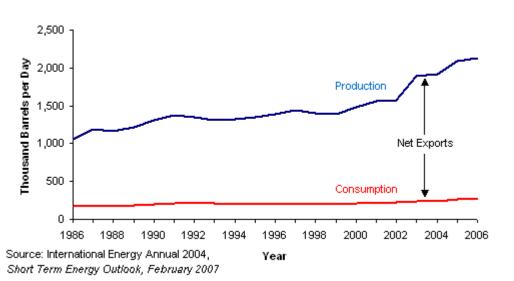


Source. On and Gas oourm

Production

Algeria produced an average of 1.37 million barrels per day (bbl/d) of crude oil in 2006. Together with 445,000 bbl/d of lease condensate and 310,000 bbl/d of natural gas liquids, Algeria averaged 2.13 million bbl/d of total oil production during 2006, up slightly from 2.09 million bbl/d in 2005 and 1.93 million bbl/d in 2004. On 1 November 2006 (OPEC Doha Agreement) and 1 February 2007 (OPEC Abuja Agreement), Algeria agreed to cut crude production by 59,000 bbl/d and 25,000 bbl/d, respectively. Algeria's Saharan Blend oil, 45° API and 0.1 percent sulfur content, is among the highest quality in the world. European countries rely on Algerian oil to help meet increasingly stringent EU regulations on sulfur content of gasoline and diesel fuel.



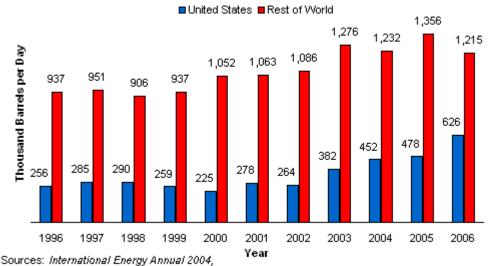


Exports

With domestic oil consumption of 283,000 bbl/d in 2006, Algeria had estimated net oil exports (including all liquids) of 1.84 million bbl/d. EIA estimates that the United States imported 650,000 bbl/d or 35 percent of Algerian oil exports during 2006. According to the International Energy Agency (IEA), during the first 11 months of 2006, approximately 37 percent of Algerian oil exports went to European countries within the Organization for Economic Co-operation and Development

(OECD). France imported the majority of oil (8 percent), while Italy (7 percent) Spain (6 percent) and Germany among others, also imported Algerian oil.

Algeria's Oil Exports to the United States and Rest of World, 1996-2006



Short Term Energy Outlook-January 2007, EIA Petroleum Navigator

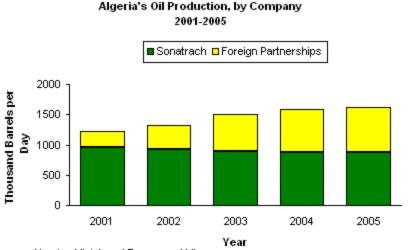
Sector Organization

In March 2005, the Algerian parliament adopted the hydrocarbon reform bill. The bill encouraged international oil company (IOC) investment throughout the hydrocarbon industry, which stateowned Sonatrach previously dominated. However, 2006 amendments to the hydrocarbon bill created a windfall tax on IOC profits when oil prices top \$30 per barrel. This tax reached up to 50 percent on some contracts, deflating some of the IOCs investment enthusiasm. In addition, the amendments gave Sonatrach the right to have a 51 percent or higher participation option on each newly discovered project. Aside from Sonatrach, the state regulatory agency, Alnaft, promotes oil exploration, signs upstream contracts, approves development plans, and collects royalties and taxes.

In 2005, Algeria held its sixth licensing round for foreign development of oil and natural gas reserves. A total of 54 companies showed interest in the ten blocks being offered. Companies that won exploration rights included BP (winning three concessions), BHP-Billiton (winning two concessions), Shell (winning two concessions), and the UAE-US joint venture Gulf Keystone (winning two concessions). In mid-2007, the Algerian government is expected to begin the country's seventh licensing round.

Sonatrach operates the largest oil field in Algeria, Hassi Messaoud. Located in the center of the country, Hassi Messaoud produced around 440,000 bbl/d of crude in 2006, and Sonatrach hopes to increase production at the field to 600,000 bbl/d over the next few years. Sonatrach also operates the Hassi R'Mel field (north of Hassi Messaoud, south of Algiers), which produces around 180,000 bbl/d of crude. Other major fields operated by Sonatrach include Tin Fouye Tabankort Ordo, Zarzaitine, Haoud Berkaoui/Ben Kahla, and Ait Kheir.

Foreign oil operators have steadily increased their share of Algeria's oil production. The largest foreign oil producer is Anadarko, with total production capacity of 500,000 bbl/d. The company operates the Hassi Berkine South and Ourhound fields in eastern Algeria, with combined output of around 450,000 bbl/d. As of the fourth quarter 2006, Anadarko netted 62,000 bbl/d of oil from the fields based on its ownership percentage in the project. Anadarko is developing seven new oil and natural gas fields in Block 208 of the Berkine Basin; first production from the fields (EKT, El Merk, El Merk N, El Merk E, El Merk C, El Kheit, and El Tessekha) is possible by 2008, with output eventually reaching 150,000-200,000 bbl/d of crude oil and condensate. Eni operates (among others) the Rhourde Oulad Djemma (ROD) project in south eastern Algeria, a series of six satellite fields that have production capacity of 80,000 bbl/d. Additional foreign investors include Amerada Hess, BHP-Billiton, BP, Repsol, Shell, Statoil and Total.



Source: Algerian Ministry of Energy and Mines

Pipelines and Export Terminals

Algeria uses seven coastal terminals to export crude oil, refined products, liquefied petroleum gas (LPG) and natural gas liquids (NGL). There are facilities located at Arzew, Skikda, Algiers, Annaba, Oran, Bejaia, and La Skhirra in Tunisia. Arzew handles about 40 percent of Algeria's total hydrocarbon exports, including all of its NGL, LPG, and oil condensate exports. Algeria has ambitious plans for the expansion of the Arzew port area, including the construction of a petrochemicals complex, a condensate refinery, and a desalination plant.

Algeria's oil pipeline network facilitates the transfer of oil from interior production fields to the export terminals. Sonatrach operates over 2,400 miles of crude oil pipelines in the country. The most important pipelines carry crude oil from the Hassi Messaoud field to export terminals (see table). Sonatrach also operates oil condensate and LPG pipeline networks that link Hassi R'mel and other fields to Arzew. Sonatrach is expanding the Hassi Messaoud-Azrew pipeline, the longest in the country. The project entails a second, parallel line that will more than double the capacity of the existing line.

Algeria operates one crude oil pipeline connection to a foreign country. The 160-mile, 304,000bbl/d OT1 pipeline connects the In Amenas oil field in the southeastern part of the country to the export terminal in La Skhira, Tunisia.

Algeria's Major Domestic Crude Oil Pipelines				
Origin	Destination	Length (miles)	Capacity (bbl/d)	
Hassi Messaoud	Arzew	500	470,000	
Hassi Messaoud	Bejaia	410	370,000	
Hassi Messaoud	Skikda	400	520,000	
In Amenas	Hassi Messaoud	390	390,000	
Hassi Berkine	Hassi Messaoud	180	110,000	
El Borma	Mesdar	170	55,000	
B. Mansour	Algiers	80	77,000	
Mesdar	Hassi Messaoud	70	26,000	
Source: Algerian Ministry of Energy and Mining				

Downstream

Naftec, a subsidiary of Sonatrach, operates Algeria's four refineries, which supply most of the country's refined oil product needs. According to *OGJ*, the refineries have combined capacity of 450,000 bbl/d. The Skikda refinery (300,000 bbl/d) provides the bulk of Algeria's refined products

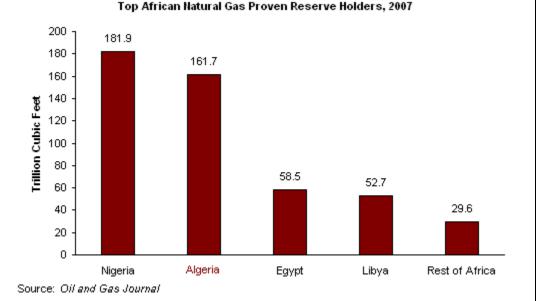
production. The 30,000-bbl/d Hassi Messaoud refinery supplies products to southern Algeria, while the 60,000-bbl/d Algiers refinery processes crude from Hassi Messaoud for consumption in the capital. Finally, the coastal 60,000-bbl/d Arzew refinery produces products for domestic consumption and export. In July 2006, Sonatrach and the Chinese National Petroleum Corporation (CNPC) brought online the small-13,000 bbl/d Adrar refinery, which is located 930 miles southwest of Algiers.

Natural Gas

Overview

Algeria is a significant producer of natural gas and liquefied natural gas (LNG). In 2005, Algeria exported to OECD-Europe 21 percent of the region's total natural gas imports. Algeria also exports substantial amounts of natural gas and LNG to the United States.

According to *Oil and Gas Journal (OGJ)*, Algeria had 161.7 trillion cubic feet (Tcf) of proven natural gas reserves (the eighth-largest in the world) as of January 2007. Algeria's largest gas field is the super-giant Hassi R'Mel, discovered in 1956 and holding proven reserves of about 85 Tcf. Hassi R'Mel accounts for about a quarter of Algeria's total dry natural gas production. The remainder of Algeria's natural gas reserves center around associated (they occur alongside crude oil reserves) and non-associated fields in the south and southeast regions of the country. In southeastern Algeria, the Rhourde Nouss region holds 13 Tcf of known reserves. Also in southeastern Algeria, near the Libyan border, the In Amenas region includes the Tin Fouye Tabankort (TFT; 5.1 Tcf), Alrar (4.7 Tcf), Ouan Dimeta, and Oued Noumer fields. The In Salah region in southern Algeria holds smaller, less-developed reserves (5-10 Tcf).



The country produced 2.8 Tcf of natural gas in 2004, the eighth-largest in the world and the second largest among OPEC-member countries (behind Iran). Algeria consumed 0.68 Tcf of natural gas in 2004, some 24 percent of its production. In 1997, Algeria's natural gas production exceeded the country's crude oil production for the first time, though it has since fallen below oil production again. The Algerian government has encouraged the domestic use of natural gas, which represented 62 percent of the country's total energy consumption in 2004. The remaining natural gas is exported, with the majority going to Europe and some to the United States.

*includes lease condensate

Algeria's Total Hydrocarbon Production, 1984-2004 4.0 Natural Gas 3.5 3.0 Quadrillion Btu 2.5 Oil* 2.0 1.5 1.0 0.5 0.0 1986 1988 1990 1992 1994 1996 1998 2000 2002 2004 1984 Year Source: International Energy Annual 2004

Sector Organization

Sonatrach dominates natural gas production and wholesale distribution in Algeria, while stateowned Sonelgaz controls retail distribution. Algeria has increasingly allowed greater foreign investment in the sector, and foreign gas producers have entered into numerous partnership agreements with Sonatrach. There are also plans to allow foreign participation in the retail natural gas sector. Foreign operators in Algeria include BHP-Billiton, BP, Repsol, Statoil and Total.

Exploration and Production

Development of the In Salah region is crucial in Algeria's plan to increase its natural gas production. The In Salah Gas consortium, a partnership of Statoil, BP, and Sonatrach, was the first major natural gas partnership between Sonatrach and a foreign operator. The consortium has development rights for seven of the twelve existing fields in the In Salah region. In Salah Gas will appraise existing wells and explore for new natural gas reserves in the region. The fields controlled by the consortium contain proven reserves of 6 Tcf, with potentially 10 Tcf in total recoverable reserves.

Initial production at the In Salah fields began in July 2004, and once fully online, they should produce some 880 million cubic feet per day (Mmcf/d) of natural gas. Even prior to initial startup, the consortium had already signed natural gas supply contracts with European customers. In May 1997, In Salah Gas sealed its first natural gas sales deal with Italian electricity generator Enel. The deal enables In Salah Gas to take over an existing contract to supply Enel with 390 Mmcf/d of natural gas. In Salah Gas is also marketing natural gas to potential clients in Europe, Turkey and North Africa.

Additional Algerian natural gas projects have centered around three blocks in the Illizi province of southeast Algeria, near the Libyan border: Ohanet, In Amenas, and Gassi Touil. Ohanet, led by a consortium of BHP-Billiton and Sonatrach, is in Illizi on the northern edge of the Sahara desert. Production of natural gas, NGL, and liquified petroleum gas (LPG) at Ohanet began in October 2003. The Ohanet project includes a natural gas processing plant with capacity for 30,000 bbl/d of condensate, and 26,000 bbl/d of LPG.

In November 2004, Algeria awarded a tender to Repsol-YPF and Gas Natural for a natural gas project at Gassi Touil, a field containing 9 Tcf of proven reserves. The \$2 billion integrated project will consist of 52 development wells, a 780-Mmcf/d natural gas processing facility, a 630-Mmcf/d natural gas pipeline, and a 500-Mmcf/d natural gas liquefaction terminal at Arzew. Initial production at Gassi Touil should begin in 2009, with the bulk of its gas destined for Spain and other European markets.

In June 2006, Sonatrach, BP and Statoil began producing natural gas at the In Amenas field. At peak production the field should produce around 900 Mmcf/d of natural gas, plus 50,000 bbl/d of

condensate and LPG. The project includes construction of three pipelines to carry the hydrocarbons to the Sonatrach distribution system at Ohanet. In 2003, Statoil purchased 50 percent of BP's stake in the project.

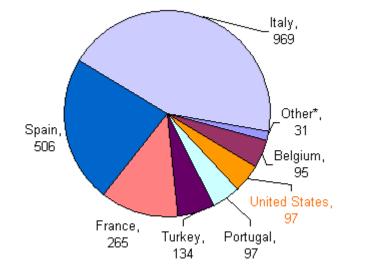
Pipelines

Domestic System

Algeria's domestic pipeline system centers around the Hassi R'Mel natural gas field. The largest pipeline systems connect Hassi R'Mel to liquefied natural gas (LNG) export terminals along the Mediterranean Sea. A 315-mile, 4.38-billion-cubic-feet-per-day (Bcf/d) system connects Hassi R'Mel to Arzew, while a 360-mile, 1.98-Bcf/d system connects Hassi R'Mel to Skikda. A smaller pipeline (270 miles, 690 Mmcf/d) also runs between Hassi R'Mel and Isser, near Algiers. Hassi R'Mel is the center of Algeria's entire natural gas transport network, so pipelines connect to it from the country's major natural gas-producing regions. A 600-mile, 3.29-Bcf/d pipeline links the In Amenas region; a 330-mile, 774-Mmcf/d pipeline connects the In Salah region; and a 90-mile, 610-Mmcf/d system runs from the natural gas fields surrounding Gassi Touil.

Export System

There are two natural gas pipeline connections between Algeria and Europe (map). The 670-mile, 2.32-Bcf/d Trans-Mediterranean (Transmed, also called Enrico Mattei) line runs from Hassi R'Mel, via Tunisia and Sicily, to mainland Italy. Completed in 1983 and doubled in 1994, there are plans to construct an additional compressor station along the Transmed that could increase capacity to 3.48-Bcf/d. An international consortium, led by Spain's Enagas, Morocco's SNPP, and Sonatrach, operates the 1,000-mile, 820-Mmcf/d Maghreb-Europe Gas (MEG, also called Pedro Duran Farell). MEG, completed in 1996, connects Hassi R'mel with Cordoba, Spain via Morocco, where it ties into the Spanish and Portuguese natural gas transmission networks. In August 2001, Sonatrach awarded ABB a \$93 million contract to build a natural gas compressor station on the MEG line in order to increase the line's capacity to 1.78 Bcf/d.



Importers of Algerian Natural Gas - Billion Cubic Feet, 2005

Source: International Energy Agency

*United Kingdom and Greece

Medgas Pipeline

In July 2001, a consortium led by Spain's Cepsa (20 percent) and Algeria's Sonatrach (20 percent) agreed to build a natural gas pipeline linking Algeria and Europe: Medgaz. The 120-mile Medgaz will link Beni Saf, Algeria to Almeria, Spain, with an eventual extension to France. In September 2002, the consortium completed a study of the line's feasibility, and initial construction on the project should begin around June 2007. The \$1.2 billion Medgaz, which should be completed by 2009, will have an initial capacity of 390 Mmcf/d, increasing to a maximum of 1.55 Bcf/d. There are also plans to run a parallel power cable. In November 2002, Cepsa said that it had signed a letter of intent to purchase 35 Bcf/y of natural gas via Medgaz, and in 2004, Iberdrola also agreed to purchase 35 Bcf/y from the line.

Galsi Pipeline

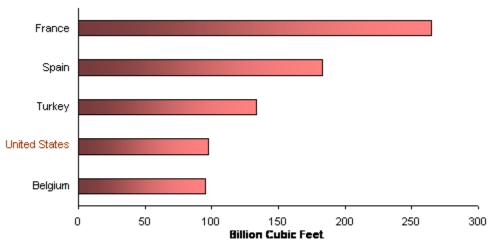
In 2002, Sonatrach signed a deal with Italy's Enel and Germany's Wintershall to form Galsi, a consortium to build a natural gas pipeline from Algeria to Italy. The pipeline will run from Gassi R'Mel to El Kal, Algeria, then an underwater section to Cagliari, Sardinia. This is to be followed by an onshore section to Olbia, Sardinia, then a final, offshore pipeline to C.D. Pescaia, Italy. The Galsi pipeline, which is currently under construction, will have initial capacity of 770-990 Mmcf/d, and, as with Medgaz, there are plans for a parallel power cable. The Galsi project could be completed by late 2009.

Trans-Saharan Pipeline

Sonatrach and the Nigerian National Petroleum Corporation (NNPC) formed the Trans-Saharan Natural Gas Consortium (NIGEL) in 2002. The NIGEL consortium aims to construct a 2,800-mile natural gas pipeline from Warri, Nigeria to Hassi R'Mel, via Niger. There are also plans to construct a road and fiber optic cable parallel to the pipeline. The NIGEL pipeline would utilize the proposed Medgaz and existing Transmed pipeline to carry Nigerian natural gas to European markets. A feasibility study on the Trans-Saharan pipeline is underway, but practical problems such as the immense length and possible sabotage are two deterrents to the project moving forward. The Algerian government would like to see the \$10 billion pipeline functioning by 2015.

Liquefied Natural Gas

With the start-up of the Arzew GL4Z plant in 1964, Algeria became the world's first producer of liquefied natural gas (LNG). Algeria is the fourth largest exporter of LNG (behind Indonesia, Malaysia and Qatar), exporting around 13 percent of the world's total. The vast majority of Algeria's LNG exports go to Western Europe, especially France, Spain and Turkey. Sonatrach has LNG export contracts with Gaz de France, Belgium's Distrigaz, Spain's Enagas, Turkey's Botas, Italy's Snam, and Greece's DEPA. During 2005, Algeria exported 97 Bcf of LNG to the United States, some 15 percent of total U.S. LNG imports for that period. Algeria's largest LNG export terminal is the Arzew facility, whose three facilities produce a combined 2.47 Bcf/d of regasified LNG. Other important terminals include Skikda and Algiers.





Sources: United States: EIA, Natural Gas Monthly August 2006; France/Spain: Natural Gas in the World, Trends & Figures in 2005; Turkey/Belguim: International Energy Agency, Natural Gas Information 2006

Profile

Country Overview

President	Abdelaziz Bouteflika (since April 1999)	
Location	Northern Africa, bordering the Mediterranean Sea, between Morocco and Tunisia	
Independence	5 July 1962 (from France)	
Population (2006E)	32,930,091	

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Currency/Exchange Rate (3/13/07)	
(3/13/07)	1 Algeria Dinars (DZD) = 0.0141 USD
Inflation Rate (2006E)	2.5%
Gross Domestic Product (GDP, 2006E)	\$122 billion
Real GDP Growth Rate (2006E)	4.0%
(2006E)	15.7%
Merchandise Exports (2006E)	\$53.4 billion
•	petroleum, natural gas, and petroleum products 97%
(2005E)	US 22.5%, Italy 17.8%, France 11.8%, Spain 10.2%, Canada 7.8%, Belgium 4.8%
(2006E)	\$20 billion
•	capital goods, foodstuffs, consumer goods
(2005E)	France 31.6%, Italy 8.5%, Germany 6.3%, Spain 5.6%, China 5.3%, US 4.9%, Turkey 4.5%
Current Account Balance (2006E)	\$32.2 billion
Energy Overview	
Mining	Chakib Khelil
Proven Oil Reserves (January 1, 2007)	12.3 billion barrels
	2,124 thousand barrels per day, of which 65% was crude oil.
/	283 thousand barrels per day
	1,841 thousand barrels per day
Capacity (2006E)	450 thousand barrels per day
Proven Natural Gas Reserves (January 1, 2007E)	161.7 trillion cubic feet
(2004E)	2.8 trillion cubic feet
Consumption (2004E)	0.68 trillion cubic feet
Net Natural Gas Exports (2004E)	
Capacity (2004E)	6.5 gigawatts
(2004E)	29.4 billion kilowatt hours
Electricity Consumption (2004E)	
Consumption (2004E)	1.2 quadrillion Btus*, of which Natural Gas (62%), Oil (36%), Coal (1%), Nuclear (0%), Hydroelectricity (0%), Other Renewables (0%)
Total Per Capita Energy Consumption (2004E)	38.6 million Btus

Environmental Overview Energy-Related Carbon 76.9 million metric tons, of which Natural Gas (53%), Oil (37%), Coal (2%) **Dioxide Emissions** (2004E) Per-Capita, Energy-2.4 metric tons **Related Carbon Dioxide** Emissions (2004E) Carbon Dioxide Intensity 0.3 Metric tons per thousand \$2000-PPP** (2004E) **Environmental Issues** soil erosion from overgrazing and other poor farming practices; desertification; dumping of raw sewage, petroleum refining wastes, and other industrial effluents is leading to the pollution of rivers and coastal waters; Mediterranean Sea, in particular, becoming polluted from oil wastes, soil erosion, and fertilizer runoff; inadequate supplies of potable water Major Environmental party to: Biodiversity, Climate Change, Climate Change-Kyoto Protocol, Desertification, Agreements Endangered Species, Environmental Modification, Hazardous Wastes, Law of the Sea, Ozone Layer Protection, Ship Pollution, Wetlands signed, but not ratified: none of the selected agreements **Oil and Gas Industry** Organization Enterprise Nationale pour la Recherche, la Production, le Transport, la transformation et la Commercialisation des Hydrocarbons (Sonatrach) - State-owned company for exploration, transport and marketing of petroleum, natural gas and related products; Enterprise Nationale de Raddinage des Produits Petroliers (Naftec) - Operates and manages all refineries: Enterprise Nationale de Commercialisation et de Distribution des Produits Petroliers (Naftel) Domestic product distribution. Societe de Conditionnement, Commercialisation & Transport de Gas Industriels (Cogiz) – produces natural gas by-products. Arzew (Algeria's largest crude oil export port), Skikda, Algiers, Annaba, Oran, Bejaia, plus **Oil Export Terminals** the Tunisian facility of La Skhirra. Selected Foreign Energy ABB, Amerada Hess, Anadarko, Burlington Resources, BHP Billiton, BP, Cepsa, CNODC, CNPC, Enagas, Endesa, Enel, ENI, Gaz de France, Maersk, Petrobras, Petrofac, Repsol-Company Involvement YPF, Statoil, Talisman, Total, Wintershall, Woodside, YPF Hassi Messaoud, Hassi Berkine, Ourhound, Hassi R'Mel, Bir Hebaa, Gassi El Agreb/Zotti, Major Oil Fields Menzel Ledimet Major Natural Gas Fields Hassi R'Mel, Rhourde Nouss, Rourde Nouss Sud-Est, Rhourde Adra, Rhourde Chouff, Rhourde Hamra fields. Arzew GL4Z, Arzew GL1Z, Arzew Gl2Z, Skikda GL1K LNG Facilities **Major Refineries (crude** Naftec-Skikda (300,000), Naftec-Algiers (60,000), Naftec-Jarzew (60,000), Naftec-Hassi refining capacity bbl/d, Messaoud (30,000) 2005E)

* 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

EIA Links EIA: Country Information on Algeria

U.S. Government

<u>CIA World Factbook</u> <u>U.S. Commerce Department Country Commercial Guide for Algeria</u> <u>U.S. State Department Consular Information Sheet on Algeria</u>

Foreign Government Agencies

Algeria and the IMF Algerian Finance Ministry Algerian Ministry of Energy and Mining

Algerian Mission to the UN Embassy of Algeria in Washington, DC

Non-Governmental Organizations

Arab Net: Algeria Infoplease: Algeria News From Algeria

Oil and Natural Gas

Amerada Hess Anadarko BHP British Petroleum Burlington Resources Cepsa CNPC Kuwait Foreign Petroleum Exploration Company Naftec Petroceltic Sonatrach Statoil Talisman Energy

Sources

Africa Energy Intelligence Africa News Africa Oil and Gas Bulletin Africa Research Bulletin, AFX.COM Al- Bawaba Alexander's Gas & Oil Connections Algerian Ministry of Energy and Mines AP Worldstream **APS Review Downstream Trends APS Review Gas Market Trends APS Review Oil Market Trends** the Australian **BBC** Monitoring **BHP** Billiton **Business Wire** California Energy Commission **CIA World Factbook** CWC Africa Energy Alert Dow Jones International **Economist Intelligence Unit Energy Compass** Factiva **Financial Times IHS GEPS Reports** INOGATE (European Commission) International Crude Oil Market Handbook International Oil Daily Middle East Economic Digest (MEED) Middle East Economic Survey (MEES) Middle East Executive Reports Middl e East News Online Natural Gas Week Oil and Gas Journal Oil Daily Petroleum Economist Petroleum Intelligence Weekly Platts Oilgram News Power Engineering International **PR** Newswire Reuters Sonatrach

U.S. Energy Information Administration Weekly Petroleum Argus World Gas Intelligence World Markets Analysis World Markets Research Worldwide Projects

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