

ENERGY SECURITY IN INDIAN OCEAN REGION

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ENERGY CONSUMPTION: ASIAN PROFILE

- Asian countries are going to account for greater energy consumption in future
- World energy forecasts predict that by 2030 about two thirds of global energy demand will be from the Asian developing countries
- China and India in particular will be major oil and gas consumers
- Population growth, rapid industrialization and urbanization are, among others, major causes of growth in energy demand
- Search and competition for energy resources is shaping the geo-politics of Indian Ocean

**Global Energy consumption / projections by type 2004 – 30
(Quadrillion BTU)**

REGION	2004	2010	2015	2020	2025	2030
OECD						
liquids	98.9	99.9	103.5	106.8	110.3	114.4
natural gas	53.1	59.6	64.0	67.5	70.0	72.3
coal	46.6	49.4	50.7	52.1	55.5	59.3
nuclear	23.2	24.5	25.3	26.0	26.4	27.3
other	17.9	21.1	21.8	22.7	23.7	24.7
Total	239.8	254.4	265.2	275.1	285.9	298.0
Non-OECD						
liquids	69.3	84.1	94.1	103.8	113.8	124.4
natural gas	50.3	61.0	70.4	79.5	88.5	98.1
coal	67.9	86.9	100.9	115.1	127.4	139.8
nuclear	4.3	5.3	7.2	9.6	11.7	12.4
other	15.3	19.3	21.6	23.9	26.3	28.8
Total	206.9	256.6	294.2	331.9	367.8	403.5
World						
liquids	168.2	183.9	197.6	210.6	224.1	238.9
natural gas	103.4	120.6	134.3	147.0	158.5	170.4
coal	114.5	136.4	151.6	167.2	182.9	199.1
nuclear	27.5	29.8	32.5	35.7	38.1	39.7
other	33.2	40.4	43.4	46.5	50.1	53.5
Total	446.7	511.1	559.4	607.0	653.7	701.6

Source: International Energy Outlook, 2007, Washington DC.

Percentage of Global Energy Consumption

	India		Asia		OECD	
	1990	2030	1990	2030	1990	2030
Oil	1.8	3.8	4.7	8.7	62.0	50.6
Natural gas	0.5	2.5	2.7	9.5	50.1	40.8
Coal	4.9	8.4	2.4	3.1	48.4	32.5
Nuclear power	0.3	3.4	1.7	2.7	85.6	69.9
Hydropower and other Renewable energy	2.7	3.5	3.4	7.9	60.5	41.2
Net electricity consumption	2.4	5.7	3.2	7.7	64.1	43.9
Total energy consumption	2.3	4.5	3.6	7.2	56.8	42.8
Population	16.1	17.7	14.1	16.3	19.9	15.8

Source: Calculated from EIA website at <http://www.eia.doe.gov/oiaf/ieo/ieorefcase.html> (7 October 2006)

Strategies of Securing Energy Resources: IOR Outsourcing

- Fossil fuels continue to dominate IOR's energy imports. Gulf will continue to be the major supplier of oil/gas
- Several Asian consumer countries are actively outsourcing oil/gas from IOR and non-IOR countries to augment their domestic supplies.
- 2007-08: India was involved in 38 projects (37 blocks) in 18 countries mainly in Southeast Asia (Myanmar, Vietnam), West Asia (Iran, UAE, Kuwait), Africa (Sudan, Egypt), Central Asia and Russia
- India and China are the major energy competitors in Asia. Chinese oil diplomacy is ahead of the Indian. For example, India lost to Chinese energy deals in Iran and Myanmar.

Foreign Energy Participation in IOR

- Inadequate capital, technology and infrastructure compel IOR countries to invite foreign participation in their oil/gas E&P projects
- Global oil giants like US *Chevron* ((Bangladesh/gas), *Total* (Thailand/gas), *Murphy* (Malaysia/), Australia's *Pearl Oil* (Indonesia/oil), *BP and Shell* (Pakistan/oil), UK's *Hardy Oil&Gas* (India/gas), Japan's *INPEX* (Iran/oil) are engaged in E&P projects
- China, 2nd largest oil consumer next to US, is vigorously entering IOR: Myanmar, Iran, UAE. Africa accounts for 1/3rd of China's crude oil
- Even Gulf oil producers are outreaching into other IOR projects: Saudi Arabia announced building oil refinery in Bangladesh; Kuwait is developing a major oil refinery in Vietnam. This is a more recent phenomenon

Regional Energy Cooperation in IOR

Multilateral energy cooperation in IOR is poor.

Pipeline Projects remain pipedreams:

Iran-Pakistan-India (IPI) failed due to US opposition

- Myanmar-Bangladesh-India gas pipeline agreement collapsed as Bangladesh withdrew
- Turkmenistan-Afghanistan-Pakistan-India (TAPI) is victim of political disorder in Afghanistan
- ASEAN Energy Action Plan (2004): No execution; only declaratory
- Asian Gas Grid, an Indian initiative, abandoned under American pressure

IOR: Threats to Energy Supplies

IOR Energy supplies threatened mostly by Non-traditional Actors

- Terrorists; Pirates
- Most frequent threat sources to energy supplies and assets on the High Seas, Offshore, Straits and Gulfs)
- *Al-Queda* smuggled terrorists through LNG tankers to US, originating from Algeria
- m.v. *Limburg*, French oil tanker, bombed off Yemen coast in 2002
- Saudi giant super tanker hijacked by Somalian pirates (November, 2008)