Part 2

The following member country profile is an excerpt from Chapter 4 of the publication Energy Supply Security 2014 and is not intended as a stand-alone publication.

CHAPTER 4: Emergency response systems of individual IEA countries

The ability of the International Energy Agency (IEA) to co-ordinate a swift and effective international response to an oil supply disruption stems from the strategic efforts of member countries to maintain a state of preparedness at the national level. Energy security is more than just oil, as the role of natural gas continues to increase in the energy balances of IEA countries. The most recently completed cycle of Emergency Response Reviews (ERRs) reflected this change by assessing, for the first time, the member countries' exposure to gas disruptions and their ability to respond to such crises. This chapter provides general profiles of the oil and natural gas infrastructure and emergency response mechanisms for 29 IEA member countries.

Each country profile is set out in the following sequence:

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Greece

Key data

Table 4.11.1 Key oil data

	1990	2000	2005	2010	2011	2012	2018*
Production (kb/d)	16.9	5.9	1.8	2.3	1.9	1.6	0.9
Demand (kb/d)	314.1	399.2	423.9	372.4	351.0	317.9	274.6
Motor gasoline	56.1	75.7	90.7	85.8	77.3	69.3	-
Gas/diesel oil	107.0	144.3	160.6	133.4	131.6	109.2	-
Residual fuel oil	92.5	107.1	99.4	82.6	77.5	70.0	-
Others	58.5	72.0	73.2	70.6	64.6	69.3	-
Net imports (kb/d)	297.2	393.3	422.1	370.1	349.1	316.3	273.7
Import dependency (%)	94.6	98.5	99.6	99.4	99.5	99.5	99.7
Refining capacity (kb/d)	385.0	382.5	401.4	488.5	488.5	488.5	-
Oil in TPES (%)**	56	55	57	51	47	45	-

* Forecast.
** TPES data for 2012 are estimates.

Table 4.11.2 Key natural gas data

	1990	2000	2005	2010	2011	2012*	2018**
Production (mcm/y)	123	36	16	7	6	5	0
Demand (mcm/y)	123	2 052	2 842	3 850	4 665	4 354	4 901
Transformation	16	1 542	1 936	2 455	2 862	0	-
Industry	86	439	668	867	1 128	0	-
Residential	0	6	88	303	417	0	-
Others	21	65	150	225	258	0	-
Net imports (mcm/y)	0	2 016	2 826	3 843	4 659	4 349	4 901
Import dependency (%)	0.0	98.2	99.4	99.8	99.9	99.9	100
Natural gas in TPES (%)	1	6	8	12	15	14	-

* 2012 data are estimates.
** Forecast.

Note: This section on the emergency response systems of individual member countries was written by the IEA. All countries provided valuable information and comments. All opinions, errors and omissions are solely the responsibility of the IEA.

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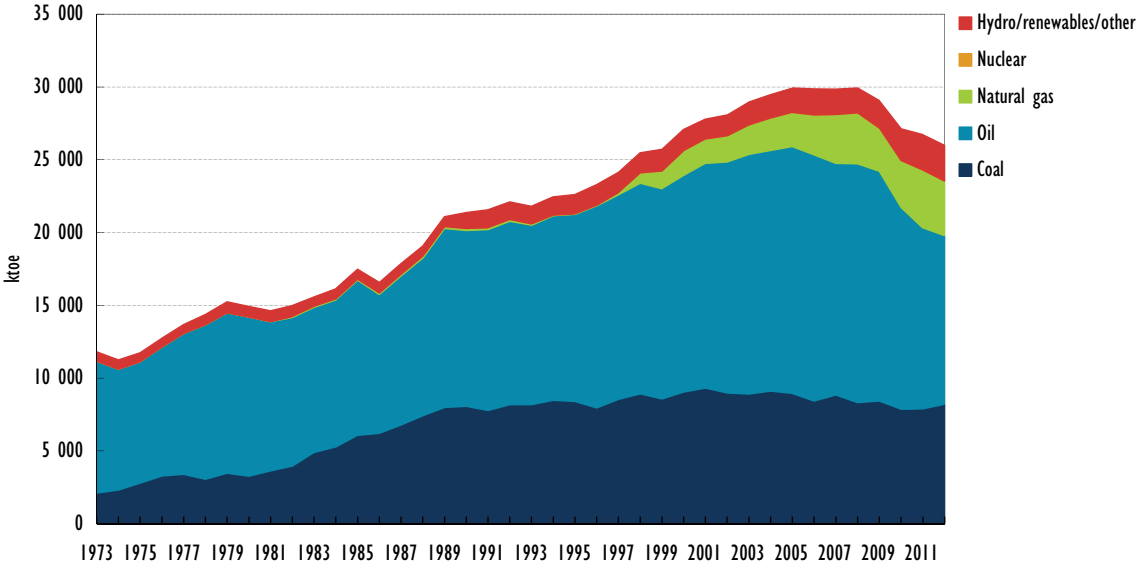
Figure 4.11.1 Total primary energy source (TPES) trend, 1973-2012



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Map 4.11.1 Oil infrastructure of Greece

This map is without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

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Map 4.11.2 Gas infrastructure of Greece

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Country overview

Oil has been the dominant energy source in Greece, accounting for some 45% of the country's total primary energy Supply (TPES) in 2012. Oil demand peaked at 450 thousand barrels per day (kb/d) in 2007, and since then it dropped sharply to 318 kb/d in 2012. Almost all the crude oils used in Greece are imported. Most of the crude oil is imported from OPEC countries and the former Soviet Union (FSU) countries.

There are ten oil terminals in Greece, the majority located in the Attiki Area (Athens) and the remaining refineries in the Thessaloniki area. Six oil terminals can accept crude oils, of which four are located near the refineries. Nearly all inland transportation of crude oil and refined products is by ship and road. Products are also transported by rail in Greece, specifically to the power plants. Rail is also used to transport local products to the Balkans.

The four refineries, operated by two refining companies, have a total crude distillation capacity of around 490 kb/d. In 2012 some 56% of the refined product imports came from OECD Europe countries, while some 16% of refined product imports were imported from the Russian Federation. However, Greece's oil product exports significantly increased from 102 kb/d in 2004 to 245 kb/d in 2012. Greece is a net exporter of refined products.

The use of oil stocks held by domestic industry is central to Greece's emergency response policy, as Greece meets its entire stockholding obligation to the International Energy Agency (IEA) and the European Union by placing a stockholding obligation on industry. Importers of crude oil or oil products, as well as large end-users, are required to hold a volume of oil stocks equivalent to 90 days of their net imports made during the previous year. Companies liable to maintain emergency stocks can delegate up to 30% of their obligation to other companies or central stockholding agencies within the territory of the European Union. Greece does not hold public stocks and does not have any bilateral stockholding agreements with other IEA member countries, but emergency stocks are held on behalf of Cyprus[1] [2] according to agreements between the Cyprus Organisation for Storage and Management of Oil Stocks (KODAP) and Greek refineries. All oil stocks are held in the form of oil products, and commingled with commercial stocks.

The share of natural gas in the country's TPES has increased to 14% in 2012. Because of the growth in the demand for electricity and the subsequent construction of new gas-fired power stations, demand for natural gas steadily increased and in 2012 stood at 4.4 bcm (12 million cubic metres per day). Roughly three-quarters of gas is supplied from Russia and Turkey by pipeline, and the remaining portion is imported in the form of liquefied natural gas (LNG), largely from Algeria.

Key elements of Greece's overall policy on natural gas security are diversification of supply sources, establishment of market-based demand measures, reduction of the LNG delivery lead times during periods of high demand, signing of new contracts for gas supply as well as development of the natural gas transmission system (updating the existing LNG terminal, a new pipeline and an underground gas storage facility). The transmission system operator (TSO), DESFA, plays a major role in emergency planning and managing crisis situations. Interruption of gas supply for customers based on a

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priority list, fuel switching at power stations and the use of gas reserves stored at the LNG terminal are foreseen as emergency response measures in a gas crisis.

In order for new gas-fired power producers to be granted with a production licence, they are obliged to hold at least five days of backup reserves of alternative fuel. Five thermal power generation units, which use gas as primary fuel, can switch to an alternative fuel.

Oil

Market features and key issues

Domestic oil production

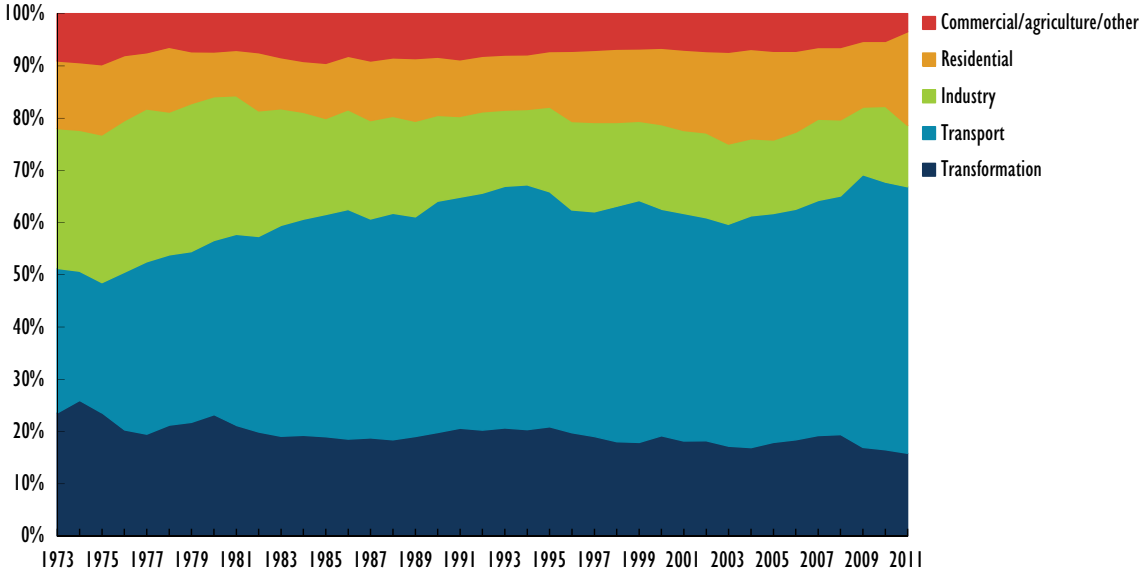
Greece has very little indigenous oil production (some 1.6 kb/d in 2012). Oil is produced from the Prinos offshore oil field in the Kavala Gulf in the northern Aegean Sea.

Oil demand

Oil demand in Greece increased from 383 kb/d in 2000 to 450 kb/d in 2007. However, having peaked in 2007, the country's oil demand sharply decreased to 318 kb/d in 2012 with an annual compound decrease rate of almost 7%.

Transport consumed 51% of Greece's total oil demand in 2011, followed by residential use (18%) and transformation/energy (16%).

Figure 4.11.2 Oil consumption by sector, 1973-2011



In terms of oil demand by product, demand for motor gasoline decreased 18% in the period between 2003 and 2012, while demand for diesel slightly increased by 2% in the same period. Demand for heating oil/other gasoil recorded a significant decrease from 127 kb/d in 2003 to 66 kb/d in 2012, while demand for residual fuels also dropped by 31%.

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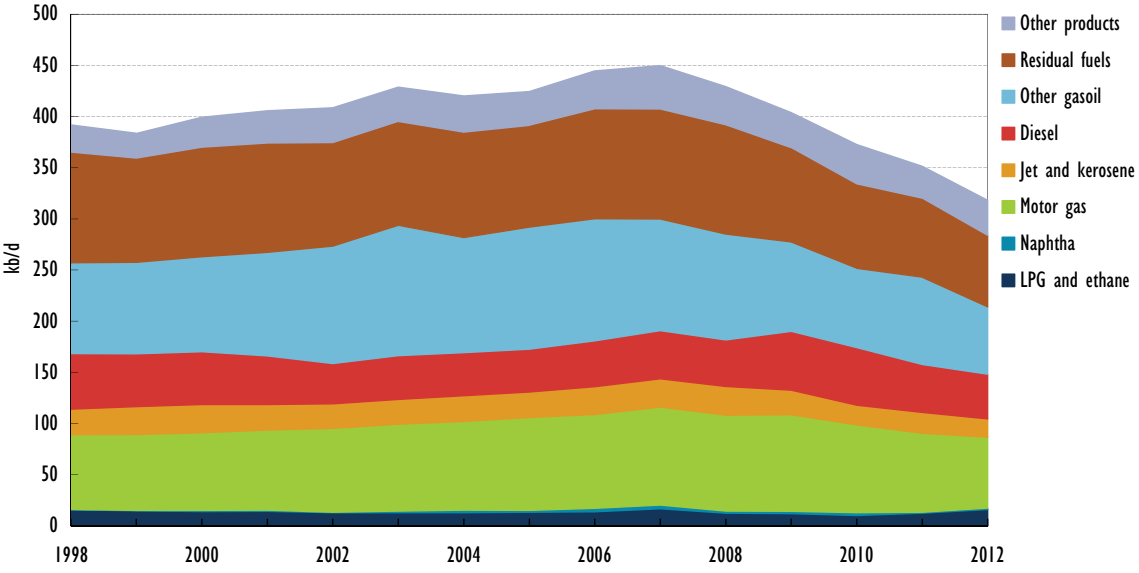
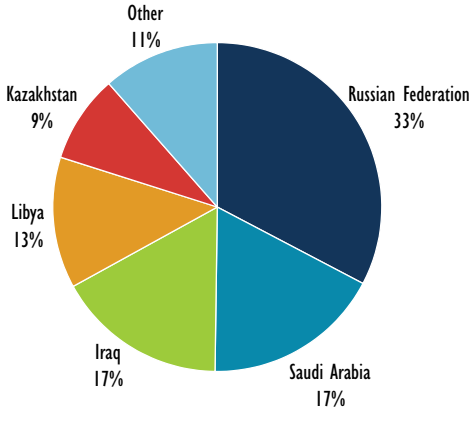
Figure 4.11.3 Oil demand by product, 1998-2012



Imports/exports and import dependency

In 2012 Greece imported 545 kb/d of oil, which consisted of 419 kb/d crude oil, 41 kb/d of natural gas liquids (NGLs) and feedstock, and 85 kb/d of refined products. Countries from the OPEC and the FSU have been major import sources of crude oil. By country, Russia was the largest supply source of crude oil, representing 33% of total imports in 2012, followed by Saudi Arabia (17%), Iraq (17%), Libya (13%) and Kazakhstan (9%).

Figure 4.11.4 Crude oil imports by origin, 2012



In 2012, roughly 56% of the refined product imports came from OECD member countries, mainly from OECD Europe, while some 16% of refined product imports for the same year were supplied from Russia.

Greece was a net exporter of refined products in 2012, exporting 245 kb/d of oil products. The destination of oil exports was mainly Turkey (22%), Singapore (9%), Lebanon (7%) and Libya (7%). Nearly 40% of total exports was gas/diesel oil in 2012.

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Oil company operations

Two companies operate in the Greek refining industry: Hellenic Petroleum and Motor Oil Hellas. The Greek state owns 35.5% of the Hellenic Petroleum capital but the company is to be fully privatised in the coming years. Over 20 trade fuel companies operate in Greece, with six of them covering almost 70% of inland consumption.

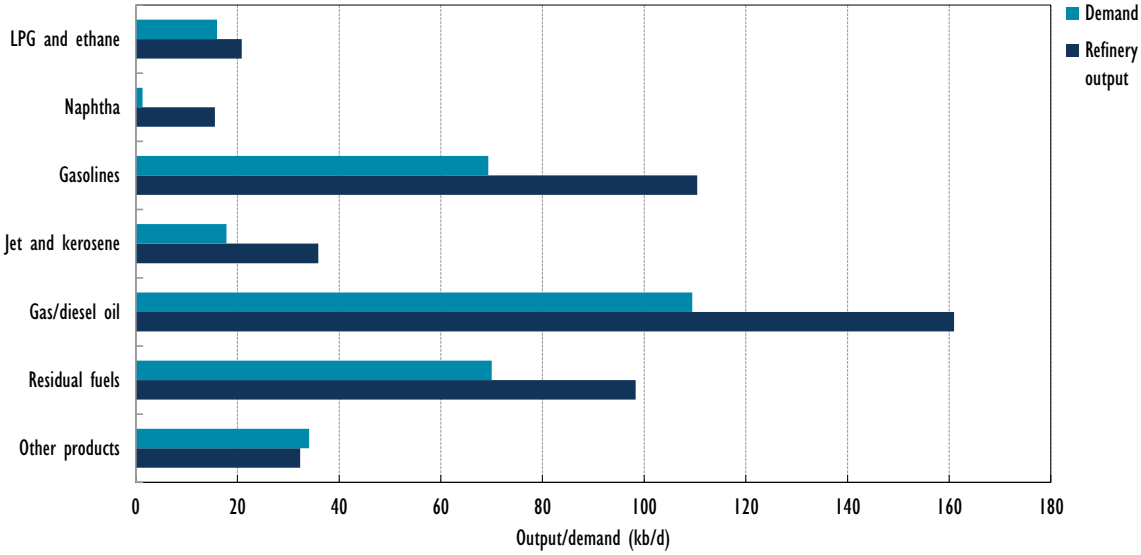
Oil supply infrastructure

Refining

The four refineries in Greece have a total crude distillation capacity of around 490 kb/d. Roughly two-thirds of this capacity is owned by Hellenic Petroleum, including two refineries located in the Athens area and a third near Thessaloniki. The fourth refinery, owned by Motor Oil Hellas, is located in Corinth. Refineries have completed extended upgrades, increasing their Solomon Composite Process Complexity Index, which makes them among the most modern and profitable in Europe.

In 2012 the four refineries processed over 22 million tones (Mt) (around 440 kb/d) of crude oil, with an overall capacity utilisation rate of almost 85%. In 2012, the refined product output totalled 474 kb/d. The composition of production was gas/diesel oil (34%), motor gasoline (23%), residual fuel oil (21%) and liquefied petroleum gas (4%).

Figure 4.11.5 Refinery output vs. demand, 2012



With decreasing domestic demand, in principle, Greek domestic refinery production is sufficient for meeting oil demand in the country; this permits extended exports mainly to countries around the Mediterranean.

Ports and pipelines

There are ten oil terminals in Greece, seven located in the Attiki Area (Athens) and the remaining three in the Salonica area. Six oil terminals (Aspropyrgos, Elefsina, Thessaloniki, Aghioi Theodori, Pachi (Megara) and Agia Triada) receive crude oil; four of these terminals are located near the refineries.

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Greece has two oil pipelines. The first, a 220-km-long, 16-inch crude pipeline with a capacity of 50 kb/d, links the Thessaloniki port in Greece with the Octa refinery in the Former Yugoslav Republic of Macedonia (FYROM). It is owned and operated by Hellenic Petroleum. The second, a 53-km-long, 10-inch Jet A-1 pipeline with a capacity of 42 kb/d, connects the Aspropyrgos refinery with Athens International Airport.

Except for jet fuels supplied to the Athens airport, nearly all inland transportation of crude oil and refined products is by ship and road. Products are also transported by rail in Greece, specifically to the power plants. Rail is also used to transport oil products to the Balkans.

An international pipeline project is being proposed for transporting Russian and Caspian oil from the Bulgarian Black Sea port of Burgas to the Greek Aegean port of Alexandroupolis. This 300-km pipeline, with a capacity of 0.7-1 mb/d, would be an alternative export route for Russian oil by bypassing the Bosporus Straits.

Storage capacity

Greece possessed a total storage capacity of 59.7 mb (9.5 mcm) used for industry operations and mandatory industry stocks in 2012. Crude oil storage accounted for some 30% of the country's total storage capacity. All the storage facilities owned by refineries are certified tanks for emergency stocks. A part of the storage facilities is also used for maintaining stocks for third parties in the context of the European Directive 2009/119/EC, such as foreign companies with term/spot commercial storage agreements and clients who require oil storage capacity to obtain retailing licences under the existing Greek law (4123/2013).

Decision-making structure

The Severe Oil Disruptions Management Committee forms the permanent core of the Greek national emergency strategy organisation (NESO), which is supported by the Directorate of Petroleum Policy of the Ministry of Environment, Energy and Climate Change. The committee is chaired by the General Secretary of the Ministry of Environment, Energy and Climate Change, and it is composed of 15 members, including the president of the Regulatory Authority for Energy (RAE); representatives of the ministries of national defence, finance, economy, and transport; representatives from the three branches of the armed forces; and representatives of refineries and retail companies. The committee is usually convened every three months while it is authorised to draw up and submit an emergency action plan to the Minister of Environment, Energy and Climate Change. Once the plan is activated, it reports on the implementation of the measures taken.

The Directorate of Petroleum Policy plays an important role in preparing and implementing an emergency response plan and measures. The directorate collaborates closely with the IEA, the European Union, domestic industries and regional authorities. The directorate also collects and processes data on emergency stocks.

In the event of an oil supply disruption, extraordinary meetings of the Severe Oil Disruptions Management Committee will be held at the Ministry of Environment, Energy and Climate Change. The Minister for Environment, Energy and Climate Change is responsible for the political decision as to whether Greece will participate in a proposed IEA collective action or not, and will approve the emergency response measures proposed by the committee.

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Stocks

Stockholding structure

Greece meets its stockholding obligation to the IEA and the European Union by placing a stockholding obligation on industry. Importers of crude oil or oil products destined for the domestic market, as well as large end-users (such as power plants) are required to hold oil stocks with a volume equivalent to 90 days of their net imports made during the previous year.

Under the Greek stockholding regime, an entity that is required to hold emergency oil stocks may agree with a third party owning certified storage facilities for the safekeeping of the total or a part of their statutory emergency oil stocks, following authorisation by the Ministry of Environment, Energy and Climate Change. Such a contract should be for at least one year and dedicated exclusively to keeping the emergency oil stocks. The government intends to limit the minimum duration of such contracts to less than one year with the aim reinforcing in parallel the security of supply and the terms of competition.

The new law for oil stocks No. 4123/2013 has a provision for the establishment of a stockholding agency with the legal form of a limited non-profit company in line with the European directive. The decision on the creation of the new agency, to be signed by the president of the Hellenic Republic, is will be made in due course, while taking into consideration Greece's current financial situation.

Crude or products

Greece held some 32 mb of industry stocks at the end of April 2013, equal to 132 days of net imports in 2012. About 33% of total industry stocks were stored as crude oil, while the shares of middle distillates and of motor gasoline were 31% and 13% respectively.

Location and availability

Compulsory stocks are maintained within the Greek national territory but the new legal framework provides the possibility of keeping up to 30% of stocks in other EU member states. Greece has no bilateral stockholding agreements with other IEA member countries, although emergency oil stocks are held in the Greek territory on behalf of Cyprus[3] [4] Compulsory stocks held by industry must be maintained in storage facilities that have been certified as emergency stocks storage tanks. However, this does not mean that operational and commercial stocks must be kept separately. In practice, compulsory stocks are commingled with operational and commercial stocks.

Monitoring and non-compliance

The parties responsible for maintaining emergency stocks are required to submit monthly oil statistical reports to the Directorate for Petroleum Policy, no later than on the first business day following the 20th calendar day of every month. A ministerial decision authorises the Directorate of Petroleum Policy to undertake spot inspections of emergency stocks in certified tanks. Usually the quantities maintained by entities are cross-checked through official documents of the customs and tax authorities.

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Stock drawdown and timeframe

In the event of a disruption in energy supply, the use of oil stocks held by domestic industry would be central to Greece's emergency response policy. The Minister for Environment, Energy and Climate Change is authorised to decide on the release of compulsory industry stocks, based on the proposal of the Severe Oil Disruptions Management Committee. In case of an IEA collective action, the committee will draft a decision on the emergency response measures as well as on the manner and type of stocks to be released, and will propose this decision to the minister for final approval within 48 hours of the Notice of Activation under the Initial Contingency Response Plan of the IEA.

There are also several stock release procedures during local supply disruptions, including temporary or mandatory reduction of the stockholding obligation by category of products, tender and allocation of emergency stocks to specific categories of customers or to specific geographic areas in the country. The Severe Oil Disruptions Management Committee regulates the distribution of emergency oil stocks and supervises compliance with the plan and emergency measures.

In the emergency plan which was approved by the Cabinet in 2013, restrictions of oil product exports are provided for in case of only local disruptions, as in case of global disruptions the country is committed to facilitate supply of the international market.

Financing and fees

The government does not provide any financial support for obliged stockholders. The costs of compulsory oil stocks are financed by the companies operating in the Greek market, and thus implicitly passed on to consumers through market prices. The government may occasionally decide to set a ceiling for fees charged by storage companies to entities without enough storage capacity.

Other measures

Demand restraint

Under the legal framework, the Severe Oil Disruptions Management Committee may decide on the demand restraint measures to take and may supervise their implementation.

The emergency plan, approved by the Cabinet in 2013, includes a comprehensive list of possible measures that can be taken to reduce oil consumption in the short term. Promotion of the use of public transport, speed limit reduction, carpooling and lowering heating temperatures are envisaged as voluntary demand restraint measures, which are expected to be encouraged by information campaigns through mass media. Compulsory measures considered are driving restrictions, limited opening hours of service stations, and restriction of fuel supply to retail companies.

Fuel switching

Oil is used for electricity generation on many of the 200 inhabited Greek islands. However, none of the oil-fired power plants in the country possess fuel-switching capacity to alternative fuels, as natural gas is hardly available on the islands. There is no specific policy or legislation for the promotion of short-term fuel switching from oil to other fuels in an emergency.

Other

Given that Greece has very little indigenous oil production, surge production of oil is not considered an emergency response measure.

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Gas

Market features and key issues

Gas production and reserves

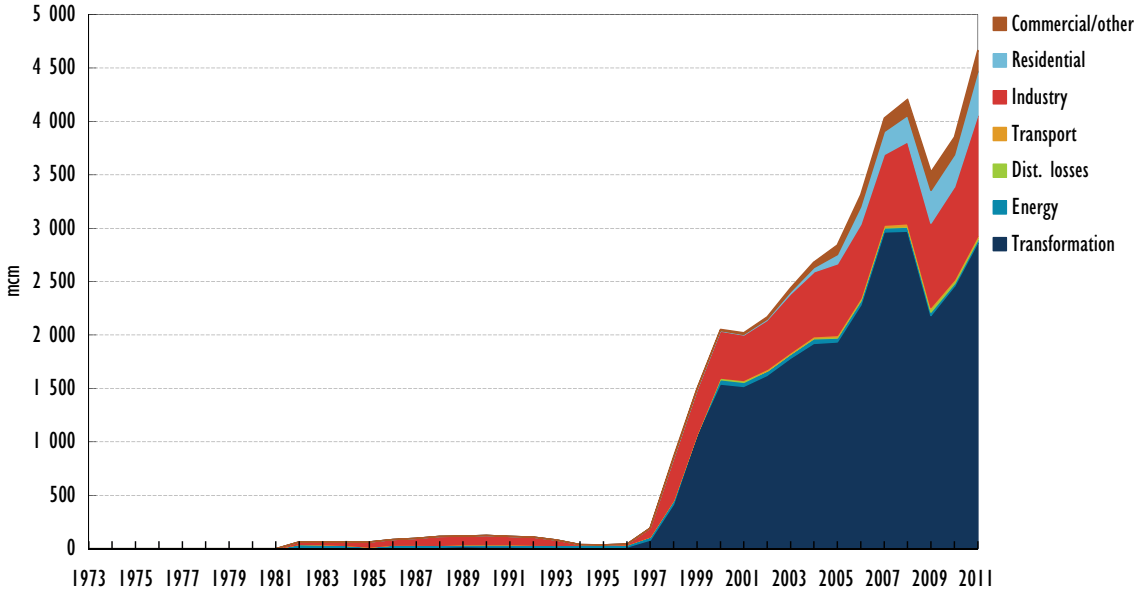
Greece's domestic production of natural gas is negligible. The South Kavala gas field, located in the Kavala Gulf of the Aegean Sea, produced 5 mcm in 2012.

Gas demand

Since the early 1980s natural gas demand has steadily increased and stood at 4.4 bcm (12 mcm/d) in 2012.

In 2011, transformation represented roughly 61% of total consumption, followed by industry (24%) and residential use (9%).

Figure 4.11.6 Natural gas consumption by sector, 1973-2011



The daily peak demand in 2011 amounted to 18.7 mcm/d, while the daily average demand in the year was 12.6 mcm/d.

Gas import dependency

Greece's total natural gas imports in 2012 were some 4.5 bcm, roughly three-quarters of which were supplied by pipeline and the remaining portion was imported in the form of LNG. Russia has been the principal source of natural gas imports since Greece began to import gas in November 1996. However, the share of Russian gas in total gas imports has gradually declined from 85% in 2005 to 60% in 2012, because of the increase in imports from Algeria and Turkey which accounted for around 16% and 15% of the total gas imports in 2012, respectively.

The Greek Public Gas Corporation (DEPA) has three long-term contracts for natural gas supply; with Russian Gazexport (2.8 bcm/y until 2015-2016), with Algerian Sonatrach

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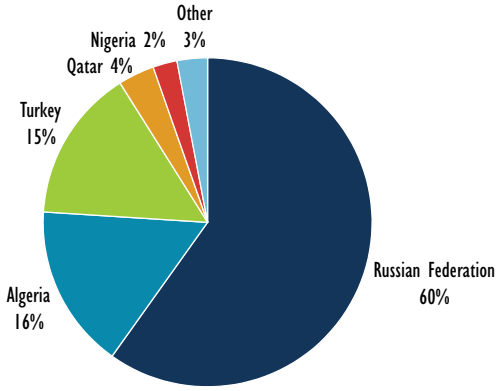
(0.5 bcm/y until 2019) and with Turkish Botas (0.7 bcm/y until 2021). Together they will supply a total volume of about 4.2 bcm per year.

Figure 4.11.7 Natural gas imports by source, 2012



Gas company operations

In accordance with the legislative framework on liberalisation of the natural gas market, in 2007 DEPA established the National Natural Gas System Operator SA (DESFA SA), a 100% subsidiary of DEPA. DESFA owns the existing gas infrastructure, and serves as the TSO as well as the LNG operator.

DEPA shares in three regional distribution system operators (EPAs: local gas distribution companies) by holding up to 51% of the share, while private investors hold the remaining 49%. Those companies are responsible for extending the urban networks, as well as supplying gas to domestic and industry consumers with annual consumption below 8.96 mcm per year. The consortium of Attiki Denmark participates in the EPA Attikis (Athens), while Eni participates in the EPA Thessalonikis and EPA Thessalias.

Gas supply infrastructure

Ports and pipelines

There are three entry points to the natural gas transmission system in Greece. The first entry point (with a maximum import capacity of 12 mcm/d) is located on the Greek-Bulgarian border, through which natural gas from Russia is imported by a pipeline through Ukraine, Moldova, Romania and Bulgaria. The second entry point (5.2 mcm/d) is on the Greek-Turkish border enabling gas imports from Turkey. The third entry point (12.5 mcm/d) is at Agia Triada, opposite the LNG terminal located on the island of Revithoussa in the Gulf of Megara.

According to the national preventive plan, these three entry points provide the Greek national gas transmission system with a maximum import capacity that, nevertheless, does not comply with the N-1 standard of European Regulation 994/2010, without robust demand restraint measures. While the missing entry capacity is estimated at 2 mcm/d for 2014, capacity upgrades at the entry points are planned.

Located in a strategic location for the delivery of Russian, Caspian and Middle Eastern gas supplies to Europe, Greece is involved in international gas pipeline projects, such as the Greek branch of the South Stream Pipeline, Interconnector Greece-Bulgaria (IGB) and Interconnector Turkey-Greece-Italy (ITGI).

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The most recent development includes the selection of Trans-Adriatic Pipeline (TAP) to deliver gas from Azerbaijan to Europe via Turkey, Greece, Albania and ending in Italy. When completed, TAP will be a major interconnector opening the Southern Gas Corridor for the supply of Europe with gas from the Caspian Sea.

The ITGI pipeline has also been chosen by the European Commission as a Project of Common Interest (PCI) although its implementation has been temporarily suspended. After the completion of these investments, Greece could emerge as an important natural gas player in the region.

The IGB project includes the construction of a cross-border and bi-directional gas pipeline about 181 km long (150 km in Bulgaria and 31 km in Greece), connecting the Greek gas network in the area of Komotini with the Bulgarian gas network. The annual capacity of the gas pipeline is foreseen to be up to 5 bcm.

Storage

Greece has some potential for natural gas storage, especially in the depleted field in South Kavala. However, as of 2013, the country's gas storage facility has been located only at the LNG terminal on the island of Revithoussa.

The combined storage capacity of the two LNG tanks in Revithoussa is 130 000 m^3 of LNG, which is equivalent to 80 mcm of natural gas. The full capacity of this storage facility is equivalent to around seven days of average gas demand in 2012. There is a plan to extend the LNG terminal in terms of both storage and regasification capacity. Construction of the third LNG tank was awarded by DESFA in 2013. It will increase the total storage capacity to 225 000 m^3.

There is also a plan to upgrade the existing send-out capacity from 1 000 m^3 LNG/h (or 14.8 mcm/d) to 1 400 m^3 LNG/h (or 20 mcm/d). The peak send-out capacity is planned to stand at 1 550 m^3 (or 23 mcm/d), increasing from 1 250 m^3 LNG/h (or 18.8 mcm/d). The port facilities are also to be upgraded to allow the berthing of LNG carriers with a capacity of up to 260 000 m^3, increased from 140 000 m^3.

Emergency policy

The key elements of Greece's overall policy on natural gas security are diversification of supply sources and routings as well as development of the natural gas transmission system. The RAE (National Regulatory Authority) carries out a risk assessment within the context of the implementation of the regulation to identify the most significant risks for the Greek National Natural Gas System (NNGS). Following a cost benefit analysis, based on the risk assessment, the RAE formulated the Preventive Action Plan which identifies a short-term strategy to address security of supply issues in the short term (up to two years ahead) and a medium-term strategy to provide increased security of supply in the medium term (three to six years ahead).

The short-term strategy will focus on several measures:

- reduction of LNG delivery lead times during periods of high demand
- agreements for supplementary gas which allows market participants to reach agreements with upstream parties for extra gas deliveries
- implementation of market-based demand-side measures and
- implementation of measures to enhance dual-fuel availability.

The medium-term strategy aims to comply with the N-1 standard and to reduce the residual risk posed by the most adverse crisis at the lowest cost for gas consumers.

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The medium-term strategy unfolds through the realisation of one more infrastructure project. The project could be one of the following: building of a new LNG terminal, realisation of an underground gas storage or a new interconnection linked with new supply agreements.

The country's TSO, DESFA, plays a major role in emergency planning and managing crisis situations that affect the NNGS. DESFA is exclusively responsible for the operation, maintenance, development and utilisation of the NNGS. Emergency response measures will include interruption of gas for customers based on the priority set by DESFA, fuel switching at power stations under the control of the electricity network TSO, and measures to ensure the availability of gas reserves in emergency cases.

Under the network code, DESFA declares an emergency gas situation and carries out an emergency response plan.

Emergency response measures

The Greek TSO prepared the emergency plan in the context of the Greek Law 4001/2011 and the provisions of EU Regulation 994/2010. The emergency plan provides for an emergency action team, sets procedures for responding to an emergency and lists measures that may be implemented during each of three crisis levels as defined in the regulation.

Under the provisions of Law No. 4001/2013, DESFA and customers are obliged to sign a contract for the interruption of natural gas supply ranked by priority. In case of a gas emergency, there is a specific ranking of natural gas interruption, and, according to this priority list, dual-fired power plants and big industrial customers are the first to be cut off.

DESFA may issue orders to interrupt gas supply not only to big industrial customers, but also to any other customer if it estimates that it is necessary for the effective operation of the natural gas grid. That course of action is intended to ensure that households and possibly small and medium-sized enterprises and district heating installations are protected.

DESFA has a load-shedding plan for the interruption of gas supply to electricity production units. The plan has 24 alternative scenarios for the interruption of gas supply at the three natural gas entry points.

Fuel switching at power stations is also envisaged as an emergency response measure in a gas crisis. In order to be granted a production licence, new gas-fired power producers are obliged to hold at least five days of backup reserves of dual fuel (i.e. either diesel at a storage facility on the power plant's premises, or LNG reserves at the Revithoussa LNG Terminal). Thirteen thermal power generation units, with a total capacity of 4 575 megawatts (MW), are connected to the national gas transmission system; five of them, with a combined capacity of some 1 972 MW, are able to switch from gas to oil in case of a gas disruption.

Around 16 000 m^3 of LNG (equivalent to about 10 mcm of natural gas) is available for peak shaving at the LNG tanks in Revithoussa.

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