TURKEY: ECONOMIC REFORM AND ACCESSION TO THE EUROPEAN UNION

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The Present Situation in the Turkish Gas Market

The Turkish natural gas market is still an emerging one. Turkey has limited gas resources, and it began production and distribution only in 1976. A considerable part of the country is still not served by natural gas.

The use of natural gas by industry is also relatively new. It began in 1989—after the initiation of gas imports from the Russian Federation and is rapidly growing. Demand in the power generation sector is expected to grow even more rapidly, doubling between 2001 and 2010. In 2001 total gas demand was 15.5 billion cubic meters. Of this, the power industry accounted for about 10.6 billion cubic meters, followed by residential demand at about 2.7 billion cubic meters and industry demand at 2.0 billion cubic meters.\(^1\)

Between 1990 and 1998, the average annual primary gas demand increased by 15.3 percent, with peak growth of 18.4 percent in 1999. Past government forecasts had predicted that demand would grow by almost 26 percent per year between 1999 and 2005; for the next 15 years it was expected to grow at a rate of between 3.5 percent and 4 percent. Figures published recently by Turkey’s state-owned...
gas company, BOTAŞ, indicate that the company expects the Turkish gas market to double in size over the next years, with 55 cities receiving natural gas for the first time. Many independent observers have expressed doubts about these figures, however. They believe BOTAŞ's demand forecasts were overly optimistic and point to the fact that subsidies and below-cost pricing would have to be phased out during the process of liberalization of the energy sector.

Import and Export Infrastructure and Future Developments


In view of the expected rapid increase in natural gas consumption, in 1984 the government of Turkey signed an intergovernmental agreement with the former Soviet Union. Consequently, in 1986 BOTAŞ and SOYUZGAZEXPORT signed a natural gas sale and purchase agreement for a 25-year period. Natural gas began flowing to Turkey in 1987, and the volume transported gradually increased, reaching 6 billion cubic meters per year in the plateau period in 1993.

The 842-kilometer Russian Federation–Turkey Natural Gas Main Transmission Line enters Turkey at Malkoçlar at the Bulgarian border and then follows the Hamitabat, Ambarlı, İstanbul, İzmit, Bursa, Eskişehir route to reach Ankara. The main dispatching center is located in Yaprakçik-Ankara. Construction of the pipeline began on October 26, 1986, and the line reached Hamitabat on June 23, 1987. Since then, imported natural gas has been used together with domestic gas for power generation at the Trakya Combined Cycle Power Plant in Hamitabat. The pipeline reached Ankara in August 1988. The İstanbul Fertilizer Industry Company (İGSAŞ) began to receive natural gas in July 1988, the Ambarlı Power Plant in August 1988, and Ankara for residential and commercial purposes in October 1988. In 1996, the transmission pipeline was extended to the western Black Sea region via the İzmit-Karadeniz Eregli line (209 kilometers); the main customers are the Eregli Iron and Steel Works plants. In the same year, the main transmission line also was extended to Çan.

The Bursa-Çan Natural Gas Transmission Line was completed in 1996 for the purpose of supplying natural gas to the Çanakkale Ceramic Factory, together with other industrial establishments along the route. In 2000, the Çan-Çanakkale Natural Gas Transmission Line was completed.

In 1998, BOTAŞ signed an agreement with Russia to import 8 billion cubic meters per year of natural gas from the West through TURUSGAZ—a BOTAŞ, GAZPROM (Russia), and GAMA (Turkey, civil contractor) joint venture. Another agreement was signed with the Russian Federation on December 15, 1997, to import 16 billion cubic meters of gas per year through a pipeline beneath the Black Sea. A joint venture was also established by GAZPROM and ENI (Italy) to lay the “Blue Stream” pipeline, and on December 29, 2002, the first Blue Stream pipeline gas from Russia entered Turkey, crossing the Black Sea at a depth of down to 2,150 meters. Deliveries were expected to amount to 16 billion cubic meters by 2007 in accordance with the natural gas sale and purchase agreement.

In August 1996, Turkey and the Islamic Republic of Iran signed a 25-year natural gas sale and purchase agreement that called for the delivery of natural gas to start at a volume of 3 billion cubic meters per year, to reach 10 billion cubic meters per year in the plateau period in 2007. The agreement was then amended in August 2000. A dedicated pipeline, the Eastern Anatolia Natural Gas Main Transmission Line, running between Dogubayazit on the Turkish-Iranian border and Ankara/Seydisehir (Konya) was completed at the end of 2001 after some delay. On December 2001, the delivery of natural gas began through the Eastern Anatolia line. In April 2002 the construction works of the Karacabey-İzmir Natural Gas Transmission Line were completed, and the line became operational.

In 1999, BOTAŞ signed an agreement with Turkmenistan for the purchase of 16 billion cubic meters of natural gas per year. The Turkmen gas would be transported to Turkey for a period of
30 years. On February 19, 1999, the Turkmen government commissioned project studies to a consortium comprising PSG–General Electric Capital and Bechtel. Shell joined this consortium on August 6, 1999. This project involves construction of a pipeline from Turkmenistan to Turkey, running parallel to the Baku-Tbilisi-Ceyhan crude oil pipeline until it joins the Eastern Anatolia Natural Gas Main Transmission Line near Erzurum. Gas imports were expected to begin between 2002 and 2004; however, no progress has been made on this gas pipeline. Meanwhile, the Turkish Petroleum Corporation (TPAO) has conducted the relevant studies needed to join the international consortium that will develop and produce gas from six dedicated gas fields (including the Körpece, Zeagli, Darvaza, Garacaovlak, and Malay fields) to feed the Trans-Caspian gas pipeline.

In April 2002, after two years of planning, Turkey and Greece signed a memorandum of understanding for a gas pipeline linking the two countries. The Ankara–Dedeagac link, which forms part of the EU’s INOGATE (Interstate Oil Gas Transport to Europe) program, will feed Iranian gas through western Turkey to the Greek frontier. INOGATE is a technical assistance program of the EU (covering central and eastern Europe, including the newly independent states) that seeks to integrate the hydrocarbon transport networks between the Caucasus, central Asia, and central and eastern Europe. Start-up is planned for 2005, with an initial capacity of 0.5 billion cubic meters per year, rising to a plateau of 3.6 billion cubic meters per year. The link is capable of carrying 13 billion cubic meters of gas per year, with Turkey’s share set to plateau at 10 billion cubic meters per year in 2007. The pipeline will connect Karacabey in western Turkey to Komotini city in northeast Greece, enabling Turkey to sell Greece some of the gas surplus. The cost of this project is estimated at €250 million, and it should be completed in 2005. An economic feasibility study for the project, conducted by Société Générale, was funded equally by DEPA (the Greek national gas company) and the European Commission. Countries that could be interested in selling gas to the European market via this pipeline include Azerbaijan, the Islamic Republic of Iran, Kazakhstan, Turkmenistan, and Uzbekistan. In particular, Iran hopes to export the extra 3 billion cubic meters per year to the European market. The natural gas could reach Italy by means of an offshore connection, where it could eventually compete with Algerian and Libyan natural gas. Another possibility is to export gas to Bosnia and Herzegovina. A further possibility could be the construction of a pipeline to Austria through Bulgaria, Romania, and Hungary.

In fact, in November 2002 five companies signed an agreement to carry out a joint feasibility study on the construction of a natural gas pipeline from Turkey to Austria via Bulgaria, Romania, and Hungary. Participants in the project are BOTAS, (Turkey), Bulgargaz (Bulgaria), Transgaz (Romania), MOL (Hungary), and OMV Erdgas (Austria). The study received approval from the EU in July 2003. At the beginning of 2004, the Nabucco Company began its financial and market studies, and the final report of the feasibility study is due by the beginning of 2005. The construction phase is scheduled to start in mid-2006, and operations are expected to begin at the end of 2009. Once contracted, the pipeline will stretch about 3,400 kilometers, with total capacity from Turkey of 25 billion to 30 billion cubic meters per year. The expected offtake in transit countries would be 8 billion to 10 billion cubic meters per year, and the total capacity to Austria’s Baumgarten region would be 17 billion to 20 billion cubic meters per year. Total costs are projected to be about €4.4 billion. The idea behind the project is that Turkey would act as an “energy corridor” for the export of Caspian oil and gas. Turkey finds the idea attractive, because it would allow the country to reduce the gas surplus it seems to be facing in the near future. In view of its geographic position, Turkey could, in fact, play a pivotal role in enhancing the security of supply and competition in the EU, connecting the Caspian gas reserves with the Mediterranean region and Europe.

**Long-Term Purchase Contracts**

BOTAS has signed eight long-term sales and purchase contracts with six different supply sources. Six contracts are presently in effect. Of these, three are with Russia for plateau volumes of 6 billion cubic meters per year, 16 billion cubic meters per year, and 8 billion cubic meters per year, respectively, through the Blue Stream pipeline across the Black Sea; one is with Iran for 10 billion cubic meters per year; and two are liquefied natural gas...
contracts—one with Algeria for 4 billion cubic meters per year and the other with Nigeria for 1.2 billion cubic meters per year. These agreements are summarized in table 8.1.

Of the two contracts that are not yet in effect, one was signed with Turkmenistan for 16 billion cubic meters per year, and the Shah Deniz contract with Azerbaijan is for 6.6 billion cubic meters per year, starting in 2005 (see table 8.1). It is likely, however, that these two contracts will prove mutually incompatible. Although progress has been reported on imports from Azerbaijan, the pipeline project from Turkmenistan appears to be stalled.

On December 26, 1996, a framework agreement was signed between Iraq and Turkey to pipe 10 billion cubic meters of Iraqi gas per year to Turkey after development of the gas fields in Iraq. On the Turkish side, BOTAS, TPAO, and TEKFEN have been involved in this project. ENI was designated as coordinator of the upstream activities.

Finally, a natural gas sale and purchase agreement was initialed on March 31, 2001, by BOTAS and EMG (Eastern Mediterranean Gas Company) of Egypt to supply Turkey with 4 billion cubic meters per year of natural gas.

To diversify natural gas supply sources, BOTAS entered into a 20-year LNG sale and purchase agreement with SONATRACH (Algeria) in 1988. In order to receive the imported LNG, BOTAS began construction of the Marmara Ereğlisi LNG Import Terminal in September 1989. The terminal, which began operations in 1994, is used both as a LNG regasification plant and as a storage facility for imported LNG.

In addition to long-term contracts, BOTAS has also purchased natural gas on the spot market. The first spot LNG was from Australia within the scope of an agreement signed with North West Shelf LNG in 1995. Spot LNG was also purchased from Qatar and Algeria under two different agreements signed with Qatar Gas and SONATRACH in 1998. In 2001 BOTAS purchased a total of 16,368 million cubic meters of natural gas. The Russian Federation was the main natural gas supplier with 10,931 million cubic meters, followed by Algeria (3,985 million cubic meters) and Nigeria (1,337 million cubic meters). Iran provided 115 million cubic meters (BOTAS 2001).

BOTAS justified signing these long-term purchase contracts by pointing to the expected rapid growth in the Turkish gas market; it predicted that gas demand would reach 55 billion cubic meters in 2010 and 83 billion cubic meters in 2020. As noted earlier, however, most observers believed the ambitious BOTAS demand forecasts were overly optimistic, and they cautioned as well about the country’s economic crisis. Some analysts foresee that in 2010 Turkey will have surplus gas of 10 billion to 25 billion cubic meters, increasing to 50 billion cubic meters in 2020 (Hafner 2002).

Oversupply also seems to be the basis of the dispute that arose between Turkey and Iran in 2001 in connection with a natural gas purchase agreement for 10 billion cubic meters per year signed in 1996. Under the contract, Iran was to export to Turkey a total of 192 billion cubic meters of Iranian gas over 22 years, with deliveries starting in January 2000. However, when deliveries were scheduled to start,
BOTAS had not completed the necessary import infrastructure, and an amendment to the original deal was negotiated under which first gas was delayed to July 2001, and the duration of the contract was extended to 25 years. The total contractual volume was also increased to 228 billion cubic meters, with annual volumes scheduled to reach their plateau level of 10 billion cubic meters per year in 2007. But again, when the July 2001 date arrived, BOTAS claimed that Iran had not constructed the necessary border metering facilities, and gas did not actually start flowing until December 2001.

In June 2002, BOTAS announced that gas imports from Iran had been halted because of an alleged quality problem. Iran accused Turkey of using the quality issue as a pretext, and said that the real reason for the halt was that Turkey was not in a position to consume the gas. The dispute was resolved after a reduction in the contract price (in line with the reduction that BOTAS agreed to with the Blue Stream consortium—about 9 percent) and in the take-or-pay level (down from the original 87 percent of annual contract quantity to 70 percent, which means that BOTAS will need to take only 7 billion cubic meters per year at the plateau).

**National Networks and Future Development**

Residential users in Ankara began receiving natural gas in 1988. In 1992 Istanbul and Bursa also began to receive supplies of natural gas; Izmit and Eskisehir received supplies in 1996. The distribution of natural gas is undertaken by local distribution companies; EGO in Ankara, IGDAŞ in Istanbul, İZGAZ in Izmit, and BOTAS in Bursa and Eskisehir. The distributors are owned or co-owned by the municipalities they serve, except in Bursa and Eskisehir. The gas supply continues to be restricted to limited areas of western Turkey, but there are plans to extend the system.

The city distribution networks have been enlarged over the years, parallel with demand. In 2001 the number of consumers increased to 197,303 in Bursa and 76,484 in Eskisehir because of the work under way to enlarge the city distribution networks in these cities. In view of the growth scenario described earlier, BOTAS has planned to connect local distribution networks in 55 new cities. The connection dates for all of these projects are in 2002–04.

In order to become “a Bridge to Europe” and boost its internal demand, Turkey will have to improve its national transmission and distribution network. Five projects are already under study and slated to become operational in 2005: the Southern Natural gas transmission line project; the Konya-Izmir natural gas transmission line project; the eastern Black Sea gas transmission line project; the western Black Sea natural gas transmission line project; and the Georgian border–Erzurum (Horasan) natural gas transmission line project.

The Southern Natural gas transmission line project is aimed at meeting natural gas demand in the southern and southeastern regions of Turkey by transmitting natural gas through a branch line to be extended from the Eastern Anatolia Natural Gas Main Transmission Line near Sivas. The total length of this 40-inch pipeline from Sivas to Mersin via Malatya, Kahramanmaras, Gaziantep, Osmaniye, and Adana will be 565 kilometers.

By means of the Konya-Izmir natural gas transmission line project, the Eastern Anatolia Natural Gas Main Transmission Line will be extended from Konya to Izmir, and will supply natural gas to cities such as Burdur, Isparta, Denizli, and Nazilli. The 618-kilometer 40-inch line will have branches to the cities in the vicinity of Afyon and Antalya.

The eastern Black Sea gas transmission line project will supply Hopa, Artvin, Rize, Trabzon, Giresun, Ordu, and Samsun via Bayburt and Gümüşhane by extending a branch from the Eastern Anatolia Natural Gas Main Transmission Line at Erzincan. The plan is to supply natural gas to Gümüşhane, Bayburt, Trabzon, and Rize as the first stage of the project. Through the western Black Sea gas transmission line project, natural gas will be supplied to Bartın, together with the industrial and residential sectors along the route via Zonguldak, Devrek, and Çaycuma, by extending a branch from Karadeniz Ereğli. It is foreseen that the 141-kilometer line will consist of a 78-kilometer line of 16-inch pipe and a 63-kilometer line of 12-inch pipe. In addition, a 65-kilometer loop line of 16-inch pipe will be constructed on the İzmit-Karadeniz Ereğli Natural Gas Transmission Line.

To transport Turkmenistan and Azerbaijan natural gas within Turkish territories, an approximately 225-kilometer pipeline will be constructed from the Georgian border of Turkey to Erzurum (Horasan). This line will be connected to the Eastern Anatolia
Natural Gas Main Transmission Line at Horasan. The project includes a commercial metering station and a compressor station.

Ownership and Industry Structure

This section addresses questions related to the present ownership and industry structure of Turkey's natural gas sector, with the goal of comparing the Turkish case with that of some EU countries. In doing so, the section discusses similarities with other emerging gas markets as well as differences with more mature markets.

Turkey

Turkey's natural gas sector is dominated by BOTAS. BOTAS Petroleum Pipeline Corporation was established as an affiliated company of the Turkish Petroleum Corporation on August 15, 1974, to transport Iraqi crude oil to the Gulf of Iskenderun. In 1995 the company was restructured as a state economic enterprise (SEE) by Decree of the Council of Ministers No. 95/6526, thereby obtaining the status of an independent company. Since 1987, BOTAS has expanded its original mission of transporting crude oil through pipelines to cover the natural gas transportation and trading activities. In 1995 all kinds of petroleum-related activities such as exploration, drilling, production, transportation, storage, and refining for the purpose of providing crude oil and natural gas from sources abroad was added to BOTAS's activities.


By Decision of the High Planning Council No. 2002/T-15 of June 6, 2002, the Bursa and Eskişehir Operation Managements were restructured and transformed into affiliate companies of BOTAS that took the form of joint stock companies. The new companies were the Bursa City Natural Gas Distribution, Trade and Contracting Corporation (BURSAGAZ) and the Eskişehir City Natural Gas Distribution, Trade and Contracting Corporation (ESGAZ).

BOTAS's monopoly rights to natural gas import, distribution, sales, and pricing, granted by Decree No. 397 of February 9, 1990, were abolished by the natural gas market law (No. 4646) enacted on May 2, 2001, to establish a stable and transparent natural gas market based on competitive rules. The new law covers the import, transmission, distribution, storage, wholesale trading, and export of natural gas, and the transmission and distribution of compressed natural gas (CNG), as well as the rights and obligations of all real and legal persons related to these activities. Under the law, BOTAS will competitively tender and release the import contracts to new private entrants until its import share falls below 20 percent by the year 2009. The company must auction at least 10 percent of its gas purchase rights a year, starting from the enactment date of the law. BOTAS will also undergo further restructuring, and separate companies will be established for trade, transmission, and storage after the year 2009.

The 2001 natural gas market law also set the minimum annual consumption limit for qualification as an eligible consumer to 1 million cubic meters, which corresponds to a market opening of approximately 80 percent (European Commission 2003).

EU Emerging Gas Markets

Within the European Union, Greece and Portugal are considered to be emerging gas markets. As a result, both countries obtained derogation to the liberalization schedule foreseen in Directive 98/30/EC of the European Parliament and of the Council of June 22, 1998, on common rules for the internal market in natural gas.

Greece

Greece is not directly linked to the interconnected system of any other member state, and it has only one main external supplier of imported gas, Russia, which has a market share of more than 75 percent. So far, Greece has only a vertically integrated gas company, DEPA (Public Gas Corporation). Plans are under way to separate DEPA's activities into transmission and supply. At present, there is no unbundling of gas supply and high-pressure transmission.
Low-pressure gas distribution is performed (for individuals and small industrial consumers) by three independent private companies, each covering a specific geographic area. An energy regulatory authority was established by Law No. 2773/99. Greece has an LNG terminal, which may serve as storage. No underground gas storage is yet in operation. The opening of the Greek gas market is scheduled for 2006.

**Portugal** The Portuguese gas market is very small. Transgas, the main operator for the high-pressure network, was set up in 1993, and its major shareholder is Gas de Portugal, which previously was in charge of supply and transmission. Industrial and commercial consumers with a gas consumption profile of over 10,000 thousand cubic meters are served directly by Transgas, along with the four distribution companies in Portugal (Gas de Lisboa for the capital city, Portgas for the northern region, Lusitania Gas for the central region, and Set Gas for the southern region). These four companies sell, in turn, to smaller distribution companies (less than 2,000 cubic meters purchased annually). To promote investment in the enlargement of the three provincial distribution networks, the Portuguese government conducted in the 1990s an international tender to select strategic investors for each network. Italgas, a subsidiary of ENI, was selected as the strategic investor for two out of three (Lusitania Gas and Set Gas).

In 2000 the government merged the state-owned oil and gas operators with the intention of privatizing them. A holding was then set up (Galp-SGPS) in which Eletricidade de Portugal is the major shareholder. ENI took 33 percent of the capital. As an emerging market, Portugal has applied for derogation; therefore, the EU natural gas directive will not be implemented before 2007.

**EU Mature Gas Markets: The Italian Case**

Italy produces only about one-fifth of its internal gas consumption, and production is falling, in absolute and relative terms, in relation to needs. In the production sector, ENI is the dominant operator (in 2001 it accounted for 88 percent of total production), followed by Edison T&S SpA (12 percent of total production). Proven overall reserves amount to about 215 billion cubic meters, the equivalent of 13 years of production at current levels. Imports fulfill most of the country’s requirement (just under 80 percent), and their share is expected to cover 88 percent of the total requirement by 2005 and 90 percent by 2010. As for imports, the ENI Group is again the dominant operator, accounting for about 85 percent of the total in 2001. The second importer after ENI is Enel SpA (the former electricity monopoly), with about 11 percent of imports in 2001.

In 2004, Italy started importing gas from Libya, and in 2007 the operator Edison will begin importing liquefied natural gas from Qatar upon the construction of a regasification terminal in the upper Adriatic. The import contracts that are signed will satisfy expected requirements until 2010.

The contracts for the vast majority of imports are long term; in 2001 they accounted for about 98 percent of the imported volume. Nearly 93 percent of imported gas is transported by pipeline to entry points in Italy. The transportation rights paid by importers on foreign pipelines serving the national gas system go mainly to companies of the ENI Group, which was responsible for constructing and funding the infrastructure. Snam Rete Gas SpA owns 96 percent of the transportation capacity in Italy in terms of invested capital. The network of the second operator, Edison, is geographically complementary to that of Snam Rete Gas, especially in the central part of the country. The section of pipeline passing under the territorial waters of the Channel of Sicily is also part of the national system. It is owned by Transmediterranean Pipeline Company Limited (TMPC, an Italian-Algerian company in which SONATRACH and ENI hold equal stakes).

Access to Italy’s transportation networks is regulated in accordance with Legislative Decree 164/2000 implementing the EU directive on the internal market for natural gas. Tariffs, access criteria, and the obligations to be met by the transportation companies are set by the Electricity and Gas Regulatory Authority.

Legislative Decree 164/2000 also defined the national network of gas pipelines, which is made up of import pipelines, connections to storage facilities and the principal interregional pipelines. For this network, as defined and updated by ministerial decree, access has been regulated since October 2001 along entry-exit lines.
The Italian storage system consists of depleted fields. The storage sites currently in operation are managed by Stoccaggi Gas Italia SpA (Stogit), a company set up in 2001 by the ENI Group, after hiving off its storage branch, and Edison. Stogit manages eight storage facilities, and Edison has two storage facilities. The energy authority sets the tariffs, criteria, access priorities, and obligations that storage companies are required to respect. The only regasification terminal in Italy at present is the one at Panigaglia, which is run by Snam Rete Gas. Its capacity is presently entirely taken up. Six new terminals are planned.

The Italian market has been fully open since January 1, 2003. Article 1 of Legislative Decree 164/00 implementing European Commission Directive 98/30/EC on common rules for the internal natural gas market provides that the importation, exportation, transportation, dispatch, distribution, and sale of natural gas are free.

Imports from non-EU countries are subject to authorization by the Ministry of Industry on the basis of objective, nondiscriminatory published criteria on technical and financial capabilities; assurances about the origin of the gas; the availability of strategic storage capacity in Italy in proportion to the quantity of gas imported annually; and the ability to contribute to the development and safety of the system or to the diversification of supply. LNG imports are facilitated through the reduction of strategic storage obligations. Two transitional annual constraints have been introduced to facilitate the entry of new operators: a ceiling on the national consumption level that can be served by a single company from 2003 to 2010 (50 percent) and a ceiling on the deliveries to the national network by any single company from 2002 to 2010 (initially 75 percent of national consumption, with a reduction of 2 percentage points per year, to 61 percent).

Transportation and dispatch are public service activities, with connection and network access obligations according to the criteria and tariffs laid down by the energy authority. Storage is conducted on a licensing basis lasting no more than 20 years, and is subject to access obligations under the criteria, priorities, and tariffs laid down by the authority. Storage and exploitation activities must be separated.

Distribution is a public service activity. The service is entrusted to a concessionaire through an open tendering process for a period not exceeding 12 years. The local authorities that grant the concession are entrusted with the orientation, supervision, and control powers, and their relation with the distributors are regulated on the basis of a standard contract prepared by the regulatory authority and approved by the Ministry of Productive Activities.

The legislative decree implementing the EU directive completely transformed the structure of the gas sector in Italy and provided a new impetus to the reorganization of the sector. The major energy companies acquired many distribution companies so that they could increase their market share and create new consortia. Companies that use gas have also set up consortia with a similar goal of purchasing gas on competitive terms.

The Italian case represents a median case of liberalization in the EU context. The U.K. market is considerably more competitive than the Italian one, because the country has, until recently, been self-sufficient in natural gas. In almost all other EU countries, the market is less competitive: in Germany, a regulatory authority has not yet been introduced, although it was recently decided to introduce one; in France, the incumbent controls the market almost completely; in Spain, competition is facilitated by the presence of multiple regasification terminals, and a model gas release program was implemented to reduce the share of the incumbent, Gas Natural.

**Regulatory Reform in Turkey**

On May 15, 2001, the executive board of the International Monetary Fund (IMF) approved a new three-year standby arrangement for Turkey amounting to US$19 billion. As part of the package of economic measures, which were a condition of IMF support, Turkey passed new electricity and gas laws.

The new natural gas market law (Law No. 4646) was adopted on May 2, 2001. The law came into force immediately, but its implementation was subject to a 12-month transition period, extendable to a maximum of 18 months. The transitional period was in fact extended until November 2002.
legislation on gas market licensing was issued in September 2002.

The law is intended to establish a competitive gas market and to ensure independent regulation of the sector. The law also seeks to harmonize Turkish legislation with EU law in view of Turkey’s future accession. The main features of the law are the following:

- All legal entities can carry out import, export, wholesale trade, transportation, distribution, storage, and CNG transmission and distribution activities under license from the energy market regulator.
- The natural gas activities of BOTAŞ are to be unbundled. BOTAŞ is to be split into three state economic enterprises after the year 2009, responsible for trading, storage, and transmission, respectively. The two local distributors owned by BOTAŞ in Bursa and Eskişehir will later be corporatized and privatized.
- No importer will be allowed to import more than 20 percent of Turkey’s gas consumption during any one year. BOTAŞ will be required to sell part of its gas import contracts to comply with this provision. This sale will be accomplished through a series of annual competitive tenders to sell existing import contracts to new importers for no less than 10 percent of total imports each year. No new natural gas purchase agreement can be executed by any import company with countries that have existing contracts with BOTAŞ. This limitation shall apply for the entire duration of the agreement.
- No legal entity is allowed to sell more than 20 percent of annual gas consumption. Only national gas producers may sell more than 20 percent of annual gas consumption in the domestic market, provided that the amount sold directly to eligible consumers does not exceed 20 percent. The remaining gas could be sold through importers, distributors, or wholesalers.
- Gas companies will not be allowed to establish another company in the same field of activity, but will be allowed to own participations in a company operating in another field. They may not, however, directly or indirectly hold the majority of the capital or commercial assets of the company, nor do they have the right to use the majority of voting rights of the company.
- The rights of BOTAŞ on existing participations are preserved.
- To ensure security of supply, gas importers and wholesalers must inform the Energy Market Regulatory Authority (EMRA) about the source and security of their gas imports, and they must store 10 percent of the gas they import in five years. Importers also must prove that they can contribute to the improvement and security of the national transmission system.
- Transportation companies that own transportation networks and the owners and operators of LNG and storage facilities are to offer services at nondiscriminatory conditions.
- Third parties also will be allowed to build pipelines. BOTAŞ and other potential grid operators are to undertake investment, which is subject to EMRA’s approval. The regulatory agency is to control this investment, along with service quality. Existing and planned national transmission networks as well as transmission networks under construction remain under the ownership of BOTAŞ.
- Eligible consumers will be free to select the supplier of their choice. Eligibility will be determined by the regulator. Consumers purchasing more than 1 million cubic meters of natural gas a year and users unions (consortia), power generators, and cogenerators are considered eligible.
- Distribution rights for cities and municipalities must be awarded under a tender. Once a distributor has won a tender, it applies the unit service and the amortization price as specified in the tender announcement. After this period, its prices and conditions will be reviewed every year by the regulator. Distributors must construct, operate, and extend distribution equipment as specified in the license. Once the license for a distribution area has been awarded, the selected operator has to allow the local government to participate up to 20 percent in the company capital. The size of public participation, to be remunerated at the nominal share price, is to be determined by the regulator. Distribution companies may hold a license for no more than two cities within the country.
- EMRA has to develop five different categories of gas prices: for connection, transmission, storage, wholesale sales, and retail sales. Prices for
connection will be determined between the regulator and distribution companies. Network tariffs will be based mainly on distance and volume. Storage tariffs will be freely determined between storage companies and users. Transmission and storage companies will have an obligation to prove to the regulator that their services are economical and safe. Wholesale prices will be negotiated by the trading parties, but the regulator will maintain some oversight of wholesale prices. The distribution companies must prove that they provide gas from the cheapest source, and they must operate efficiently and safely during their license period. Distributors’ retail sales prices for captive consumers are subject to rate-of-return regulation.

The Energy Market Regulatory Authority, which opened its doors in November 2001, was established to meet a condition of the IMF’s support for Turkey. EMRA is an independent, administratively and financially autonomous public administration related to the Ministry of Energy and Natural Resources. According to Article 4, paragraph 3, of the electricity market law (No. 4628), “The headquarters of the Authority shall be located in Ankara and the ministry to which it is related shall be the Ministry of Energy and Natural Resources. The Authority may establish representative offices in distribution regions in order to carry out customer relations.” Most of the technical specialists have so far been recruited through temporary assignments from various public administrations, including the Ministry of Energy and Natural Resources, BOTAŞ, the former Turkish Electricity and Transmission Company (TEAŞ), the Treasury, and public banks. By March 2003, its overall personnel, including support staff, totaled 270. Its budget is €4.3 million.

EMRA has begun to develop some of the secondary regulation for the liberalization of the energy sector. In September 2002, EMRA issued a regulation on principles and procedures pertaining to connection, transmission and dispatch, storage, and wholesale and retail sale tariffs. In January 2003, the new transmission tariff was announced. The tariff—the maximum that system operator BOTAŞ can charge to shippers—is a flat rate postal tariff equivalent to $0.4 per million Btus. This tariff is lower than many expected, indicating that EMRA seriously intends to create a competitive market and that the prices for industrial consumers will probably go down as a result of liberalization. Secondary legislation on licensing procedures and on network operation rules to be determined by transmission companies was also adopted.

**Comparative Analysis of Turkey’s Gas Legislation**

Even though Turkey is an emerging market, its industry structure does not differ considerably from that of other countries of the EU, including more mature markets. Furthermore, its new legislation goes even further than the laws in force in many EU countries. Although liberalization was postponed in Greece and Portugal until 2006 and 2007, respectively, in Turkey the threshold of 1 million cubic meters per year for eligibility represents a market opening of approximately 80 percent. This figure may, however, be a result of the structure of the demand, mainly consisting of large consumers. The average market opening within the EU is about 78 percent.

As for unbundling, the obligation imposed on BOTAŞ to divest all distribution activities, in addition to separating trading and transmission activities, is more stringent that that found in other EU countries. In Italy, for example, ENI has substantial interest in distribution (100 percent of Italgas through Snam Rete Gas) and was not requested to divest its distribution arm, which owns 35 percent of the distributors. In Spain, Gas Natural is strongly linked to Enagas and Repsol. In Germany, Ruhrgas has a minority interest in regional companies and distributors at least sufficient to influence them. RWE Gas and E. ON cover the whole chain, including small production interests. In France, over 90 percent of distribution is undertaken by EdF-GdF. In Austria, the regional gas companies may be connected with their distributors.

The limit on BOTAŞ’s share of imports is much more stringent than what is imposed in Italy and in Spain. No limit was imposed in France or Germany. Likewise, the limit on BOTAŞ’s domestic market share is more stringent than what was imposed on Snam Rete Gas in Italy. The 10 percent storage obligation is similar to that existing in Italy. However, Turkey’s situation is different because it is a transit country that eventually will have access to much more gas than it consumes domestically, but it has little opportunity to create underground storage sites (which instead are available “downstream,” in the Balkans).
The most interesting feature of the new gas law, however, is the gas release program. If managed wisely, the program has the potential to create real competition within the country. The natural gas law states (temporary article 2) that every year until the aggregate of the annual import amount falls to 20 percent of the annual consumption amount, BOTAŞ shall release part of its contracts to competitors by means of a tender. However, it is not yet clear how such a system will work in practice. BOTAŞ has a final say on the winner of the tender procedure. If BOTAŞ is left free to choose the operator to whom it will cede its purchase agreements, the program may turn out to be not too effective. Also, in view of the Italian experience, it would be preferable that the gas be released by means of a tendering procedure based on objective criteria.

Italian legislation implementing the EU directive introduced two constraints on the incumbent, ENI, to facilitate the entry of new operators. The first is a ceiling on the national consumption level that can be served by a single company from 2003 to 2010 (50 percent). This measure, however, excludes gas for self-consumption. The second is a ceiling on the deliveries to the national network by any single company from 2002 to 2010 (initially 75 percent of national consumption, with a reduction of 2 percentage points a year, to 61 percent).

ENI was left free to decide how to resell part of the gas for which it had already contracted through long-term take-or-pay contracts. The result was that only Italian companies (Plurigas SpA, Dalmine Energia, and Energia SpA) benefited from the measure; major international gas companies, especially producers, were not offered an opportunity to enter the market.

The solution adopted in Italy thus, in the end, reinforces the position of some weak competitors that represent no real threat to the incumbent, but it does not seem very effective as a means of reducing prices and building competition. The three companies that benefited from the measure are too small to effectively compete with ENI. On the contrary, it is more likely in practice that smaller firms will adjust their prices to be in line with that of the incumbent.

In the United Kingdom, competition effectively started only in the early 1990s, when a gas release program was introduced. Each year, the release gas was allocated on a pro rata basis to successful applicants (32 in the first year and an additional 70 in the second year—albeit including some multiple bids), who paid BG (British Gas) a price equal to BG’s weighted average cost of gas. Previous attempts by the British government to introduce supply side competition through voluntary commitments by BG (including the 90/10 rule under which BG would contract no more than 90 percent from new fields, leaving 10 percent to other companies) were less effective than hoped, because most of the 10 percent gas contracts were bought for new power generation rather than competing in the industrial market.

One example of a competition-enhancing release program was undertaken in Spain. By Royal Decree Law 6/2000 of June 23, 2000, and by an order of June 29, 2001, the Spanish government conducted a gas release program for 25 percent of the gas supplies that Spain received from Algeria through the Maghreb pipeline from October 2001 to January 1, 2004—that is, for about 26 months. This program, like the gas release program in the United Kingdom, was based on the principle of keeping the incumbent neutral.

The release was designed to give competitors to Gas Natural access to gas, so that customers in the large industrial market would receive offers from alternative suppliers. Trading companies with a market share of more than 50 percent of the market were excluded from the bidding. Fourteen bids were made by different company groups (the total bid was for two and a half times the amount of gas being offered). Bids could be made for only up to 25 percent of the total volume offered. The average price paid by bidders was equivalent to Gas Natural’s purchasing cost (oil-related gas price) plus a fixed management fee.

The final awards were made on October 22, 2001. Among the winning applicants were three Spanish companies—Iberdrola Gas (25 percent), Unión Fenosa Gas Comercializadora (20 percent), and Endesa Energía (18 percent)—and two international companies—BP Gas (25 percent) and Shell (2 percent)—through their Spanish subsidiaries.

Spanish imports from Algeria by pipeline totaled 6.54 billion cubic meters in 2001; total imports were almost 17.5 billion cubic meters. Spain’s gas release program was therefore equal to about 16 percent of Spanish consumption, whereas the planned gas release for Turkey will be for 80 percent of total imports.
Conclusion

Turkey plays a central role as a transit country for oil and gas from the Caspian Sea, Black Sea, and Central Asia regions to the EU. Because of its strategic position, Turkey can help to improve natural gas supply diversification and security in Europe as well as to enhance competition. It is expected that the EU will have a gas supply deficit of about 13 percent in 2010 and about 28 percent in 2020 (European Commission 2002).

To perform this role effectively, Turkey will have to develop its national infrastructure and stimulate internal gas demand. The development of distribution networks is important to maintain market growth, which itself will be vital if the gas that BOTAS has contracted is to be absorbed and if the country is to attract international investors. In that respect, clear regulations on access rules, tariffs, and new investments are vital. Experience in other countries reveals that uncertainty over the applicable regime may seriously prevent investments.

To develop the internal market, regulators should also enact the appropriate secondary legislation that will allow prices to domestic consumers to go down while maintaining good quality standards. Time limits must be imposed on the licensing system for distribution.

Finally, the release program must be implemented soon to increase the number of market participants.

Notes

1. The authors wish to thank the participants in the conference “Turkey: Towards EU Accession” for their comments, and especially Ahmet Aydin, who sent them detailed comments and additional information that allowed them to substantially improve the first draft of this chapter.
2. These numbers were provided by the state-owned gas company, BOTAS.
3. In 2001 both Snam Rete Gas and Edison were separated from their respective vertically integrated groups (ENI and Edison) in compliance with the provisions of Legislative Decree 164/2000 on the unbundling of activities in the gas sector. At the end of 2001, 40.24 percent of the shares of Snam Rete Gas were floated, with ENI continuing to own the remaining stake.
4. The fact that gas for self-consumption has been excluded from the ceiling means that Snam can minimize the amount of gas it releases by entering the electricity market through the construction of gas-fired power generators, thus reducing the effect of the program.

References

What requirements must Turkey—the largest country among the candidate and accession countries—meet to join the European Union? What progress has been made toward meeting them?

This timely volume analyzes the economic challenges confronting Turkey in its quest to accede to the European Union (EU). It focuses on the extent to which Turkey is ready to join the Single Market; comply with the EU’s body of economic regulations and directives, the *Acquis Communautaire*; and meet the Maastricht criteria for fiscal, monetary, and exchange rate policies.

This book also provides an assessment of Turkey’s national program to meet the accession requirements. It describes briefly what Turkey needs to achieve on the economic policy front to satisfy the conditions for accession, the progress to date, and the likely consequences of implementing the full body of EU requirements.

The book is divided into four parts:

- An analysis of the macroeconomic policies for EU accession
- An analysis of the effects of integration on key sectors: agriculture; manufacturing; services industries, including banking, telecommunications, transportation, and natural gas; and network industries
- An exploration of key economic policy challenges, including labor market regulation, foreign direct investment challenges, and the costs and benefits of meeting the EU environmental *Acquis*
- The quantification of the impact of EU accession and consideration of the welfare effects of integration

Although the focus is on the specific situation of Turkey, the subject will be of value to all researchers with an interest in the challenges of deeper integration through regional agreements.

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