

COUNTRY ANALYSIS BRIEFS

Greece

Last Updated: August 2006

Background

Greece has limited domestic energy resources, but it could develop into an important regional transit hub.

In recent years, Greece has enjoyed strong economic growth and low inflation. In 2005, however, Greece's economy experienced a modest slowdown, with 3.7 percent real GDP growth, down from 4.2 percent in 2004. The contraction occurred following four years of high investment expenditures for the 2004 Olympics as well as high employment and low interest rates. The economy is expected to slow further due to high oil prices and the decline of the Euro against the US dollar, with a projected growth rate of 3.5 percent in 2006.



One of the smallest economies in the European Union (EU), Greece became the twelfth member of the Eurozone in January 2001. The government is undergoing an EU-imposed "excessive-deficit" procedure for misreporting its public finances as far back as 1997. In fact, had the true extent of its fiscal deficit been known, Greece would not have been allowed to adopt the euro in 2002 (see EIA's [EU Regional Analysis Brief](#) for more information). With its deficit reaching 6.6 percent of GDP in 2004 and 4.6 percent for 2005, Greece remains well above the 3 percent limit for Eurozone members. Although much of the deficit can be attributed to one-time spending in preparation for the 2004 Olympics, the fiscal corrections needed are substantial.

Since the mid-1990s, Greece has undertaken macroeconomic and structural reforms, including measures to reduce the size of the bureaucracy, expand privatization, and attract foreign investment. Both the International Monetary Fund (IMF) and the Organization for Economic Cooperation and Development (OECD) have called for continued efforts in these areas. Although privatization of key utilities and industries has begun, these efforts are limited when compared to other Eurozone members.

Greatly improved relations between Greece and Turkey have allowed for more economic and energy cooperation. In March 2002, Greece and Turkey began discussions to resolve a decades-long disagreement over Aegean Sea boundaries. Greece has endorsed Turkey's bid for EU membership since 1999. Greece, which is a major investor in the former Yugoslavia, is working to integrate its energy infrastructure with the Balkan states. Improved relations with neighboring states could help Greece achieve its goal of becoming a major regional energy hub.

Oil

Greece has almost no domestic oil

According to 2006 Oil and Gas Journal estimates, Greece has oil reserves of just 7 million

production, but may play a key role as a transit country if the Burgas-Alexandroupolis pipeline is built.

barrels. With domestic production of 6,400 barrels per day (bbl/d) in 2005, Greece relies heavily on imports – primarily from Iran, Saudi Arabia, Russia, Libya and Egypt – to meet its 439,000 bbl/d of oil consumption. Oil's market share of total energy consumption is gradually declining as the country increases its reliance on natural gas. Although the Middle East is expected to remain Greece's major oil supplier, oil from Russia and the Caspian Sea region will become more important as Greece constructs new pipelines.

Exploration and Production

Greece's oil industry is dominated by Hellenic Petroleum (HP), formed in 1998 from the state-owned Public Petroleum Corporation (PPC). HP conducts oil exploration, imports crude and petroleum products, operates three refineries that account for 50 percent of petroleum product output in Greece, and distributes and markets petroleum products throughout Greece. The Greek state is partially privatizing HP in stages, and the company is now 41.5 percent privately owned.

The Prinos fields in the Aegean Sea are Greece's main oil production area and are operated by U.K.-based Regal Petroleum's Greek subsidiary Kavala Oil. In January 2004, Regal found "considerable potential" for reserves to exceed estimates of 227 million barrels and made plans to raise the field's production from 4,000 bbl/d to 15,000 bbl/d. In September 2004, Regal announced that the Greater Kallirachi field in the North Aegean Sea holds up to one billion barrels of light crude. In June 2005, however, Regal announced that its Kallirachi 2 exploration well had failed to produce commercial flows of oil and reduced its reserve estimates in Greece by 70 percent. In September 2005, Regal announced that it was pulling out of the off-shore Prinos field after a dispute over a cost-cutting package with the local oil workers' union. Since then, the Co-operative of Workers of Kavala Oil have been legally running the field and hope to increase production to more than 3,500 bbl/d, up from its current production of 1,400 bbl/d, by the end of 2006.

Oil Exports

Burgas-Alexandroupolis Pipeline

In January 1997, Bulgaria, Greece, and Russia agreed to build the \$700-million Burgas-Alexandroupolis oil pipeline linking the Bulgarian Black Sea port of Burgas with Alexandroupolis on the Mediterranean coast of Greece (see map). As originally conceived, the proposed 180-mile underground pipeline would allow Russia to export crude oil (up to 300,000 bbl/d) via the Black Sea, bypassing the Bosphorus. The project was stalled for several years by a wide range of technical and economic issues. Although Russia, Greece, and Bulgaria signed a memorandum on the commencement of pipeline construction in November 2004, the countries did not complete an MOU by the end of 2004. Greece continued to lobby for construction of the pipeline, and the final MOU was signed in April 2005. In 2006, Russia was granted a 51 percent stake in the pipeline project. In response to Russian involvement, the Bulgarian state-controlled gas monopoly Bulgaraz and the Universal Terminal Bourgas (UTB) proposed to co-create a Bulgarian corporation that will control a minimum 24.5 percent of the remaining 49 percent of the Burgas-Alexandroupolis oil pipeline. Greek candidates have created the Thraki company to control the remaining 24.5 percent stake in the project, but it is as yet unclear whether Greece will accept the new conditions, as the project originally stated that the three partners would share equal 33 percent stakes in the pipeline. According to Greece's development ministry, Greece could profit between \$30 and \$50 million per year from the pipeline.

Other Pipelines

Since 2002, HP has operated a 140-mile pipeline from Thessaloniki to HP's Okta refinery near Skopje, Macedonia. The pipeline is managed by a Greek-Macedonian consortium. Other bypass options in the [Southeastern Europe region](#) include the Constanta-Trieste pipeline running from the Romanian port of Constanta to Italy's Adriatic port city of Trieste, and the Albania-Macedonia-Bulgaria (AMBO) pipeline connecting the Bulgarian port of Burgas to the Albanian port of Vlore.

Downstream

According to the 2006 *Oil and Gas Journal*, Greece has a refining capacity of 413,000 bbl/d. HP accounts for approximately seventy five percent of this capacity at its three refineries: Aspropyrgos (146,500 bbl/d), Elefsis (100,000 bbl/d) and Thessaloniki (67,000 bbl/d). The private refinery operated by Motor Oil (Hellas) in Corinth has a 100,000-bbl/d capacity. HP has a nearly 24 percent share in the Greek retail oil sector, making it the largest company in the market. HP operates an extensive network of gasoline stations across Greece under the trademarks EKO, ELDA and M (MAMIDAKIS), as well as storage and supply terminals. In 2006, HP signed a deal with Foster Wheller Ltd. to construct a distillate hydrocracker and a coking unit at its 100,000 bbl/d Elefsis refinery. The deal is part of a five-year, \$1.5 billion corporate spending plan aimed at upgrading HP facilities to meet deadlines for new, stricter quality limits on oil products. In particular, HP must meet the EU directive on the sulfur content in fuels, which must be lowered to one percent from the current 3.5 percent by January 1, 2009.

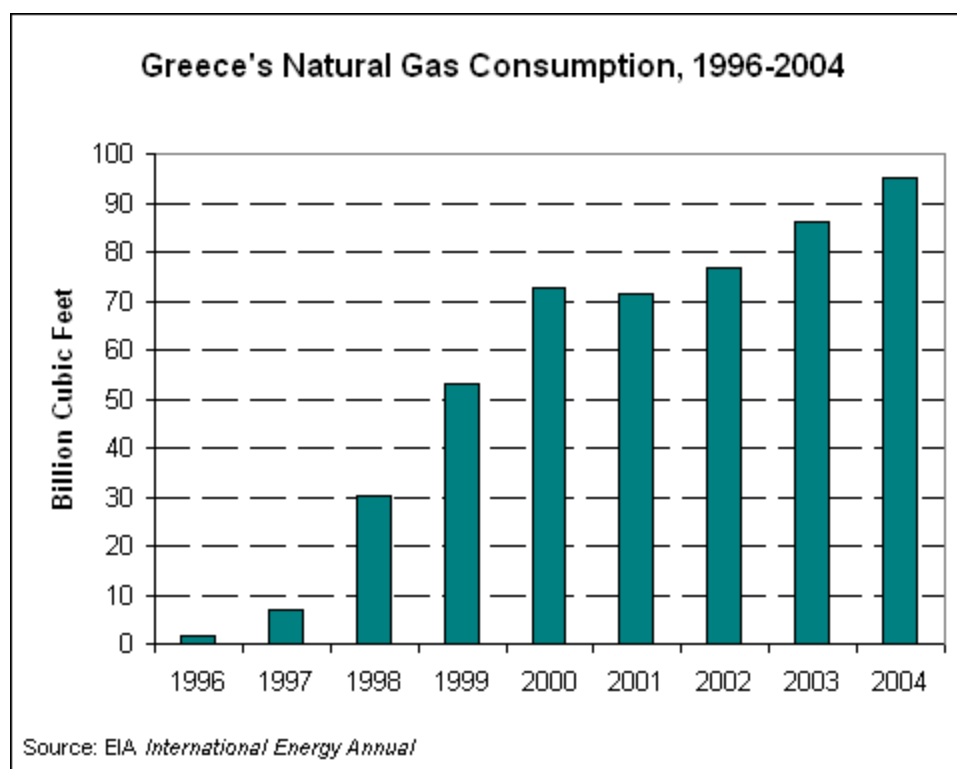
Natural Gas

Greece imports most of its natural gas from Russia but is trying to lessen its dependency by importing and re-exporting natural gas from the Caspian Sea region.

With reserves of only 35 billion cubic feet (Bcf), according to the 2006 *Oil and Gas Journal*, Greece produces negligible amounts of natural gas. Consumption, however, has increased significantly, from only 1 Bcf in 1996 to 95 Bcf in 2004, and is expected to continue to increase – possibly tripling over the next ten years. Despite the recent strong demand growth, the share of natural gas in total energy consumption is still small, reaching 6 percent in 2004. Greece receives over two-thirds of its natural gas imports from Russia, with the remainder coming as LNG from Algeria.

Market Liberalization

Greece's energy markets are dominated by a small number of players who have maintained their powerful positions despite the development of a legal framework for liberalization. In the natural gas sector, DEPA dominates the market and is involved in import, distribution, and storage. HP and the Greek government currently own 35 percent and 65 percent of DEPA, respectively. In March 2004, Spain's Gas Natural (GN) agreed to purchase 35 percent of the government's share of DEPA, contingent on approval of the contract by Greece's new government. However, the new Greek government of Kostas Karamanlis decided that the price of its offer was too low. Instead, the state plans to unbundle DEPA's natural gas transmission and distribution network in November 2006.



Greece relies on Russia for 80 percent of its natural gas imports. DEPA began importing natural gas from Russia via Bulgaria in July 1997. Greece has a 20-year contract with Russia's Gazexport (a subsidiary of Gazprom) to purchase approximately 99 Bcf/y of natural gas. It currently expires in 2016, but the Greek government is considering extending the agreement until 2026. Prometheus Gas, which is jointly owned by Gazexport and Greece's Copelouzos Group, was formed to import gas by pipeline from Russia and develop the energy sector in Greece. The company's ability to import gas will be activated when Greek demand exceeds the annual amount contracted by DEPA with Gazprom, and will increase competition in the natural gas market.

In 2006, the Greek parliament passed a government bill to deregulate the energy market, the final legislative step needed for the country to begin opening its natural gas market to competition. The gradual opening of the market will allow DEPA to face competition in the natural gas market for the first time. Under the bill, the Greek market will be liberalized in stages, with large users and power generators (consuming over 100,000 MW of natural gas annually) able to choose their gas supplier initially, with smaller consumers following at a later date. In April 2006, Greece was censured by the EU Commission for the absence of the freedom to choose a supplier in the natural gas market. However, the December 2005 opening of Greece's first privatized power project, HP's 390 MW combined-cycle gas turbine (CCGT) plant at Thessaloniki, is a significant first step towards market liberalization.

Natural Gas Pipelines

Greece is currently being connected to Turkey and to Italy via an undersea pipeline and will be connected to the wider European natural gas network by 2010. The country plans to become a major transit route for Caspian and Iranian gas, making it a strategic partner in natural gas supply security for other EU members as part of the South European Gas Ring (SEGR). The completion of the [South Caucasus Pipeline \(SCP\)](#), planned for 2007, will also strengthen the role of Greece in energy security.

Greece is looking to lessen its dependence on Russian natural gas imports through a number of new pipeline projects. In 2005, Turkey and Greece signed an agreement to buy natural gas from Azerbaijan and then export the majority of it to Western Europe in an effort to become an energy hub for the rest of Europe. The SCP, which will transport Azerbaijani natural gas between Karacabey, Turkey and Komotini, Greece, is scheduled to begin natural gas transport by the end of 2006. Construction on the 186-mile pipeline began in July 2005 and is tied to the start-up of the Shah Deniz field in Azerbaijan's section of the Caspian Sea. The pipeline bypasses Russia and could be connected to the proposed Greece-Italy pipeline (also known as the Poseidon pipeline). The SCP will have an initial capacity of 124 Bcf/y of natural gas and up to 406 Bcf/y at a later stage.

In December 2005, DEPA signed a contract with Greek-Russian consortium Stroytransgaz - Prometheus Gas for the construction of a natural gas pipeline between the Greek towns of Komotini and Alexandroupoli. The high-pressure pipeline is expected to come online by the end of 2006 and is partly funded by the EU. The Greek development minister approved a \$14.5 million pay-out to DEPA to allow it to begin construction on its section of the natural gas pipeline, and to upgrade and extend Greece's gas distribution network. The link is part of the Turkey-Greece-Italy gas interconnector (TGI), a key component of the EU's Southern European Gas Ring (SEGR) program, which plans to interconnect the gas grids of Turkey, Greece and Italy by the end of 2010. The SEGR program entails both the Turkey-Greece and Greece-Turkey natural gas pipelines. The link is an extension of an existing pipeline from Kipi to Alexandroupoli, which connects with a Turkish pipeline across the border.

BOTAS, Turkey's natural gas company, is scheduled to complete the construction of its section of the Turkey-Greece natural gas pipeline by October 2006. The line will run from Karacabey on the south side of the Marmara Sea to Ipsala on the Turkey-Greece border. Greece is still building its 57-mile section of the pipeline, which will link with Greece's natural gas transmission network at Komotini. The Turkey-Greece pipeline will pump an initial 28 Bcf per year beginning in late 2006. The pipeline will eventually pump 407 Bcf per year by 2012, 111 Bcf of which will be consumed by Greece with the rest potentially shipped to Italy via a new link currently under development between the two countries under the Adriatic. The \$720 million Aegean pipeline (also known as the Greece-Turkey pipeline), a joint venture between DEPA and BOTAS, the Greek and Turkish state-owned natural gas utilities, is due to be completed by 2009. It would link the two countries' existing natural gas networks in western Anatolia and Thrace through a seabed pipeline across the Marmara strait. The Turkey-Greece and Greece-Turkey pipelines are part of the SEGR project, aimed at boosting import connections between EU member states. The lines may be used in the future to import Caspian Sea natural gas to further diversify EU imports.

In 2005, DEPA signed a \$380 million agreement with Italy's Edison group to extend the Aegean pipeline to Italy across the Adriatic. Known as the Poseidon pipeline, the 130-mile Greek-Italy pipeline will have a capacity of up to 370 Bcf and will stretch across the Adriatic Sea from Greece to the Italian coast in the Apulia Region in the south. The pipeline is scheduled to begin construction in 2008 and be completed by 2011.

Liquefied Natural Gas (LNG)

In 1999, Greece entered a 21-year contract to purchase 24 Bcf of regassified liquefied natural gas (LNG) each year from Algeria's Sonatrach. Greece also signed a contract for 56 Bcf of LNG with Italy's Eni, but it is not currently operational. Greece has one LNG terminal at its Revithoussa port, near Athens, with a capacity of 23 Bcf/y. In 2006, a project was approved for the \$90 million upgrading of the Revithoussa terminal, increasing its capacity to 185 Bcf/y. DEPA stated that it used less than 30 percent of the facility in 2005, and is hoping to offer third-party access. The British gas company BP has offered a proposal to use the terminal as a port location for LNG shipments from Egypt.

Coal

Lignite is Greece's only significant fossil fuel resource, with reserves totaling 4,299 million short tons (Mmst). With lignite output of 80 Mmst in 2004, Greece is second only to Germany in European lignite production. The largest deposits are at Ptolemais and Amintaio in northern Greece. Since Greece has no hard coal reserves, it is imported from South Africa, Russia, Venezuela, and Colombia. Domestic production has been partly opened to private companies, but the Public Power Corporation (PPC) remains the largest producer with the right to exploit 63 percent of known reserves. In 2006, the European Commission filed suit against Greece in court,

Greece is second only to Germany in the EU for lignite coal production.

claiming that the country was breaking the EU electricity directive as a result of PPC's common accounting for mining and power regulation.

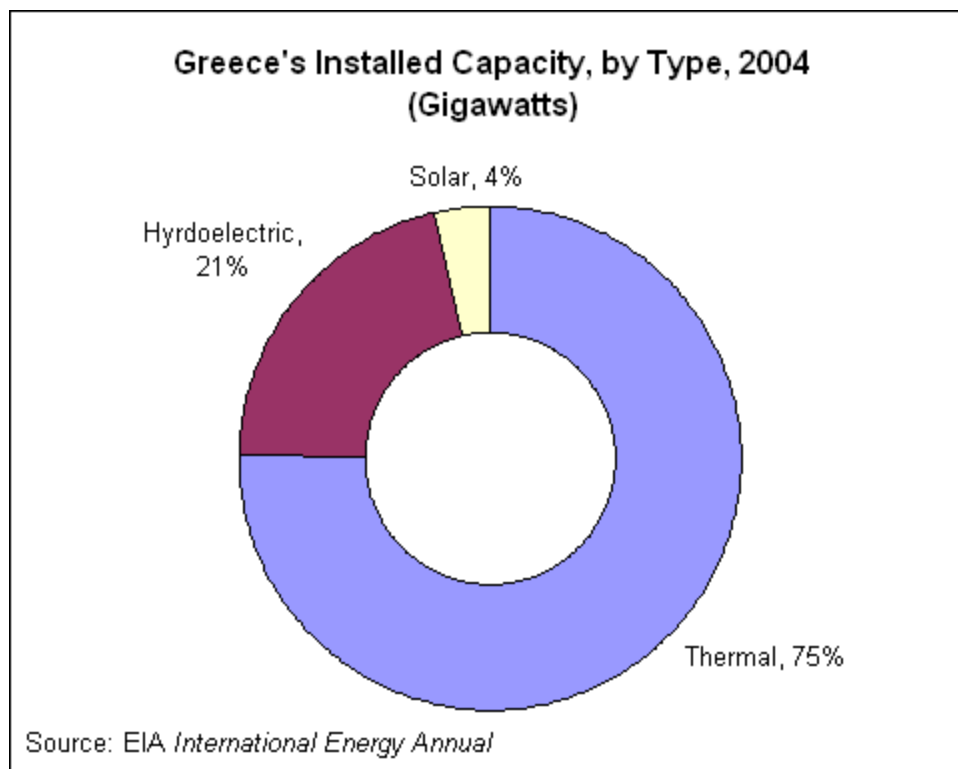
Electricity

Greece will likely benefit from greater electricity connections with its neighbors.

In 2004, Greece generated 55.5 billion kilowatthours (Bkwh) of electricity, of which approximately 75 percent was thermal, 21 percent was hydroelectric and 4 percent was other renewables. Although most of the thermal energy is lignite-fired, some is oil-fired. The majority of new plants will be natural gas-fired. Electricity demand has grown nearly 50 percent over the last decade, which, according to the Energy Regulatory Authority (RAE), will require some 6,000 megawatts (MW) of additional capacity to guarantee adequate supply through 2015.

Market Liberalization

PPC controls Greece's electric production, transmission, and distribution. The Electricity Market Liberalisation Law was passed in 2001 and legally opened 37 percent of the Greek power market to competition. The law enabled the entry of third-parties to compete with PPC and required that tariffs must cover all costs and provide reasonable profit. As a result, the generation, distribution, and retailing operations of PPC were unbundled, and the independent transmission system operator, HTSO, was established. By 2006, 70 percent of the market was open, and Greece plans to completely deregulate its market by January 2007. However, in April 2006, Greece was censured and faces legal action by the EU Commission for the country's absence of sufficient legal and management functions to deregulate the country's transmission and distribution systems in the electricity market.



Since PPC lost its legal monopoly, the Greek government has issued licenses for over 2,750 MW of private thermal generating plants. However, most private producers have been unable to finance plants. As a result, PPC still produced 96 percent of Greece's electricity in 2004. Apart from refurbishments, the Greek government has legally prevented PPC from bidding for tenders to build the first round of new capacity, totaling 900MW, until 2010. However, the company has two already-approved combined cycle gas turbine (CCGT) plants that are under construction and has been given approval for a major refurbishing of 1,600 MW of capacity at its current plants.

In 2006, Spain's Iberdola bought a 70 percent stake in Korinthos Power from Motor Oil Corinth Refineries and plans to cooperate in the tenders to develop CCGTs in southern Greece. One tender for a 400 MW CCGT at Aliveri was launched in May 2006, and two additional plants with a combined capacity of 900-1000 MW will be launched by 2007. Investment in the three CCGTs is estimated at roughly \$750 million.

Cooperation with Neighboring States

Greece's power network is currently connected with the networks of Albania, Macedonia, and

Bulgaria. In June 2001, energy ministers from Albania, Bosnia and Herzegovina, Bulgaria, Greece, Macedonia, and Romania signed a memorandum for the creation of a competitive regional electricity market (REM) with over 55 million customers by 2005-2006. In July 2002, Greece and Italy completed a 500-MW link under the Ionian Sea to connect their national power grids. In October 2005, Greece signed the Treaty Establishing Energy Community between the European Union and South Eastern Europe in Athens. The other parties to the treaty are Albania, Bosnia-Herzegovina, Bulgaria, Croatia, Macedonia, Montenegro, Romania, Serbia and the UN Interim Administration in Kosovo. Greece, along with Austria, Hungary, Italy and Slovenia, participates in a non-voting capacity. The Energy Community creates the world's largest integrated competitive electricity market of the European Community, with approximately 500 million consumers.

Improved Greek-Turkish relations also have benefited Greece's electricity sector. In March 2002, Greece and Turkey signed a bilateral agreement to connect their electricity grids along the Greek-Turkish border. The interconnector became operational in 2006, and along with the planned gas interconnector and a proposed CCGT plant in Thrace, Greece will be able to both import gas from and export electricity to Turkey in a long-awaited cooperation scenario. Electricity will be exported via a 400-kilovolt (kV) transmission line between Filippoi (Greece) and Hamidabad (Turkey) that is expected to be operational by 2007. In addition, a new cross-border interconnection with Bulgaria is planned in order to relieve import congestion, as well as a second grid connection with Italy.

Renewable Energy

To meet European Union mandates, renewable electricity generation projects are on the rise in Greece. The Centre for Renewable Energy Sources (CRES), supervised by the Greek Development Ministry, was created in 1987 to promote renewable energy. In aiming to meet its commitments under the Kyoto protocol, Greece plans to have renewable energy sources make up 20 percent of its energy needs by 2010, compared with 10 percent in 2006.

The CRES estimates that 15 percent of the country's electricity needs can be produced by wind farms, with installed wind-power capacity possibly expanding to 2,000 MW by 2010. Wind farms are already located on the Greek islands of, Crete, Evia, Andros, and Samos. In May 2006, Greek wind farm operator Rokas announced that it would invest \$3.1 billion in a wind farm and power transmission system. The company plans to install 44 wind parks with a combined generating capacity of 1,363 MW and to link them to the Chios, Lesbos, and Limnos islands in the northern Aegean. The project is one of the biggest investments in wind energy in the world. Greece currently has 475 MW of installed wind-power capacity, with Rokas accounting for 40 percent of total Greek wind power production.

The use of solar technology in Greece has almost tripled since 2000, and an EU report, "Photovoltaics 2010," indicates that Greece could use solar power to meet one-third of its energy requirements. A 50-MW solar power plant, the first grid-connected solar system of a considerable size, is being constructed in Crete and a 100-kilowatt PV park is planned for the island of Gavdos. In 2006, Rokas announced plans to invest between \$190- \$257 million in solar plant construction. The company aims to set up solar power stations of between 30 MW and 40 MW capacity throughout Greece. According to Rokas, solar power energy is significantly more expensive than wind power, with estimates per MW of solar power at \$6.4 million, compared with \$1.2 million per MW of wind energy.

Profile

Country Overview

Chief of State	President Karolos Papoulias (since March 12, 2005)
Head of Government	Prime Minister Konstandinos Karamanlis (since March 7, 2004)
Location	Southern Europe, bordering the Aegean Sea, Ionian Sea, and the Mediterranean Sea, between Albania and Turkey
Independence	1829 (from the Ottoman Empire)
Population (2005E)	10,668,354
Languages	Greek 99% (official), English, French
Religion	Greek Orthodox 98%, Muslim 1.3%, other 0.7%
Ethnic Group(s)	Greek 98%, other 2% note: the Greek Government states there are no ethnic divisions in Greece

Economic Overview

Minister of Economy and Finance	Georgios Alogoskoufis (since March 10, 2004)
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Currency/Exchange Rate (July 2006)	Euro/US\$1.25
Inflation Rate (2005)	3.6 percent
Gross Domestic Product (2005E)	\$238.6 billion
Real GDP Growth Rate (2005E)	3.7 percent
Unemployment Rate (2005E)	9.9 percent
External Debt (2005E)	106.8 % of GDP
Exports (2005E)	\$17.2 billion
Exports - Commodities	food and beverages, manufactured goods, petroleum products, chemicals, textiles
Exports - Partners (2005 est.)	Germany 12.4%, Italy 10.4%, UK 6.7%, Bulgaria 5.9%, US 5.3%, Cyprus 5.2%, Turkey 5.1%, France 4.2%
Imports (2005E)	\$54.1 billion
Imports - Commodities	machinery, transport equipment, fuels, chemicals
Imports - Partners (2005E)	Germany 12.7%, Italy 12.4%, Russia 7.8%, France 5.7%, Netherlands 5.5%, Saudi Arabia 4.1%
Current Account Balance (2005E)	\$-17.8 billion

Energy Overview

Proven Oil Reserves (January 1, 2006E)	None
Oil Production (2006E)	4.7 thousand barrels per day, of which 35% was crude oil.
Oil Consumption (2005E)	423.9 thousand barrels per day
Crude Oil Distillation Capacity (2006E)	413 thousand barrels per day
Proven Natural Gas Reserves (January 1, 2006E)	None
Natural Gas Production (2004E)	None
Natural Gas Consumption (2004E)	95.1 billion cubic feet
Recoverable Coal Reserves (2003E)	4,299 million short tons
Coal Production (2004E)	79.5 million short tons
Coal Consumption (2004E)	80.3 million short tons
Electricity Installed Capacity (2004E)	11.4 gigawatts
Electricity Production (2004E)	55.5 billion kilowatt hours
Electricity Consumption (2004E)	53.5 billion kilowatt hours
Total Energy Consumption (2004E)	1.4 quadrillion Btus*, of which Oil (62%), Coal (26%), Natural Gas (7%), Hydroelectricity (3%), Other Renewables (1%), Nuclear (0%)
Total Per Capita Energy Consumption (2003E)	129.6 million Btus
Energy Intensity (2004E)	7,391.2 Btu per \$2000-PPP**

Environmental Overview

Energy-Related Carbon Dioxide Emissions (2003E)	104.3 million metric tons, of which Oil (61%), Coal (34%), Natural Gas (5%)
Per-Capita, Energy-Related Carbon Dioxide Emissions (2003E)	9.5 metric tons

Carbon Dioxide Intensity (2004E) 0.5 Metric tons per thousand \$2000-PPP**

Environmental Issues air pollution; water pollution

Major Environmental Agreements party to: Air Pollution, Air Pollution-Nitrogen Oxides, Air Pollution-Sulfur 94, Antarctic-Environmental Protocol, Antarctic-Marine Living Resources, Antarctic Treaty, Biodiversity, Climate Change, Climate Change-Kyoto Protocol, Desertification, Endangered Species, Environmental Modification, Hazardous Wastes, Law of the Sea, Marine Dumping, Ozone Layer Protection, Ship Pollution, Tropical Timber 83, Tropical Timber 94, Wetlands signed, but not ratified: Air Pollution-Persistent Organic Pollutants, Air Pollution-Volatile Organic Compounds

Oil and Gas Industry

Organization Partially -privatized

Foreign Company Involvement BOTAS (Turkey), GN (Spain), Gazexport (Russia), Edison (Italy), Sonatrach (Algeria), Regal Petroleum (UK), Foster Wheeler Ltd. (US)

Major Oil Fields Prinos (4,000 bbl/d), Kallirachi (1,400 bbl/d)

Major Pipelines South Caucas Pipeline (124 Bcf/y); Turkey-Greece pipeline (28 Bcf/y); Poseidon pipeline (370 Bcf/y);

Major Refineries Aspropyrgos (146,500 bbl/d), Elefsis (100,000 bbl/d), Thessaloniki (67,000 bbl/d)

* 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 Data for Greece](#)

[European Union Fact Sheet](#)

U.S. Government

[CIA World Factbook, Greece](#)

[U.S. Department of Energy's Office of Fossil Energy's International section, Greece](#)

[U.S. Department of State Consular Information Sheet, Greece](#)

[U.S. Embassy and U.S. Information Agency, Athens, Greece](#)

General Information

[Centre For Renewable Energy Sources \(CRES\)](#)

[EarthTrends: Greece Country Profile](#)

[Greece.com: Government](#)

[Greek Connection](#)

[Helapco: Hellenic Association of Photovoltaic Companies](#)

[Hellenic Petroleum \(HP\)](#)

[Motor Oil \(Hellas\)](#)

[Nationmaster: Greece Government Profile](#)

[Prometheus Gas](#)

[Public Gas Corporation \(DEPA\)](#)

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Oil and Gas Journal

Petroleum Economist

International Market Insight Reports

Global Power Report

Reuters

National Trade Data Bank

Petroleum Intelligence Weekly

Platt's Oilgram News

U.S. Energy Information Administration

World Gas Intelligence

World Markets Energy

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