

COUNTRY ANALYSIS BRIEFS

Iran

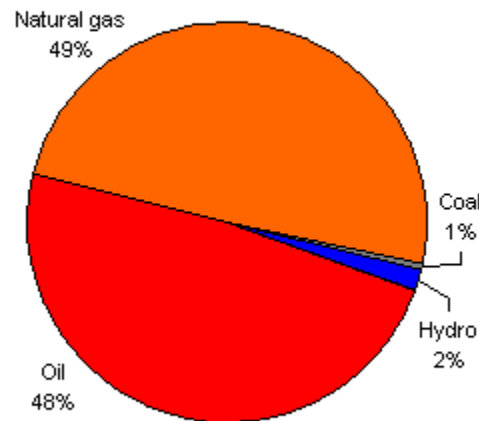
Last Updated: October 2007

Background

Iran, one of OPEC's founding members, holds the world's third-largest proven oil reserves, and the world's second-largest natural gas reserves.

Iran is a member of the [Organization of the Petroleum Exporting Countries](#) (OPEC), and ranks amongst the world's top three holders of proven oil and natural gas reserves. Iran is OPEC's second-largest exporter after Saudi Arabia, and is the fourth-largest exporter of crude oil globally after Saudi Arabia, Russia, and Norway. Natural gas accounts for half of Iran's total domestic energy consumption, while the remaining half is predominately oil consumption. The continued exploration and production of the offshore South Pars natural gas field in the Persian Gulf is a key part of in Iran's energy sector development plan.

Total Energy Consumption in Iran, by Type (2004)



Source: EIA International Energy Annual 2004

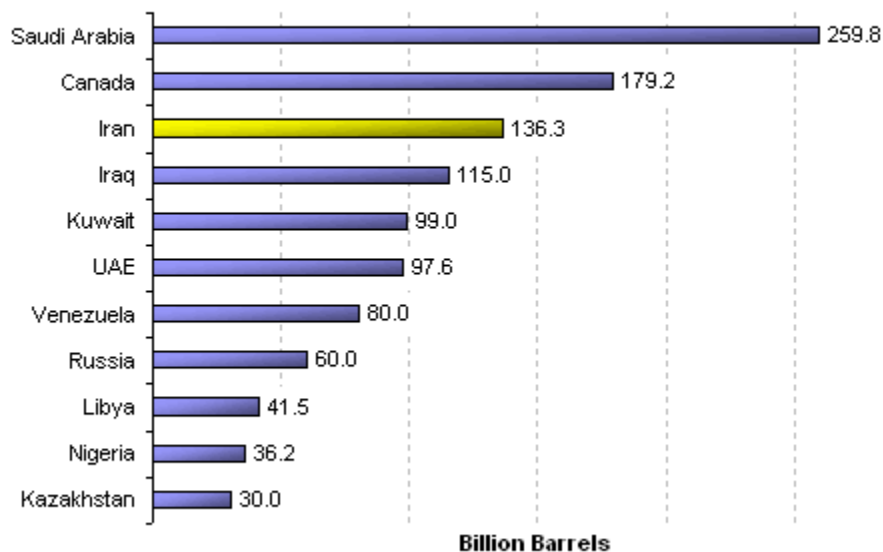


Oil

Iran is OPEC's second-largest oil producer and the fourth-largest crude oil exporter in the world.

According to *Oil and Gas Journal*, Iran has 136 billion barrels of proven oil reserves, or roughly 10 percent of the world's total proven petroleum reserves as of January 1, 2007. Iran has 40 producing fields, 27 onshore and 13 offshore, with the majority of crude oil reserves located in the southwestern Khuzestan region near the Iraqi border. Iran's crude oil is generally medium in sulfur content and in the 28°-35° API range.

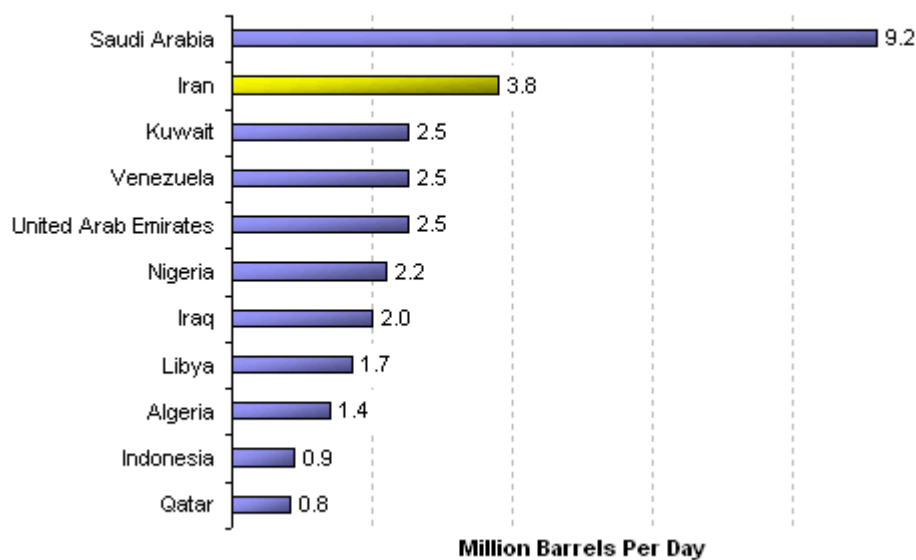
Top Proven World Oil Reserves, January 1, 2007



Source: Oil & Gas Journal, Jan. 1, 2007

Iran is OPEC's second-largest producer after Saudi Arabia. In 2006, Iran produced an estimated 4.2 million barrels per day (bbl/d) of total liquids, of which 3.8 million bbl/d was crude oil, equal to 5 percent of global production.

OPEC Total Crude Oil Production in 2006E



Source: EIA Short-Term Energy Outlook (May 2007)

Iran's oil consumption totaled 1.6 million bbl/d in 2006. The Iranian government heavily subsidizes the price of refined oil products which has contributed to increased domestic demand. Iran has limited refinery capacity to produce light fuels, and imports much of its gasoline supply. Iranian domestic oil demand is mainly for gasoline and automotive gasoils, but domestic demand for other oil products are declining due to the substitution of natural gas. However, it is an overall net petroleum products exporter due to large exports of residual fuel oil. Oil export revenues represent the majority of Iran's total exports earnings, but the country suffers from budget deficits due to a growing population and large government subsidies on gasoline and food products. In 2005, the [International Monetary Fund \(IMF\)](#) estimated that energy subsidies accounted for 12 percent of Iran's GDP, the highest rate in the world according to an [International Energy Agency \(IEA\)](#) study.

Major Iranian Oil Field Production and Reserves, 2006

Field	Production Capacity Thousand (bbl/d)	Reserves Millions of Barrels
Ahwaz-Asmari	700	10,100
Marun	520	9,500
Gachsaran	480	8,500
Karanj-Parsi	250	4,650
Agha Jari	200	8,700
Nowrooz and Soroosh	200	6,000
Doroud 1 & 2	200	600
Rag-e-Safid	180	2,400
Bangestan	158	6,500
Abu Zar	140	50
Sirri A & E/C & D	130	1,200
Salman	100	800
Major Field Total:	3,258	59,000

Source: Global Insight

Iran produced 6 million bbl/d of crude oil in 1974, but has been unable to produce at that level since the 1979 revolution due to a combination of war, limited investment, sanctions, and a high rate of natural decline in Iran's mature oil fields. Iran's oil fields need structural upgrades including

enhanced oil recovery (EOR) efforts such as natural gas injection. Iran's fields have a natural annual decline rate estimated at 8 percent onshore and 10 percent offshore, while current Iranian recovery rates are 24-27 percent, 10 percent less than the world average. It is estimated that 400,000-500,000 bbl/d of crude production is lost annually due to reservoir damage and decreases in existing oil deposits.

Upstream Projects

The Azadegan project phases I and II represent the greatest potential increase in Iranian crude oil production. Azadegan contains 26 billion barrels of proven crude oil reserves, but is geologically complex and difficult to extract. Iran and Venezuela have agreed on a \$4 billion investment in the Ayacucho 7 block, where there are an estimated 31 billion barrels of oil. Iran's Northern Drilling Company (NDC) has also worked with Russia's Lukoil on oil field development in the Caspian Sea. (See [Caspian Sea Analysis Brief](#))

New Major Iranian Upstream Projects through 2012			
Field	Company	Thousand bbl/d	Online
Salman, Foroozan, Daroud	Total, Petro Iran	200	2007
Darkhovin, Phase II & III	ENI	100	2007
South Pars (Ahwaz)	NOIC	150	2008
Azadegan Phase I (south)	NIOC	100	2009
Kushk-Hosseinih	NOIC	300	2010
Yadavaran	NIOC & Chinese Partners	300	2011
Azadegan Phase II (north)	NOIC	110	2012
New Potential Total:		1,260	

Source: OPEC, *Global Insight*

Iran plans to increase oil production to over 5 million bbl/d by 2010, but it will need foreign help. According to *Global Insight*, an estimated \$25-35 billion is required to meet the government's 5.8 million bbl/d target by 2015. Investment in Iran's energy sector has been tempered due to the election of the conservative government of President Mahmoud Ahmadinejad in 2005, the international controversy surrounding the Iranian uranium enrichment and nuclear program, and economic sanctions. According to the IEA 2007 Medium-Term Oil Market Report, Iran will not be able to increase its net expansion capacity through 2012.

U.S. Sanctions

U.S. sanctions against Iran due to Iran's historic support for international terrorism and its actions against non-belligerent shipping in the Persian Gulf impact the development of its petroleum sector. According to the Iran Transactions Regulations, administered by the [U.S. Department of Treasury's Office of Foreign Assets Control](#) (OFAC), U.S. persons may not directly or indirectly trade, finance, or facilitate any goods, services or technology going to or from Iran, including goods, services or technology that would benefit the Iranian oil industry. U.S. persons are also prohibited from entering into or approving any contract that includes the supervision, management or financing of the development of petroleum resources located in Iran.

Sector Organization

The state-owned [National Iranian Oil Company \(NIOC\)](#) is responsible for oil and gas production and exploration. The [National Iranian South Oil Company \(NISOC\)](#), a subsidiary of NIOC, accounts for 80 percent of local oil production covering the provinces of Khuzestan, Bushehr, Fars, and Kohkiluyeh va Boyer Ahamd. Though private ownership of upstream functions is prohibited under the Iranian constitution, the government has allowed for buyback contracts which allow international oil companies (IOCs) to enter exploration and development through an Iranian affiliate. The contractor receives a remuneration fee, usually an entitlement to oil or gas from the developed operation. In August 2007, President Mahmoud Ahmadinejad appointed NIOC executive Gholamhossein Nozari to serve as Acting Oil Minister, replacing Vaziri Hamaneh and creating controversy over President Ahmadinejad's role in the energy sector.

Exports

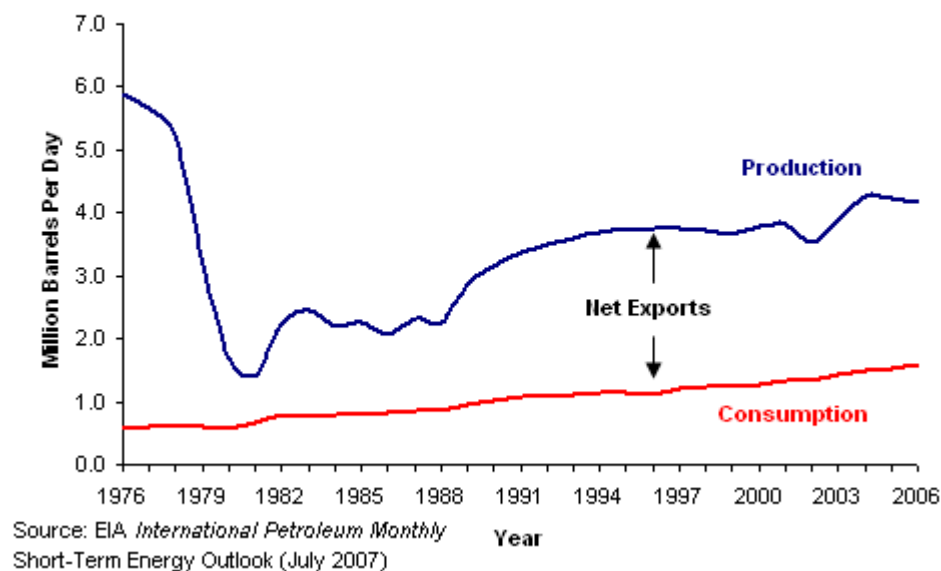
According to International Energy Agency's Monthly Oil Data Service and Global Trade Atlas, Iran's net crude and product exports in 2006 averaged 2.5 million bbl/d, primarily to Japan, China, India, South Korea, Italy, and other Organization for Economic Co-operation and Development

(OECD) nations, making it the fourth-largest exporter of crude oil in the world. In 2006, Iran's oil export revenues amounted to \$54 billion.

Top Iranian Crude Oil Exports, 2006	
Country	Thousand (bbl/d)
Japan	448
China	335
India*	302
South Korea	204
Italy	191
Turkey	179
France	135
South Africa	127
Taiwan	117
Greece	117
Other	345
Total Exports:	2,500

*India's imports only reported for April-August 2006
 Source: IEA Monthly Oil Data Service, March 2007;
 Global Trade Atlas

Iran's Oil Production and Consumption, 1976-2006E



Export Terminals

Iran has the largest oil tanker fleet in the Middle East, the National Iranian Tanker Company, which holds 29 ships including Very Large Crude Carriers. Kharg Island is the country's largest terminal with a holding capacity of 16 million barrels of oil and a loading capacity of 5 million bbl/d, followed by Lavan Island with capacity to store 5 million barrels and loading capacity of 200,000 bbl/d. Other important terminals include Kish Island, Abadan and Bandar Mahshar, and Neka, which helps facilitate imports from the Caspian region. The Strait of Hormuz, on the southeastern coast of Iran, is an important route for oil exports from Iran and other Persian Gulf countries. (See [Persian Gulf Analysis Brief](#)) At its narrowest point the Strait of Hormuz is 34 miles wide, yet an estimated 17 million barrels, or roughly two-fifths of all seaborne traded oil, flows through the Strait daily. Iranian Heavy Crude Oil is Iran's largest crude export at 1.6 million bbl/d followed by Iranian Light at 1 million bbl/d.

National Iranian Oil Company (NIOC) Crude Exports by Blend			
Name	API Gravity	Sulfur content	Exports (bbl/d)
Iranian Heavy	31°	1.70%	1.6 million
Iranian Light	34.6°	1.40%	1 million
Foroozan Blend and Sirri	29-31°	n/a	165,000
Lavan Blend	34-35°	1.8-2%	75,000

Refining

Iran's total refinery capacity is 1.5 million bbl/d from nine refineries operated by the National Iranian Oil Refining and Distribution Company (NIORDC), a NIOC subsidiary. Iranian refineries are unable to keep pace with domestic demand, and face major infrastructure problems. The country plans to add around 985,000 bbl/d of refining capacity by 2012, mostly through expansions and upgrades for gasoline yields at the Bandar Abbas, Bushehr, and the 90-year-old Abadan refineries. Large expansion projects at Bandar Abbas, including new catalytic reformers, distillation units, and condensate splitters will help supply the domestic demand, but it will probably not all gasoline imports. Iran has also discussed joint ventures in Asia, including China, Indonesia, Malaysia, and Singapore to expand refining activity.

IRAN REFINERY PROJECTS (through 2012)				
Refinery	Project Type	Online	Additional Production Capacity (thousand bbl/d)	Notes
Bandar Abbas	Upgrade & Expansion	2012	300	heavy crude processing
Bushehr	New Refinery	TBD	170	
Abadan	Upgrade	2009	140	
Abadan	New Refinery	2012	80	gasoline production
Arak	Expansion	2009	80	
Bandar Assaluyeh	New Refinery	TBD	80	
Bandar Abbas	Expansion	2009	60	
Tehran	Expansion	2012	50	gasoline production
Tabriz	Expansion	2012	25	gasoline production
Total New Refinery Capacity:			985	

Source: PFC Energy, *Global Insight*

Pipelines

Iran has an expansive domestic oil network including 5 pipelines, and multiple international pipeline projects under consideration. Recently, an expansion of the 150 mile pipeline from the port of Neka on the Caspian coast to Rey, Tabriz, and Tehran refineries has reached a capacity of 300,000 bbl/d according to *Global Insight*. Iran has invested in its import capacity at the Caspian port to handle increased product shipments from Russia and Azerbaijan, and enable crude swaps with Turkmenistan and Kazakhstan. In the case of crude swaps, the oil from the Caspian is consumed domestically in Iran, and an equivalent amount of oil is produced for export through the Persian Gulf with a Swiss-trading arm of NIOC for a swap fee.

In 2006, Iran imported over 192,000 bbl/d of gasoline and relied upon imports to meet almost half of its fuel needs costing \$5

Gasoline

Iran is the second biggest gasoline importer in the world after the United States, consuming over 400,000 bbl/d. According to FACTS Global Energy, Iran imported over 192,000 bbl/d of gasoline in 2006 costing \$5 billion. The gasoline consumption growth rate has averaged ten percent annually over the past six years, and the cost of imports is expected to reach \$6 billion in 2007, up from \$2.8 billion in 2005. Gasoline prices are heavily subsidized, and sold below the market

billion. price at around 42 cents per gallon, which has encouraged increased consumption. An increase in vehicle sales in recent years has also contributed to the problem. According to PFC Energy, car ownership in Iran grew 250 percent between 1990 and 2006, and a majority of these vehicles are older models. Gasoline powered vehicles in Iran are expected to reach 14.9 million by the end of 2007. Iran does not have sufficient refining capacity to meet its domestic gasoline and other light fuel needs. Therefore Iran imports gasoline from India, Turkmenistan, Azerbaijan, the Netherlands, France, Singapore, and the United Arab Emirates. Iran also imports from large, multinational wholesalers such as BP, Shell, Total, Vitol, LUKoil, and several Chinese companies.

New Gasoline Rationing System

In June 2007, the Iranian government instituted a gasoline rationing system. The decision followed a 25 percent price increase to 42 cents per gallon in May. NIORDC is responsible for the program which allows private cars to purchase 26 gallons per month and taxis to buy 211 gallons per month. The rations and increased costs are politically unpopular in Iran. Customers are allowed to purchase their ration six months in advance. Part-time taxis, commercial vehicles, and government vehicles also have special allowances. Records are maintained on smart cards, and later this year the government is expected to announce the price for gasoline bought beyond quota levels.

Iran's gasoline consumption dropped 30 percent immediately after the rationing scheme was adopted. NIOC executive, Hojjatollah Ghanimifard, stated that Iranian gasoline imports for August 2007 dropped 14 percent, although an additional \$1.5 billion was requested by the Iranian Oil Ministry to increase gasoline imports through March 2008. The International Energy Agency reported in its [August 2007 Oil Market Update](#) that gasoline consumption will likely increase again due to the fact that Iran allows advance purchase of gasoline at a subsidized rate. The combination of rationing, price hikes, increased refining capacity, as well as compressed natural gas (CNG) production, will reduce Iranian gasoline import demand by an estimated 30,000 bbl/d in the next three years according to FACTS Global Energy.

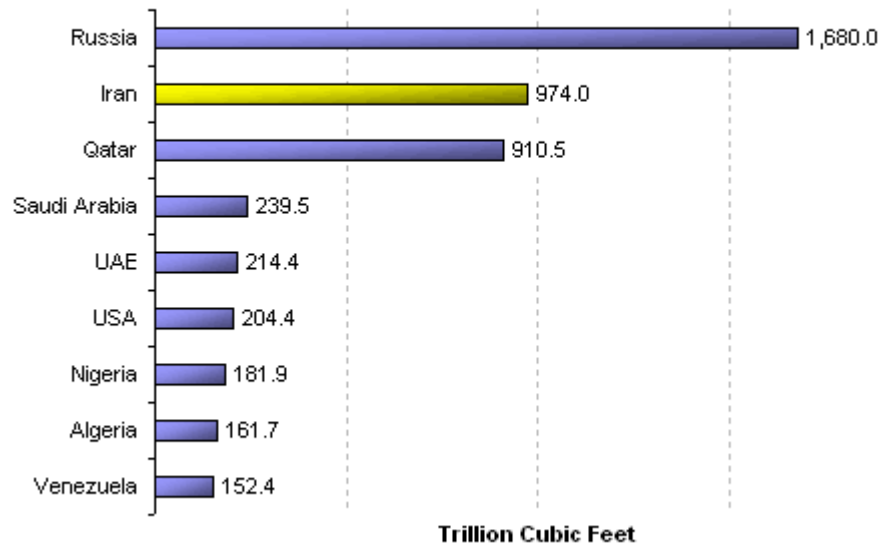
Natural Gas

Iran is the world's third largest consumer of natural gas, and the South Pars Natural Gas offshore field the most significant development project in the country's energy sector.

According to *Oil and Gas Journal*, Iran has an estimated 974 trillion cubic feet (Tcf) in proven natural gas reserves. Iran holds the world's second largest reserves after Russia. Around 62 percent of Iranian natural gas reserves are located in non-associated fields, and have not been developed. Major natural gas fields include: South and North Pars, Tabnak, and Kangan-Nar. In 2005, Iran produced and consumed 3.6 Tcf of natural gas. Natural gas consumption is expected to grow around 7 percent annually for the next decade.

Both production and consumption have grown rapidly over the past 20 years, and natural gas is often used for re-injection into mature oilfields in Iran. According to FACTS Global Energy, Iran's natural gas exports will be minimal due to rising domestic demand even with future expansion and production from the massive South Pars project. In 2005, 65 percent of Iranian natural gas was marketed production, while 18 percent was for EOR gas re-injection, and 17 percent was lost due to flaring and the reduction of wet natural gas from hydrocarbon extraction. Like the oil industry, natural gas prices in Iran are heavily subsidized by the government.

World Natural Gas Reserves by Country, January 1, 2007



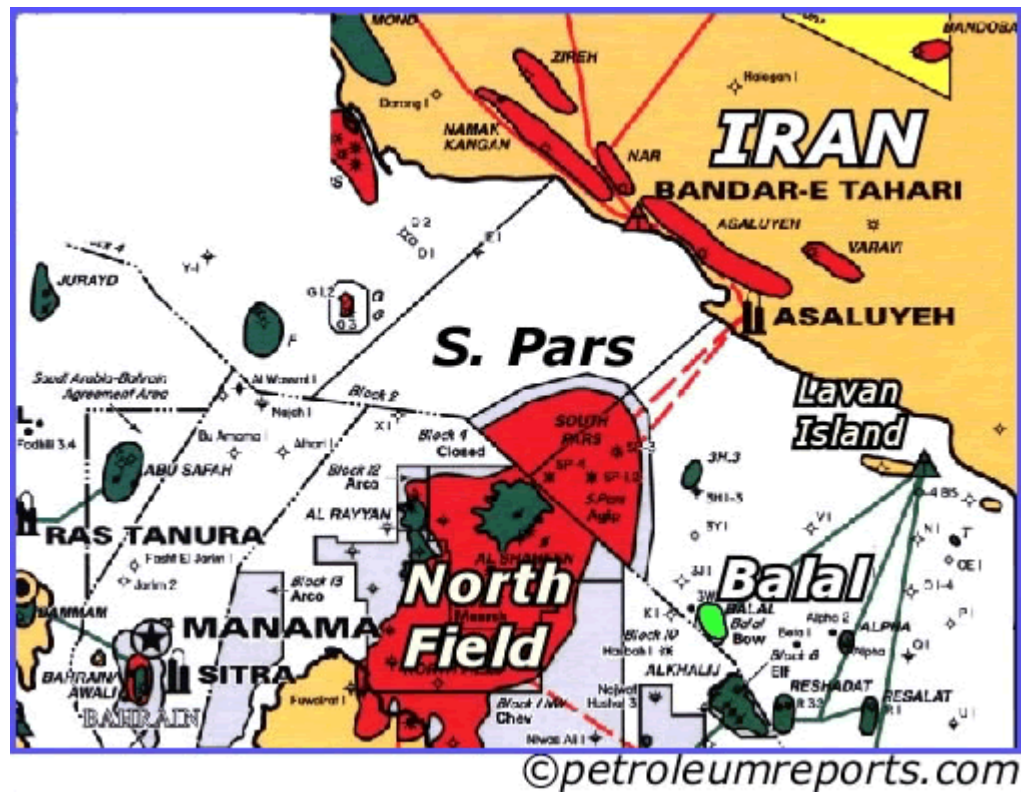
Sector Organization

The National Iranian Gas Company (NIGC) is responsible for natural gas infrastructure, transportation, and distribution. Due to the poor investment climate, some foreign companies including British Petroleum (BP) and Chile's Sipetrol have chosen to divest in Iran's natural gas sector. Total, Eni, and Shell are the largest remaining foreign investors. In response, Iran has looked toward eastern firms, like state-owned Indian Oil Corp. and China Petroleum & Chemical Corporation, or Sinopec, to take an increased role in Iranian natural gas upstream development. Under Iran's buy-back scheme, foreign firms hand over operations of fields to NIOC, and after development they receive payment from natural gas production to cover their investment.

Liquefied Natural Gas (LNG)

According to FACTS, Global Energy, Iran may only be able to reach peak LNG exports of around 1,462 Bcf as a lifetime ceiling. LNG projects in Iran lag behind neighboring Qatar, the world's largest LNG exporter. A \$500-million contract for Iran LNG is part of the South Pars Phase 12 development. Pars Oil and Gas Company (PAGC) is responsible for upstream LNG development, and downstream development is divided amongst various companies including the National Iranian Gas Export Company (NIGEC).

South Pars Field



The most significant energy development project in Iran is the offshore South Pars field, which is estimated to have 450 Tcf of natural gas reserves, or around 47 percent of Iran's total natural gas reserves. Discovered in 1990, and located 62 miles offshore in the Persian Gulf, South Pars has a 25 phase development scheme spanning 20 years. The Iranian government expects each phase to yield 1 Bcf/d, and is developing the South Pars field primarily to meet its domestic market demand. The first five phases are completed, while the next five are due by the end of 2007. The Iranian government plans for the first 16 phases to be online by 2010, keeping pace with Qatar's connected North Field. The majority of South Pars natural gas development will be allocated to the domestic market for consumption and gas re-injection, with the remainder exported to South Asia or Europe, LNG production, and gas to liquids (GTL).

Exploration and Production

Iranian natural gas field exploration occurs in the Fars province including the Varavi, Shanol, and Homa fields, and in the Persian Gulf Salman gas field. Former Oil Minister Kazem Vaziri-Hamaneh announced in August 2007, that a natural gas discovery in the Fars province should produce up to 30 million cubic feet per day (Mcf/d) from 17 new wells. Iran also announced new agreements with IOCs associated with the South Pars project, and SKS, a private Malaysian company to develop non-associated Golshan and Ferdos fields for LNG exports. Their investment will amount to \$16 billion, but is in early stages. Iran and Kuwait have recently settled a dispute over the Arash (Al Dorra) offshore natural gas field in the Persian Gulf which they will jointly develop and explore. The field lies on the continental shelf between Iran, Kuwait, and Saudi Arabia.

Pipelines

Iran's domestic natural gas pipelines increased over recent years, and future projects are planned for the IGAT (1-8) pipeline series. The 745 mile Iran-Turkey pipeline completed in 2001 can move 1.4 Bcf/d. Iran imports 800 Mcf/d from Turkmenistan via pipeline from the bordering Korpedze field to Iran's Kurt Kul town for consumption in northern Iran. This \$195-million pipeline is the first in the Caspian region to bypass Russia. In March 2007, the 87-mile long Iran-Armenia pipeline was completed in Agarak, and will transport 200 Mcf/d to Armenia in exchange for electricity. The Nabucco pipeline is another proposed project which will run 2050 miles from Iran and other Caspian states through Turkey to Austria and the European Union. Construction is slated to start in 2009, and the project will cost an estimated \$6.8 billion with a capacity to transport 300 Mcf/d.

Iran-Pakistan-India (IPI) Pipeline



Source: U.S. Government

The most controversial pipeline proposal is the \$7.4-billion Iran-Pakistan-India (IPI) line which would transport Iranian natural gas south to the Asian subcontinent. With a proposed 1724 miles and a 5.4 Bcf/d capacity, the pipeline has been stalled in the past due in part to disputes over the cost of the shipments. NIOC's Director of International Affairs Hojjatollah Ghanimifard invited President Musharraf of Pakistan and Prime Minister Singh of India to discuss the pipeline in July 2007, but the final arrangement has not been announced. Pakistan and India still need to settle transportation tariffs. Iran would probably extend its domestic IGAT-7 pipeline into Pakistan, and not create a new parallel pipeline. The 545-mile IGAT-7 has a total capacity of 5.4 Bcf/d and runs from Assaluyeh to Iranshahr. The IGAT-7 should be completed by 2011.

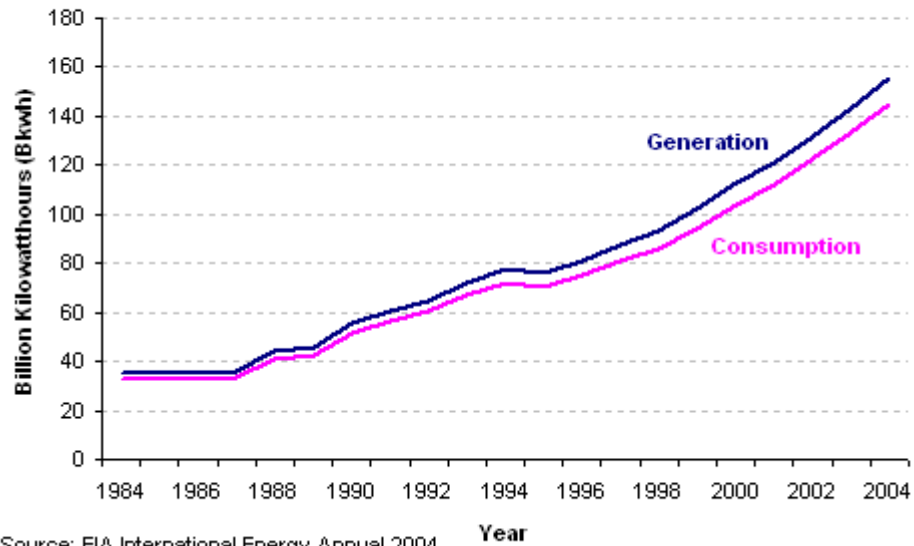
Electricity

Iran's electricity demand is projected to grow 6 percent annually through 2015.

In 2004, Iran generated 156 billion kilowatthours (Bkwh) and consumed 145 Bkwh. 146 Bkwh was generated by conventional thermal electric power, and the remaining 11 Bkwh was generated by hydroelectric power. As of 2004, EIA shows no significant generation from nuclear electric power. Iran will need to increase its electricity generation to meet its rapid consumption growth. The IEA estimates that energy intensity in Iran is 30 percent higher than in OECD countries. According to FACTS Global Energy, Iran's electricity demand is projected to grow at 6 percent per year through 2015.

In Iran multiple sources of power generation are being explored. One option for meeting electricity demand includes using fuel oil for power generation, particularly efficient for plants located close to oil refineries. Iran also plans to boost natural gas production use to meet its electricity demand. Hydroelectric plants and the controversial nuclear power program will also be part of Iran's overall electricity plan if technological advances, investment, and political pressure allow. State-owned Tavanir and other regional subsidiaries dominate the power sector, and are responsible for power generation, transmission, and distribution. However, the Iranian government has moved to attract private investment in its electricity sector.

Iran's Electricity Generation and Consumption, 1984-2004



International Cooperation

According to *Middle East Economic Survey* (MEES), Pakistan's governmental Central Development Working Party has approved a plan to import 100-400 MW of electric power from Iran for up to 6.3 cents per kwh over 30 years. Iran and Turkey plan to build three power plants together using natural gas to generate 6,000 MW, and they plan to build joint hydroelectric plants starting in 2008. Iran's Deputy Energy Minister Mohammad Ahmadian stated that Iran would like to link with Russia's electricity network, though such a project would require at least two years to fulfill. Iran has expressed interest in increasing supplies to Azerbaijan after the necessary infrastructure is built.

Profile

Energy Overview

Proven Oil Reserves (January 1, 2007E)	136 billion barrels
Oil Production (2006E)	4.16 million barrels per day, of which 3.8 million barrels per day was crude oil.
Oil Consumption (2006E)	1.6 million barrels per day
Crude Oil Distillation Capacity (2007E)	1,451 thousand barrels per day
Proven Natural Gas Reserves (January 1, 2007E)	974 trillion cubic feet
Natural Gas Production (2005E)	3.6 trillion cubic feet
Natural Gas Consumption (2005E)	3.6 trillion cubic feet
Recoverable Coal Reserves	462 million short tons

(2007E)

Coal Production (2004E)	1 million short tons
Coal Consumption (2004E)	1.7 million short tons
Electricity Installed Capacity (2004E)	34.3 gigawatts
Electricity Production (2004E)	156 billion kilowatt hours
Electricity Consumption (2004E)	145 billion kilowatt hours
Total Energy Consumption (2004E)	6.4 quadrillion Btus*, of which Natural Gas (49%), Oil (48%), Hydroelectricity (2%), Coal (1%)
Total Per Capita Energy Consumption (2004E)	95.5 million Btus
Energy Intensity (2004E)	10,280 Btu per \$2000-PPP**

Environmental Overview

Energy-Related Carbon Dioxide Emissions (2004E)	402 million metric tons, of which Oil (52%), Natural Gas (42%), Coal (1%)
Per-Capita, Energy-Related Carbon Dioxide Emissions (2004E)	6 metric tons
Carbon Dioxide Intensity (2004E)	0.6 Metric tons per thousand \$2000-PPP**

Oil and Gas Industry

Organization	The Ministry of Petroleum (MoP) manages: 1) National Iranian Oil Company (NIOC) - oil and gas exploration and production, refining and oil transportation; 2) National Iranian Gas Company (NIGC) - manages gathering, treatment, processing, transmission, distribution, and exports of gas and gas liquids; 3) National Iranian Petrochemical Company (NPC) - handles petrochemical production, distribution, and exports; and 4) National Iranian Oil Refining and Distribution Company (NIORDC) handles oil refining and transportation, with some overlap to NIOC. The National Iranian Offshore Oil Co. (IOOC) is in charge of offshore oil fields in the Persian Gulf. The National Iranian South Oil Fields Co. (NIOC South) is in charge of onshore oilfields in southern Iran. Pars Oil & Gas Co. (POGC) is in charge of the offshore North and South Pars gas fields. Khazar Exploration & Production Co. is in charge of Iran's Caspian Sea sector. Also, the National Iranian Tanker Company (NITC) controls the second largest fleet of tankers in OPEC.
Major Oil/Gas Ports	Kharg Island, Lavan Island, Sirri Island, Ras Bahregan
Foreign Company Involvement	BG, BHP, Bow Valley, BP, Eni, Gazprom, Lukoil, OMV, Petronas, Royal Dutch/Shell, Sheer Energy, Sinopec, Statoil, Total
Major Oil Fields	Agha Jari, Ahwaz, Bangestan, Bibi Hakimeh, Darkhovin, Doroud, Gachsaran, Mansouri (Bangestan), Marun, Masjid-e Soleiman, Parsi, Rag-e-Safid, Soroush/Nowruz
Major Natural Gas Fields	South Pars, North Pars, Khuff, Zireh, Tabnak, Nar-Kangan, Aghar, Dalan, Sarkhoun, Mand

Major Refineries (capacity, bbl/d)	Abadan (400,000), Isfahan (265,000), Bandar Abbas (232,000); Tehran (225,000), Arak (150,000), Tabriz (112,000), Shiraz (40,000), Kermanshah (30,000), Lavan Island (20,000)
Major Export Terminals (loading capacity, bbl/d)	Kharg Island (5 million), Lavan Island (200,000), Neka (50,000), Assaluyeh (250,000 gas liquids), Kish Island and Abadan and Bandar Mahshahr

* The total energy consumption statistic includes petroleum, dry natural gas, coal, net hydro, nuclear, geothermal, solar, wind, wood and waste electric power. The renewable energy consumption statistic is based on International Energy Agency (IEA) data and includes hydropower, solar, wind, tide, geothermal, solid biomass and animal products, biomass gas and liquids, industrial and municipal wastes. Sectoral shares of energy consumption and carbon emissions are also based on IEA data.

**GDP figures from OECD estimates based on purchasing power parity (PPP) exchange rates.

Links

U.S. Government

[CIA World Factbook - Iran](#)

[EIA - Country Information on Iran](#)

[Library of Congress Country Study on Iran](#)

[OPEC Fact Sheet](#)

[U.S. State Department - Iran](#)

[U.S. Treasury Department's Office of Foreign Asset Controls](#)

Foreign Government Agencies

[Interests Section of the Islamic Republic of Iran in Washington, DC \(in the Pakistani Embassy\)](#)

[Permanent Mission of the Islamic Republic of Iran to the United Nations](#)

[Salam Iran Home Page](#)

Energy

[National Iranian Oil Company](#)

[National Petrochemical Company of Iran](#)

[Pars Times: Caspian Sea Region](#)

[Pars Times: Iran Oil and Gas Resources](#)

General

[BBC Iran](#)

[BBC Persian](#)

[Bushehr: Global Security.org](#)

[Iran Nuclear Resources](#)

[Iran Press Service](#)

[Iranian Trade](#)

[Pars Times: Persian Gulf Region](#)

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Upstream
U.S. Energy Information Administration
Xinhua News Agency

Contact Info

cabs@eia.doe.gov
(202)586-8800
cabs@eia.doe.gov