Energy Review

Issue : 13
Date: 02.04.2007

http://www.turkishweekly.net

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Letter from the Editor

Dear Readers,

One week was left behind with lots of discussions and instabilities, not only in political terms but also in economic terms. The hottest topic of the week was the seizure of Britons by the Iran and the political discussions about this.

As always, this week with all our crew, we tried to prepare a comprehensive review of the energy agenda within the framework of political and economic developments.

Rovshan Ibrahimov wrote the article "Azerbaijan- New Trend in Oil Strategy" and analyzed so well the past and the future of Azerbaijan in energy sector.

Haluk Direskeneli penned a really well-prepared report about Soma Manisa Thermal Power Plant for the future investors.

Mr. Seyfettin EROL analyzed for us the EU's policies on Central Asia in his article "EU's new Central Asia Policy and its Energy Dimension".

Fevzi Saffet Bora summarized this week's developments in his article "Energy: Week in Review".

And, lastly I, Hasan Selim Ozertem wrote the article "Oil prices increase as the tension increases in the Middle East" and reviewed for you this week's oil market developments.

Moreover, I want to send my best wishes to Baku to my editor Mr. Ibrahimov and of course to you; to our dearest readers all around the world.

Until next week,

Co-Editor

Hasan Selim Ozertem

Energy Review is a Uluslararasi Stratejik Arastirmalar Kurumu/International Strategic Research Organization publication and prepared by the USAK Energy Desk.

TurkishWeekly
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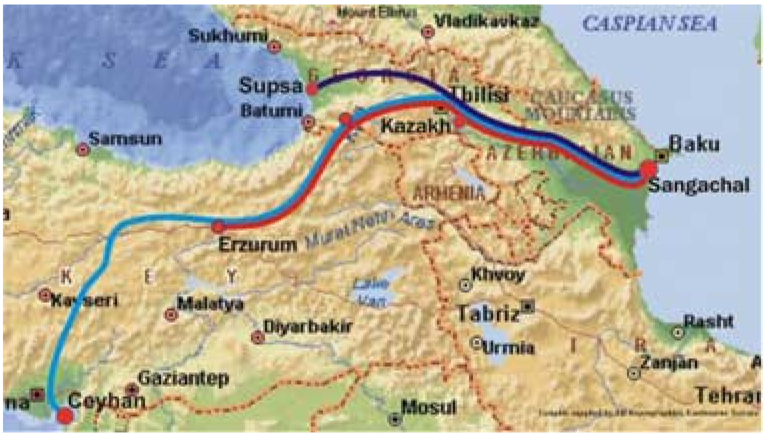
Azerbaijan-New Trend in Oil Strategy

Rovshan Ibrahimov,

Editor, USAK Energy Review

After its independence, Azerbaijan began to search for new ways to attract foreign companies to the development and exploitation of its oil fields. In 1994 a new agreement which is also known as the Deal of Century has been signed, according to which exploration of offshore fields Azeri-Chiragly-Guneschli with the foreign oil companies admitted. Subsequently, 26 Production Sharing Agreements were signed. In early agreements Azerbaijan has small shares in exploration. The main reason was that at that time, the country has sought to strengthen its independence and attract more foreign companies. Thus, it can be concluded that it was mainly political than economic and with the increasing shares of Azerbaijani companies was growing.

After the discovery of large reserves, one of the main tasks was the exportation of hydrocarbons to the world markets. Parallel to this, Baku-Supsa and the Baku-Tbilisi-Ceyhan oil pipelines, and Baku-Tbilisi-Erzurum gas pipeline were built. Since 2005, oil has been exported by the main Baku-Tbilisi-Ceyhan pipeline and from the end of March this year first gas was exported via Baku-Erzurum pipeline to Turkey.



Alternative corridors for delivery of energy resources to the world markets and high oil prices have created favorable conditions for the expansion of its activities of the National Company of Azerbaijan, SOCAR. In a short time, the company has been able to resume its activities in the abandoned oil fields in the country and to increase the production of oil and gas. The company was able to obtain loans from international institutions, which allowed the company to undertake additional investments in the oil sector.

Since 2006, the company is returning to the international arena. The company has bought the marine terminal in Kulevi in Georgia, the refinery at Ceyhan in Turkey and planned acquisition of one of the four refinery factories in Romania. The company is interested in participating in the development of oilfields in Moldova.

In 2007, Azerbaijan has to review its oil strategy. The country does not intend to confine itself to export crude oil. At the same time, plans to be actively involved in the production and marketing of ready processed products to the European markets. The President Ilham Aliyev announced this during the signing of the Memorandum of Understanding on energy cooperation between the EU and Azerbaijan in Brussels in November last year.

Alternative corridors for delivery of energy resources to the world markets and high oil prices have created favorable conditions for the expansion of its activities of the National Company of Azerbaijan, SOCAR

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There was provided of the modernization of refinery factories in Baku, with a view to the production of gasoline on European standards. Acquisition terminal at Kulevi on the shores of the Black Sea will contribute to export finished products to the markets of Eastern Europe. Terminals at Ceyhan and in Romania will break Azeri oil to European and world markets.

Recently, Minister of Industry and Energy Natig Aliyev, in an interview with journalists to the question whether Azerbaijan will use Odessa-Brody pipeline for exporting of its own oil, replied that Azerbaijan will be more interested in buying refineries factories in the territory of Ukraine. Azerbaijan also desires to establish its own oil tanker fleet in the Mediterranean Sea.

Azerbaijan already has for more than a hundred years extensive experience in developing and implementing products in the international arena

What is the explanation of the active policy of Azerbaijan in the international arena? Firstly, without any doubts, the finished product could provide a much more income for the country, rather than the sale of crude oil. Azerbaijan already has for more than a hundred years extensive experience in developing and implementing products in the international arena. The country has sufficient infrastructure and high professional specialists. Income from oil after developing of the projects, make possible to the implementation of its own projects.

In addition, Azerbaijan clearly understands that the oil may break through in 25-30 years time, and the country should take advantage of any opportunities as possible. In the future, Azerbaijan will be able to handle at those factories oil supplied from Kazakhstan and Turkmenistan, transit which it is addressed. In fortunately happens to be Azerbaijan will be able to establish a network of facilities in Central and Eastern Europe so that it will enhance their independence and relations with the countries of the EU, as well as improve their economic condition.

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SOMA MANISA TURKEY- THERMAL POWER PLANT: BRIEF REPORT FOR FUTURE INVESTORS

Haluk Direskeneli,
Energy Analyst

In years 2000-2001, on various instances, we visited the Soma Thermal Power Plant together with Mr Eddie Kolodziej and other senior engineers of CSWI (later AEP) of USA companies for possible cooperation to run the plant in Transfer of Operational Rights (TOR) scheme.

This is our joint report prior to our possible TOR scheme operation. This report is an independent report prepared with the available information as received at the Soma Thermal Power Plant site in year 2001, trying to advise a frank picture of the existing situation. It is free from any public interpretation.

This report relates to the feasibility of Transferring the Operation Rights for Soma A and Soma B Thermal Power Plants.

The relevant units of SOMA Thermal Power Plant consisting of 2 units in Soma A and 6 units in Soma B will be hereinafter referred to as follows for ease of reference.

The Power Plant to be transferred is a 2 x 22 MW + 6 x 165 MW unit Power Plant in Soma District of Manisa, amount of US $ 255.000.000 transfer of operations for 20 years with a total installed capacity of 1034 MW.

- **SOMA A : A1 (Unit 7) and A2 (Unit 8)**
- **SOMA B : B1 (Unit 1), B2 (Unit 2), B3 (Unit 3), B4 (Unit 4), B5 (Unit 5) and B6 (Unit 6)**

SCOPE

Transfer of Operational Rights to the Company, Joint Company operates the Power Plant, invests in the assets and sale of electricity to Turkish Electricity Generating and Transmission Company over a 20 years period.

OVERVIEW

This bid document is prepared in line with the request of outlined bids in the official Gazette Ref. No.22819 dated 16 November 1996.

It includes the transfer of Operational Rights of "Soma A and Soma B Thermal Power Plants" to the Company for a period of 20 years within the framework of Law 3096 on authorizing organizations other than Turkish Electricity Distribution Company and TEAS to engage in the Generation, Transmission, Distribution and Trade of Electricity, and the related Regulation 87/11488.

The Power Plant to be transferred is a 2 x 22 MW + 6 x 165 MW unit Power Plant in Soma District of Manisa, amount of US $ 255.000.000 transfer of operations for 20 years with a total installed capacity of 1034 MW.

OPERATING DATA

a) LOCATION OF THE POWER PLANT

Soma Thermal Power Plant is a lignite-fired production plant situated in Soma District of Manisa Province. The plant is 90 km to Manisa, and 130 km to İzmir. The nearest airport (in İzmir) is 150 km, the nearest port is (in İzmir) 130 km, and the nearest customs (in Soma) is 2 km away. Although the plant is not situated on a major highway, it is in a lively area of mild weather.

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b) HISTORY OF THE POWER PLANT

Soma A Thermal Power Plant was tendered to ALSTHOM Company – France on March 2nd, 1954 by the Administrative Council due to the Government decision on October 21, 1953. Date of commissioning of **A1(Unit 7)** and **A2(Unit 8)** by the leading contractor Alsthom are respectively 24.07.1957 and 28.01.1959.

The studies for the establishment of **units B1 and B2** of Soma Thermal Power Plant began in the year 1967. First, the preliminary determinations of the known lignite reserves were made. Based on the results obtained, the State Supreme Planning Organization decided on the possibility of establishing in a long term a 1200 MW Plant in Soma.

Thus, the preparation of the initial studies of possible plant sites and the alternative plans began in the year 1971, with the purpose of evaluating the poor quality portions of the lignite present in Soma and the production wastes.

Against the energy bottleneck observed starting from the year 1974, the Ministry of Energy instructed TEK (Turkish Electricity Institution) to build the 2X165 MW section to accelerate the Thermal Plant establishment in planning – project works based on the previously performed studies.

With the tender put out in the year 1976, the construction job of the 2X165 MW unit **B1 (Unit 1) and B2 (Unit 2)** was awarded to the three – way consortium consisting of Skodaexport (Czechoslovakia), Metex (Finland) and their local partner company (Turkey).

*The construction of 2X165 MW expansion units **B5 (Unit 5) and B6 (Unit 6)** was designed to provide production of electricity from much lower calorie lignite observed in the region*

The conveyor system providing coal transport from the Denis coal mine basin to the Thermal Power Plant was constructed on a turnkey basis, in accordance with the supplementary agreement between TEK and a local company, for Soma Thermal Power Plant expansion units **B3 (Unit 3) and B4 (Unit 4)**, signed between TEK and Skodaexport – and their local partner company. Consortium partnership on November 12th, 1980.

Within the framework of the aforementioned supplementary agreement, local partner signed a sub- contractor agreement with German Krupp Industrie Technik GmbH (Germany) to provide the materials and service of which the supply was not possible by Krupp.

The construction of 2X165 MW expansion units **B5 (Unit 5) and B6 (Unit 6)** was designed to provide production of electricity from much lower calorie lignite observed in the region. In due course, with a contract signed in September 1986, the construction was initiated by Skoda (Czechoslovakia) and their local partner (Turkey) companies and completed in 1989.

c) GENERAL INFORMATION ON POWER PLANTS A AND B

Major Equipment Manufacturers:

Boilers	**B1-B6**	**: Ses, Tlmace, Czech**
Boilers	A1-A2	: Soc. Stein et Roubaix, France
Turbines	B1-B6	: Skoda, Czech
Turbines	A1-A2	: Alsthom, France
Generators	B1-B6	: Skoda, Czech
Generators	A1-A2	: Alsthom, France

Fuel Used in the Plant (Lignite Coal):

Soma coal mining area is 18,000 hectares in Soma District of Manisa. In this area, 639.000.000 tons of coal reserve is present

Soma coal mining area is 18,000 hectares in Soma District of Manisa. In this area, 639.000.000 tons of coal reserve is present. This amount of reserve will be increased with the drills that are going to be made. The heating value of the coal reserve which is suitable for operating the power Plant is around 1550 – 5000 kcal/Kg. The quantity and quality of coal that is burned in the Power Plant units are;

2X22 MW Units A1 and A2:

Coal is produced from the underground mines and the open pits. In the underground mines, manual & mobile equipment and cutting loading machinery system is found

Quantity	**: 270.000 tons ± %10**
Calorific Value	: 3500 ± 100 kcal/Kg
Particle Size	: 0 – 30 mm. and 0 – 0.5 washery sludge screenings
Moisture (in original coal)	: %22 max.
Sand ash	: %27 max.

4X165 MW Units B1 – B4:

Quantity	**: 5.500.000 tons ± %10**
Calorific Value	: 2400 kcal/Kg
Particle Size	: 0 – 200 mm. and 0 – 1000 mm.
Moisture (in original coal)	: %21 max.
Sand ash	: %41 max.

2X165 MW Units B5 and B6:

Quantity	**: 3.200.000 tons ± %10**
Calorific Value	: 1550 kcal/Kg ± %10
Moisture (in original coal)	: %20.84 ± %10
Sand ash	: %51.20 ± %10

Coal is produced from the underground mines and the open pits. In the underground mines, manual & mobile equipment and cutting loading machinery system is found. In the open pits, overburden removing is done with the 17 yd^3 electric excavators and with soil trucks of 85 – 170 tons. The soil disloading areas that are out of operation are adjusted and afforestated according to the original topography.

Other Facilities:

The plant has 505 housing units for employees, 1 guest house and 1 boarding house for bachelor workers at plant site.

The plant has 505 housing units for employees, 1 guest house and 1 boarding house for bachelor workers at plant site.

d) BASIC REQUIREMENTS

- Investments and rehabilitation aimed for decreasing environmental pollution and increasing the efficiency of the plant
- Planned implementation of a periodic maintenance program and major overhauls to sustain a high level of energy production

e) COAL REQUIREMENT AND SOURCE

Thermal Power Plant's coal requirement is met by Turkish Coal Enterprises(TKI) according to the protocols signed between TEAŢ and TKI. The qualities of the boiler units of the Power Plant are;

UNITS	**kcal / kg**	**Ash %**	**Moisture %**
B1 and B2	2400	41	21
B3 and B4	2400	41	21
B5 and B6	1550	51,2	20,84

designed as mentioned above.

*Total coal consumed is **71.609.894 tonnes.** During this period, **58.530.247.890 KWh** of electrical energy has been produced.*

The amounts of coal that the units have consumed since the day they started service until December 31th , 1997 are:

UNITS	**DATE OF COMMISSIONING**	**AMOUNT OF COAL CONSUMED**
1st Unit	1981	15.662.737 tonnes
2nd Unit	1982	14.398.805 tonnes
3rd Unit	1985	13.259.169 tonnes
4th Unit	1986	11.856.521 tonnes
5th Unit	1992	8.116.694 tonnes
6th Unit	1992	8.315.968 tonnes

Total coal consumed is **71.609.894 tonnes.** During this period, **58.530.247.890 KWh** of electrical energy has been produced.

Usually, coal is given to TKI in terms of months and years. But, this coal is not provided through homogenous terms. Since the received coal does not meet the standards;

In 1993 ; 290.678.500 KWh
In 1994 ; 515.654.500 KWh
In 1995 ; 611.438.000 KWh
In 1996 ; 745.182.750 KWh

In 1997 ; 745.422.000 KWh which make a total of **2.908.875.750 KWh** of energy loss has occurred.

In units **B5 and B6**, there is not a considerable energy loss due the change in calories.

*In 1997 ; 745.422.000 KWh which make a total of **2.908.875.750 KWh** of energy loss has occurred.*

In units **B1 – B4**, a calorie change in the boiler occurs while the coal that is in different qualifications cannot be prepared into a homogenous standard. This situation is derived from the protocols between TKI and TEAS, which is; if the coal delivered cannot meet the LHV specifications 3 days following each other in a 10 days period; only then it is possible to apply a fine.

The aim is not to avoid paying the fine, but not to decrease the generation of the Power Plant.

There is always sufficient quantity of coal in TKI mines. But, both the transportation of this coal and the inability to mix these different types of coal in a homogenous way; between the years 1991-1997, the total generation loss was **5.570.555.750 KWh**.

Since the stocking areas' capacity is 1 month of the plant's coal requirement, if appropriate coal to form the fuel mixture that is described in the tariffs is not obtained; the stocking area and the machinery will be out of service.

These losses may be avoided by taking these actions:

- There will be a protocol signed between TKI and our Company. In this protocol, all the insufficiencies until today must be mentioned with importance.
- It has to be provided that the coal preparation units will work 24 hours.
- All the different qualified coal from TKI mines will be mixed to one homogenous structure.
- In coal delivery, it is assumed that the coal provides the technical calorific basis.
- Stone separating unit, with a capacity of 3X1000 ton/hour, has to be at operation.

It is known that; during the operating period of the plants, some problems are faced due to unstable quality of the lignite given to the plant. In order to solve this problem, there are large stocking areas and parking machinery reserved for mixing the coal in different standard to obtain an average quality.

Since the stocking areas' capacity is 1 month of the plant's coal requirement, if appropriate coal to form the fuel mixture that is described in the tariffs is not obtained; the stocking area and the machinery will be out of service. It is also known that; if calorific value is higher or lower than the designed value of the boiler; technical, economic and environmental problems are raised.

As a result of poor quality of coal, such problems are seen in the power plants;

- Working with low load
- Units going out of circuit
- The necessity to take spare operating parts into operation
- Insufficiency in the organization capacities

Again, as a result of these problems;

- The increase in the ash load of the electro filters, increase the particulate material emission.
- The increase in the temperature in the burning room, increase the NO_x emission.
- The change in the flue gas maloperation point, cause inefficiency in electro filters.
- The increase of SO_x concentration in the flue gas, cause an increase in the SO_x emission levels of air quality.
- Changing of the moisture content of the lignite, cause a change in the flue gas volume flow and temperature and this directly effects the efficiency of the plant.

The coal requirement of the Power Plant is met by the coal mine in Soma belonging to Aegean Lignite Enterprises (ELİ), an affiliate of the TKI (Turkish Coal Enterprises) General Directorate

The coal requirement of the Power Plant is met by the coal mine in Soma belonging to Aegean Lignite Enterprises (ELİ), an affiliate of the TKI (Turkish Coal Enterprises) General Directorate. The lignite with heating value above 2000 – 5000 kcal/Kg is produced in the Merkez and Işıklar regions. The lignite with heating value above 2500 kcal/Kg is allocated for domestic heating purposes and for the needs of the industry.

It should be kept in mind that the pollution prevention concept is the dominant approach in the global trend of air quality management. With the increasing rate of natural sources depletion, energy saving precautions within the power plants is vital for the operators

The lower quality coal is given to the plant. Thus, 80% of the regional production is used in the plant. Portions of the Soma lignite with heating value 1000 – 2500 kcal/Kg is produced in the Denis region, and is only consumed in the thermal plant since there are no other places it can be used.

The coal consumed in units **B1 – B4** of the plant is produced in the Merkez-Işıklar region, while the coal is consumed in units **B5 – B6** is produced in the Denis region.

ENVIRONMENTAL ASPECTS

It should be kept in mind that the pollution prevention concept is the dominant approach in the global trend of air quality management. With the increasing rate of natural sources depletion, energy saving precautions within the power plants is vital for the operators. As for the control of pollutant emissions, air quality management and regulation of many countries are being stricter due to the greenhouse effect (globalwarming), acid rain and many other adverse effects increasing logarithmically, unless proper precautions are taken.

Turkish air quality regulations are also being revised within the body of the Ministry of Environment, and soon the revised form will be published in the Official Gazette. All countries attended to the Rio Congress in 1995, were committed to take necessary countermeasures to lower the emission rates; as the present values for global temperature increase are far beyond the expected values.

a) AIR QUALITY CONTROL MANAGEMENT

Supported by the privatization and renovation of the Thermal Power Plants (TPP) in Turkey and the awareness of acid rain, air pollution; the flue gas desulphurization (FGD) technologies are currently being installed and successfully utilized within the last years by the Turkish operators.

Deterioration of the local and regional air quality is among the most significant environmental impacts of coal - burning TPP's. Potential adverse air quality impacts are particularly serious in the case power stations using low quality lignite without proper pollution control devices, resulting in the violation of regulatory limits of both emission standards and ground – level concentrations set for various air pollutants.

Potential adverse air quality impacts are particularly serious in the case power stations using low quality lignite without proper pollution control devices, resulting in the violation of regulatory limits of both emission standards and ground – level concentrations set for various air pollutants.

Stack emissions for power plants utilizing fossil fuel can be classified in two groups as conventional and non conventional emissions. Sulfur dioxide (SO_x) , nitrogen oxides (NO_x) and suspended particulate matter (SPM) are known as the conventional air pollutants with respect to TPP's.

When emitted with the concentrations of higher than the legal limits or the generally accepted guideline values, these pollutants may cause damages not only on human health but also on local or regional flora and fauna, water resources, agriculture and on buildings and historical sites within the concept of acid rain. It is possible to control the emissions of conventional pollutants by employing widely accepted pollution control technologies such as electrostatic precipitators (ESP) and flue gas desulphurisation (FGD) plants.

b) NATIONAL AIR QUALITY CONTROL REGULATIONS

According to the Turkish Preservation of Air Quality Regulation (PAQR) issued in the Official Gazette dated November 2nd, 1986 and numbered 19269; the conventional pollutants' emissions limits are given as follows:

Plant operators play an important role for improving the plant's availability and reliability

- The maximum allowable SO_2 concentration in the stack emission of the TPP is 1,000 mg/Nm^3 based on a 5% O_2 content and the relevant ground level SO_2 concentrations stipulated by PAQR are 150, 400 and 900 micrograms/m^3 on annual, daily and hourly bases, respectively.
- In terms of NO_x emissions, the regulatory limit is 1,000 mg/Nm^3 for existing installations.
- The regulatory limits for SPM (dust) emissions are 250 and 150 mg/m^3 for old and new installations, respectively. Further, the Regulation also stipulates that these limits can be increased by 200% if the ash content is more than 18%.

ORGANISATIONAL PLAN

Plant operators play an important role for improving the plant's availability and reliability. When inappropriate operating techniques are used; significant plant damage can easily occur because of insufficient operation. So; our aim is to continue with the existing operators and continue with several training techniques. By the installation of a computer based operational information system, an improvement for the availability and environmental performance will be provided.

STAFFING PLAN

The year 1998 is perceived as the year during which the Company will be acquainting itself with the plant. Some assumptions could be revised in this respect depending on the operation and efficiency of the plant. Reduction of staff will be considered as a consequence of improvements and investments.

On the other hand, new personnel will not be hired for the Flue Gas Filtering and Treatment Plants, and the present staff of the Plant will be trained to operate these units.

The number of persons employed at Soma Thermal Power Plant was 1502 in March 1997. The break down of staff by qualification is as follows:

The ash removal capacity of the plant is assumed to be adequate for 20 years of operation, and no investment is therefore planned in this respect

34	Engineers
15	Technicians
54	Office Employees
1359	Wage Workers
40	Civil Defence Workers

Cleaning services for the power plant are contracted out to service vendors.

ASSUMPTIONS :

Routine/ defect maintenance in the station will be done by power plant's skilled team and external maintenance providers on performance based contracts. Selection of the contractors will be by a competitive tendering process. The engineering strategy at Soma Power Plant is considered both daily focused production capability and long term approach to plant asset management.

INVESTMENT PLAN

Investments are aimed either at preventing environmental pollution or at increasing productivity. Almost all of the required investments will be for Soma B. Mandatory investments are scheduled for the first 4 years, keeping in mind the necessity for an uninterrupted supply of power. These investments are described in detail in the below part.

INVESTMENTS AIMED AT PREVENTING ENVIRONMENTAL POLLUTION

The ash removal capacity of the plant is assumed to be adequate for 20 years of operation, and no investment is therefore planned in this respect.

Flue Gas Desulphurization Unit

The Flue Gas Treatment Facilities for Plant B has priority over all basic investment and rehabilitation requirements of the power plant. Judging by the examples at Orhaneli

The Flue Gas Treatment Facilities for Plant B has priority over all basic investment and rehabilitation requirements of the power plant. Judging by the examples at Orhaneli, Kemerköy and Yatağan, and according to information received from manufacturers (ABB, DB Riley, Mitsubishi, and GEC ALSTHOM), 28 months are required to complete this investment which has now become legally imperative under environmental regulations because SO2 emission from the stack is polluting the environment beyond tolerable limits.

The Flue Gas units of **Units B1 and B2** of Soma B will be commissioned on January 1, 2001, the Flue Gas units of **Units B3 and B4** on May 1, 2001, and the Flue Gas units of **Units B5 and B6** on July 1, 2001.

Phases and deadlines for the Desulphurisation investment are shown below.

Preparing tender documents	:	4 months
Procurement, tender results	:	3 months
Manufacture	:	12 months
Construction work	:	12 months (starting on the 10th)

		month of manufacture)
Trial run	:	1 month
Commissioning	:	1 month

Electrostatic Precipitator Rehabilitation

*The installation of electrostatic precipitators on **Units B1 and B2** of Soma B would be finished in October 1999, and the Units would go on stream on January 1, 2000 after 2 months of start up operations and provisional commissioning. **Units B3 and B4** would go on stream on May 1, 2000*

The installation of electrostatic precipitators on **Units B1 and B2** of Soma B would be finished in October 1999, and the Units would go on stream on January 1, 2000 after 2 months of start up operations and provisional commissioning. **Units B3 and B4** would go on stream on May 1, 2000.

Dismounted electrostatic precipitators from Soma B would be installed on **Units A1 and A2** of Soma A. Soma A would be closed down for 4 months during the installation, and would be restarted on June 1, 2000.

Phases and deadlines of this rehabilitation were shown below.

Preparing tender documents	:	2 months
Procurement, tender results	:	2 months
Manufacture and purchases	:	9 months
Construction and commissioning	:	6 months

Waste Water Treatment Plant

The improvement of the Waste Water Treatment Plant for the waste water discharged to the ash removal area of the plant would start in 2001 and will be completed in 2003.

INVESTMENTS AIMED AT INCREASING THE PRODUCTIVITY OF THE PLANT

Ash removal and coal pick up improvements are particularly important among measures aimed at increasing the productivity of the plant.

Ash Removal System

Now that the first four units of Soma B have switched to the fluidized ash removal system, it is necessary to improve the ash removal reservoir. Four pumps also need to be added so that ash removal pumps would have 3x1 stand byes like in units B5 and B6.

Coal Conveyors

The coal for **Units B1., B2., B3. and B4.** are brought in on conveyor belts or by truck. The coarseness of the coal brought in on conveyors is 0 to 200 mm, and the coarseness of the coal brought in by truck is 0 to 1000 mm. Conveyor capacity is 600 tons/hour. Coal pick up capacity remains low because the capacities of the gyratory mill and the cam mill in the crushing plant are inadequate. There is also a need to reduce the proportion of rocks in the coal intake. Therefore the system has to be rehabilitated so that all coal received at the plant can be dumped in the same place where rocks can be picked out on a slow-moving belt before crushing and storing in the coal park.

Cooling Towers

The interior equipment of the cooling towers of Soma A will be replaced with water sprinkler elements which are the product of a more advanced technology and which do not need maintenance. This will take care of the problem with ashes during summer months, and will increase the efficiency of the units.

Investment on Other Rehabilitation/Improvements

In addition to scheduled investment, the Company will also earmark funds for rehabilitation and improvement needs in major overhaul years (2000, 2001, 2003, 2006, 2008, 2011 and 2013) for such items as pumps, heaters, etc. which cannot be foreseen now, but will be necessary when the time comes.

We have completed our draft report on Soma Thermal Power Plant and Soma Coal Mine Fields as of year 2001 and submitted to the private investors.

Later in time, as known by the interested parties, TOR scheme is abandoned.

A Solid Rehabilitation program is a must for proper operation. New E/P dust collectors, new FGD systems are to be added into the existing system.

There is also one more new investment project to construct 2x 300 Mwe Thermal power Plant named as Soma-C in near future. Therefore we should make our homework properly and get ready to apply new technologies such as CFB and IGCC whichever would be feasible, economic and environmentally appropriate.

We have lignite coal as our biggest fuel source and we all agree that we should use that coal

with maximum efficiency and availability,
with minimum harm to the mother nature,
with minimum impact on global warming

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with minimum impact on global warming.

We hope that this report although needs updating, will give the interested reader a frank view of the Soma Thermal Power Plant for future operation as of year 2001.

It is our sincere feeling that the report will give the interested reader a frank view of the Soma Thermal Power Plant for future operation in case of any privatization.

Your comments are always welcome

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EU's new Central Asia Policy and its Energy Dimension

In the last week of March, EU delegation headed by EU's term president German Foreign Minister Frank-Walter Steinmeier has paid a visit to Kazakhistan's capital Astana for two days. During this visit, the delegation has made several meetings with the Central Asian foreign ministers. In their common press conference, both sides have emphasized their interest in cooperation. In this regard, Steinmeir underlined the importance of this meeting as being the first of such a kind among foreign ministers. He also said the time has arrived to start "all-inclusive and strategic partnership" between EU and Central Asian republics, and the common problems with security and international terrorism has made it necessary to form a strategic partnership. This statement was not perceived as a surprise. Previously, German minister Steinmeir has told that "We need a new strategy in the Central Asia" in his latest visit to the region 5 months ago (31 October-4 November 2006) which has started in Kazakhistan and ended in Kyrgyzstan.

EU has spent around 1.3 billion euro in 15 years period between 1991-2006. In the future, EU has proposed in its budget to spent 750 million euro till 2013. These are accepted as the indicators for EU's long term commitment for an increased cooperation with the countries of the region.

Without a doubt, EU's latest interest to the region is notable. As stated by EU's external relations commissioner Benita Ferrero-Waldner, the current relations between EU and Central Asia is undergoing through a "historical" period. Both parties' statements confirming their willingness to increase the frequency of such meetings is also a proof of this situation. EU has spent around 1.3 billion euro in 15 years period between 1991-2006. In the future, EU has proposed in its budget to spent 750 million euro till 2013. These are accepted as the indicators for EU's long term commitment for an increased cooperation with the countries of the region.

However, Central Asia has never been given priority to such an extent since 1991. For the EU, the preferential actor of the region was Russia. As a matter of fact, Oliver Roy in his article titled "Afghanistan and Central Asia" dated back to 1992, claims that the preferential choice of western bloc is Russia hence stability, and "Westerners, to avoid instability, has supported Russia". From the perspective of western world, compared with Central Asia, Russia was having a better potential and was a bigger emerging market. Therefore, in the beginning the western countries were not having direct interest in the Central Asia. Caucasus, especially Azerbaijan, with its energy potential was attracting the primary interest when compared to Central Asia.

Blackwill and Stürmer's claims about EU's lack of commitment to develop policies for Central Asia and Caucasus have been accepted as correct by many researchers, at least implicitly

In this regard, Robert D. Blackwill and Micheal Stürmer, in their "Relations with Turkey and the Caspian Basin Countries" article published in 1997, has suggested the following remarks while analyzing the Western policies for the region: Indeed, this region may be perceived as the latest game fields of the classical geopolitics. Russia is sending out mixed signals about her regional demands; Iran and Turkey are obvious competitors; Pakistan is wishing to get her share; Saudi Arabia is involved with silent diplomacy. US looks like being the only power to fully understand the game. Europe has an interest but no policies". Blackwill and Stürmer's claims about EU's lack of commitment to develop policies for Central Asia and Caucasus have been accepted as correct by many researchers, at least implicitly. Therefore, there were not enough studies about this subject. For example, in Roy Allison and Lena Johson's book "Central Asian Security", although they have analyzed the roles of US, China, Iran and Turkey in their book, they have not spared a chapter for

EU. Also Alexander Rahr claims: “Contrary to US policy, neither European states nor EU as a whole has managed to develop a comprehensive agenda for the politically and economically rapidly developing region.”. The documents showing EU’s policy priorities were also in parallel to this claim.

EU’s interest of the region can be summarized with the crucial points: Energy and stability.

On the other hand, 1997 has been a turning point for the west for its policies regarding the region, EU Commission’s energy report dated 1997 has given the changing signals of the EU policy about the region. Also, on 11 December 1998 in Vienna, EU Council has emphasized the economical deteriorating turmoil in the region under the title “Newly Independent Countries”.

EU’s interest of the region can be summarized with the crucial points: Energy and stability. Hence, EU has endeavored to progress in her Central Asia policies through these parameters and to achieve her goals has developed new projects around these points. It is possible to gather up these projects under three headlines: TACIS (Technical Assistance to the Commonwealth of Independent States), INOGATE (*Interstate Oil and Gas Transport to Europe*) which is on the way to get realized through opportunities stemming from TACIS and TRACECA (*Transport Corridor Europe Caucasus Asia*). Also since 1999, partnership and cooperation agreements between EU and Central Asian Republics and Azerbaijan constitute the political framework.

Besides, the EU’s interest is also related to the drug smuggling, migration and environmental problems in the region. These issues have been revealed once again in the latest visit

Besides, the EU’s interest is also related to the drug smuggling, migration and environmental problems in the region. These issues have been revealed once again in the latest visit. In fact, Steinmeir has attracted the attention to the Central Asia’s strategic importance in this regard and stated that common problems of security and international terrorism has made the cooperation a must. “Problems such as drug trafficking, arms smuggling and organized crime are the common threat areas. In Afghanistan we have to be succesfull. A moderate Islamic understanding in the region, is one of the factors to necessiate us to cooperate with the region.”

With this last visit, EU, in its strategy to achieve concrete steps, has spoken out its willingness to support clear and concluding policies in the region. Nevertheless, in this blunt and changed policy, EU’s increasing energy problem and Russia’s policies those not inspiring confidence have a share

With this last visit, EU, in its strategy to achieve concrete steps, has spoken out its willingness to support clear and concluding policies in the region. Nevertheless, in this blunt and changed policy, EU’s increasing energy problem and Russia’s policies those not inspiring confidence have a share. By grouping these issues from the EU perspective, we have the following realities:

- EU’s energy dilemma and Russia’s non-trustable position regarding this issue. Recently, especially Putin’s policies which are far away from relaxing EU in terms of energy supply security and not ratifying the “EU Energy Charter” treaty.
- In the central Asian region, increasing dominance of Russia, and the “energy security” anxiety of EU caused by the return of Russia
- The reflections of Russia’s authoritarian state-strong leadership policies to foreign policy and its initiatives to expand in the framework of “imperial policies”. EU’s desire to answer these policies, especially Russia’s return with regard to Baltic countries and Eastern Europe, with policies involving Central Asia and Caucasus.
- The deteriorating situation in Afghanistan, the undesired instabilities which is expected to be caused by this situation in the Central Asia and its side effects to energy security dimension

- China's growing influence in the region from an energy security point of view and the India's desire to follow the China. These messages are well received by EU. In this regard, the competition caused by North-South and Asia-Pacific against East-West routes and the shifting of Central Asian energy sources supply demand balance towards East and the EU's growing anxiety to supply its growing hunger for energy sources which is expected to be caused by these reasons.

In terms of energy security, EU countries' discomfort with the possible US dominance and their preference to put forward initiatives to block a second Russia.

- In terms of energy security, EU countries' discomfort with the possible US dominance and their preference to put forward initiatives to block a second Russia.

On the other hand, another trivet of the latest developments, from the perspectives of pragmatist foreign policies of Central Asian republics, the underlining aims to start a new period with the EU are as follows:

- The increasing dominance of Russia in the regional countries' foreign, domestic policies and security perspectives, and the annoyance caused by these
- US's strategy to change the "political framework" in the region and in this regard countries of the region are aiming to create an alternative to counteract US rhetoric.
- In the regional politics, China is portraying a power which is far away from being a balancing or a trustable ally. With relations to West, in terms of "balancing" there is a need for a brand new start and with in this framework, Central Asian states' desire to implement multilateral relations in their foreign policies.

The latest developments in Afghanistan and the possible future threats directed towards Central Asia over Afghanistan and opposition/terror organizations acts to recover in the region

- The latest developments in Afghanistan and the possible future threats directed towards Central Asia over Afghanistan and opposition/terror organizations acts to recover in the region.

EU's interests and security anxieties have overridden the ethical dimension of its foreign policy understanding

- Central Asian republics' desire to optimize their benefits through increasing the number of players in this "New Great Game". It can be interpreted that EU's wish to be active in the regional policies is an indication of increasing competition in the region. (On the other hand, the "loose" situation in the union's foreign policy and the hesitancies regarding Germany are the pitfalls of this policy.

As a result, the "late comer" of the global power struggle, namely EU's latest pragmatist move to reconstruct its relations with the Central Asian countries by setting aside its previous "hesitancies" and "sensitivities", is worth investigating. It looks like, EU's interests and security anxieties have overridden the ethical dimension of its foreign policy understanding. In fact, Kazakhstan's Foreign Minister Dr. Marat Tazhin's expression of his pleasure to host such a meeting, his belief in the progression of future relations if EU commits to "mutual tolerance and the understanding of Central Asian Republics' unique situation" is an indication of this result. Also, Uzbekistan's foreign minister Vladimir Norow underlined the lack of EU policies to focus on the relations with the countries of region. He also said this meeting was a good base for mutual exchange of ideas and if this cooperation is expected to be successful it should rely on "equal conditions and pragmatic understandings". Therefore, West's "dilemma" and "double standards" in its policies are once again revealing themselves.

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Energy Review

Issue : 13
Date: 02.04.2007

http://www.turkishweekly.net

Energy: Week in Review

Fevzi Saffet BORA
USAK Energy Review

"Turkey gets recognized as an energy corridor"

Austrian Ambassador to Turkey Heidermaria Gurer emphasized the importance of Turkey as an energy transit corridor for Europe and also indicated Turkey's undeniable role in world politics. She said OMV, gas and oil group of Austria will carry Central Asian gas to Europe after being its being transported to Austria's Baumgarten hub via Turkey (NABUCCO project).

"National Marker Usage Came Early"

Turkish Petroleum Refineries Corporation (TÜPRAŞ) indicated the national marker system, designed to prevent illegal imports of gasoline, should have been tested for at least two years before being officially implemented, noting that the Scientific and Technological Research Council of Turkey put it into use six months after being assigned to its development.

Energy Market Regulatory Authority indicated that those who adjusted their technical infrastructure according to the EMRA specifications wouldn't encounter any problems.

National marker, a gasoline additive, is sensitive to heat and is not adequately tested during different weather conditions, in the open air or at gas stations.

Energy Market Regulatory Authority indicated that those who adjusted their technical infrastructure according to the EMRA specifications wouldn't encounter any problems.

"Turkish Union of Chambers and Commodities Exchanges complained about unjust competition in the 4.2 billion euro liquefied petroleum gas (LPG) sector"

Statement included: …The LPG sector is seriously harmed by unjust competition. Great investment costs occur due to the obligation to store products for 20 days…

"Enel/Acciona trump raised E. ON bid for Endesa"

Enel and Acciona, which own 46 percent of Endesa, will offer 41 euros a share to buy out the Spanish utility after E.ON raised its offer for the third time to 40 euros a share in an attempt to keep them off.

Spanish energy regulator CNE said: Acciona and Enel cannot provide their own bid for Endesa until six months after E.ON's bid's fading, unless the German group pulls its offer. E.ON's bid runs until April 3.

The legal bill to allow and regulate the establishment of nuclear energy plants is ready to be passed in the Turkish Grand National Assembly next week. It was accepted in the energy commission.

"Nuclear Energy Bill To Be Discussed Next Week"

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"BTC To Pump 1 Billion Dollars"

The Baku-Tbilisi-Ceyhan oil pipeline project, which transports Caspian Sea oil to the world earned Turkey over $400 million since its start in July 2006. The target for 2007 is $1 billion from the pipeline and the 2008 goal is 1.6 Billion USD. The target is to carry 1.6 million barrels of oil per day through the

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pipeline. BOTAS gets 35 cents per barrel transported while the Treasury takes in 20 cents per barrel. The Turkish Petroleum Corporation gets a 6.5 percent share. With estimates of 584 million barrels of oil to be transported through the pipeline, the revenues of BIL will be $204.4 million and the Treasury's will be $116.8 million. TPAO's profits will exceed $700 million.

When full capacity is reached, 1 million barrels of oil would be transported each day and that BIL's annual revenue would be $120 million.

Turkey is planning to transport oil to Far Eastern markets from the Baku-Tbilisi-Ceyhan oil pipeline via Israel, Another plan is to carry natural gas from Ceyhan to Israel by either a pipeline beneath the Mediterranean or by LNG tankers. When the BTC pipeline comes to its full capacity, the eastern Mediterranean route would be the transport 130 million tons of oil per year

"BTC Oil Is Planned To Be Sold to Far East Via Israel"

Turkey is planning to transport oil to Far Eastern markets from the Baku-Tbilisi-Ceyhan oil pipeline via Israel, Another plan is to carry natural gas from Ceyhan to Israel by either a pipeline beneath the Mediterranean or by LNG tankers. When the BTC pipeline comes to its full capacity, the eastern Mediterranean route would be the transport 130 million tons of oil per year.

Turkey Wasting Opportunities In Iraq

Turkish Petroleum International Co. (TPIC) officials indicated last week that Turkey is not using its resources to access Iraqi markets. Turkish companies are not competitive enough in Iraq. And Turkish hydro-carbon authorities and state-owned oil companies should act more convergingly with well-managed petroleum policies.

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Oil Markets - This Week

Hasan Selim Ozertem

USAK's Energy Expert

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Oil Markets: Oil prices increase as the tension increases in the Middle East

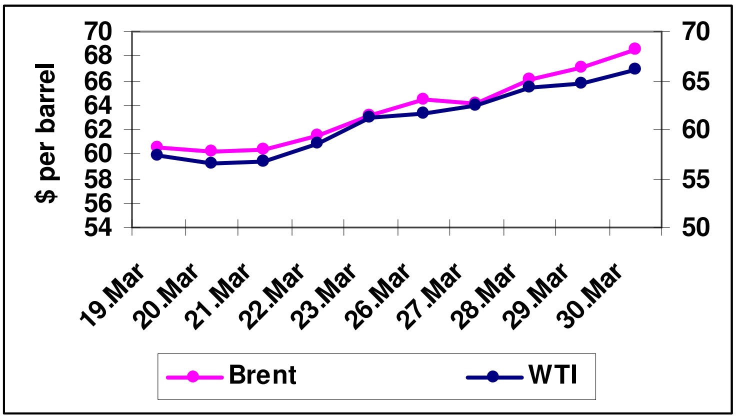
After becoming $49.90 in the first half of the January, oil prices turned back to their increasing trend in the market

After becoming $49.90 in the first half of the January, oil prices turned back to their increasing trend in the market. Firstly, cold weather conditions after mild weather caused demand for heating oil to increase, then OPEC's production cut in the beginning of February increased oil prices up to around $55-57 in the market. Everyone was waiting problems to emerge once again in the Middle East and the first signal was the beginning of negotiations among UN Security Council members for imposing stronger sanctions against Iran. All members agreed on a new package on the third week of the March and last Saturday voted for it unanimously on the UN Security Council. However, just a day before this vote to take place, on 23 March Iran captured 15 British naval personnel in the Shatt al-Arab waterway, which separates Iran and Iraq. Everyone has forgot all the other things and started to talk about these 15 soldiers after then.

On March 28 Foreign Secretary Margaret Beckett in a statement announced that they would be imposing a freeze on all other financial bilateral business with Iran.

UK claimed that Britons were seized in Iraqi waters and demanded its sailors to be released. Moreover, on March 28 Foreign Secretary Margaret Beckett in a statement announced that they would be imposing a freeze on all other financial bilateral business with Iran. After all these developments oil prices soared and Brent oil became $68.6 and WTI $66.07 on the spot market.

In two weeks time oil prices increased for about 15% and the problems in the Middle East was dominant in these price increases.



Oil Prices
Source: Financial Times

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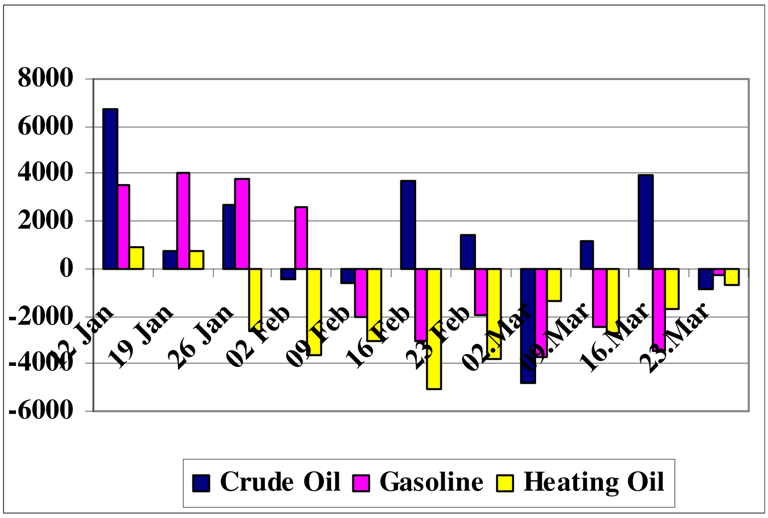
In addition to these developments, on Friday Iran's Central Bank governor said that Iran had plans to stop selling its oil in dollars completely and added that more than 50 percent of Iran's oil income is paid in other currencies and they were reducing the dollar share and asking clients to pay in other currencies. He also stated that Iran had commercial relations with more than 70 countries, including (in) Asia and Europe. It can be noted that Iran is the fourth biggest oil exporter in the world.

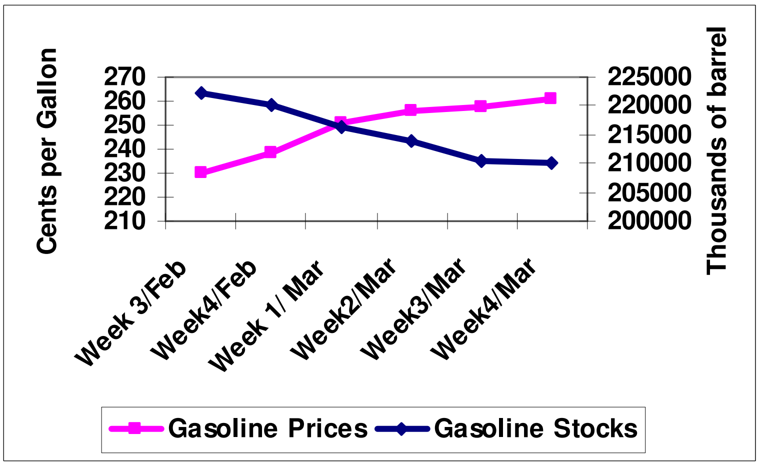
In the US market, oil stock values of the week before were announced on Wednesday. According to these data not only gasoline, but also crude oil and distillate stocks were declined. However, when compared to previous weeks this decline is relatively smaller. The Gasoline stocks decreased 258000 barrels and this value was 0.8 million for crude oil and 0.7 million for distillate.

Energy analysts claim that refiners are exiting the maintenance season and as a result gasoline supplies will begin to increase in the near future. In this period of the year gasoline becomes more important as an indicator with the beginning of driving season and the ending of winter.



Oil Stocks in the US
Source: Energy Information Administration

Energy analysts claim that refiners are exiting the maintenance season and as a result gasoline supplies will begin to increase in the near future. In this period of the year gasoline becomes more important as an indicator with the beginning of driving season and the ending of winter.



Gasoline in the US

Source: EIA

For this week, according to a Bloomberg's survey, 15 of 36 analysts expect a decrease in oil prices and 14 of them expect a rise, whereas only seven of them are neutral. For the oil markets the most important indicator that affects prices can be shown as Iran crisis for now. So, if this week Iran and Britain can begin their negotiations about the seizure of Britons, this will help to tension to decrease a little in the Middle East as well as the pressure on the oil prices.

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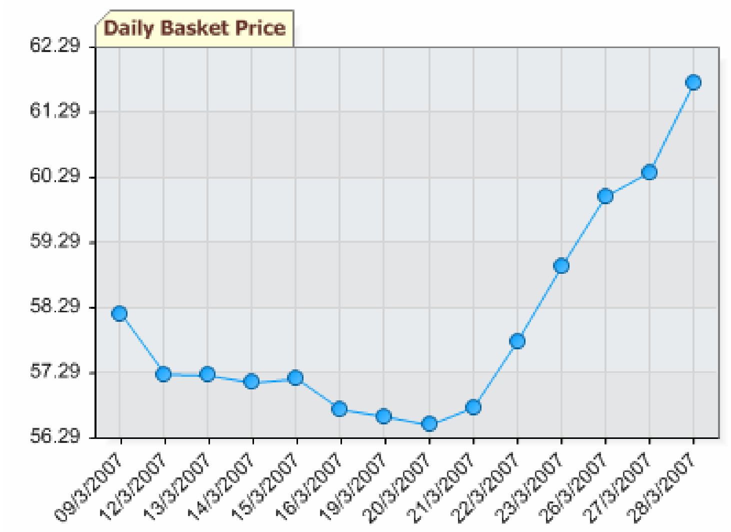
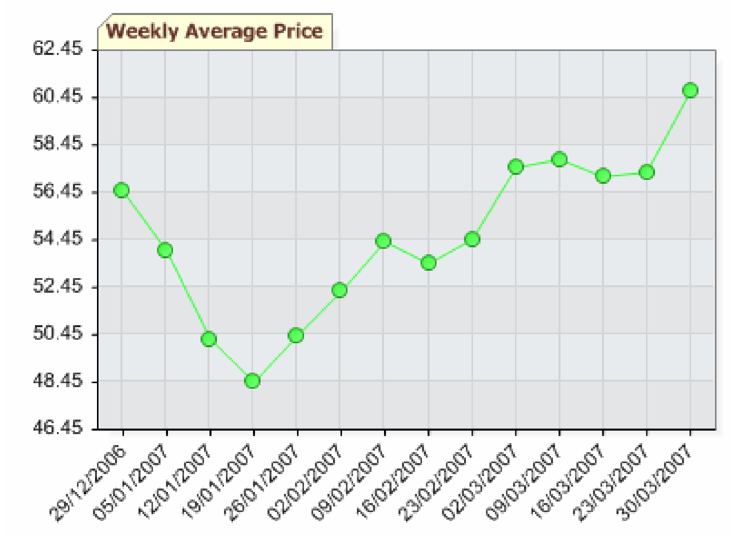
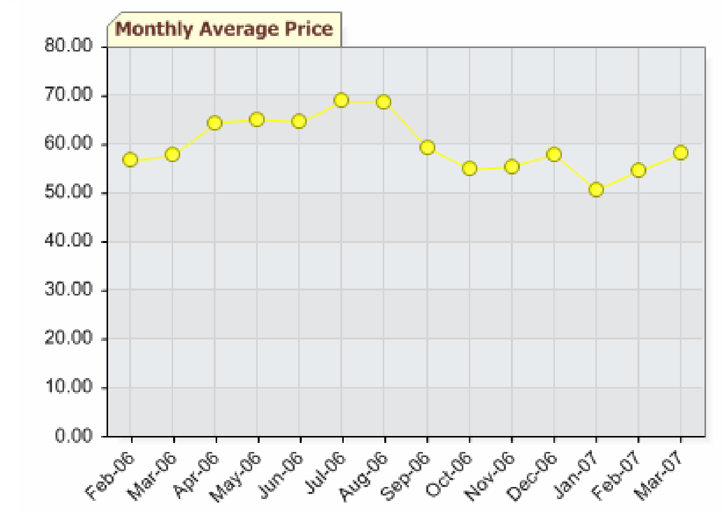
Indicators

OPEC's Basket Price







Indicators

Indicative Exchange Rates Announced at 15:30 on 30/03/2007 by the Central Bank of Turkey

CURRENCY		EXCHANGE RATES Buying	EXCHANGE RATES Selling	EXC.RATES ON BANKNOTES Buying	EXC.RATES ON BANKNOTES Selling
USD/TRY	1 US Dollar	1.3801	1.3868	1.3791	1.3889
EUR/TRY	1 EURO	1.8383	1.8472	1.8370	1.8500
GBP/TRY	1 British Pound	2.7017	2.7158	2.6998	2.7199

Turkish Refinery Output Price

Product Name	YTL/TON	YTL/M3	Special Concise Tax	Dividend	Exclusive of VAT	VAT	VAT included price	Validity Date
Unleaded Petrol 95 OCTANE			**YTL/M3**	**YTL/M3**	**YTL/M3**	**YTL/M3**	**YTL/M3**	
İzmit	948,30	720,71	1.362,50	1,32	2.084,53	375,22	2.459,75	30/03/2007
İzmir	948,30	720,71	1.362,50	1,32	2.084,53	375,22	2.459,75	30/03/2007
Kırıkkale	952,48	723,88	1.362,50	1,32	2.087,70	375,79	2.463,49	30/03/2007
Batman	981,70	746,09	1.362,50	1,32	2.109,91	379,78	2.489,69	30/03/2007
Jet Fuel			**YTL/M3**	**YTL/M3**	**YTL/M3**	**YTL/M3**	**YTL/M3**	
İzmit	894,72	715,78	0,00	1,29	717,07	129,07	846,14	03/03/2007
İzmir	894,72	715,78	0,00	1,29	717,07	129,07	846,14	03/03/2007
Kırıkkale	907,42	725,94	0,00	1,29	727,23	130,90	858,13	03/03/2007
Kerosene			**YTL/M3**	**YTL/M3**	**YTL/M3**	**YTL/M3**	**YTL/M3**	
İzmit	894,72	715,78	760,50	1,29	1.477,57	265,96	1.743,53	03/03/2007
İzmir	894,72	715,78	760,50	1,29	1.477,57	265,96	1.743,53	03/03/2007
Kırıkkale	915,89	732,71	760,50	1,29	1.494,50	269,01	1.763,51	03/03/2007
Batman	922,95	738,36	760,50	1,29	1.500,15	270,03	1.770,18	03/03/2007
Diesel 7000			**YTL/M3**	**YTL/M3**	**YTL/M3**	**YTL/M3**	**YTL/M3**	
İzmit	852,19	720,10	834,50	1,27	1.555,87	280,06	1.835,93	31/03/2007
İzmir	852,19	720,10	834,50	1,27	1.555,87	280,06	1.835,93	31/03/2007
Kırıkkale	893,96	755,40	834,50	1,27	1.591,17	286,41	1.877,58	31/03/2007
Batman	893,96	755,40	834,50	1,27	1.591,17	286,41	1.877,58	31/03/2007
Diesel 50			**YTL/M3**	**YTL/M3**	**YTL/M3**	**YTL/M3**	**YTL/M3**	
İzmit	876,60	740,73	927,00	1,27	1.669,00	300,42	1.969,42	31/03/2007
İzmir	876,60	740,73	927,00	1,27	1.669,00	300,42	1.969,42	31/03/2007
Kırıkkale	918,40	776,05	927,00	1,27	1.704,32	306,78	2.011,10	31/03/2007
Fuel Oil 4			**YTL/TON**	**YTL/TON**	**YTL/TON**	**YTL/TON**	**YTL/TON**	
İzmit	566,07		476,00	1,42	1.043,49	187,83	1.231,32	30/03/2007
İzmir	566,07		476,00	1,42	1.043,49	187,83	1.231,32	30/03/2007
Fuel Oil 6			**YTL/TON**	**YTL/TON**	**YTL/TON**	**YTL/TON**	**YTL/TON**	
İzmit	435,80		204,00	1,42	641,22	115,42	756,64	30/03/2007
İzmir	435,80		204,00	1,42	641,22	115,42	756,64	30/03/2007
Kırıkkale	442,76		204,00	1,42	648,18	116,67	764,85	30/03/2007
Batman	442,76		204,00	1,42	648,18	116,67	764,85	30/03/2007

Source : www.tupras.com.tr