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Arab Maghreb Union

established in 1989, the Arab Maghreb Union (AMU), which includes Mauritania, Morocco, Tunisia, [Algeria](#) and [Libya](#) (note: due to their size and importance the latter two are covered in separate reports), is an important oil and gas producer, exporter, and transit center to southern Europe. The recent discovery of offshore oil has brought new attention to the region over the past year.

Note: Information contained in this report is the best available as of June 2005 and is subject to change.

MAURITANIA

While Mauritania's real gross domestic product (GDP) grew an estimated 4.0% in 2004 and is projected to grow by 4.4% in 2005, the country remains the poorest country in the Arab Maghreb Union (AMU). Per capita income is only \$443, more than 75% below the AMU average. Almost 30% of the population lives on less than \$1 a day, while 69% lives on less than \$2 a day. Reforms since 1992 generally have stabilized prices, but Mauritania still experiences occasional periods of high inflation. In the second half of 2004, prices rose because of food shortages, bringing the inflation rate for the year to 10.1%. An 8.3% inflation rate is forecasted for 2005. Mauritania's macroeconomic reforms have been accompanied by efforts to liberalize the country's economy. Air Mauritania and the state telecom company were privatized in 1999 and 2001, respectively. The state power company is expected to be privatized soon.



In 2002, Mauritania completed the World Bank/International Monetary Fund (IMF) [heavily indebted poor countries \(HIPC\)](#) initiative. This led to debt relief of \$1.1 billion, which almost halved Mauritania's net debt burden. Despite its improving economic environment, Mauritania remains vulnerable to several sources of instability. With an economy strongly reliant upon primary products (mining, fishing, and agriculture), fluctuations in international markets, as well as external

shock like weather, can have a profound impact on Mauritania. In 2003, Mauritania became eligible for the [African Growth and Opportunity Act \(AGOA\)](#), but has no exports to the U.S. under these benefits.

There has been opposition to President Maaouya Ould Sid'Ahmed Taya, who took power in a 1984 military coup. Taya became an elected leader in 1992 and subsequently won reelection in 1997. Both of these elections were criticized by outside observers. Taya was reelected again in November 2003 after cracking down on Islamist leaders and successfully putting down a coup attempt. Although the coup leaders were not caught, the jailing of opposition leaders marred the election. In August 2004, the government broke up a new plot by army officers and radical Islamists to seize power. A number of civilians and soldiers were arrested in connection with the attempt.

Energy

With recent offshore oil discoveries, Mauritania is poised to become an oil producer in the first quarter of 2006. In January 2004, Australia's Woodside announced the economic viability of the [Chinguetti oilfield](#) (discovered in May 2001). Located 56 miles southwest of Nouakchott, the field is estimated to have oil reserves of 100 million barrels. The field will likely begin to produce 75,000 barrels per day (bbl/d) in 2006 and have a life of eight years. Other participating companies are Hardman Resources (19%), Mauritania-government controlled Group Project Chinguetti (GPC) (12%), BG Group (10%), Premier (8%) and Roc Oil (3%). The national oil company, GPC, was created in April 2004.

In addition to Chinguetti, Mauritania possesses several other promising offshore oil and gas fields. The Tiof oilfield, which is located 16 miles north of the Chinguetti field, may contain up to 350 million barrels of oil. The Tiof-6 exploration well was drilled successfully in February 2005. Woodside and its partners believe that the field may start producing at 50,000 bbl/d in mid-2007, with production potentially rising to 150,000 bbl/d in 2008. The Banda field, located 12 miles east of Nouakchott, may contain natural gas reserves of 3-5 trillion cubic feet (Tcf), while the Pelican gas field is estimated to hold 1 to 1.5 Tcf. As of April 2005, UK-based [Dana Petroleum](#) was working with LNG operators to determine development options for the Pelican field.

With Mauritania's best offshore blocks under contact, other companies have lined up to explore onshore blocks, particularly in the Taoudeni Basin in the northeastern part of the Mauritanian desert. In January 2005, France's Total signed two production sharing contracts, covering nearly 22,394 square miles. Spain's Repsol, China National Petroleum Co. and Woodside Petroleum are among the companies that have been awarded Taoudeni blocks.

In March 2005, the Mauritanian government created a separate ministry of oil and energy to handle the energy portfolio. The new ministry is headed by Ould Hmeida. In 2004, Mauritanian imported 24,000 bbl/d, making up the vast majority of Mauritania's total commercial energy consumption. Mauritania also consumes a significant amount of "non-commercial" (i.e., wood, biomass) energy.

MOROCCO

Morocco is a constitutional monarchy in which the King possesses more authority than either the judiciary or the legislature. After King Hassan II's death on July 23, 1999, his son, Mohammed VI, succeeded him in a smooth transition of authority. Mohammed VI has increased the pace of economic and political reforms.

In 2004, Morocco's real GDP increased an estimated 3.7% because of strong growth in the energy and mining sectors and the beginning of the tourism sector's recovery. This fell short of 2003's 5.2%

growth, largely due to a slowdown in the agricultural sector, which employs 43% of the population. Growth in 2005 is expected at 3.5%, with the continued contraction of the agriculture sector, as well as the textile and of the apparel sector following the expiration of the Multi-Fiber agreement. Morocco's government continues to invest and seek private investment to create jobs and decrease dependency on the volatile agricultural sector.

Morocco's 2004 per capita income of \$1,621 was roughly 64% of the AMU average. The country suffers from several socioeconomic problems including poverty, urban overcrowding, inadequate housing infrastructure, and illiteracy, which reaches 83% for women in rural areas. Still, unemployment and underemployment remain the principal socioeconomic problem. While the unemployment rate was estimated to be 10.4% at the end of 2004, this masks higher rates in urban areas (18%) and among college graduates (24%). Approximately 400,000 new jobs must be created annually until 2010 to meet the goal of 6% unemployment that was set in a February 2004 report of the Finance Ministry.



Morocco has maintained macroeconomic stability. Morocco's inflation rate (consumer prices) was 1.5% in 2004, up slightly from 1.3% in 2003. It is forecast to reach 1.9% in 2005. The increased inflation is a result of higher food and fuel prices. The Moroccan monetary authorities are expected to actively use monetary policy to keep the inflation rate differential between Morocco and the Eurozone in check so as to maintain the competitiveness of Moroccan exports.

Controlling fiscal expenditures remains a priority for Morocco. The 2005 budget deficit is projected to be 4.0%. The public wage bill accounts for more than half of government expenditures. In part, this reflects the decision to expand the civil service to provide jobs for the well-educated. The wage bill is expected to rise about 15% in 2005. Morocco has tried to cut its deficits through the privatization of state-owned enterprises (SOEs). Between 1993 and 2005, 66 Moroccan SOEs were fully or partially privatized. Recent privatizations include the tobacco distribution company Régie des Tabacs, Banque Centrale Populaire, and 35% of Maroc Telecom to Vivendi (an additional 16% is expected to be sold in 2005).

Morocco has pursued other economic liberalization efforts including a reform program supported by the World Bank and International Monetary Fund (IMF) since the early 1980s. Morocco has signed several agreements with the European Union on economic cooperation, including one establishing a free trade zone for industrial goods over a 12-year transition period. Morocco is a partner country of the [European Free Trade Agreement](#).

On June 15, 2004, the U.S.-Morocco Free Trade Agreement was signed. The agreement immediately eliminated tariffs on 95% of bilateral trade, with the remaining tariffs to be eliminated over the next nine years. The U.S.-Morocco FTA is the first in Africa and the first under the Middle East Free Trade Area initiative.

As of mid-2005, the [decades-old dispute](#) between Morocco and the Polisario Liberation Front over the Western Sahara region continues. A referendum on the future of the territory, a former Spanish colony, was scheduled for January 1992 under [U.N. auspices](#); however, the referendum has yet to be held. A U.N.-brokered cease fire and settlement plan went into effect on September 6, 1991 although a political settlement is still absent. Recently, there has been increased interest in oil exploration contracts in areas offshore of Western Sahara. The legality of these activities likely will remain in question until the status of Western Sahara is permanently settled.

Oil and Natural Gas

According to January 2005 estimates by the Oil and Gas Journal, Morocco has proven oil reserves of 2 million barrels and gas reserves of 43 billion cubic feet (Bcf). Morocco may have additional hydrocarbon reserves, as many of the country's sedimentary basins have not been explored yet. In 2000, an oil and gas discovery in the Talsint region near the border with Algeria raised hopes that Morocco could add another important asset to its economy, help cut its energy import bill and also attract new investment to the country.

The Moroccan Office of Hydrocarbons and Mining (ONHYM) has become optimistic about finding additional reserves - particularly offshore - following discoveries in neighboring Mauritania. As of April 2005, 15 foreign companies were operating in Morocco, with an estimated total investment of \$56 million per year. In May 2004, China Offshore Oil Corporation (CNOOC) received a license to drill near Agadir. In April 2004, Norway's Norsk Hydro signed a 12-month exploration contract for the Safi Offshore Northwest zone, while Denmark's Maersk signed a eight-year agreement for eight blocks near Tarfaya. In March 2004, Calgary-based Stratic Energy committed to a three-year exploration program in two onshore blocks in northwest Morocco. The two concessions cover approximately 1,544 square miles. Other foreign firms engaged in exploration include Petronas, Cooper Energy NL, Shell, Total, and Tullow Oil.

Recent activity in Western Sahara, which is believed to contain viable hydrocarbon reserves, has been controversial. In 2001, Morocco granted exploration contracts to Total and Kerr-McGee, angering Premier Oil and Sterling Energy, which previously had obtained licenses from the Polisario government. In 2005, the government-in-exile of the Western Sahara invited foreign companies to bid on 12 contracts for offshore exploration, with hopes of awarding production sharing contracts by the end of 2005. Both Premier Oil and Sterling Energy received conditional exploration rights. Foreign companies operating in Western Sahara have become targets of international protest campaigns. These companies include Total, Wessex Exploration, Svitzer (the British subsidiary of the Dutch company Fugro), Wales' Robertson Research International and Norway's TGS Nopec. All have ended their operations in Western Sahara. As of May 2005, Kerr-McGee is the last Western company in Western Sahara, although it too is being pressured to pull out.

Currently, Morocco produces small volumes of natural gas and oil in the Essaouira Basin and small amounts of gas from the Gharb Basin. Morocco is the largest energy importer in northern Africa, with the total cost of its imports fluctuating between \$1 billion and \$1.5 billion per year. The Moroccan government announced in February 2003 that foreign companies could import oil without import tariffs. In March 2000, Morocco modified its hydrocarbons law in order to, among other things, offer a 10-year tax break to offshore oil production firms and to reduce the government's stake in future oil concessions (to a maximum of 25%). The entire energy sector is due to be liberalized by 2007.

Morocco is a transit center for Algerian gas exports to Spain and Portugal. These are transported across the Strait of Gibraltar via the 300-350 Bcf/year Maghreb-Europe Gas (MEG) pipeline. Gas

from the MEG pipeline will be used to power Morocco's third independent power project (IPP) in Tahaddart, near Tangier.

Morocco has two refineries (Samir Oil Refinery at Mohammedia and Sidi Kacem) with a combined capacity of 154,901 bbl/d. The Samir refinery produces 80% to 90% of the country's refined petroleum products. In 2004, the Samir refinery returned to near full-capacity output levels, following the completion of repairs needed after a severe flood and massive fire in November 2002. Refinery output surged 49% in 2004. In June 2005, a consortium led by Italy's Snamprogetti SpA and Turkey's Tekefen Company was awarded a \$628 million contract to modernize the Samir refinery. The upgrade, which is expected to be completed by 2008, is hoped to prepare Samir to compete with foreign producers when the market is liberalized in 2009. The Samir refinery, which was state-run until 1997, is controlled by the Saudi-owned, Swedish-registered Corral Holdings.

Coal and Electricity

Morocco's electrical sector traditionally has been controlled by the state-owned Office National de l'Electricité (ONE). ONE was reorganized in 1995, after which it regained profitability. Due to a growing population and economic development, Morocco's electricity demand is increasing rapidly. Power shortages and a desire to control public spending have led the Moroccan government to make more use of the private sector to meet the country's power needs. The state's share of electricity generation likely will decline to 40% by 2020. The electricity sector is expected to be liberalized by 2005, though ONE has said there will be two systems, one regulated and one free. ONE will continue to be solely responsible for distribution and transmission.

In 2002, Morocco had an installed generating capacity of 4.5 gigawatts (GW). The country's two largest electricity power stations at Mohammedia and Jorf Lasfar are both coal fired. Most of the coal is imported from South Africa, although Polish coal was purchased for the Jorf Lasfar power plant in April 2005. Morocco produces a small and declining amount of coal from a mine at Jerada. Jorf Lasfar became Morocco's first privately operated power station in 1997, when it was taken over by a U.S.-Swiss consortium. Its capacity was expanded to 1,400 MW in 2001.

The expansion at Jorf Lasfar is consistent with a wider campaign to increase generating capacity in Morocco. As part of the Moroccan government's plan, a \$500 million, 350 - 400-MW combined-cycle power plant is planned at Tahaddart, near Tangier. Siemens, ONE, and the Spanish energy firm Endesa are expected to run the plant. Other significant projects include a 800-MW power station in the northern Ouezzane region, a 450-MW pumped-storage facility at Beni Mellal, and a 25-MW plant in Western Sahara. In addition to the Beni Mellal facility, ONE is considering another pumped storage plant in the Azilal region south of Rabat. In October 2004, Samir signed a \$21 million deal with the French CEGELEC group to construct a new power plant at the refinery. The plant should be operational by October 2005.

Renewable energy plays a key role in ONE's \$3.4 billion energy development plan, announced in January 2004. The goal is to provide 80% of rural areas with electricity by 2008, while increasing the share of renewables from 0.24% in 2003 to 10% in 2011. The plan calls for two new wind projects, as well as a 200 to 250-MW thermo-solar facility in Ain-Mokhtar, of which 30 MW will be generated from solar power. One of the wind power facilities (60 MW) will be located in Essaouira, while the other (140 MW) will be located near Tangiers. The Essaouira facility is scheduled to come on-line in 2006.

Morocco has additional renewable resources that could be developed. According to MBendi, Morocco has four perennial rivers and many dams with hydroelectric potential. In May 2005, ONE selected Temsol for a \$27.6 million project to supply solar power to 37,000 rural homes by 2007.

Similar contracts were awarded in May 2002 to a consortium led by Total Energie and in January 2004 to Apex-BP. Currently, only 55% of outlying villages have access to electricity.

Morocco has expressed interest in nuclear power for desalination and other purposes. In September 2001, the government signed an agreement with the United States establishing the legal basis for construction of a 2-MW research reactor just east of Rabat. As of December 2004, the Moroccan nuclear reactor reportedly was 40% completed. It is expected to be commissioned by the end of 2005. Morocco is gradually integrating its electrical grid with those of its neighbors in Africa and Europe. [Maghreb integration](#) has been spearheaded by the Maghreb Electricity Committee. Physical integration initiatives began in the 1990s. In May 2003, Moroccan representatives met with Energy ministers from other European and Mediterranean countries to discuss the feasibility of electricity market integration. Tunisia, Algeria, and Morocco acknowledged that they would like to eventually link their electricity systems to the E.U. single energy market. In April 2004, Spanish companies Pirelli and Nexans received a contract to expand the capacity of the Spain-Morocco connection by 700 MW, bringing total capacity to 1,400 MW.

TUNISIA

Tunisia is a stable republic presided over by President Zine al-Abidine Ben Ali, who rules in conjunction with his party, the Constitutional Democratic Assembly (RCD). In October 2004, Ben Ali was reelected to a fourth five-year term, a move that was possible after Tunisia's parliament passed a new constitution in April 2002. The RCD supports economic liberalization, although at a pace that will not provoke popular unrest. In addition to economic reforms, Ben Ali has pursued a process of democratization, legalized opposition parties and guaranteed them 20% of parliamentary seats. [Critics](#) note, however, that substantial progress can still be made in areas including freedom of press, human rights, and separation of powers.

In 2004, Tunisia had strong real gross domestic product (GDP) growth (5.6%), mainly due to the recovery of the tourism sector and the growth of the agriculture sector. Slightly slower economic growth (5.3%) is forecasted for 2005. Tunisia has averaged over 5% growth per year since 1997, only suffering one slowdown in 2002.

Tunisia has traditionally maintained high tariffs to protect domestic industries. The International Monetary Fund (IMF) has urged that these be reduced as part of Tunisia's "second-generation reforms." Many tariffs were lowered with regards to Europe as part of Tunisia's 1995 association [agreement with the European Union](#), which came into force in 1998. In addition to integrating its economy with that of Europe, Tunisia has pursued closer relations with its North African neighbors. In May 2001, Egypt, Jordan, Morocco and Tunisia [agreed to set up a free trade zone](#) ahead of the 2010 target for trade barriers to end in the Euro-Mediterranean area. The Great Arab Free Trade Zone is expected to eventually encompass 10 Arab nations.



Privatization of Tunisia's state-owned enterprises (SOEs) is moving ahead slowly. Since 1987, around 160 SOEs have been at least partially privatized. In the long run, Tunisia sees privatization as a way of creating jobs by making its economic climate more attractive to investors. Tunisia's unemployment rate remains at high levels (officially 14%, but likely higher). As close to 55% of the work force is under the age of 25, significant job creation is needed. The Tunisian government hopes to increase domestic and foreign investment, with a target of \$34 billion from 2002 to 2006.

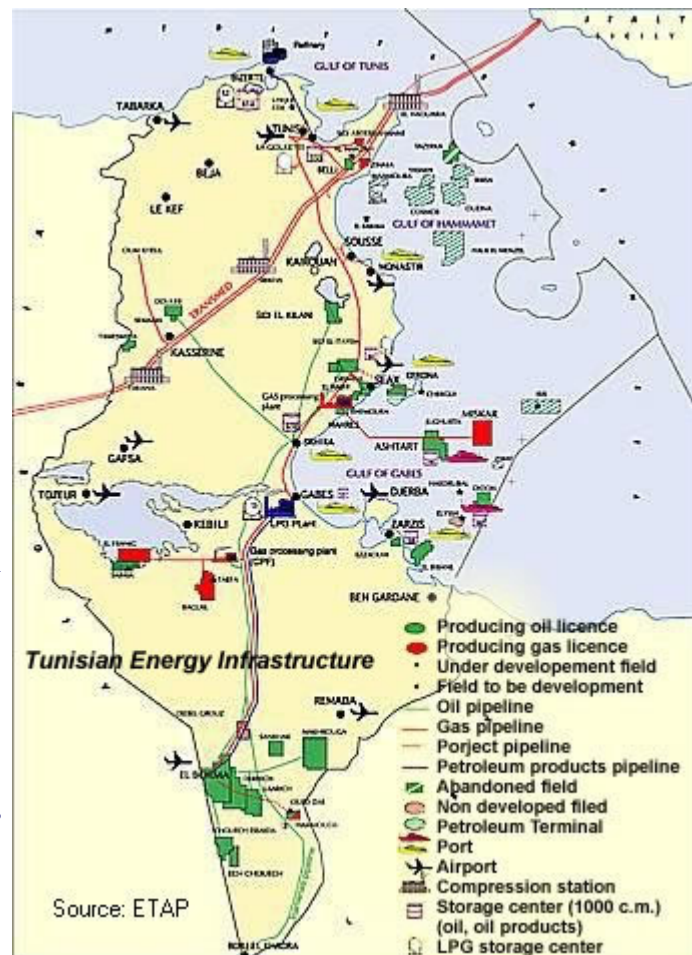
Oil

Tunisia has modest proven oil reserves of 308 million barrels. In 2004, Tunisia produced around 76,000 barrels per day (bbl/d) of oil, nearly all of which was crude. This represents a slight increase from 2003, but a 37% decline from the peak output of 120,000 bbl/d between 1982 and 1984. Although domestic petroleum demand has increased in recent years, alternatives including natural gas are becoming more important. The country's modest domestic oil production capacity cannot meet the country's demand; in fact, Tunisia became a net oil importer in 2000 for the first time in over 20 years. Tunisia should be able to supply at least part of its own energy needs for the next decade, but significant production thereafter will be contingent on new discoveries.

Tunisia's only refinery at Bizerte, operated by government-owned Société Tunisienne des Industries de Raffinage (STIR), has a production capacity of 34,000 bbl/d. Plans proposed in the early 1980s to double the capacity of the refinery have been dropped. Because of its relative lack of refining capabilities, Tunisia exports crude oil and imports refined products. As of April 2004, General Mediterranean Holding (GMH) of Luxembourg was in negotiation with the Ministry of Industry and Energy to build a new \$150 million refinery at La Skhirra.

Tunisia's oil reserves are located mainly in the Gulf of Gabes and the Ghadames Basin in the southern part of the country. Tunisia's largest oilfield, El Borma, was discovered in 1964 near the Algerian border. Today, this onshore field is operated by ENI-Agip and produces about 18,900 bbl/d, down from its peak of 70,000 bbl/d in 1985. The Ashtart field located east of Sfax in the Gulf of Gabes is operated by Tunisia's state-owned oil company Enterprises Tunisienne d'Activités Pétrolières (ETAP). Almost 75% of Tunisian oil production comes from these two fields. Much of the remainder comes from the Sidi El Kilani, Al Manzah, Oued Zar, Adam, Didon and Miskar oilfields. The Al Manzah field started production at 4,000 bbl/d in October 2000, with Canada's Centurion Energy as the operator. In April 2005, Centurion sold most of its assets in Tunisia, including those at the Al Manzah field, to Canadian firm Candax Energy Inc.

The Tunisian government and ETAP have worked to attract foreign firms to fund exploration, particularly of the country's smaller fields. To achieve this, Tunisia reformed its hydrocarbons laws



in August 2000. One of the most important provisions is a reduction in the tax rate from 75% to 50% for foreign firms if ETAP takes a 40% share of the concession. Royalties are fixed at 10% for oil and 8% for gas.

Tunisia now enjoys significant foreign investment. In December 2003, Tunisia licensed the Austrian firm [OMV](#) to explore the 770-square mile Jenein Sud exploration block in southern Tunisia. An international consortium led by ENI-Agip has drilled several successful exploration wells in the Borj el Khadra prospect in the Ghadames basin. These include the 9,000 bbl/d-Hawa-1 well, the 3,000 bbl/d-Hawa-2 well, the 3,600 bbl/d-Dalia-1 well and the Nour-1 well. Other stakeholders in the consortium include: Pioneer Natural Resources, Paladin Resources and ETAP. The Adam concession, also located in the Borj el Khadra prospect, became Tunisia's largest oil producing concession in early 2005.

A number of other hydrocarbon projects are underway in Tunisia. A partnership between a Tunisian and a Kuwaiti oil firm is drilling an offshore well with expected reserves of 6 million barrels of oil. Sweden's [PA Resources](#) (PAR) is involved in development and exploration in the Douleb field, the Zarat concession and the Tamesmida field and Sweden's Lundin Petroleum operates a number of offshore fields - notably, the Isis and Oudna fields. In February 2004, Tunisian independent HBS Oil Company announced an oil discovery on Djerba Island. Petroceltic announced in December 2004 that it had struck both oil and gas at its Sidi Toui 3 well in the Ksar Hadada Block in southern Tunisia. In April 2005, the U.A.E.'s Mabdallah Saad al-Thani Corporation announced a five-year exploration agreement with ETAP for the El Jem block, while U.S.-based Rigo Oil Company announced an exploration agreement for the Tozeur-Sud block. Other foreign firms involved in hydrocarbon operations include Anadarko, Samedan Oil, Petro Canada, and Total.

In addition to increasing production for Tunisia, ETAP is pursuing overseas exploration and production. The company is working in Syria with Preussag of Germany to develop small oilfields and has signed an oil cooperation agreement with Iraq. The legality of the latter remains unknown. In December 2004, the Syrian and Tunisian governments signed an agreement to explore for oil in northeastern Syria. ETAP also has joint venture agreements with Sonatrach of Algeria and Libya's National Oil Company.

Tunisia has five oil terminals on the Mediterranean coast. The largest of these is La Skhirra, on the Gulf of Gabes. A 22,000-bbl/d, 78-mile pipeline between the Sidi El Kilani oilfield and La Skhirra was inaugurated in March 2001. La Skhirra also handles about 22% of Algeria's oil exports. It is linked to the Illizi Basin oilfields in southern Algeria by a 480-mile pipeline. Other Tunisian oil terminals include the Ashtart offshore terminal, Gabes, Zarzis, and Bizerte.

Natural Gas

Tunisia is increasingly turning to natural gas to meet increasing domestic energy demand. The state-owned electricity and gas company, Société Tunisienne de l'Electricité et du Gaz (STEG) has promoted the use of natural gas through an incentive system that began in 2005. According to STEG, natural gas represented 44% of the total initial energy consumption in Tunisia in 2005, compared to 14% in 2003. Tunisia has 2.75 trillion cubic feet (Tcf) of proven natural gas reserves, with around two-thirds located offshore. In 2002, Tunisia produced 88 billion cubic feet (Bcf) of natural gas, up from 79 Bcf in 2001.

The majority of Tunisia's gas output comes from the Miskar gas field, located about 80 miles offshore in the Gulf of Gabes. The field was discovered in 1975 by Elf, but is now fully owned and operated by [British Gas \(BG\)](#), the largest investor in Tunisia's energy sector. According to BG, the field contains 1.5 Tcf of reserves. In 2003, Miskar, produced an average of 170 million cubic feet

per day (Mmcf/d) of gas, which supplied more than 50% of Tunisia's total gas demand. In collaboration with the Tunisian government, BG has installed new offshore compression equipment in order to expand the output of the Miskar field. BG has a Miskar gas sales contract with STEG, giving it the right to supply at least 230 Mmcf/d on a long-term basis.

BG also holds the Amilcar and Ulysse exploration permits in the Gulf of Gabes. In August 2002, BG announced that it had found oil at the Hasdrubal South West-1 field, located within the Amilcar permit. The Tunisian government has decided to delay gas production from the Hasdrubal field until 2007. BG is planning on developing the Hasdrubal natural gas and gas condensate field at a cost of \$330 million over a 12-year period. By 2006, BG intends to complete a drilling program in the Ulysse exploration permit area, also located in the Gulf of Gabes.

Tunisia has four other producing natural gas fields (El Franning, El Borma, Baguel, and Zinnia). Together, these relatively small fields account for almost all of the remainder of domestic production.

The 20-year old Trans-Mediterranean (TransMed) pipeline, with 1,300-Bcf-per-year-capacity, transports Algerian natural gas to Sicily, crossing the Mediterranean from Cap Bon. Tunisia receives royalties (5.25%-6.75% of the gas' value, in cash or in kind) from the pipeline as payment for access through its territory. In May 2005, ENI, which operates the TransMed pipeline along with Algeria's Sonatrach, agreed to expand the capacity of the Tunisian section of the pipeline by 113 Bcf/year by 2008. In a second expansion to be completed by 2012, the capacity of the Tunisian section will be increased by an additional 117 Bcf/year, bringing total capacity to a maximum of 1,183 Bcf/year. In October 2003, Tunisia and Libya agreed on a pipeline plan that would provide gas to Southern Tunisia.

Electricity

In 2002, Tunisia consumed 10.05 billion kilowatt hours, up from 9.87 billion kilowatt hours in 2001. Much of this growth reflects the increasingly comprehensive nature of the Tunisian grid. Information from the government-owned electric utility, Société Tunisienne de l'Electricité et du Gaz (STEG) indicates that 96% of the country now has access to electricity, compared to 86% in 1994. The electrical grid now is estimated to approximately 90% of the country.

The vast majority of Tunisian electricity is generated by fossil fuel plants. Tunisian overall power generating capacity was 2,855 MW in 2002. At that time, 97% of Tunisian power generating capacity came from thermal power plants, with the remainder accounted for by hydroelectric and wind plants. In 2004, the Tunisian government invested \$687 million in the country's energy sector to increase electricity production in existing thermal plants, as well as facilitate the search for additional oil and gas deposits.

Until 1996, STEG had a monopoly over power production, distribution and pricing. The utility still generates approximately 80% of Tunisia's power. Tunisia's first independent power plant, a \$261 million, 471-MW, combined cycle (natural gas and diesel-fired) power project went on-line at Rades in 2002. It is owned and operated by the Carthage Power Company - a consortium comprised initially of U.S.-based PSEG (60%), and Japan's Marubeni Power Holdings BV (40%) - on a 20-year build-own-operate-transfer (BOOT) basis. In May 2004, PSEG sold its stake in Carthage Power Company to BTU Power. In July 2003, a 30-MW associated gas plant operated by [CME Energy](#) commenced commercial operations.

In addition to these already established independent power producers, Tunisia is encouraging other

projects in order to reach its goal of an installed capacity of 3,540 MW by 2006. In March 2004, BG signed a Memorandum of Understanding (MoU) to construct a \$250 million, 500-MW power plant (**Barca Power**) near Sfax. As of October 2004, this project was still under discussion. BG also plans to build a Liquefied Petroleum Gas (LPG) plant that will serve the Tunisian market.

Tunisia also is working to develop renewable energy resources. In May 2003, Tunisia announced that 12 additional windmills would be added to the wind farm in Hawariya, bringing total capacity to 20 MW. Separately, the Global Environment Facility (GEF) is providing \$10.5 million to build windmills in Tunisia. GEF expects that its initial investment will be followed by an additional \$106 million in private funding in order to generate 100 MW. The German Technical Cooperation Agency also is providing money for wind power. December 2004 marked the launch of the Mediterranean Renewable Energy Center in Tunis, an agency to promote and develop renewable technologies across North Africa.

Tunisia is part of a trans-Maghreb project to link the power grids of all the Maghreb countries to those of Spain and the rest of the European Union; however, Tunisia's domestic power grid must first be upgraded to meet domestic demand and ensure greater reliability. The African Development Bank, the European Investment Bank and the Kuwait-based Arab Fund for Economic and Social Development have all provided loans for various upgrades. In March 2004, a Spanish-led consortium won a \$30.6 million contract to work on the modernization of Tunisia's power grid. Tunisia already is linked to Algeria's electrical grid, and efforts to connect to Libya's grid have begun. When the two networks are connected, an integrated North African power grid will stretch from Morocco to Egypt.

Table 1. Economic and Demographic Indicators for the Arab Maghreb Union					
Country	Gross Domestic Product (GDP), 2004E (Billions of U.S. \$)	Real GDP Growth Rate, 2004 Estimate	Real GDP Growth Rate, 2005 Projection	Per Capita GDP, 2004E	Population 2004E (Millions)
Algeria	\$83	5.0%	6.4%	\$2,580	32.4
Libya	\$29.5	6.7%	6.5%	\$5,206	5.7
Mauritania	\$1.2	4.0%	4.4%	\$443	2.8
Morocco	\$49.6	3.7%	3.5%	\$1,621	30.6
Tunisia	\$28.1	5.6%	5.2%	\$2,828	9.9
Regional Total/Average	\$191.4	5.0%	5.2%	\$2,536	81.4

Sources: *Global Insight*

Table 2. Energy Consumption and Carbon Dioxide Emissions in the Arab Maghreb Union , 2002									
									Carbon Dioxide Emissions

Country	Total Energy Consumption (Quadrillion btu)	Petroleum	Natural Gas	Coal	Nuclear	Hydro-Electric	Other Renewable Electric	Net Electricity Imports	(Million metric tons of carbon)
Algeria	1.29	35.2%	63.3%	1.6%	0.0%	0.1%	0.0%	-0.1%	22.3
Libya	0.67	69.1%	30.9%	0.0%	0.0%	0.0%	0.0%	0.0%	12.9
Mauritania	0.05	95.0%	0.0%	4.0%	0.0%	1.0%	0.0%	0.0%	0.9
Morocco	0.46	72.0%	5.2%	19.5%	0.0%	2.0%	0.0%	1.0%	8.4
Tunisia	0.34	52.9%	45.8%	0.9%	0.0%	0.3%	0.0%	0.1%	5.8
Regional Total/Average	2.81	64.8%	29.0%	5.2%	0.0%	0.7%	0.0%	0.3%	50.3

Source: Energy Information Administration

Note: percentages may not add up to 100% due to rounding.

Country	Crude Oil Reserves, 1/1/05 (Million Barrels)	Natural Gas Reserves, 1/1/05 (Billion Cubic Feet),	Coal Reserves (Million Short Tons)	Petroleum Production, 2004E (Thousand Barrels Per Day)	Natural Gas Production, 2003 (trillion cubic feet)	Coal Production, 2002 (Million Short Tons)	Electric Generating Capacity, 2002 (Gigawatts)	Crude Oil Refining Capacity, 1/1/05 (Thousand Barrels Per Day)
Algeria	11,800	60,500	44	1,232	2.9	0	5.9	450
Libya	39,000	52,000	0	1,515	0.3	0	4.6	380
Mauritania	0	0	0	0	0	0	0.1	0
Morocco	1.6	43	0	0.5	0	0	4.5	155
Tunisia	308	2,750	0	79.8	0.1	0	2.9	34
Regional Total/Average	51,100	215,293	44	2,827.3	3.3	0	18.0	1,019

Source: Energy Information Administration

Sources for this report include: Africa News; Africa Research Bulletin; Agence France Presse; Alexander's Gas and Oil; Business Wire; CIA World Factbook 2003; CWC Africa Energy Alert; Economist Intelligence Unit; Financial Times; Global Insight; Mbendi; Nationmaster.com; Oil and Gas Journal; U.S. Energy Information Administration; U.S. State Department; World Markets Analysis Group.

LINKS

For more information from EIA on Mauritania, Morocco, and Tunisia, please see:

[EIA: Country Information on Mauritania](#)

[EIA: Country Information on Morocco](#)

[EIA: Country Information on Tunisia](#)

Links to other U.S. government sites:

[U.S. Agency for International Development](#)

[CIA World Factbook 2005](#)

[Library of Congress -- Mauritania Country Study](#)

[U.S. Department of Energy's Office of Fossil Energy's International section - Mauritania](#)
[U.S. State Department Consular Information Sheet on Mauritania](#)
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Contact: Lowell Feld
lowell.feld@eia.doe.gov

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