

PIPELINES IN TURKEY AND SECURITY OF ENERGY SUPPLY

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SECURITY OF ENERGY SUPPLY IN TURKEY

- Geographical position of Turkey features security of KEAU within the framework of ensuring the diversity of resources in energy supply and of routes in transportation.
- Within the context of “**the Energy Strategy Paper**”, Turkey is defined as a significant country in ensuring energy supply by the virtue of its function of a “**natural bridge**” between energy-exporting countries and energy-importing countries and through its potential in diversifying resources and energy transportation.

DIRECTORATE GENERAL OF PETROLEUM PIPELINE CORPORATION (BOTAŞ) NATURAL GAS AND OIL PIPELINES



ARAZİ İNŞAAT VE KAMULAŞTIRMA D. BŞK. LİĞİ
ŞUBAT 2014

MEVCUT DOĞAL GAZ BORU HATLARI

İNŞAAT AŞAMASINDAKİ DOĞAL GAZ BORU HATTI

MEVCUT PETROL BORU HATLARI

PROJE, MÜHENDİSLİK VEYA YAPIM İHALESİ AŞAMASINDAKİ BORU HATLARI

CS (KOMPRESÖR İSTASYONLARI)

İNŞAAT AŞAMASINDAKİ KOMPRESÖR İST.

LNG

PETROL BORU HATTI POMPA İSTASYONU

BORU ÇAPI



MEVCUT GAZ İTHALI
KONTRATA BAĞLANMIŞ GAZ MİKTARI
PLANLANAN GAZ MİKTARI

NATURAL GAS AND OIL PIPELINES

- **12.300 km-long natural gas pipelines and 3.332 km-long oil pipelines** lie within Turkish national boundaries.
- There are **7 (seven) international/trans-boundary pipelines** in Turkey.
- In Turkey, NATO also has an oil pipeline system, which is in total **11.500 km-long. 3.200 km** of it lies in Turkey.

INTERNATIONAL PIPELINES IN TURKEY- 1

- **Baku-Tbilisi-Ceyhan (BTC) Crude Oil Pipeline:** 1076 km of total 1760 km long BTC Pipeline lies in Turkey.
- **Kirkuk-Yumurtalık Crude Oil Pipeline:** It is a total 901 km long Pipeline; 641 km of which lies in Turkey.
- **Iran Natural Gas Pipeline:** 1170 km of the total 1456 km-long Pipeline lies within the boundaries of Turkey.

INTERNATIONAL PIPELINES IN TURKEY- 2

- **Blue Stream Natural Gas Pipeline:** The total length of the pipeline is 1236 km, 501 km of which lies in Turkey.
- **Baku-Tbilisi-Erzurum Natural Gas Pipeline:** transmits the natural gas extracted from the «Shah-Deniz» gas field of the Caspian Sea (Phase I).



INTERNATIONAL PIPELINES IN TURKEY- 3

- **Interconnector Turkey-Greece-Italy (TYIE):** The interconnection line between Turkey and Greece is currently functioning; the phase between Greece and Italy is envisaged to be completed in 2015.
- **Russian Federation-Turkey Natural Gas Main Transmission Line:** the length of the line is 842 km.





INTERNATIONAL PLANNED PIPELINE PROJECTS

- Nabucco West Pipeline Project,
- Trans Anatolia Gas Pipeline Project and
- Samsun-Ceyhan Crude Oil Pipeline Project that will enable transmission of crude oil from Russia to Ceyhan Port



DOMESTIC PIPELINES

- **Batman – Dörtyol Crude Oil Pipeline:** It's length is 511 km.
- **Ceyhan - Kırıkkale Crude Oil Pipeline:** It is a 442 km-long pipeline.
- **Şelmo – Batman Crude Oil Pipeline:** The length of the pipeline is 42 km.

STATISTICS OF CROSSINGS AT BOSPHORUS



THE BOSPHORUS

- The Bosphorus or «Istanbul Strait» is one of the narrowest water-courses in the world:
 - **The length at the European side** : 19 miles;
 - **The length at the Anatolian side** : 30 miles
 - **Its coastal length** : 90 km
 - **The length of the midline course** : 17 miles (31 km)
 - **Its maximum width** : 3600 meters
 - **Its minimum width** : 698 meters
 - **The average width** : 1500 meters
 - **The average depths** : 30-60 meters
 - **The course alteration** : 12 times
 - **The widest alteration** : 80 degrees
 - **Type of streams** : 4 types
- The Population of Istanbul is over 15 million people.
- In Istanbul, the average of maritime traffic resulting from the transiting ships is **2000**.

	THE AMOUNT OF LOAD (MT)		
YEARS	DANGEROUS LOAD (CARRIED BY TANKERS)	DANGEROUS LOAD (IN TOTAL)	TOTAL AMOUNT OF LOAD
2012	131.122.919	140.411.265	377.072.202
2013	134.443.952	141.411.390	380.889.393

YEARS	AVERAGE WAITING TIME (hours)	ACCIDENTS	BREAKDOWNS	LEGISLATION VIOLATION
2012	12.2	12	132	67
2013	11.1	14	82	65

ACCIDENTS BETWEEN 2004-2013 AT IGT HM (ISTANBUL SHIPPING TRAFFIC SECURITY SERVICES DIRECTORATE) ZONE										
TYPE OF ACCIDENT	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
COLLISION	10	12	17	20	23	20	23	12	6	6
CLASH	1	5	1	4	3	3	5	4	3	7
FIRE	1	2	2	0	0	2	1	0	1	1
SINKING	1	1	0	0	0	1	1	0	0	1
GROUNDING	10	8	7	7	6	6	6	3	2	3
TOTAL	23	28	27	31	32	32	36	19	12	18

REDUCTION OF RISKS

FOR CROSSINGS AT THE BOSPHORUS

- Taking the number of ships crossing the Bosphorus and accidents involving the amount of dangerous substances into consideration together, it is important for our country to prioritize oil and natural gas pipelines for international energy supply.
- Therefore, it is strongly considered that the risks at the crossings at the Bosphorus will be reduced via pipelines.

RISKS

- Major risks on 12.300 km-long natural gas pipelines and 3.332 km-long oil pipelines are:

1- Terrorism

2- Robbery

3- Violations and Accidents



STRs FOR SECURITY OF ENERGY SUPPLY-1

- Combating the risks for the security of energy supply requires the planning and coordination of Governors and District Governors in Turkey.
- In Turkey, ensuring security, safety and public order, emergency planning and coordination fall within the remit of Governors who represent the State at local level.
- Disaster–Emergency-Crisis Management and Emergency Call Services are also under the responsibility of Governors in Turkish provinces.

STRs FOR SECURITY OF ENERGY SUPPLY-2

- Within the framework of the Protocol signed between Gendarmerie General Command of Turkey (JGK) and BOTAŞ, protection of stationary facilities, such as pumps, block valves, decompression stations, is being ensured, coordinated with the JGK units.
- In Turkey, the JGK Units are affiliated to State Territorial Representatives in terms of ensuring safety and security.



STRs FOR SECURITY OF ENERGY SUPPLY-3

- STRs in Turkey have to combat terrorist attacks, violations, accidents and robbery at oil and natural gas pipelines at their incumbent region.
- This entails an efficient and swift coordination among Natural Gas and Oil Companies, Security Units (TNP and JGK), Emergency Centers and Central Administration.