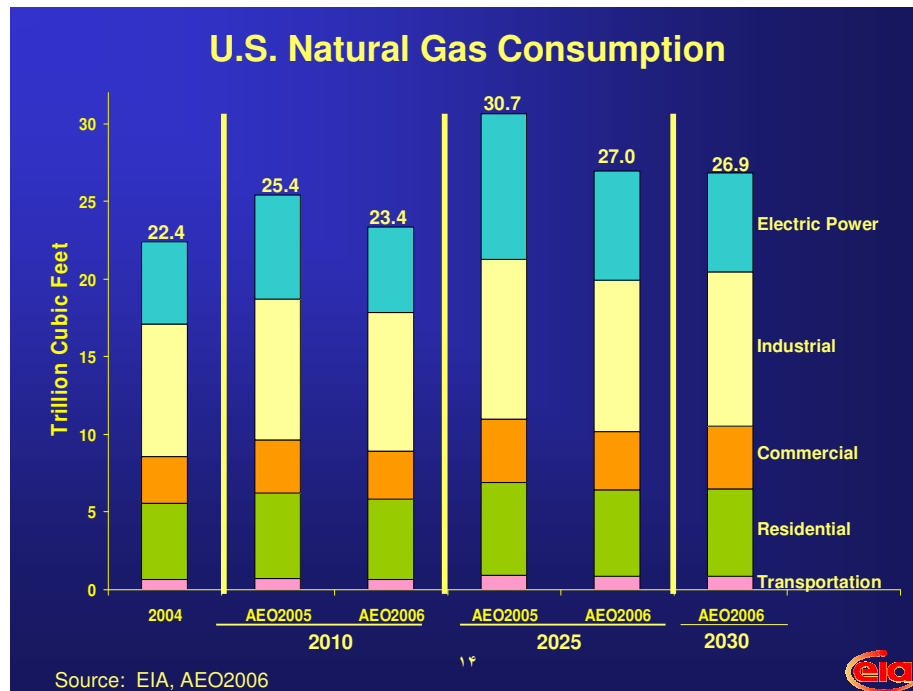
Coal, crude oil, natural gas, nuclear power, water and other renewable materials are the main sources of energy for the US and the world. A quick look at each and every one of these energy resources will help better understand the position of crude oil and natural gas in the US energy policies. Also, it will help to better understand US

dependency on Persian Gulf energy when other issues are taken into consideration, such as the volume of crude oil and natural gas reserves in the US, its energy imports and consumption levels in different sectors (transportation, industry, trade, power generation, household) as well as the regions that are main suppliers of energy. Each and every one of these topics will be discussed in the next parts of article.

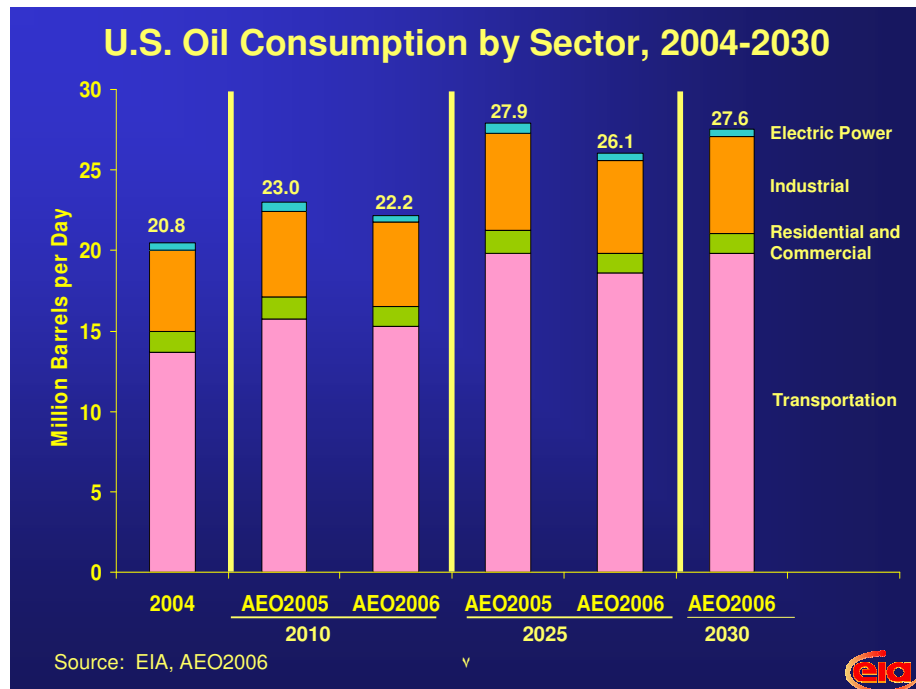
Crude oil, natural gas, coal, nuclear, and renewable materials are the main energy sources for the United States. According to the 2006 Energy Outlook Report, US energy consumption comprises of 40.08 percent carbohydrates, 23.07 percent natural gas, 22.53 percent coal, 8.23 percent nuclear, 5.74 percent renewable, and 0.4 percent other sources. With an average growth rate of just about 1.1 percent over the next 25 years, they will reach 53.58, 27.66, 34.49, 9.09, 9.02, and .05 percent respectively. The total volume of consumed energy will reach 133.88 percent from the current 98.05 percent. (DOE/EIA, 2006: 11 [internet]) As per the IEA report, at 40 percent, crude oil will continue to be the main source of energy for the US, followed by natural gas at 23 percent, and coal at 22 percent.

In 2004, US demand for oil products reached 20.76 million bpd, of which 8.63 million barrels were produced domestically and 12.11 million barrels were imports. With an average growth rate of 1.1 percent in 2030, the figure will reach 57.27 million bpd. In 2030, US will have to import 17.24 million bpd of crude and produce the rest domestically. (DOE/EIA, 2006: 11 [internet])

Figure 3.



The IEA report in 2004 indicates that the US consumed 41.22 tcm of natural gas and with an average growth rate of 7 percent, its gas consumption will hit the 26.86 tcm mark in 2030. Of the total volume of consumed gas in 2004, 18.52 tcm was produced and only 3.40 tcm was imported. Quite the opposite, the average growth rate of imports will be 14 percent higher than domestic production levels in 2030. (DOE/EIA, 2006: 11 [internet])



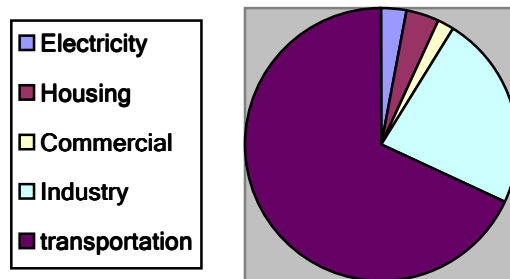
The United States produces and consumes its own coal though. The country produced 1,125 million tons and consumed 1,104 million tons in 2004. Based on the IEA report, in 2030, it will consume more coal than it could produce and it will have to import 83 million tons as well. (NRDC/IAGS, 2005: 21)

### C. Oil and Natural Gas Consuming Sectors

The produced or imported crude oil and natural gas are used by a range of sectors in the States. These sectors have different characteristics. They also differ when it comes to consumption levels and patterns, efficiency, and vulnerability. The most important consumers are the sectors of transportation, industry, households, and electricity power generation.

The transportation sector, which includes personal cars, heavy trucks, vans, railroad, planes and etc. consumes 14.93 million barrels of crude per day, equal to 68 percent of US total domestic consumption. The industrial sector consumes 23 percent, followed by households with 4 percent, electricity power generation with 3 percent, and commerce with 2 percent. In 2003, the country consumed 20 million bpd of crude oil in its transportation, household, and industrial sectors. (NRDC/IAGS, 2005: 22)

Figure 4- Oil Consumption per Sectors (Mbd, Percentage)



In the transportation sector, personal cars consume 60 percent of total crude oil, followed by heavy trucks with 16 percent and airplanes with 10 percent, railway networks with 2 percent, commercial/trade vans with 2 percent, and others with 10 percent. (NRDC/IAGS, 2005: 24-28) Hence, transportation sector uses the biggest chunk of fuel in the States and personal vehicles remain champion consumers in this sector. Oil price hikes or disruptions in oil exports could dire consequences for the US transportation system, in particular personal vehicles, as it is directly connected to the public welfare and the American way of life. A quick review of the next 25 years will show how important this matter can be for its energy policies. In 2025, fuel consumption for personal vehicles will grow by 51 percent, followed by heavy trucks at 57 percent, industry at 25

percent, and aviation at 75 percent. However, in the household sector consumption will drop by 4 percent. (DOE/EIA, 2006: 64 [internet])

Regions and countries which supply US energy are the last decisive factors in assessing the US energy outlook. In 2004, US imported 13.1 million bpd of crude oil. The main sources of supply were North America, OPEC member states outside the Persian Gulf, Persian Gulf littoral states, the Caribbean, Europe, Far East, and other regions. OPEC members are the major exporters of crude to the US, with the Persian Gulf littoral states at the third place with 11.2 percent. (DOE/EIA, 2006: 64 [internet]) As the 2006 International Energy Outlook (IEA) indicates, this situation with a little bit increase will remain the same for the US until 2030.

Estimates suggest that US oil imports from the current 13.1 million bpd will rise to 18.3 million bpd over the next 25 years. This clearly translates into the fact that it will become more dependent on crude imports. In 2030, crude imports will make around 64 percent of its total energy, half of which will come from OPEC member states. Crude imports from the North Sea, just like domestic sector, will drop in that year. Canada and Mexico will also preserve their position as important oil distributors in the period, though this will depend on the crude price in the world market, since oil exploration and exploitation costs in these countries are still higher than those in the Persian Gulf. (Economic Research Institute, 2003: 3)

Figure 5.

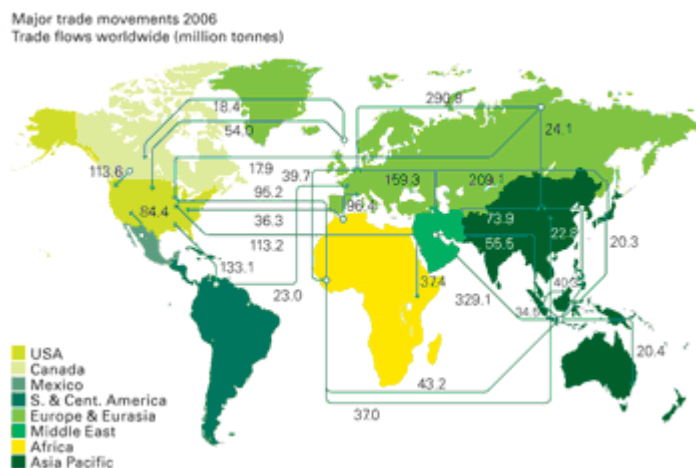


Table 4. Petroleum Imports by Country of Origin, 1960-2006

Year	Selected OPEC Countries						Selected Non-OPEC Countries						Total Imports	Imports From Persian Gulf <sup>2</sup> as Share of Total Imports	Imports From OPEC <sup>1</sup> as Share of Total Imports
	Persian Gulf <sup>2</sup>	Iraq	Nigeria	Saudi Arabia	Venezuela	Total OPEC <sup>3</sup>	Angola	Canada	Mexico	Russia <sup>4</sup>	United Kingdom	Total Non-OPEC <sup>5</sup>			
	Thousand Barrels per Day														
1960	NA	17	0	84	911	1,314	0	120	16	0	(s)	500	1,815	NA	72.4
1961	346	25	0	73	879	1,286	0	190	40	0	1	631	1,917	18.0	67.1
1962	272	2	0	74	906	1,265	0	250	49	0	2	816	2,082	13.0	60.8
1963	303	1	0	108	900	1,283	0	265	48	0	3	839	2,123	14.3	60.5
1964	315	1	0	131	933	1,361	0	299	47	0	(s)	898	2,259	13.9	60.2

1965	345	16	15	158	994	1,476	0	323	48	0	(s)	992	2,468	14.0	59.8
1966	306	26	11	147	1,018	1,471	0	384	45	0	6	1,102	2,573	11.9	57.2
1967	198	5	5	92	938	1,259	(s)	450	49	0	11	1,278	2,537	7.8	49.6
1968	202	5	9	74	886	1,302	0	506	45	0	28	1,538	2,840	7.1	45.9
1969	179	5	49	65	875	1,336	1	608	43	2	20	1,830	3,166	5.7	42.2
1970	121	5	50	30	989	1,343	0	766	42	3	11	2,076	3,419	3.5	39.3
1971	299	11	102	128	1,020	1,673	4	857	27	0	10	2,253	3,926	7.6	42.6
1972	471	4	251	190	959	2,063	16	1,108	21	8	9	2,678	4,741	9.9	43.5
1973	848	4	459	486	1,135	2,993	49	1,325	16	26	15	3,263	6,256	13.6	47.8
1974	1,039	0	713	461	979	3,280	49	1,070	8	20	8	2,832	6,112	17.0	53.7
1975	1,165	2	762	715	702	3,601	75	846	71	14	14	2,454	6,056	19.2	59.5
1976	1,840	26	1,025	1,230	700	5,066	12	599	87	11	31	2,247	7,313	25.2	69.3
1977	2,448	74	1,143	1,380	690	6,193	24	517	179	12	126	2,614	8,807	27.8	70.3
1978	2,219	62	919	1,144	646	5,751	20	467	318	8	180	2,612	8,363	26.5	68.8
1979	2,069	88	1,080	1,356	690	5,637	43	538	439	1	202	2,819	8,456	24.5	66.7
1980	1,519	28	857	1,261	481	4,300	42	455	533	1	176	2,609	6,909	22.0	62.2
1981	1,219	(s)	620	1,129	406	3,323	49	447	522	5	375	2,672	5,996	20.3	55.4
1982	696	3	514	552	412	2,146	44	482	685	1	456	2,968	5,113	13.6	42.0
1983	442	10	302	337	422	1,862	78	547	826	1	382	3,189	5,051	8.8	36.9

1984	506	12	216	325	548	2,049	90	630	748	13	402	3,388	5,437	9.3	37.7
1985	311	46	293	168	605	1,830	110	770	816	8	310	3,237	5,067	6.1	36.1
1986	912	81	440	685	793	2,837	112	807	699	18	350	3,387	6,224	14.7	45.6
1987	1,077	83	535	751	804	3,060	192	848	655	11	352	3,617	6,678	16.1	45.8
1988	1,541	345	618	1,073	794	3,520	212	999	747	29	315	3,882	7,402	20.8	47.6
1989	1,861	449	815	1,224	873	4,140	284	931	767	48	215	3,921	8,061	23.1	51.4
1990	1,966	518	800	1,339	1,025	4,296	237	934	755	45	189	3,721	8,018	24.5	53.6
1991	1,845	0	703	1,802	1,035	4,092	254	1,033	807	29	138	3,535	7,627	24.2	53.7
1992	1,778	0	681	1,720	1,170	4,092	336	1,069	830	18	230	3,796	7,888	22.5	51.9
1993	1,782	0	740	1,414	1,300	4,273	336	1,181	919	55	350	4,347	8,620	20.7	49.6
1994	1,728	0	637	1,402	1,334	4,247	331	1,272	984	30	458	4,749	8,996	19.2	47.2
1995	1,573	0	627	1,344	1,480	4,002	367	1,332	1,068	25	383	4,833	8,835	17.8	45.3
1996	1,604	1	617	1,363	1,676	4,211	351	1,424	1,244	25	308	5,267	9,478	16.9	44.4
1997	1,755	89	698	1,407	1,773	4,569	427	1,563	1,385	13	226	5,593	10,162	17.3	45.0
1998	2,136	336	696	1,491	1,719	4,905	468	1,598	1,351	24	250	5,803	10,708	19.9	45.8
1999	2,464	725	657	1,478	1,493	4,953	361	1,539	1,324	89	365	5,899	10,852	22.7	45.6
2000	2,488	620	896	1,572	1,546	5,203	301	1,807	1,373	72	366	6,257	11,459	21.7	45.4

2001	2,761	795	885	1,662	1,553	5,528	328	1,828	1,440	90	324	6,343	11,871	23.3	46.6
2002	2,269	459	621	1,552	1,398	4,605	332	1,971	1,547	210	478	6,925	11,530	19.7	39.9
2003	2,501	481	867	1,774	1,376	5,162	371	2,072	1,623	254	440	7,103	12,264	20.4	42.1
2004	2,493	656	1,140	1,558	1,554	5,701	316	2,138	1,665	298	380	7,444	13,145	19.0	43.4
2005	<sup>s</sup> 2,334	<sup>s</sup> 531	<sup>r</sup> 1,166	<sup>r</sup> 1,537	<sup>r</sup> 1,529	<sup>s</sup> 5,587	473	<sup>r</sup> 2,181	<sup>r</sup> 1,662	410	<sup>s</sup> 396	<sup>r</sup> 8,127	<sup>r</sup> 13,714	17.0	40.7
2006 <sup>r</sup>	2,209	553	1,119	1,461	1,409	5,499	534	2,303	1,700	370	271	8,113	13,612	16.2	40.4

<sup>r</sup>Organization of the Petroleum Exporting Countries. See Glossary for current membership.

R=Revised. P=Preliminary. NA=Not available. (s)=Less than 500 barrels per day.

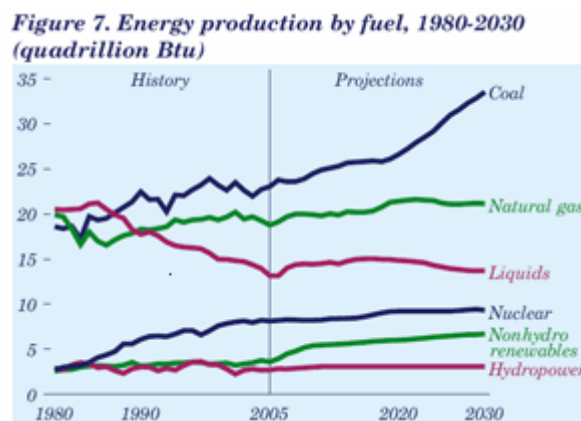
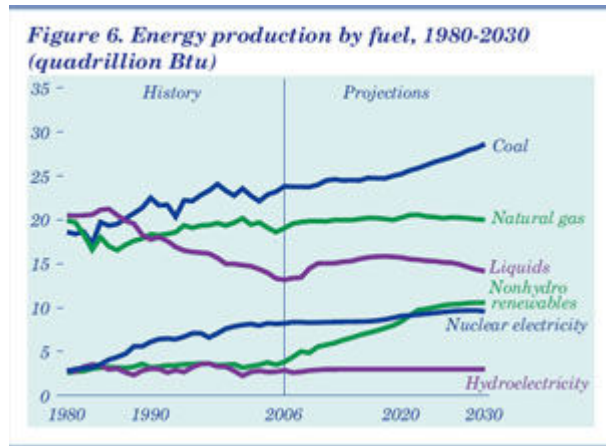
<sup>s</sup>Bahrain, Iran, Iraq, Kuwait, Qatar, Saudi Arabia, and United Arab Emirates.

Notes: □□□The country of origin for refined petroleum products may not be the country of origin for the crude oil from which the refined products were produced. For example, refined products imported from refineries in the Caribbean may have been produced from Middle East crude oil. □□□Data include any imports for the Strategic Petroleum Reserve, which began in 1977. □□□Totals may not equal sum of components due to independent rounding.

On the other hand, US depends less on natural gas imports and indeed this country doesn't import significant amount of natural gas from the Persian Gulf. But in 2030, it will become more dependent on natural gas imports. At the moment, it produces 83 percent of its gas, while importing 16 percent from Canada and just about 1 percent from the rest of the world. (DOE/EIA, 2006: 8-9 [internet])

The amount of energy production, consumption, and imports (crude oil in general and natural gas in particular) in US shows that consumption and production will increase simultaneously in the next 25 years and that consumption will surpass production. Accordingly, the US will be importing more energy from abroad. According to the 2006 International Energy Outlook Report, the volume of US energy imports from 29 percent in 2004 will increase to 32-33 percent of its energy demands in 2030. High oil prices will also play a significant role in domestic production. Higher energy prices in the world market make domestic production more cost-effective and justified, increasing its share in the total volume of consumption. Oil prices also play a significant role when considering by-products such as crude, liquid natural gas (LNG) and petrochemical products whose distribution will go up by 10.5 million bpd in 2021 from the current 8.6 million bpd and it will remain the same until 2030. In 2025, US oil by-product imports will make 62 percent of total demand. (Klare, 2004a:4)

The report of 2001 entitled 'Bush-Cheney Energy Strategy: Procuring the Rest of the World's Oil Report', was more skeptical in this respect. Based on the report, US crude production of 8.5 million bpd in 2002 will decrease to 7 million bpd in 2020. At the same time, the current consumption of 19.5 million bpd will go up by 25.5 million bpd. Similarly, the current LNG consumption of 11 million bpd will hit the 18.5 million bpd mark in that year. (EIA, 2006: 25 [internet])



#### D. Energy Sector's New Challenges & Issues

Influential American research centers and energy/security experts are concerned about four issues or challenges when it comes to the subject matter of energy security, especially fossil fuel. They devise their proposed policies based on the followings:

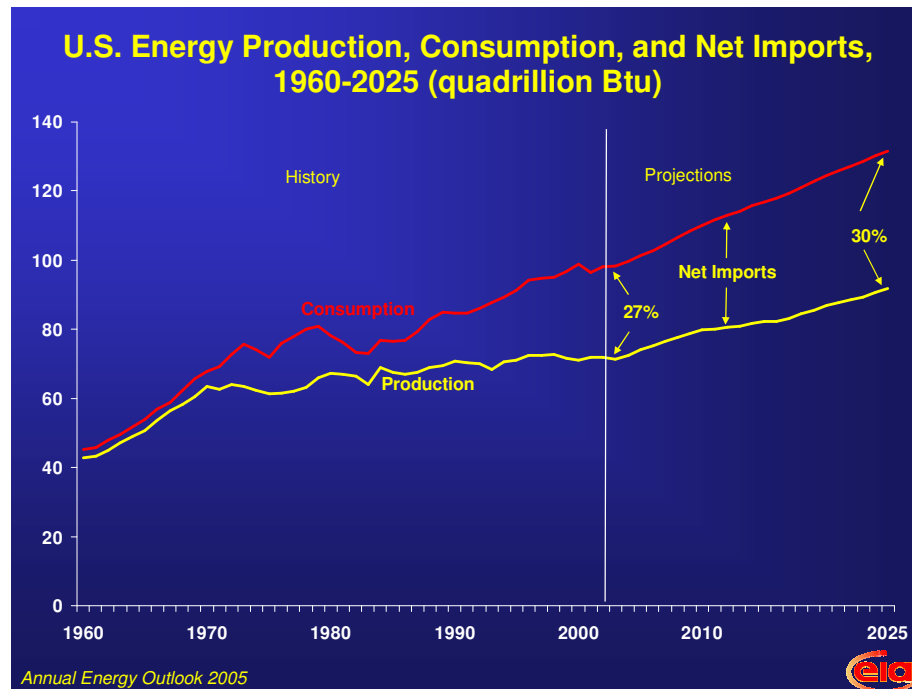
- 1- **Growing Trend of Energy Consumption;**
- 2- **Restrictions in Supply of New Energy Resources;**
- 3- **Instability in Oil Exporting Countries;**

#### **4- Subversive incidence and activities;**

Each and every one of these issues or challenges could influence the way US devises its energy policies and plans toward the Persian Gulf, the world most important energy supplier. Consequently, Washington gives special attention to this strategic region.

#### **1- Growing Trend of Energy Consumption**

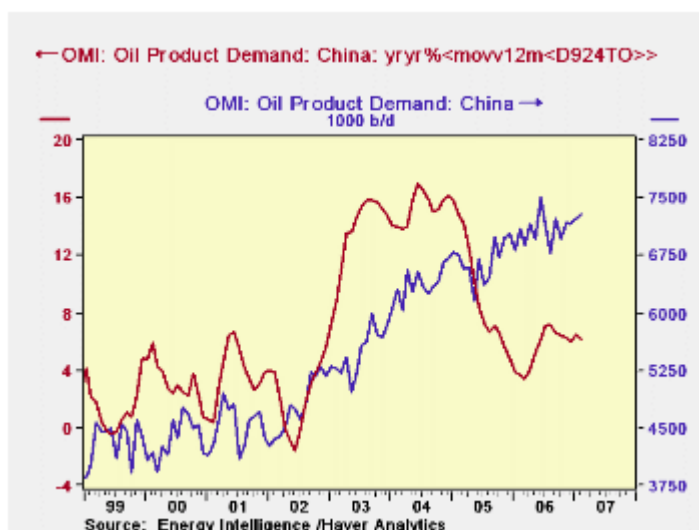
Based on oil and gas consumption levels in the past 25 years and future prospects, and despite the drop in energy resources, demand has risen the industrialized world. Demand for energy has also grown in the developing nations. In fact, demand for energy has gone up everywhere. Based on the International Energy Organization's (IEO) report, demand for crude, from 80 million bpd in 2003, will reach 98 million bpd in 2015 and 118 million bpd in 2030. (Klare, 2004b:13) Growing demand in the US has been the case for some decades though, which clearly indicates that it will similarly go up in the next decade. For instance, the US imported 42 percent of its energy needs in 1990, reaching 49 percent in 1997. In April 1998, it imported 50 percent of its crude. At the moment, domestic production is down, which means it will import more crude in the coming years. (DOE/EIA, 2006: 4 [internet]) Its rising consumption levels will inevitably affect the global energy market as well.



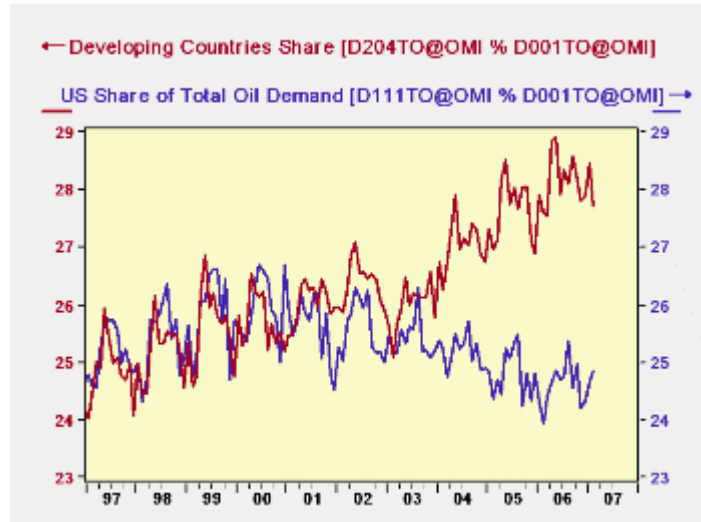
However, higher demand and higher consumption are not restricted to crude oil alone. It is also the same for many other types of energy. Over the next 25 years, total energy consumption will be up 1.2 percent in the United States. Also, energy consumption in the Britain will reach 127 quadrillion in 2025 from 99.7 quadrillion in 2004. (EIA, 2006: Ch.4 [internet])

As with other industrial nations, such as the OECD member states and Asian developing nations, the situation will almost be the same. The rising economic power of China and its growing need for oil and gas is also a significant factor behind the global rise in demand for energy. In 1980, China produced more energy than it could consume. It even exported part of its surplus. However, in 1993, there was some kind of equilibrium in production and consumption. That year, China joined the oil importers' club and since then it has continued to import

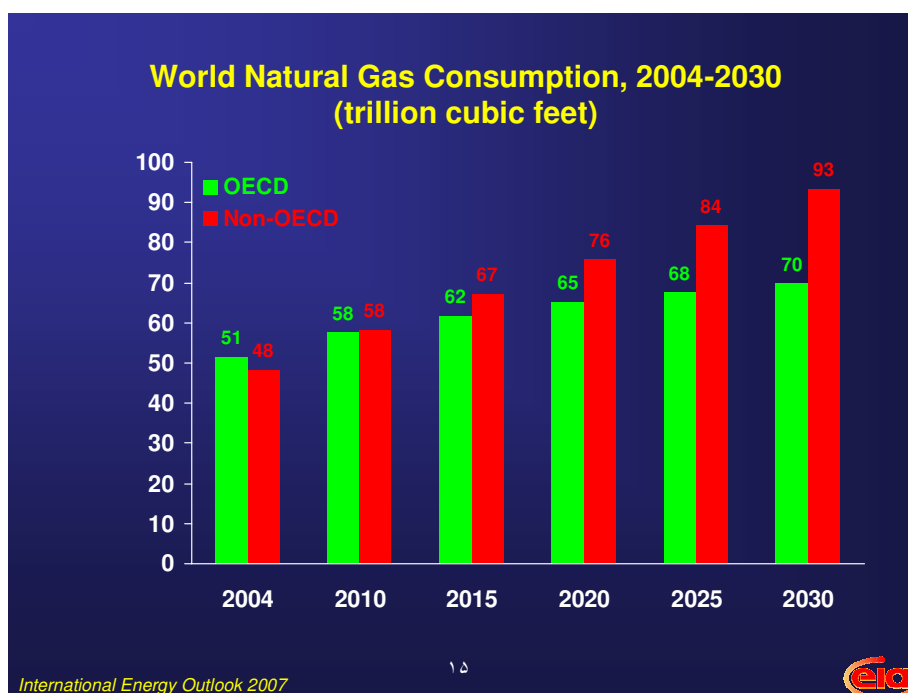
oil, so much so that in the past ten years, there has been a two-fold increase in its demands.



Over the recent decade, energy consumption in other East Asian nations also went up. For instance, demand for energy rose by 60 percent in India. Of the 22 million bpd in total demand (from 1975 to the present time) over 85 percent is now related to the growing demand for energy in Asians developing countries.



Global demand for natural gas has an ascendant trend and the situation is more like the oil . Natural gas consumption levels in the developing nations, especially those in Asia that are not OECD members, have surpassed those of the industrial world. It is estimated that global gas consumption levels will be much higher than crude, reaching 182 tcm in 2030, from 95 tcm in 2003. Global average growth rate for gas will be 2.4 percent throughout 2003-2030. It will be 2.5 percent for coal and 1.4 percent for crude oil as well. (Simmons, 2005: 3[internet])



## 2- Supply Restrictions for New Energy Resources

The second challenge facing the world energy market will be restrictions in expanding oil energy resources and finding alternatives that could replace them. This is also true for the United States, however its vulnerability to such restrictions is not comparable to that of other industrial nations, especially the developed and developing Asian nations. Restrictions in oil and gas supply as well as alternative resources that could replace them are noticeable. In the oil and gas fields, especially oil, important energy resources have already been discovered and are being exploited. At the moment, 50 percent of crude comes from 50 major oil fields, half of which are more than 40 years old and 95 percent 25 years old. There are no known resources in these fields that could be exploited with lower costs. (NRDC,

2004a:2) Therefore energy experts say that the international community must kiss the cheap oil goodbye and try to find alternatives deep down at the bottom of seas and oceans. There is also the question of restrictions in production capacities of many countries. At the moment, crude oil production has reached 97 percent of its full capacity and for security reasons just about 2 million barrels of excess crude could be added to it. More important though, such capacity only exists for Saudi Arabia which has domestic and political stability problems at home. (NRDC, 2004b [internet])

The issue of alternative fuels is even more complex and difficult. The proponents of biofuels, for example, justify their production by arguing that fossil fuels create a wide range of problems such as higher environmental costs, air pollution, diseases as well as issues related to the US national security. But the latest scientific estimates suggest that amid advantages, biofuels lack the much needed capacity to replace fossil fuels. (Klare, 2004c:Ch.4 & Blamy, 2004: Ch.7) Also in the next 30 years, they will not be able to play any effective role in stabilizing global energy market. At the same time, alternative plans will largely depend on oil and gas prices as well as scientific and technological advancements in different countries.

### **3- Instability in Oil Exporting Countries**

The Persian Gulf as the most important and strategic region of the world in terms of great proven oil and gas reserves. However, has been volatile since the Second World War. Competition among the regional states and major world powers to control oil resources has been the main cause of such instability. The Britain, France and US from one hand and Russia on the other have always tried to control and dominate the Persian Gulf littoral states. This has turned the region into a battlefield between them and the regional states. More important though, US and British support for establishing a Jewish state in the Palestine has similarly created a wide range of perennial crises in this volatile region. These developments have also affected the Persian Gulf littoral states. The three Arab-Israeli wars left huge impact on the world energy market, triggering the first major oil

shock in 1973. Despite political stability of Saudi Arabia, Iran and Iraq have had to put behind huge developments over the past few decades. The three destructive regional wars, territorial disputes, numerous coups, radical groups and fundamentalists, as well as aggressive ideological movements have all drawn up an insecure image for the Persian Gulf. (Klare, 2004c:Ch.4 & Blamy, 2004: Ch.7)

According to an article written by Patrick Clawson and Simon Henderson, al-Qaeda terrorist attacks, oil strikes, Iraqi instability that has also affected its neighbors, dispute over Iran's nuclear program, plus domestic disturbances are the main reasons behind the Persian Gulf instability. Each and every one of these factors has the potential to create another major oil shock for the United States and the industrial world. (Clawson & Henderson, 2005: 7-12) At the same time, US presence in the region and its widespread support of authoritarian regimes in the bid to secure oil supply has led to the rise of anti-American sentiments and anti-Western movements. This has similarly exacerbated the situation, pushing up energy costs and prices. (See Knights, 2006)

Just like the Persian Gulf, the outlook is not that rosy in other OPEC member states or Russia either. From the Western point of view, these nations are not stable or reliable. In Venezuela, a nationalist and leftist leader is in charge and he is not in the mood to have any constructive relations with Washington. In fact, their relations are getting worse day by day. Nigeria is also an unstable oil exporter. For years, tribal disputes amalgamated with labor strikes have disrupted its oil exports. On the other hand, countries such as Colombia, Mexico, Angola, Russia, Azerbaijan, and Kazakhstan also do not have the much needed stability either. Indeed, it is hard, if not impossible, for the industrial nations to devise comprehensive economic policies and plans by relying on oil supply from these volatile places and regions. (Klare, 2004: Ch.5)

#### 4- Subversive Activities and Disruptions

It takes huge facilities as well as thousands of kilometers of pipelines and carriers to discover, extract, exploit, transport and refine crude oil or natural gas. Each of these facilities can become an easy target for terrorist attacks and sabotage. Based on a study carried out by the Institute for Assessment of Global Security (IAGS), the global oil supply system has highly sensitive and vulnerable loopholes prone to subversive activities that can easily disrupt oil supply to the world market. About 60 percent of the world's oil is transported through the sea by 3,500 oil tanker ships. Two strategic and important regions for world oil flow are the Strait of Hormuz in the Persian Gulf and the Strait of Melaka in South East Asia, through which 26 million bpd of crude oil is being transferred. Oil transfers through these strategic straits will be more than double in the coming decades. This clearly translates into the fact that future oil transfers will become even more vulnerable and costlier than ever. (NRDC/IAGS, 2005: 11) In recent years, the biggest threat has come from the al-Qaeda. In 1996, Bin Laden announced his 'declaration of war' with the US and its allies, stating that 'oil production which serves the interests of US economy will have to be disrupted.' After the suicide attack on the French oil tanker of Limburg in October 2002, al-Qaeda announced that 'by attacking the oil tanker, the Mujahedeen have targeted the main vein of the Christian world.' In 2004, al-Qaeda said on its website that 'it will carry out more attacks, using its forces to target oil fields in Iraq and the Persian Gulf in order to deprive the US of cheap crude oil.' In 2003 and 2004, the group carried out four major oil attacks but none had significant effect in disrupting global oil supply. (Clawson & Henderson, 2005: 8) Of course, terrorist attacks and sabotage are not restricted to al-Qaeda. Based on the IAGS report, between 2003 and 2005 there were over 300 attacks on oil pipelines, the

majority of which were in the Persian Gulf and the surrounding areas. Most of the attacks also took place in Iraq and Saudi Arabia. These disruptions are not restricted to the Middle East. US intelligence agencies are also concerned about possible terrorist attacks on their oil facilities in the Gulf of Mexico and the neighboring states. Notwithstanding, terror attacks have so far failed to disrupt oil supply to the industrial world. Therefore, the pressing question is whether such attacks can be really disruptive and to what extent? For the time being, on the condition of such attacks, many governments have the required capacity and the means to quickly rebuild oil production and transportation facilities and minimize disruptions. Strategic reserves, temporary economization and other alternative sources of energy can similarly minimize the adverse impacts of terror attacks and sabotage on international economy.

#### **E. American Objectives & Policies**

Crude oil has always had a special place in the US foreign policy. During the World War II, US officials were extremely concerned over the potentiality of falling huge energy resources of Persian Gulf into the hands of their enemies. Those concerns together with rivalry on control over the oil resources of the region became a major challenge after the World War II. Price hikes of the 1970s and rising demand for oil in the industrial nations intensified the so-called anxieties. During the period, US crushed nationalist movements and fought against the intrusive policies of former Soviet Union in order to secure and stabilize its own regional position and those of its European allies, especially England. After the withdrawal of British troops from the Suez Canal, the US became the only force in charge of the security of oil supply to the industrial world. In 1970s, the Western world witnessed the birth of a major player in the field of energy emerging since 1962 and due to the developments in Libya, Algeria, Egypt, Iraq and the two Arab-Israeli wars of 1967 and 1973, a new player got more prominence role in the world oil market. It was the

Organization of Petroleum Exporting Countries (OPEC), whose decisions pushed up oil prices in the decades that followed. At the end of the 1970s, the US lost main ally (Iran) in the Persian Gulf. A revolutionary group took control of Mecca's Grand Mosque and became the symbol of resistance and instability in the world's biggest oil producing country. At the same time, the former Soviet Union invaded Afghanistan to get closer to the Persian Gulf. These developments, plus the 1979 Islamic Revolution in Iran, resulted in a 3.5 million bpd drop in crude production for a period of six years, hence triggering the second oil shock. In the 1980s, the Iraq-Iran war led to the so-called oil tanker wars in the Persian Gulf waters. Consequently, the US had to re-register Kuwaiti oil tankers under its own flag to escort them safely out of the region. It also did everything at its disposal to undermine the growing influence of OPEC in the world market. (Rutledge, 2005: 42-50) It also institutionalized its military presence in the Persian Gulf by establishment of several military bases and setting up the CENTCOM (US Central Command). In the 1990s, oil became even more central to the US policies on the Persian Gulf. In 1990, when the UN Security Council was reviewing the case of Iraqi invasion of Kuwait, oil was the most important factor on the agenda of US foreign policy. At that time advisors to George H.W. Bush was advising him that, 'Oil is as important as the violation of international law. Iraq possesses 10 percent of the world's proven oil reserves and has added up another ten percent to its reserves by invading Kuwait. If it also occupies Saudi Arabia, it could then control over 40 percent of the world's oil reserves. Under the circumstance, it could then easily put immense pressures on the industrial world, undermining public welfare of Europe and the US.' Therefore, based on their opinion, Iraq had other agenda on its mind that went beyond the attack on Kuwait. Saddam had targeted oil and US had no other option but to wage war on Iraq. On August 15, 1990, Bush said, "If Saddam takes control of world's biggest oil reserves he could then threaten our jobs, our way of life, freedom, and freedom of our allies around the

globe.” Therefore, the US and its allies joined forces to destroy Iraq’s military prowess and infrastructures, pushing Iraqi troops out of Kuwait. They then imposed widespread sanctions against Iraq and designated its southern and northern parts as no-fly zones. All these measures helped the United States to indirectly control and cordon Iraq. However, amid the hostilities and continuous bombardments of Iraq, it continued to supply 3.6 percent of US oil needs - second in Persian Gulf after Saudi Arabia with 10.8 percent. (BP, 2002 [internet])

In 2001 and during the tenure of President George W. Bush (the junior), once again oil men became heavily involved in the American politics. President Bush chose Condoleezza Rice as his national security advisor and Dick Cheney as vice president. (Rutledge, 2005: 54-65) In their view, although a Saddam without oil posed a low risk threat, his Ba’athist regime was still an element of regional instability and a danger that could disrupt oil supply at any time. At a meeting on January 30, 2001, they referred to Iraq as the element of regional instability, announcing that a new Iraq should be established. (Suskind, 2004: 72) Almost nine months after George Bush became president, terrorists brought down the Twin Towers of New York. The 9/11 attacks gave the much needed opportunity to the US Neo-Conservatives to sketch out their plan for further control of the oil-rich region of Persian Gulf. In 2003, American forces launched extensive ground and air attacks against Iraq and finally invaded and occupied that country. After the occupation, Iraq, which has the third largest proven oil reserves in the world, became an American ally.

Vice President Dick Cheney plays a key role at the Bush administration in devising US policies on the Persian Gulf and energy issues. Since the tenure of former president Jimmy Carter, Washington has had no comprehensive energy policy. The drop in oil prices in 1980s and early 1990s made having comprehensive energy policies for Washington irrelevant. But two factors later led to some kind of consensus at the Bush administration to have one in order to minimize US vulnerability in energy issues. One factor was the rise in energy consumption within the US that led to an increase in demand for more imported oil. The other factor was the formation of a small

but powerful economic lobby supporting Bush and help him win a shaky victory in the 2000 presidential election. The group comprised of major corporations active in the energy field such as Enron, Txu, and Dynegy, as well as oil majors like Chevrontexaco, Exxonmobil, Conoco and Philips Petroleum, and service companies like Halliburton and Schlumberger. (Rutledge, 2005: 45-6)

In early 2001, top priority for the Bush administration was not preventing the spread of weapons of mass destruction – as it got to be after the 9/11 attacks. The priority was boosting and stabilizing oil security and its exports to the American markets. During his 2000 presidential campaign, when there were major gas and power blackouts in several US states, Bush maintained that his most important duty would be to solve the national energy crisis. Bush and his deputy had come to the conclusion that disruption in oil supply could possibly lead to costly disruptions in different industrial sectors of car making, construction, oil and petrochemical, transportation, agriculture as well as employment and public welfare. (Rutledge, 2005: 66)

The havoc in the energy sector between 2000 and 2001 convinced Bush to the establishment of the National Energy Policy Development Group (NEPDG) whose main task was to devise a long-term plan for meeting energy needs. The group was chaired by Vice President Dick Cheney, who was also Bush's closest political ally. Cheney had worked extensively in the Defense Ministry under the tenure of Bush the senior and had experience working as executive director of Halliburton before getting into the White House in 2000. The NEPDG report on US energy outlook indicates:

**“The US has to deal with two separate options at the same time and it can only choose one. The first option would be to continue in the same path it has been for years. In this path, energy consumption will continue to surpass domestic production, and seeing the drop in production output, the country will practically become more and more dependent on imports. The second option would be to put emphasis on renewable and alternative energies that could replace fossil fuels and reduce domestic oil consumption.”**

The Dick Cheney report focused on huge investments in the energy field, particularly new energy resources and new transportation technology. Bush reviewed the report in the early months of 2001. The report was finally published on May 17 of that year. The report while rejecting the idea of more US dependent on oil imports, also puts great emphasis on investing in renewable energy resources. The major objective of this policy is not reduction of consumption levels though. Its main proposals concern investments in modern technology, boosting production capacity through huge investments in oil fields, especially in Alaska, as well as diversifying global oil resources and regions that supply US energy. In addition, the report explicitly lays emphasis on reducing oil imports from the Persian Gulf while at the same time boosting the positions of Caspian Sea region, West Africa, and Mexico in the global and American oil markets. (NEPDG, 2001[internet]) More will be said about these issues in the following parts.

#### **F. Minimization of US Vulnerability**

Although US imports from the Persian Gulf make just about 11.2 percent of its total domestic consumption, many American organizations, institutes and experts have warned that any oil disruptions to the industrialized world would have destructive and costly consequences. (NRDC,2004 [internet]) At the same time, it is important to note that although the US imports around ten percent of its oil needs from the Persian Gulf, disruptions in supply, given the current interdependent and complex global network of relations, will inevitably have serious consequences for both the global and American economies. On the other hand, hegemony over the Persian Gulf's oil exports and reserves will give a great power to whoever get the chance to control them and to dictate its will on others.

Hence, reduction dependency on the Persian Gulf oil reserves can reduce vulnerability towards oil supply disruptions from this region. Control over these important reserves will also offer great

opportunities in other areas while minimizing the susceptibility reduces threats from rivals.

American experts have come up with a wide range of proposals to minimize their country's vulnerability to the Persian Gulf oil. These proposals are as follows:

- 1- Diversifying oil and gas supplies from different parts of the world;**
- 2- Emphasis on alternative energies through utilizing modern technology;**
- 3- Improving energy infrastructures and amending energy policies and information.**
- 4- Boosting strategic reserves and capacities.**
- 5- Improving consumption patterns and increasing the flexibility of sectors;**

With regard to diversification of resources and regions, the assumption is that in the face of a regional riot or disruption, oil supply could continue from other parts of the world, and if possible, that could even increase. Major international oil markets are the North American countries, South and Central American countries, Persian Gulf, Caspian Sea region, West African nations, and the North Sea. The United States imports crude from 40 countries. Based on the June report in 2006, Canada, Mexico and Saudi Arabia each exported 1.4 million barrels of oil to the US, followed by Venezuela in the fourth place with around 1 million bpd. This clearly means that the US is trying to diversify its oil supply sources. Meanwhile, tendency is towards importing oil from allies such as Canada and Mexico. ('Top Suppliers of U.S., 2004[internet]) In addition, the US is trying to boost its presence and influence in the Persian Gulf in order to secure oil supply, while helping other exporters to boost their production capacities. The ultimate goal is to prevent oil supply disruptions. The US is more susceptible towards the Persian Gulf though, as its allies also import crude from the region. Indeed, sustainable supply could help keep oil prices in check and serve US economy.

Moreover, the country is making extensive efforts to maintain its grip on the region. These efforts through the US presidents' foreign policy

doctrines since Nixon to George W. Bush have been concentrated on different policies (including the two tiers Nixon doctrine, weakening regional powers, Clinton policy of dual containment against Iran and Iraq and the Bush doctrine on using pre-emptive strikes or wars against other players). (See Sokolosky & Others, 2001) The Persian Gulf is high on the agenda of US foreign policy not only due to its dependence on oil. Although oil is important for the whole world and the US position on the international arena has turned the region into a boiling spot for American issues, oil, terrorism, national security, free trade, and democracy. Hence, the US find itself in a complex situation trying to minimize its dependency on the Persian Gulf oil while at the same time finding alternative sources of energy in other fields that could serve its political/economic interests.

Iran lies between the two oil-rich regions of the Caspian Sea and the Persian Gulf. Therefore, any importance given to these two regions will automatically boost its position, making the situation for Washington even more complex. In light of the ongoing tensions between the two countries, US has pursued depriving Iran and block it's oil and gas sectors as its top policy priority. (Judith, 2002)

Finding alternative sources of energies has been the second axis of US policy to reduce its energy susceptibility. Emphasis is put on boosting domestic production capacities. The Americans are very much concerned about rising energy prices in the domestic market as well as dependency on oil imports. The Dick Cheney report was in fact devised to alleviate these concerns. However, after five years or so, the situation remains the same and the American worries are still persistent. As a result, on January 31, President Bush came up with the new Advanced Energy Initiative. The chief aim of the initiative was to utilize modern technology to break the US addiction to oil. Since 2001, the country has invested \$10 billion in development of cleaner, cheaper and more available alternative energies. Research funds on clean energy have also been raised by 22 percent in an attempt to produce new energies so that they could replace the 75 percent of energy imported from the Middle East. Under the initiative, there are also plans to utilize modern technology to produce clean coal as well as solar and wind energies. The plan aims to change fuels

used by vehicles, going one step beyond the oil-based economy. The initiative has likewise focused on the production of Cellulosic Ethanol as well as hybrid and electric cars which are effective in reducing air pollution. (White House, 2006[internet]) Utilization of plant fuels and intelligent growth are among other plans in the country's energy sector. The sector views these fuels as the energy of future, while laying emphasis on the country's higher production capacity in technology and agriculture. They argue that the new energy can help to significantly reduce dependency on oil imports, while reducing air pollution and increasing agricultural revenues. (NRDC, 2004 [internet])

The third point concerns boosting the infrastructures and amending the existing energy policies. There has always been some kind of conflict between the oil sector and the environmentalists. The gap between the oil majors' revenues and consumers has also led to similar political tensions. Reaching some kind of consensus among the elite and the ordinary people could help devise accurate and efficient decisions about the energy sector. Coordination in the policy-making process can likewise help pave the ground for improving the energy sector's infrastructures. These improvements could take place within the production infrastructures and distribution channels and allow the organizations and institutes make efficient decisions. (Clawson & Henderson, 2005:13-17)

Boosting the strategic reserves is the fourth axis of the United States when it comes to minimizing susceptibility to the Middle Eastern oil disruptions. The country's strategic oil reserves were built after the 1973 oil shock. The pattern has also been imitated by other nations. At the moment, the US has 687 million barrels of crude oil in strategic reserves. In 2001, Bush expressed his support for these reserves and urged the US Department of Energy to increase them by 700 million barrels. The 2005 Energy Policy Act obliged the Energy department to increase the reserve capacity by one billion barrels. This will require a physical extension of the existing reserves. The US has on several occasions used these reserves to resolve fuel shortages. Utilization of reserves came in the face of international developments and also by the occurrence of natural disasters such as the Katrina,

Ivan and Lili hurricanes. Oil experts are of the opinion that the US will need to increase its strategic oil reserves by up to 1.3 billion barrels (equal to 84 days of imports) until 2015 if it wants to effectively deal with possible Middle Eastern oil shocks. (Clawson & Henderson, 2005: 19-20)

Improving energy consumption patterns is the final option for reducing the American susceptibility to possible oil shocks. High fuel prices have forced automobile companies to manufacture fuel-efficient cars or vehicles that run on non-fossil fuels. However, these improvements will require widespread support and actions. By investing in modern technology the government can help improve and change consumption patterns as well. The priority should be on the production of hybrid cars which use clean fuel, as well as electric engines and generators, or advanced batteries and electronic controlling devices. In general, fuel optimization or economization can happen in three forms: The timely change of old tires and engine oil, upgrading heavy vehicles and boosting their fuel efficiency, as well as installing smart parts in cars or using better options such as public transport. (NRDC/IAGS, 2005: 15) In the words of the Natural Resource Defense Council(NRDC):

“Economization in oil is a national duty. The existing technologies can help reduce oil consumed by cars, industries and buildings. As a consequence, until 2015, the country can save 3.2 million barrels of oil per day, which is more than the daily volume being imported from the Middle East. Under the circumstances, by 2012, the country can practically store at least 11.2 million bpd, reducing demand by half.” (NRDC/IAGS, 2005: 13)

However, many energy research institutes are not so much optimistic about the above-mentioned measures. The BP Energy Statistical Office has forecast that over the next 25 years, the US will not see such a day. They have given special attention to the price parameters though, maintaining that if prices of oil and its by-product continue to go up, there will be more tendencies towards spending less fuel and changing the consumption patterns. Still, such developments will not trim down higher oil and gas consumption patterns in the United States. (See BP, 2002 [internet])

### **G. Institutionalization of Hegemony over Oil-Rich Regions**

As mentioned earlier, US oil imports from the Persian Gulf only make up just about 11.2 percent of its total imports, or 18 percent of its total domestic consumption. The country has taken extensive measures to reduce its vulnerability to oil disruptions. It has, in fact, made itself more secure against the instability of oil-rich countries and/or terrorist attacks.

However, the American dependency on energy imported from Canada, Mexico, Saudi Arabia and Venezuela is totally a different matter. Saudi Arabia has penetrated just about 3 percent of the US GDP. (Kyl, 2006[[internet](#)]) The figure is higher for Mexico and Canada. But these countries have deep-seated and extensive relations with the States, which leaves no room for disruption in the face of tensions – at least this can be true for its neighbor Canada. Still, all these countries depend on the United States in many areas more than the other way around. Under the circumstances, it is not possible to question the US policies vis-a-vis these oil-rich regions simply by using the dialogue of “US dependence on oil”. It seems, behind the all-embracing US oil dependency on the Persian Gulf, there is also some kind of effort to reinstate its hegemony in these regions and ultimately the world over. Washington is utilizing all sorts of political, economic and military tools to spread its hegemony in the oil-rich regions and countries. After the Second World War, the country emerged as the leader of the Western world and did everything to keep its control over important and strategic regions. One of these regions was the Persian Gulf, across which the American presence is still spreading by the day.

The American corporations started to invest heavily in the region, especially in Saudi Arabia. The US security forces also played a key role in toppling the elected government of Dr. Mohammad Mosaddeq in Iran, showing how much they were sensitive towards the nationalization of oil industry. The struggle against the former Soviet Union’s influence in the region continued after the US took England’s place. In the 1970s, the country created a double security

regime in the Persian Gulf to support its allies. However, its support of the authoritarian regimes only led to the spread of anti-American sentiments among the ordinary people, thus threatening the very fabric of the US hegemony. In the 1980s, the US extended its military presence in the region. It also set up the US Central Command (CENTCOM) in the Middle East to closely boost its military contribution. After the collapse of the former Soviet Union in the 1990s, the US suddenly found itself alone and unrivalled in the Persian Gulf. Therefore, it tried to secure its military presence and deal with the possible threats by inking bilateral security treaties with the littoral states. The US presence and interfering became even more evident in the aftermath of the September 11, 2001 terrorist attacks on its soil. (See Sokolosky & Others, 2001) Now the aim is to stop sabotage and oil supply disruptions by terrorist groups and interfere directly to stem the weight of rivals. The formation of CENTCOM, setting up central commands and military bases, inking security pacts with the littoral states, military cooperation, organizing joint war games, and arms sales are among Washington's main strategies to strengthen its military presence in the oil-rich region. Based on 'Blood and Oil, written by Michael T. Klare, these interferences will continue until the last drop of crude oil in the Persian Gulf. (Klare, 2004b: 6)

The US military presence could have two consequences and without paying attention to them it will be hard, if not impossible to find out how deep and complex the issue really is. Firstly, military interferences have only increased oil costs for the United States. These huge costs cannot be justified without taking into account other achievements from the US's regional hegemony. It is simply not possible to justify the huge costs of US military presence within the framework of oil revenues and losses. The US dependency on Persian Gulf oil is not that significant and that explains why its actions are not limited to the oil sector alone. It seems control over oil reserves is just a tool for the US to extend its regional hegemony.

Secondly, US military interferences only exacerbate anti-American sentiments, thus jeopardizing its national security. Emergence of extremist groups in the Middle East is one of the side-effects of Washington's regional policies in support of the pro-

Western authoritarian regimes, which increases the final costs even further. However, the US interference and actions in the oil-rich regions are still being maintained and openly supported in the strategy documents of the United States. Paying these heavy costs is not solely for that 11 percent of oil that is being imported from the Persian Gulf. Rather, it is because of the strategic position of the region's oil and gas reserves in helping to develop the international economy. The circumstances help the US to even out its regional hegemony and impose its policies on others.

#### **H. Enhancing the Global Hegemony**

Control over the Persian Gulf huge oil and gas reserves and ensuring supply to other nations which are receptive to the present international order are the conditions and requirements of being a hegemonic power. The US in addition to understanding the importance of the region's oil, strives to minimize its vulnerability to these huge energy resources by boosting its military power against other regional/global powers. This way it can offer better products and services to those under its hegemony, resolve international disputes, and prevent free riding of other powers. (Jackson & Soroleon, 2004: 244-5) In particular, establishing such hierarchy would mean maintaining the existing situation and improving US presence on the international arena. US hegemony comes from its military, economic and ideological superiority in particular and its ability to control crude oil flow from the Persian Gulf in general. Such aptitude, in addition to its military power and political influence, comes from the huge investments made by the American corporations in the region, hence increasing its vulnerability to possible disruptions. Moreover to those measures taking place internally and on its own soil, The US tries to exert oil hegemony by undermining unity and resolve among the OPEC member states, controlling the region's energy exports, weakening the position of rival powers, and enhancing its pressure levers.

Oil buyers and consumers are still very much familiar with the role that OPEC played in the 1970s to push up oil prices in the world

market. They worked extensively to break up the new-founded alliance among the OPEC member states. In the 1980s, the US and other industrial nations increased fuel efficiency, used alternative fuels and produced more energy to reduce their growing demand for OPEC crude. To this end, fuel-efficient cars were manufactured and laws were ratified at the US Congress with the specific goal of economizing and storing at least two million barrels of crude per day. These efforts finally paid off as demand for OPEC oil plunged to 13 million bpd in 1979-1983. The Iraqi war on Iran, two important OPEC members, as well as the involvement of other member states in the regional conflict led to stiff competition and dispute over the amount of crude oil production. As a consequence, the organization lost its grip over the world's oil market. (NRDC, 2004:5 [internet])

Another agenda for the US is to control the region's oil pipelines. This has been the case not only for the Persian Gulf but also the Caspian Sea region, mainly after the collapse of the former Soviet Union. The US is very sensitive towards the Caspian Sea developments. It is trying to prevent the presence and the influence of its two rivals, i.e., Iran and Russia, in the Caspian Sea. Oil pipelines passing through Iran and Russia will further strengthen their strategic positions in the global energy market. The Caspian Sea oil pipeline passing through the Iranian plateau will translate into the fact that Tehran has a very effective role in these two oil-rich regions. Given the ideological differences between Iran and the US, this could even become a serious challenge for the US global hegemony. Therefore, the US is doing all it can to minimize the presence and the influence of these two regional powers in the Caspian Sea and the Persian Gulf energy sectors. The strategy of depriving the enemy of oil, which used to be implemented against the former Soviet Union bloc during the Second World War, is now being implemented against Iran. The strategy is also being indirectly implemented by the US against other potential competitors. (Telhami, 2007: 283-294) Without holding its grip firmly over these oil-rich regions, the United States cannot and will not be able to assure its future global hegemony. The emergence of new economic, political and military powers is posing a huge threat to the US hegemony. Energy is the engine of these new powers. By

holding its grip over the flow of energy from the Persian Gulf and the Caspian Sea, Washington can effectively put pressure on these powers. It can also force its policies on them and stem the ones that could become a challenge to its hegemony.

### **Conclusion**

Based on the findings of this research work, the US dependency on oil imports has been in an ascending order and despite its many efforts this will still be the case, and could even get worse, over the next 25 years. Having said that, extensive measures taken by the United States on energy has helped that country to hold its grip on the world's oil reserves, thus reducing its vulnerability to supply disruptions.

The American policy makers are devising efficient policies and plans that could help them find better opportunities in the global energy field, where competition for energy is getting tougher by the day. They are also very well aware of the strategic position of the Persian Gulf, whose huge oil and gas reserves are in high demand.

The American strategists also appreciate the importance of oil as a vital element for economic development of the industrial and developing nations. They know that by holding their grip on these energy reserves they can control other nations and secure their global hegemony and dominance. To this end, they have devised numerous strategies. Under these strategies, the US must minimize its vulnerability to oil and gas supply disruptions, maintain its grip on the oil-rich regions to stem the influence of other powers, and use its hegemonic prowess to preserve the current world order and crush any political discontent. Indeed, given to its over huge energy resources and its role in shaping global economy and policy, the Persian Gulf has become a nodal point of strategic regional aspects and US foreign policy issues. Therefore the region can serve as a valuable instrument to control other powers and maintain the US hegemony.

Given the regional and global position of the US, disruptions in oil exports from the Persian Gulf could usher different results. The

past terrorist attacks serve as further proof that such actions has not had considerable or lasting effect on the world oil market. War between two regional states (such as Iran and Iraq, or Iraq and Kuwait, or Iraq and the US), have had more significant and sustainable impact on the world oil market though. However, the OECD member states, especially the US, are now more than ever prepared to deal with possible oil shocks at any time. At the same time, oil producers, despite achievements in the world energy market, have little tendency towards using oil as a lever to push for their political agenda. To put pressure on the West, they pay little attention to this role of oil. They always try to differentiate between economics and politics in order to keep the oil market stable.

This is because prolonged oil market instability will go against the interests of both consumers and producers. The economies of the Persian Gulf littoral states are more dependent on oil export revenues than the consumers. However, given their political and economic structures, Western governments can be more susceptible to supply disruptions in the long-run.

The US has become stronger than ever against possible oil supply disruptions from the Persian Gulf. It has become so by reducing domestic vulnerability, diversifying energy resources as well as holding its grip on the global energy reserves. Consequently, the country is now more intent on stemming the influence of other rivals and strengthening its own regional hegemony. That explains why its regional policies have become more than ever complex and long-term.

From Washington's point of the view, Iran and Russia have trouble-making governments. So the White House is trying to eliminate their structural position in the world energy market as well as the Persian Gulf and the Caspian Sea regions. These two nations have an obstacle in the way of US hegemony over the huge energy reserves of these two strategic regions.

Sabotage or disruptions in oil supply can give pretext to US for justifying its control and presence in the Persian Gulf in order to ensure order and stability. But sometimes Washington doesn't seem really concerned over such disruptions since the temporary disputes would increase the need for having the US forces in the region, which

will inevitably increase the contribution of allies to its agenda. As such, other consumers and rivals could appear more and more vulnerable and in the long-run, this could go against the interests of independent forces and nations.

Accordingly, the Islamic Republic of Iran would need to devise long-term policies and plans in relation to the regional and global energy structures if it wants to provide new opportunities for the country and minimize effectively its vulnerability towards hostile measures taken by Washington's long-term policies. These efficient measures could come in the form of reduction of national economy's dependence on crude oil export revenues, producing more oil by-products and making optimum use of its existing relative advantages in the field, as well as efficient production and transfer of crude oil and natural gas from the northern and southern regions of the country. It goes without saying that if implemented efficiently, these measures will certainly help minimize the nation's vulnerability in the long-run and offer more opportunities in other areas.

## References

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- “BP Statistical Review of World Energy 2002” Available at: [www.bp.com](http://www.bp.com) and monthly oil marker report (February 2003). Available at: [www.jea.com](http://www.jea.com).
- BP. (2004) “The BP Statistical Review of World Energy 2004”, Available at: [www.bp.com/statistical review](http://www.bp.com/statistical-review).
- Clawson, Patrick & Henderson, Simon (2005, November) “Reducing Vulnerability to Middle East Shocks”. The Washington Institute for Near East Policy. *Policy Focus*.
- Davies, Peter (2005,14 June) “BP Statistical Review of World Energy 2005”, Available at: [www.bp.com](http://www.bp.com)
- DOE/EIA. Annual energy outlook 2005. (2006, February) Available at: [www.eia.com](http://www.eia.com)
- Economic Research Institute, (2003, January) The US, World and Persian Gulf. Available at: [www.marubeni.co.jp](http://www.marubeni.co.jp)
- EIA, (2004 March) *Monthly Energy Report*,. Available at: [www.eia.com](http://www.eia.com)
- EIA, (2006, February) *International Energy Outlook*. Available at: [www.eia.com](http://www.eia.com)
- Energy Information Administration (EIA), International Energy Outlook 2006. Available at: [www.eia.com](http://www.eia.com)
- Jackson, Robert & Soroleon, George (2004) “International Relations Review”, Translated by Mehdi Zakerian, Ahmad Taqizadeh & Hasan Saeid Kouhi. Tehran: Mizan Publication
- Judith, Behjat. (2002) “Geopolitical Games in the Caspian Sea, US vs. Iran”, Translated by Morteza Bohrani, Strategic Studies Center Report.
- Klare, Michael T. (2004a, January) “Bush-Cheney Energy Strategy: Procuring the Rest of the Worlds Oil”. *Foreign Policy in Focus*.
- Klare, Michael T. (2004b) *Blood and Oil*. New York: Metropolitan Books.
- Klare, Michael T. (2004c) *Blood and Oil* and Blamy, Alex (2004) *Security Communities and Their Neighbors*, London: Palgrave.
- Kyl, Jon. (2006) “To What Degree Is the US Department of Foreign Oil?” US Senate Republican Policy Committee, (<http://kyl.senate.org>)
- NEPDG, (2001) “Reliable, Affordable and Environmentally Sound Energy for America’s Future”, ([www.whitehouse.gov](http://www.whitehouse.gov))
- NRDC, (2004, February) Reducing America’s Energy Dependence. Available at: [www.nrdc.org](http://www.nrdc.org)
- NRDC/IAGS, (2005, February) Securing America, Solving Our Oil Dependence through Innovation.

- Pennwell Corporation, (2005, 19 December) *Oil and Gas Journal*; Vol. 103, No. 47. Available at: [www.eid.doe.gov](http://www.eid.doe.gov)
- Rutledge, Ian. (2005) *Addicted to Oil*, New York: IB. Taurus.
- See NRDC. (2004 December) *Growing Energy: How Biofuels Can Help End America's Oil Dependence*, Available at: [www.nrdc.com](http://www.nrdc.com)
- See, Sokolosky, Richard & Others eds., (2001) *Persian Gulf Security Improving Allied Military Contributions*, Santa Monica: RAND.
- See, U.S. Department of State, (2006) "Qatar: 2006 Investment Climate Statement 2006", Available at: [www.state.gov/e/eeb/ifa/2006/](http://www.state.gov/e/eeb/ifa/2006/)
- See. Knights, Michael (2006) "Troubled Waters, Future US Security Assistance in the Persian Gulf". The Washington Institute for Near East Policy. *Policy Focus*.
- See. NRDC, (2004, December) "Growing Energy". Available at: [www.nrdc.org](http://www.nrdc.org)
- Simmons, Matthew R. (2005, 12 October) *An Energy Tsunami Ahead*, p.3 Available at: ([www.simmonsco-intl.com/research.aspx?type=MS](http://www.simmonsco-intl.com/research.aspx?type=MS)) Speech Archives
- Strategic Petroleum Reserve Available at: [www.spr.doe.gov](http://www.spr.doe.gov)
- Suskind, Ron (2004) *The Price of Loyalty: George W. Bush, The White House and the Education of Paul O'Neill*. New York: Simon and Schuster.
- Telhami, Shibley (2007) "US Oil Strategy in the Middle East", Translated by Saeid Mirtorabi in Gharayaq Zandi, Davoud. (2007) *The U.S Security Strategy in the Middle East*. Tehran: Research Institute of Strategic Studies
- "Top Suppliers of US Crude Oil 2004", Available at: <http://physics.ius.edu/kyle/p310/crudebycountry.htm>
- White House; Advanced Energy Initiative, (February 2006). Available at: [www.whitehouse.com](http://www.whitehouse.com)