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PETROLEUM GASES MARKET IN TURKEY

Abstract

We are at the beginning of a new millennium. At this stage, we are observing economic and social liberalization efforts and regional alliance projects throughout the world. In this very same process, we are also experiencing a more holistic concept called globalization, which covers rapid and simultaneous dissemination and integration of capital, labor, information and technology, world-wide. This globalization opened a new era where national market economies and local companies went into competition in the international arena. In this era, it became a necessity for the non-liberal economies to catch up with the developments in the international markets and be open to economic and political changes. These developments have brought along many radical economic and social changes throughout the world.

Policies adopted in Turkey, with respect to the energy reform process, display a general tendency towards putting in place a legal framework that will support the implementation of good governance principles, and providing conformity with the relevant legislative infrastructure of both OECD and EU countries.

Turkey has only limited reserves of oil and natural gas, but substantial reserves of coal, particularly lignite. Energy demand has grown at 4-5 % per annum over the past three decades and will continue to grow rapidly, which will require enormous investments in 2000 and 2020, with the most significant increase being that of natural gas. (2)

Because of its limited energy resources, Turkey is heavily dependent on imported oil and gas. There are major oil and gas pipelines going through Turkey and additional pipelines are being constructed or are being planned. There is some production of lignite which is used in power plants and industry.

73 % of the world's proven oil reserves and 72 % of the world's proven gas reserves are located in the surrounding regions of Turkey: Middle East, Caspian Region and Russia. This makes Turkey a crucial bridge between energy rich regions and Europe.

Therefore, Turkey is widely called as "The Energy Bridge between the East and the West".

Turkey's natural energy resources are quite diversified; hard coal, lignite, asphaltite, oil, natural gas, hydro, geothermal, wood, animal and plant wastes, solar and secondary energy resources such as coke and briquettes are produced and consumed. Although

Turkey's oil and natural gas reserves are limited, coal reserves are quite abundant.

Energy forecasts show that primary energy demand would be 117 million TOE in 2005 and 156 million TOE in 2010.

Turkey has a large LPG (Liquefied Petroleum Gas) consumption, which ranks third in Europe and within the top ten in the world. Turkey's LPG market structure depends largely on imports. At the end of 2005, the LPG consumption was around 3.7 billion tonnes and about 80 % of this, which amounts to 2.8 billion tonnes, has been provided through imports. (2)

PREGLED TRŽIŠTA UKAPLJENOG NAFTNOG PLINA U TURSKOJ

Sažetak

Na pragu smo novog milenija. U ovom trenutku prisustvujemo pokušajima ekonomske i društvene liberalizacije i stvaranja regionalnih saveza širom svijeta. Istovremeno, vidimo i ostvarenje jednog više holističkog koncepta pod nazivom globalizacije, koji donosi brzo i paralelno širenje i integriranje kapitala, rada, informacija i tehnologija širom svijeta. Globalizacija je otvorila novo doba u kojoj nacionalne tržišne ekonomije i lokalne kompanije ulaze u konkurenciju na međunarodnom tržištu. Stoga je za neliberalne ekonomije postalo nužno uhvatiti korak s onim što se događa na međunarodnim tržištima i otvoriti se ekonomskim i političkim promjenama, što je rezultiralo mnogim ekonomskim i društvenim promjenama u cijelom svijetu.

Politike koje su prihvaćene u Turskoj u pogledu procesa energetske reforme ukazuju na opću tendenciju ka postavljanju zakonodavnog okvira za provedbu načela dobrog upravljanja i postizanju usklađenosti s odgovarajućom zakonodavnom infrastrukturom u zemljama OECD-a i Europske unije.

Turska ima ograničene resurse nafte i prirodnog plina, ali raspolaže značajnim rezervama ugljena, osobito lignita. Potrošnja energije u protekla tri desetljeća raste po godišnjoj stopi od 4-5 posto, a nastavlja i dalje ubrzano rasti što će zahtijevati ogromna ulaganja u periodu od 2000. do 2020. godine, s najvećim rastom u području prirodnog plina. (2)

Zbog ograničenih energetske resursa, Turska je veoma ovisna o uvozu nafte i plina. Kroz Tursku prolaze važni naftovodni i plinovodni pravci a novi se pravci planiraju ili grade. Postoji i određena proizvodnja lignita za proizvodnju električne energije i industrijsku potrošnju.

U turskom regionalnom okruženju nalazi se 73 posto dokazanih svjetskih rezervi nafte i 72 posto rezervi plina, na Srednjem Istoku, u Kaspijskoj regiji i Rusiji. To Tursku čini ključnom vezom između energijom bogatih regija i Europe.

Stoga je Turska nazvana "Energetskim mostom između Istoka i Zapada".

Turski prirodni energetske resursi su prilično diversificirani: kameni ugljen, lignit, asfaltit, nafta, prirodni plin, hidroenergija, geotermalna energija, drvo, životinjski i biljni otpad,

solarni sekundarni energetske izvori kao što su koks i briketi. Iako su turski izvori nafte i prirodnog plina ograničeni, rezerve ugljena su značajne.

Energetske prognoze pokazuju da će potrošnja primarne energije u 2005. godini od 117 milijuna tona ekvivalentne nafte biti 156 milijuna tona u 2010. godini

Turska ima veliku potrošnju ukapljenog naftnog plina, po kojoj zauzima treće mjesto u Europi i među prvih je deset potrošača u svijetu. Tržište UNP-a u Turskoj uvelike ovisi o uvozu. Krajem 2005. godine potrošnja UNP-a je iznosila 3,7 milijarde tona od čega je oko 80 posto, ili 2,8 milijarde tona bilo je pokriveno uvozom. (2)

1. IN TURKEY - GENERAL INFORMATION

The Republic of Turkey has population of 72 million. All of Turkey's area in Asia except for about 5% in the far northwest that is separated from the rest of the country by the Dardanelles and Bosphorus straits, and the Sea of Marmara. Turkey is bordered by Bulgaria, the Black Sea, and Georgia to the north, Armenia and Iran to the east, Iraq, Syria, and the Mediterranean Sea to the south, and Greece and the Aegean Sea to the west. (1)



Figure 1.

Source: State Institute of Statistics of Turkey (1)

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As pointed out in the geopolitical part, Turkey will have a major role to play in the security of energy supply of the enlarged EU and is expected to develop further as a major oil and gas transit country. Accession of Turkey would extend the EU to the borders of the world's most energy -rich regions in the Middle East and the Caspian Basin. In particular, a gas interconnector has been constructed in 2005 and Turkey is supporting the planned "Nabucco" gas pipeline project (Turkey-Bulgaria- Romania- Hungary- Austria) for which the Caspian Basin, including Iran, could also be a supplier. It is also collaborating with the Mashreq countries in the project to bring natural gas from Egypt and eventually Iraq and Iran to the EU. This should help to secure access to these resources and their safe transportation into the EU single market. Implementing investments on gas infrastructures identified in the trans-European Energy Networks Guidelines is of paramount importance for the diversification of gas routes to the European Union. Oil pipelines crossing Turkey will contribute to reduce environmental risks of shipping on the Mediterranean Sea and in the Strait of Bosphorus.

Turkey's strategic position and its role as key country for energy transit would necessitate a correct implementation of internal market acquis on gas and electricity. Turkey's participation in the Regional Energy Market for South-East Europe (REMSEE), covering also Western Balkans, Romania and Bulgaria, should ensure that its legislation will be in line with the relevant acquis well in advance of its accession. The aim is to achieve an operational regional wholesale market by the end 2007. This should bring Turkey very close to EU standards for gas and electricity. (4)

Turkey's natural energy resources are quite diversified; hard coal, lignite, asphaltite, oil, natural gas, hydro, geothermal, wood, animal and plant wastes, solar and secondary energy resources such as coke and briquettes are produced and consumed. Although Turkey's oil and natural gas reserves are limited, coal reserves are quite abundant. (2)

Energy forecasts show that primary energy demand would be 117 million TOE in 2005 and 156 million TOE in 2010.

Oil has the biggest share (39%) in total primary energy consumption, while natural gas has a share of 21%. Due to the diversification efforts of energy resources, use of natural gas that has been introduced into Turkish economy recently, has been growing rapidly.

Turkey's natural gas consumption is expected to grow rapidly, quadrupling within the next 20 years, with 1,400 bcf consumption projected for the year 2020.

The largest share of Turkey's imported natural gas comes from Russia, much of it via the newly-completed Blue Stream Pipeline, which provides Turkey with 14.1 trillion cubic feet (Tcf) of gas over the life of a 25-year agreement that began in 2002.

Turkey has about 1% of the total world hydroelectric potential. There are many rivers in Turkey and five separate watersheds.

Turkey has a considerable potential for electricity generation from wind. A study carried out in 2002 concluded that Turkey has a theoretical wind energy potential of nearly 90,000 MWe and an economical wind energy potential of about 10,000 MWe. The most promising region is in northwest Turkey, including the area around the Sea of Marmara. (3)

As of early 2004, Turkey had electric power generating capacity of around 32,000 megawatts (MW), and was building 13,000 MW more. With a young and growing population, low per capita electricity consumption, rapid urbanization and generally strong economic growth.

In February 2001, Turkey passed the long-anticipated Electricity Market Law, which paves the way for a free market in power generation and distribution in the country. Turkish power market, set tariffs, issue licenses, and prevents uncompetitive practices. (3)

Privatization of generation assets is envisaged to start in 2007. The goal entails a further market – opening plan as follows; current market opening of 29 % (eligible customers being those consuming more than 7.7 GWh per annum) will gradually be increased until the end of 2011.

The new laws about energy, set the stage for a new organization, the Energy Market Regulation Agency (EMRA), that oversees the power, natural gas markets, oil markets and liquified petroleum gases market, including setting tariffs, issuing licenses, and assuring competition.

Turkey, as a member of the International Energy Agency (IEA), regularly notifies the IEA Secretariat about its petroleum stocks, and complies with the requirement of maintaining 90 days of petroleum stocks in accordance with IEA commitments and the relevant EU legislation.

Turkey has a large LPG (Liquefied Petroleum Gas) consumption, which ranks third in Europe and within the top ten in the world. Turkey's LPG market structure depends largely on imports. At the end of 2005, the LPG consumption was around 3.7 million tonnes and about 80 % of this, which amounts to 2.8 billion tonnes, has been provided through imports.

Therefore, regulation in the sector is inevitable.

With the enactment of LPG Law No. 5307 in 2005 (published in the Official Gazette No.25754, dated 13.3.2005), LPG market activities have been put under the regulation of EMRA. According to the requirements of the law, the infrastructure of the five specialized customs have been completed, where the employees of the Under Secretariat of Customs who are trained by EMRA, are in charge of inspecting and analysing the suitability of the LPG imported at these customs, for ensuring that the requirements of LPG standards and technical regulations are met. These specialized customs have started to work as of 1.7. 2005. Technical standards related with imported LPG had been already determined by EMRA. Implementing Regulations regarding LPG Market are as follows: LPG Market Licence Regulation (Official Gazette dated 16.09.2005 no. 25938), LPG Market Authorized Manager Regulation (Official Gazette dated 07.01.2006 no. 26046), LPG Market Training Regulation (Official Gazette dated 25.03.2006 no. 26119), LPG Market Audit and Surveillance Regulation (Official Gazette dated 10.05.2006 no. 26164).

Regarding oil, the construction of the Baku-Tbilisi-Ceyhan Pipeline has already been completed. As a result of tremendous efforts exerted to complete the pipeline, first oil reached to Ceyhan Marine Terminal (CMT) as of 28 May 2006 and the line was commercially commissioned by realizing the first tanker lifting on 4 June 2006. Moreover, BTC is ready to provide its transport infrastructure for the delivery of the Kazakh oil to world markets. The negotiations between Azerbaijan and Kazakhstan are concluded with an agreement signed by the parties on 17 June 2006.

BTC Line will be one of the strongest strategic lines between east and west so as to increase security of supply as well as reduce the burden of hazardous materials carried through the Turkish Straits.

Due regard is assigned to the protection of infrastructures of such an important project for ensuring the security of supply. In this context, Turkey, Azerbaijan and Georgia together with the pipeline company shareholders have been cooperating for security of the pipeline.

Furthermore, Turkish Government issued a Decision on 18 May 2006 authorizing a private sector company for 6 months period to study on a pipeline project, which is planned to be constructed on the North South axis of Turkey, between Samsun to Ceyhan via Kırıkkale, in order to provide easier and less risky traffic in the Turkish Straits and the Aegean Sea.

The construction of a Turkey-Greece gas interconnector which is envisaged to be extended to Italy has started in July 2005 and initial delivery is due to be provided in late 2006. In addition, Turkey is among the initiators and a partner of the "Nabucco" Gas Pipeline Project (Turkey-Bulgaria-Romania-Hungary-Austria) and currently the partners are studying to start the Basic and Detailed Engineering Phases. Moreover, Turkey is collaborating with the Mashreq countries in the Arab Gas Pipeline Project to bring natural gas from Egypt, Syria and eventually, when conditions permit, from Iraq to the EU region. A memorandum of understanding is signed between Egypt and Turkey on 15 February 2006.

The South Caucasus Natural Gas Pipeline (SCP) in parallel with BTC will carry the first non-Russian gas from the region to Europe. SCP represents the opening of the fourth natural gas artery for continental Europe and beyond. Studies on the Baku-Tbilisi-Erzurum

BTE (South Caucasus Pipeline) Natural Gas Pipeline Project have been continued in pursuance with its schedule and the line is due to be completed at the end of 2006.

In this respect, 6,6 bcm of natural gas will be transported to Turkey over 15 years.

On the other hand, further efforts are considered for strengthening security of supply. Oil and natural gas exploration studies in the East and West Black Sea have been intensified in order to stimulate production. In addition, Turkey has finalized the first underground natural gas storage project with a storage capacity of 1.6 bcm.

2. THE LIQUIFIED PETROLEUM GAS IN TURKEY

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a. Legal Framework (Law No: 5307 on Liquefied Petroleum Gas (LPG) Market) (6)

Law No: 5307 on Liquefied Petroleum Gas (LPG) Market (Official Gazette :13 March 2005, No: 25754)

- By Law on Liquefied Petroleum Gas Market Licenses.
- By Law on Liquefied Petroleum Gas Market Audit and Surveillance.
- By Law on Liquefied Petroleum Gas Market Training.
- By Law on Liquefied Petroleum Gas Market Authorized Manager.

b. The Objective of Law No: 5307 on Liquefied Petroleum Gas (LPG) Market

- Regulate the guidance,
- Surveillance and supervision activities in order to ensure the transparent, non –discriminatory and stable performance of market activities pertaining to delivery of petroleum supplied from domestic and foreign resources to consumers in a reliable, cost – effective manner within a competitive environment.

c. The Scope of Law No: 5307 on Liquefied Petroleum Gas (LPG) Market

- Distribution, transportation, storage, trade of LPG.
- Right and obligations of all real and legal persons relating to these activities.

d. The Definitions in Law No: 5307 on Liquefied Petroleum Gas (LPG) Market

- License Holders: Real and legal persons (except for LPG in cylinders).
- Distribution undertaken:
 - distribute LPG
 - may perform storage, filling and transportation activities
- Distribution:
 - supply activities of LPG
 - all the sales to cylinder users, autogas users, bulk LPG users and vendors.
 - Market activities : import, export, storage, transportation, distribution vendor activity of liquefied petroleum gas.

e. The Principles of Licenses

- It is obligatory to obtain a license in order to perform,
 - distribution,
 - transportation,
 - autogas vending activities (except bottled LPG vendors),
 - Storage,
 - manufacturing of LPG cylinders, filling, examining, repairing,
 - establishing and operating facilities for aforesaid activities.
- In granting licenses,
 - the technology,
 - quality,
 - safety,
 - sustainability of the enterprise and service shall be taken into account with respect to market entry.
- The Authority shall be authorized to enact regulations,
 - the scope of the activities and – or operations requiring licenses,
 - the right and liabilities as per the license,
 - limitations on activities within the scope of the license,
 - determinations of special terms and conditions regarding the performance of the activity.
- Procedures and principles pertaining to licenses shall be regulated by the regulations to be issued by the Authority.
 - Procedures for application, evaluation and granting of licenses,
 - Classification terms for licenses,

- Processes for class changes in licenses,
- Minimum qualifications,
- Necessary records and notification liabilities,
- Sub-titles of activities and their definitions,
- Consumer's rights,
- Subjects to be included in the license,
- Guidance, surveillance, audit and related issues of the market activities.

f. Basic rights and Liabilities of Licensees

- Rights,
 - The license shall convey the rights to the holder to perform activities included in the license and enter into commitments.
- Import in specialized customs,
 - Refinery holders,
 - Distributor license holders,
- Liabilities,
 - Act in accordance with the commercial and technical legislation,
 - Take necessary measures to prevent environmental risks,
 - Notify all related condition to public authorities,
 - Compensate any loss or damage,
 - Notify information,
 - Employ a responsible manager at filling stations and autogas stations,
 - Supply LPG in accordance with the technical standards,
 - Employ certificated personnel,
 - Non discrimination.

g. Production and Distribution of LPG

- Production: Refinery License Holders (According to Petroleum Market Law)
- Distribution:
 - Distribution License Holders may sell
 - bulk LPG to end-user,
 - bottled LPG to end-users,
 - autogas LPG to vehicle,
 - bulk LPG to other distributor license holders
 - Distributor License Holders
 - transport LPG,
 - fill LPG,
 - storage LPG,
 - Distribution License Holders shall have
 - storage facilities,
 - filling stations,
 - LPG bottled,
 - At least 20 times more amount of LPG in their storage than their average daily supply
 - Restriction of 45 % market share for "Distributor License Holders"
 - If the distributor license owner has only one filling and storage facility, it shall distribute LPG autogas within its own and neighbour provinces where the facility exists.

h. Transportation, Storage, Filling, Bottle Manufacturing, Bottle Inspection, Repair and Maintenance of LPG.

- The Authority determines the assessment criteria for the licenses, which will be granted for the performance of transportation, storage and filling activities of bulk LPG, autogas LPG, and also determines the technical and financial provisions that necessitate the grant of the license.

i. Autogas LPG Vendors

- Autogas LPG Vendors are liable;
 - to sign contract with only one distributor,
 - to obtain the others necessary licenses,
 - to supply LPG to the vehicle,
 - not to fill or sell LPG cylinders at autogas stations,
 - to place the trademark and logo of the distributor,
 - to employ an “Authorized Manager” at the station.

j. Bottled LPG Vendors

- Bottled LPG vendors are not subject to a license but they are liable,
 - to act in accordance with the standards.
 - to obtain a permit, authorization and documents from the relevant public organizations and institutions.
 - to keep the LPG cylinders with trademark or logo of their distributor.

k. Bulk LPG Users

- Bulk LPG users shall supply LPG only from the distributor license holders.
- Consumers shall not use LPG that they have bought for their facilities or residential units other than its intended purposes.

l. Pricing of LPG

- shall be constituted in free market conditions.
- shall be notified to the Authority as ceiling prices.

EMRA is authorized to determine base and/or ceiling price in emergency situation.

m. Coordination with Other Institutions

- The representative of the Authority shall take part in standard preparatory studies to be carried out by the Turkish Standards Institution regarding LPG market activities. The Turkish standards regarding LPG market activities can be enforced as compulsory by EMRA' s approval.

n. Information Gathering, Records, Audit and Notification

- notification liabilities.

- specific procedures and principles regarding the preparation of documents and the record keeping system of the licensees.
- The Authority can request any information it deems necessary during the performance of its duties from public institutions real and legal persons.
- Market activities shall be audited by,
 - Authority's personnel,
 - way of service procurement from public institutions and organizations and private auditing organizations.

o. Insurance

- It is compulsory to get insurance for the activities carried out within the scope of a license.

p. Authorized Manager

- Employment of an authorized manager at filling stations and autogas stations.

r. Training

- Trained personnel shall be employed in sector.

s. Administrative Fines

- EMRA to impose the sanctions/penalties in cases of breach of legislation.

t. Sanctions

- Market activities shall be temporarily suspended for not less than 30 and not more than 180 days.
- Annulment of licenses.

u. Preliminary Inquiry, Investigation and Right to Legal Action

- Board shall decide directly to carry out an investigation,
- on its own initiative.
- upon a notification or complaint.

v. The LPG Sector In Turkey

Despite significant improvement in the economy during 2005, the LPG market continued to contract in Turkey. The reasons for this situation were; the economic crises experienced in 2001-2002, illegal usage of electricity, the widespread use of natural gas and the increase in LPG prices which came about as a result of high tax rates. While total LPG consumption in Turkey was 3.6 million tons in 2003, this figure rose 4.6% in 2004, to 3.8 million tons.

Table 1. Turkish LPG supply (%)

	2000	2001	2002	2003	2004
Production	15	18	21	20	18
Imports	85	82	79	80	82
Total	100	100	100	100	100

y. LPG Supply and Demand in Turkey (5)

LPG production in Turkey during 2004 remained the same level as 2003. 95% (720,000 tons) of 2004 production was carried out at TÜPRAS and the remaining 5% (35,000 tons) was processed at ATAŞ. Imports of LPG, which rose by 13.7% to 3.5 million tons, met 82% of LPG demand of sector companies, whereas 26% of the imports was carried out by TÜPRAŞ while 74% was conducted by private companies. Aygaz had a 41% share among the private company imports.

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