

TURKEY INSIGHT

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Eser Özdil

Option to divert whole Shah Deniz gas to Turkey

The difficulties experienced during the construction of the TAP pipeline project in Italy has brought to the agenda the option of selling 10 bcm natural gas to Turkey, which will be exported to Europe via this line.

(Emre Ertürk – 30 March 2017) The partners of the Shah Deniz Phase II project are trying to overcome the olive tree barrier in front of the TAP pipeline that will reach Italy by following the route of the Azeri gas to TANAP through Europe, Greece, Albania and the Adriatic Sea. The 878 km long TAP line has become one of the most important obstacles in front of the olive trees in Puglia, a region in

southern Italy.

According to reports published on international media, Shah Deniz partners are working on alternative routes. Among these options, if TAP fails to carry Azeri gas to Europe, an option to sell TAP gas to Turkey is also discussed by the partners. Highlighting relatively high gas purchase prices of Turkey with respect to Italy also warms up this option. ⇒ Page 2

Details appear in YEKA Wind tender

Enerji IQ has obtained the major details of the specifications of the wind YEKA tender, which will be carried out this year for 1,000 MWe wind installed capacity and a turbine factory to be established in Turkey.

(Enerji IQ - 29 March 2017) Preparations for the specifications of the YEKA tender for the establishment of a wind power plants with a capacity of 1,000 MWe, is one of the hottest topics in the Ministry of Energy. According to the information obtained from the Ministry, the specifications of the tender is closed to the conclusion phase and expected to be finalized in April.

Based on the tender specifications, the proposed power of the wind plants to be

installed in each nominated YEKA will not be less than 50 MWe. At least 500 MWe of the total 1,000 MWe capacity will be established in the "Edirne - Kırklareli - Tekirdağ" connection area to secure the peak demand of Marmara Region. Each wind turbine will have a minimum 65% of localization rate and the turbine factory will be located within the borders of the Republic of Turkey (excluding free zones), with a production capacity of at least 150 units / year wind turbine in a single shift. ⇒ Page 3

Minister Albayrak launched National Energy & Mining Policy

The National Energy and Mining Policy covers various titles such as natural gas, mining, oil, nuclear, electricity generation from domestic resources.

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Preparations to amend Natural Gas Market Law of Turkey

Preparations are underway for radical changes to be made in the Natural Gas Market Law, which was in effect since 2001 with only minor changes.

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of the olive trees in Puglia, a region in southern Italy.

TAP project partners will transport 230 olive trees on the route to the shore of the pipeline to another region, and the deadline for the first phase will be 30 April 2017. Later on, approximately 2,000 trees on the

8 km route in Italy will need to be moved.

An intensive work on the timely transport of trees is ongoing, and if it is not timely completed, it is stated that the TAP project, which comes back 1 year according to the initial schedule, may be delayed by at least 6 months.

Turkey option is also on the agenda

According to reports published on international media, Shah Deniz partners are working on alternative routes. Among these options, the TAP project is heading north in Albania and turning to Montenegro, Bosnia and Herzegovina and Croatia. Another option is to transport gas to Bulgaria, Romania and Ukraine via reverse flowing Trans Balkan (West Line) line, which currently transports Russian gas to Turkey.

According to the news and comments in the international media, if TAP is not realized, then the third option is to sell TAP gas to Turkey.

This option coincides with theories

that will be produced in the Shah Deniz Phase II and that the entire natural gas to reach 16 bcm per year during the plateau period will be sold to Turkey. In this context, comments are being made that Turkey may want to increase the proportion of Azeri gas to reduce the 55% dependence on Russian gas. Also the same news sources claims that Turkey has given priority to the construction of 52 inch section up to Eskişehir, where TANAP will have the main exit point, and 48 inch section from Eskişehir to Greece border is "slightly delayed".

Among the comments, Shah Deniz's partners are also saying that they may

want to sell the entire gas to Turkey because of low gas prices in Europe. The arguments in this regard are also supported by prices. The price of the Azeri gas in Italy is calculated as at least USD 240/000 m³ (6.66 USD/MMBtu) after the transmission fees of the South Caucasus line 30 USD/000 m³, 103 USD/000 m³ for TANAP and 70 USD/000 m³ for TAP), which the final price at Italy is higher than gas prices in Europe, which are currently lower than USD 5/MMBtu.

Turkey's first contract with Azerbaijan to supply 6.6 bcm/year gas to Turkey will expire in April 2021.

Will TAP carry Russian gas instead of Azeri gas?

Russia has changed its regional dynamics, bringing the Turk Stream project to the agenda and being a stakeholder in the Southern Corridor, which aims to create supply diversity in Europe with non-Russian resources.

In an explanation made by the Italian national energy company ENI, ENI Chief Executive Claudio Descalzi and Gazprom Chief Executive Alexey Miller on March

21, 2017 met in Moscow to evaluate the possibilities of cooperation for the development of the southern corridor, which will lead Russian gas to Europe including Italy. It has been reported that they have signed a Memorandum of Understanding with the declaration of the renewal of Russian natural gas supply contracts and the evaluation of partnership options in the LNG sector.

This development highlights the TAP option to be filled by the second pipeline of the Turk Stream project.

If Turkey purchases 10 bcm of natural gas in addition to the 6 bcm of gas from TANAP, it is possible to Gazprom to push Europe to fill TAP with Russian gas which will be fed by the second line of Turk Stream.

Specification details appear in YEKA Wind tender

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The basic principles of the tender will be as follows:

EIA and Other

- YEKA 's will be informed by the Ministry about the environmental plans and development plans to be processed privately and will carry out the procedures for the public final decision on the required wind plant projects.
- Acquisition of EIA reports and similar permits required for wind plants and Factory and necessary changes in case of need will be the responsibility of the winner, the wind plant company or the factory company, according to the interest.

General conditions

- The proposed power of the wind plants to be installed in each nominated candidate YEKA will not be less than 50 MWe.
- Applications to expand electrical capacity of the wind plants will not be accepted.
- A letter of guarantee amounting to US 10 million will be included in the application file, fully and partially in cash.
- Winner of the contest, will provide a letter of guarantee of US 100 million before the signing date of the contract.
- For the wind plants to be established in each YEKA, the duration of preliminary license is 24 months and the maximum construction time is 36 months.
- A spatial increase will not be provided for the YEKA's and the location of the plant site components will not be located outside YEKA.
- The price to be generated at the end of the competition will be valid for 20 years from the date of signing the contract.

Company and JV procedures

- The direct or indirect partnership ratio of the Technology Provider shall not be less than 20% and the direct or indirect ownership of the Turkish Republic citizens shall not be less than 20% in the company to be contracted.
- In case of participating in the competition as a consortium, the direct or indirect partnership structure of the Technology Provider Consortium (Factory Company) that will be a party to the contract shall be provided by the requirements of the Technology Provider; the Technology Provider shall have at least 51% partnership directly or indirectly in this company and the Investor Partner of the Consortium) At least 25% of the direct or indirect total shares belonging to the citizens of the Republic of Turkey.

Candidate YEKA's and Connections

- The winner will designate candidate source areas (Candidate YEKA) by conducting necessary energy analyzes and economic studies on the basis of connection zones and will provide it to YEGM within 90 days from the date of signing of the contract.
- Candidate YEKA's suitability will be assessed by the Ministry and appropriate areas will be declared as YEKA.
- Candidate YEKA's will be recommended to have a total capacity of at least 1,000 MWe for the regional connection capacities to be specified on the specification.
- The total installed capacity of wind plants to be installed at YEKA in "Edirne - Kırklareli - Tekirdağ" connection region will be at least 500 MWe.

Declaration of candidate YEKA

- In case the candidate YEKA's are declared as YEKA in the Official Gazette, the work schedule will be presented to the YEGM, which will be established at each of the YEKA's and the wind plants capacity to be settled annually in this connection zone. Progress reports in line with the work program will be presented on a quarterly basis.
- YEGM will evaluate the proposed Candidate YEKA's according to project priority number and complete within 120 days of the proposal date.
- Candidate YEKA will be asked for opinions of related institutions and organizations regarding whether there are places where wind plants establishment can not be allowed within the scope of the related legislation. Additional information and documents that may be requested by the institutions and organizations that are asked for their opinions will be presented by the wind plants company within the period given by YEGM.

R&D Activities and Budget Obligations

- The plant company will carry out R&D activities within 10 years from the receipt of the AR-GE center installation document within the boundaries of the Republic of Turkey (excluding free zones) and within the framework of R&D plans.
- The establishment of the R&D center will begin within 1 year from the date the contract is signed, and the installation will be completed within 21 months at the latest.
- At least USD 2 million for the first year; at least USD 5 million for the second year; and at least USD 10 million for each subsequent year, excluding the annual budget, fixed assets and machinery-equipment investments of R&D activities.
- At least 100 full-time technical personnel will be employed at the R&D center to be established.

Connection obligation for Edirne - Kırklareli - Tekirdağ region at Tharce Basin

- At least 500 MWe of the total 1,000 MWe capacity will be established in the "Edirne - Kırklareli - Tekirdağ" connection area.

Wind Turbine Manufacturing

- All of the wind turbines will be manufactured with a minimum wind turbine power (electrical power) of 2.4 MWe in accordance with modern technology and the relevant IEC 61400 series of standards.
- Any part of each wind turbine to be specified shall be produced in facilities to be procured from domestic manufacturers or to win the competition or to be installed by the factory company within the borders of the Republic of Turkey (including free zones).
- The competitor will have manufactured the main component of the wind turbine with a total cumulative capacity of 2,000 MWe from 01/01/2014 until 31/12/2016.
- The wind turbine will have a minimum 65% of localization rate.
- The factory will be located within the borders of the Republic of Turkey (excluding free zones), with a production capacity of at least 150 units / year wind turbine in a single shift.
- Factory installation and commissioning will be completed within 21 months from the date the contract is signed and turbine production will begin. The plant will be operating until the capacity allocated for the entire wind plants is produced.

EMRA proceeds with FSRU license applications

The processing of storage license applications made by Aygaz and Maks Proje to the regulator EMRA for FSRU is ongoing. EMRA recently announce the land coordinates for Aygaz's application at Aliğa district of western city İzmir.

(Enerji IQ – 7 April 2017) The licensing process for the FSRU (Floating LNG storage and gasification unit) investments, which was opened with the regulation of EMRA in March last year, is continuing. According to the information received by Enerji IQ from EMRA, the authority is currently evaluating two license applications made by the private companies Aygaz and Maks Proje. According

to the licensing procedure of the gas market legislation, EMRA announced the coordinates of the land for Aygaz's application. According to the procedural announcement, the land is located in the Aliğa district of the western city İzmir, closed to Tüpras refinery.

Aygaz is known as the flag ship of the idea to bring FSRU investments to the agenda of Turkey in the last 5 years.

The applicant of the Maks Project Company, to connect an FSRU to the grid at Yalova city on the east coast of Marmara Sea, is in the process of review and evaluation.

Sources from EMRA also told Enerji IQ that state owned BOTAŞ has not yet applied EMRA for the FSRU project on East Med. coast of Turkey, which already exists in BOTAŞ's 2017 investment program

BOTAŞ builds a new gas pipeline between the cities Afyonkarahisar and Bursa

An expropriation decision was taken by the Cabinet for the gas pipeline that starts from the city Afyonkarahisar and reach to Bursa, following the route of Kütahya and Bilecik.

(Enerji IQ – 6 April 2017) The Council of Ministers, decided to expeditious expropriation for the natural gas transmission line to be constructed between Afyonkarahisar and Bursa. The line will start from Afyonkarahisar's Çay district and will end at the Seçköy region of Bursa's Gürsu district.

A BOTAŞ official informed Enerji IQ that the connection line will enable BOTAŞ to easily manage the peak demand of Southern Marmara Region via withdrawing gas from Central-Western.

Preparations to amend Natural Gas Market Law of Turkey

Preparations are underway for radical changes to be made in the Natural Gas Market Law, which was in effect since 2001 with only minor changes, to adopt the changing market conditions.

(Enerji IQ – 6 April 2017) Ministry of Energy and the regulator EMRA boost up the preparations for radical changes to be made in the Natural Gas Market Law no. 4646. Among the views requested by the Ministry of Energy from public institutions and organizations, the critical role will be the proposals forwarded by the regulator EMRA. The EMRA Natural Gas Market Department, which has a large share in the Board Decisions that have succeeded

in expanding the narrow scope of the Law, is continuing its preparations for these proposals.

According to the information obtained by Enerji IQ from the EMRA sources, EMRA presented its first opinions to the Ministry in a conceptual perspective.

Among the suggestions are the following:

- Release of imports
- Incentives for the investments related to energy security
- Identification of a market-pricing mechanism without subsidy
- Restructuring of BOTAS as two different legal entities as transmission and trade
- Adopting a volume release program for BOTAŞ and updating the market share limit of BOTAŞ

Prime Ministry issued a Circular to accelerate Turk Stream Project

The Turkish Prime Ministry issued a Circular and stated that the transactions to be made by the public institutions and organizations regarding the Turk Stream Project should be completed quickly. It was emphasized that BOTAS will build and operate the line that will feed the Turkish grid.



(Enerji IQ – 5 April 2017) Turkish Prime Ministry issued a Circular to speed-up the procedures for the Turk Stream Project, which was initiated by the intergovernmental agreement signed by Russian Federation and Republic of Turkey, on October 10, 2016. The Circular on the acceleration and coordination of the project was published in the Official Gazette dated 5 April 2017. Previously, a similar circular was issued for TANAP.

Circular highlighted that the South Stream

Transport BV will carry out the activities related to the design, construction and operation of the two pipelines located in the sea section of the Turk Stream Gas Pipeline Project, which will consist of four lines to be laid on land and at sea. BOTAŞ will build and operate 'land section 1' which will take place in the territory of Turkey and meet the demand of Turkey.

The activities of the 'land division 2' sector of the project to transmit gas to Europe, will be carried out by a joint company that will be set up by the two countries in the coming period.

According to the Circular issued by the Prime Ministry, it was noted that the applications and transactions to be made by public institutions and organizations should be completed quickly within the scope of the project.

In the Circular, it was requested that a public entity to be appointed as a land rights organization, BOTAŞ and South Stream Transport BV, and all relevant public institutions and organizations should be given the necessary contribution and support.

BOTAŞ announced tender for capacity expansion of N. Marmara u/g storage



BOTAŞ announced the tender to increase the injection and withdrawal capacities of the Silivri and Değirmenköy reservoirs of the Northern Marmara underground natural gas storage facility.

(Enerji IQ – 5 April 2017) BOTAŞ announced the tender to expand the Northern Marmara underground natural gas reservoir's injection and withdrawal capacities, which consist of Silivri and Değirmenköy off-shore depleted fields (Phase III).

The project to be financed by the European Investment Bank is expected to be completed in October 2017 - December 2020 period.

The project covers the establishment of new ground facilities with 30 mcm/day injection and 50 mcm/day withdrawal capacity, two fixed

sea platforms, two support wells with these platforms, 20 offshore wells opening for storage, closure of 5 existing wells and dismantling one of the existing platforms.

Pre-qualification applications for the tender will be submitted to BOTAŞ by e-mail until 20 April 2017.

Minister Albayrak launched National Energy and Mining Policy



Minister of Energy and Natural Resources Berat Albayrak declared Turkey's National Energy and Mining Policy. The National Energy and Mining Policy covers various titles such as natural gas, mining, oil, nuclear, electricity generation from domestic resources and domestic coal.

(Enerji IQ – 6 April 2017) Minister of Energy and Natural Resources Berat Albayrak explained the National Energy and Mine Policy. Minister Albayrak, gave important headlines in his statement and said, "Last year, we achieved the highest electricity generation rate by using domestic sources to reduce the portion of the imported sources, in the last 15 years. But it is not enough."

Minister Albayrak stated that the basis of the National Energy and Mine Policy

consists of two elements. Albayrak, who said that these elements are "strong economy and national security", explained that "if you manage the dependency strategy in energy, you will open a window to such a strong foreign policy."

The editors of Enerji IQ compiled the statements of Minister Albayrak which are related with the Turkey's energy policies and strategies:



'Our target for electricity generation from domestic source is 2/3'

"In areas where we are dependent on imports, we have the highest rate of domestic electricity generation in the last 15 years last year, at the point of increasing domestic resources. But the target is at least two-thirds of the generation to be achieved by domestic sources."

Domestic Coal

"We have experienced the highest increase in utilizing the domestic coal. Investments are ongoing. Rate of local sources in electricity generation is 50 percent now. As a result of our exploration drilling activities in the last 10 years, we have reached more than 15 billion tons of coal reserves. Within the energy supply and demand balance, we will start the process with an environmentalist approach with an intensive investment strategy, which is the most important of our domestic resources."

FSRU investments

"We said we have to strengthen the LNG infrastructure. I pushed the button to do so... After two years, we will increase the existing 43 mcm/day entry capacity of LNG to 107 mcm/day. So what's the next step? FSRU sub-structure... We have launched the floating LNG terminal in December with a record level short commissioning period. The second FSRU will be commissioned by the end of this year and third one will hopefully be commissioned next year at Marmara Region."

'We will reduce energy imports with national energy'

Why national energy? The average cost of importing energy in the last 10 years is 44 billion dollars to my country. We have imported approximately 55 billion dollars of energy, importing minerals.

Pipelines

"When we look at the picture; we are a country where 10 pipelines are on the field. 8 of them are natural gas, 2 of them are oil pipelines. This situation puts a political responsibility on you."

Natural Gas Storage

"If we need to prepare an infrastructure at the point of security of supply, we said that we do not have a day to lose in the storage and we opened the Salt Lake facility."

Localization and Solar Energy

“Our second important priority is the localization... We have realized the domestic solar contract. The result is very pleasing. With the tender in March, the cost fell by one third. But more importantly, the PV panels will have 60% localization rate in the first year and 70% in the following year.”

Exploration and Production

“This year we will carry out active drilling activities in our seas, two in the Black Sea and two in the Mediterranean each year with a new exploration drill ship. The second seismic exploration ship will use the seas more active”

Mining Exploration

“In 2002, MTA was drilling 32 thousand meters. But now, we figured out 300,000 meters. This is not enough; our 2017 target is 1 million meters, which is also not enough. We planned to go up 2 and 3 million meters. Turkey is a country behind the world average at the point of exploration of total natural resources. If you look at the frame of the drilling picture of Turkey map, you will reach much bigger reserves than you have. Together with this target, public and private, we will reach 6 million targets to go beyond Canada and Australia.”

Mine Exploration Infrastructure

“Mining in Turkey has great potential. Partnerships will be established through MTA-private cooperation and we will launch a process at the point of regional exploration. Mining will carry Turkey far beyond its added value. What do you need for this? Turkey completes the geophysical map in 2018. We will see the entire geography of Turkey, from the vegetation cover to the topographical structure, by taking the x-ray and seeing the resources of mining. The next step is the map of geochemistry. We've had great results.”

Wind YEKA Tender

“After successfully taking this step in solar energy YEKA tender, now we are focused on the huge wind power plant tender and sent the specifications to the global investors. Our schedule for wind YEKA (renewable energy source area) is to realize before the end of this summer.”

10% target at nuclear capacity

“We are currently negotiating for the third nuclear power plant project while prioritizing the Akkuyu project. We are in a position to realize the nuclear power quickly and reach a 10% capacity.”

Oil Storage

“Turkey is not at the sufficient level of oil storage. The target is 5 million tons of storage capacity. With a very fast geographical positioning, we will pass this step for the sake of Turkey's internal problems in the least possible crisis.”

Akmercan to pay TL 750,000 for Artvin's gas distribution license

Akmercan Company won the second stage of the auction for the North Eastern city Artvin's natural gas distribution license with TL 750,000. The auction at first step was finalized with 0 Krs/kWh distribution fee.

(Enerji IQ – 4 April 2017) The natural gas distribution license tenders, which were initiated by EMRA on 13 June 2002 for Kayseri, ended with the second stage of the Artvin tender on Tuesday 4 April 2017.

The first contest was held on March 27, 2017 and Akmercan and Arsan companies were offered a quota of 0.0 Krs/kWh as the distribution fee.



EMRA Vice President Mehmet Ertürk presided over the commission of the tender commenced on the license purchase price of 74,600 TL.

On behalf of Arsan, Managing Director Yaşar Çıkış and for Akmercan, General Manager Yunus Kesgin attended the auction, which started with TL 5,000 bidding range. Later, the parties started to increase the

license fee by TL 25,000.

The tender was finalized after Akmercan's bid of TL 750,000.

Subscribers at the North Eastern city Artvin, located on Turkey – Georgia border, will only pay the pass-through natural gas cost of the Akmercan distribution company for the first 8 years, as the company offered 0.0 Krs/kWh as the distribution fee.

TAEK adopted regulation for nuclear power plant operation

The Turkish Atomic Energy Authority (TAEK) adopted the regulation setting out the procedures and principles regarding the operating organization in nuclear power plants, personnel qualifications and licenses for training and operating personnel.

(Enerji IQ – 6 April 2017) Turkey is striving to accelerate its nuclear power plant projects and continues to prepare the secondary legislation. In this context, a regulation was prepared by the Turkish Atomic Energy Authority (TAEK), which sets out the procedures and principles

regarding the organization of business in nuclear power plants, the qualifications of business personnel and the licenses of training and operating personnel.

According to the regulation, the operating chief in the nuclear power plants, the control room operator and

the personnel to serve as the turbine operator will have to obtain a license from the TAEK.

The regulation also introduces regulations on the personnel, duties and responsibilities of nuclear power plants.

Different price aspects between Akkuyu and Sinop NPP projects

According to the intergovernmental agreement signed between Turkey and the Russian Federation for the Akkuyu NPP, state owned TETAŞ will purchase the 70% of the electricity to be produced from the units I and II and 30% of the electricity to be produced from the units III and IV of the Akkuyu nuclear power plant. for a period of 15 years starting from the date of commissioning for each unit.

The tariff will be a fixed 12.35 USD cent/kWh including fuel as a 15 year

average. In this tariff, the cap is set at 15.33 USD cent/kWh.

In Sinop NPP project, TETAŞ will purchase 100% of the electricity to be produced for 20 years from the date of the commissioning of each unit. The tariff will be finalized after the feasibility studies. As of the date of the signing of the agreement between Turkey and Japan, it was decided that the 20-year average tariff would be 10.80 - 10.83 USD cent/kWh, excluding fuel.

According to the information

obtained, the upper limit on the mentioned tariff has not yet been determined.

For Sinop NPP project, the project company has not been established yet.

In Akkuyu NPP, negotiations between Turkey and Russian Federation to nominate the Turkish partner of the project is still ongoing. Parties also keep on negotiating the power purchase agreement (PPA) to be signed by the Akkuyu Company and the TETAŞ.

EIA process of Çatalağzı thermal power plant project continues

The evaluation meeting will be held on April 25, 2017 for the thermal power plant project of 160 MW domestic coal-fired power plant planned by DETES Electricity Generation Inc. in Çatalağzı district within the boundaries of Kilimli District of Zonguldak city.

(Enerji IQ – 5 April 2017) The evaluation meeting will be held on April 25, 2017 for the thermal power plant project planned by DETES Elektrik Üretim A.Ş at Çatalağzı site within the boundaries of Kilimli District of Zonguldak.

According to the environmental

impact assessment (EIA) report, the power plant with 160 MW installed power will burn 70 tons coal per hour and 2.8 tons / hour of limestone will be used for Chimney Gas Desulphurization.

The plant is planned to operate at full



capacity for 7,500 hours per year:

Domestic hard coal will be used at the plant and the calorific value will be around 5000 kcal/kg. In the EIA report, the cost of the project was stated as 500 million TL.

New structure for public offering at Enerjisa

Sabancı Holding and E.ON, signed an agreement that creates two distinct companies to manage its distribution and sales business separately from their generation and trading facilities. A public listing of the separate companies might follow in the future.

(Enerji IQ – 24 March 2017) Sabancı Holding and E.ON, the two Joint-Venture-Partners in Enerjisa, signed an agreement that creates two distinct companies to manage its distribution and sales business separately from their generation and trading facilities. It is announced that a public listing of the separate companies might follow in the future.

‘Different market drivers call for specialized energy companies’

Mehmet Gocmen, Chairman of Enerjisa, explained the rationale behind the decision: “Turkey has made significant progress in the liberalization of the electricity market in recent years under the leadership of the Ministry of Energy and The Energy Market

Regulatory Authority (EMRA). Through the years, Enerjisa has contributed to the development of the regulatory environment in the Turkish energy sector, which is performing effectively regarding increased predictability. 20 years ago, we initiated a journey as Enerjisa that has evolved into the largest electricity

company of Turkey. We have carried out 11 billion dollars of this investment together with E.ON, our business partner. In line with our new strategy of ‘Focus’ and through this strategic transformation, we aim to create two strong companies that can fully focus on their respective markets and customer needs.”

‘Strong commitment to the growing Turkish energy market’

Keith Plowman, Enerjisa Vice Chairman stated: “Thanks to the support and commitment of shareholders Sabancı Holding and E.ON, Enerjisa will continue with its plans of profitable growth through these two companies at full force, evaluating growth opportunities and continue to add value to all stakeholders and the Turkish energy sector.”

Enerjisa’s hydroelectric power plant in Doğançay completed

Enerjisa’s Doğançay hydroelectric power plant, established with an investment of 270 million Turkish Liras, will generate 169 GW of electricity per year.

(Enerji IQ – 4 April 2017) Enerjisa’s hydroelectric power plant (HEPP), having started to be constructed at the end of 2011 on the Doğançay Brook in Adana Seyhan Basin is completed. With 62 MW installed capacity and 169 GW of annual generation capacity.

Enerjisa CEO Kivanç Zaimler emphasized the importance they attach to domestic and renewable energy and said, “While planning our investments as Enerjisa, we continue to contribute to the goal of using the national resources for the electricity generation in Turkey”. Stating that by commissioning Doğançay Hydroelectric Power Plant, Enerjisa’s installed capacity in electricity generation was increased to 3.598 MW, Zaimler continued his words as follows: “One of the most important topics for us is the occupational health and safety. This

project is an example of this. During construction, an early warning system was set up in the regulator area in order to detect and prevent possible slip risks in the braes. Through planned and unplanned drills we allowed the system to operate perfectly. All these measures were managed by a professional search and rescue company and the developments on the field were regularly assessed. Our Hydroelectric Power Plant will now operate for the energy of Turkey and I would like to thank everybody who have contributed.”

Doğançay HEPP, which is one of the two projects of Enerjisa opened by tunnel boring machine (TBM) instead of traditional methods and which was constructed with an investment of 270 million TL, started its commercial generation as of March 31, 2017.

Doğançay HEPP, having all the units except for the regulator area are built underground and with this feature it has particular importance within Enerjisa projects. Constructed in 5.5 years, the project consists of a regulator structure with a height of 30 meters, a tunnel of 6.9 kilometers in length and an energy tunnel opened by a tunnel boring machine, a 273 meter tall surge tank, a penstock pipe shaft and a 514 meter long pressure pipe tunnel. Being different from other projects of Enerjisa, the project has a ‘Cavern’ (underground power plant) type power plant which is reached through a tunnel of 70 meters in length. In order to make construction and operation easier, the control of the water from spillway is made with an inflatable weir produced from a special membrane instead of steel covers.

Renewable energy cooperation between Turcas and RWE

Turkey's Turcas signed a MoU with RWE AG and its subsidiary innogy SE to cooperate on renewable energy production projects based on solar and wind energy and energy storage investments, on March 27, 2017.

(Enerji IQ – 27 March 2017) Turkey's well known conglomerate Turcas signed a MoU with RWE AG and its subsidiary innogy SE to cooperate on renewable energy production projects based on solar and wind energy and energy storage investments. There is no time limit with any geographical limitation in the MoU,

According to the Turcas' statement,

MoU will contribute to the realization of the Turcas's medium and long-term strategies in terms of diversification of Turcas's electricity generation portfolio with renewable energy sources, evaluation of innovative investment areas such as energy storage and geographical diversification.

Following the decision of E.ON to leave Turkey at the beginning of 2009,

Turcas signed a shareholders agreement with Germany-based RWE. The Denizli Natural Gas Combined Cycle Power Plant with a total installed capacity of 775 MW was commissioned by the Ministry of Energy and Natural Resources on 22 June 2013. RWE & Turcas South Electricity Generation Inc., a business partner of RWE and Turcas, which owns the plant, 70% RWE and 30% Turcas Petroleum.

Gazprom opens Istanbul office for Turk Stream

Gazprom opened the Istanbul office for the Turk Stream project, following the appointment of Cenk Pala as the Public Relations Coordinator of Turkey to South Stream Transport B.V. in last February.

(Enerji IQ – 29 March 2017)

Gazprom's Executive Committee Chairman Aleksey Miller said that South Stream Transport B.V. opened an office in Istanbul to ensure effective coordination with Turkey on the Turk Stream project.

Miller stated that the Gazprom had progressed in line with the timetable determined in the Turk Stream project and that the project was actively

continuing towards the construction phase.

Referring to the South Stream Transport B.V.'s office in Turkey, Miller said, "A new office was opened in Istanbul to ensure effective coordination with Turkey in the Turk Stream project. It was a very important decision. In this way, all the conditions for the construction of the sea part were achieved in the project."

Explaining that hydrographic researches continue in Turkish land waters, Miller said that the environmental impact assessments of the Turkish Stream pipeline route have also been concluded.

Miller stated that the project will start laying pipes for the sea line, in the second half of this year: "We plan to complete the two planned lines by the end of 2019".

LJUNGSTRÖM received contract for the upgrade of ISKEN's air preheaters

LJUNGSTRÖM, a division of ARVOS Group, has been awarded a contract by Iskenderun Enerji Üretim Ve Ticaret A.S. for the supply and delivery of LJUNGSTRÖM Air Preheater upgrades for the ISKEN Sugözü Power Plant.

(Enerji IQ – 5 April 2017)

LJUNGSTRÖM, a division of ARVOS Group, has been awarded a contract by Iskenderun Enerji Üretim Ve Ticaret A.S. for the supply and delivery of LJUNGSTRÖM Air Preheater upgrades for the ISKEN Sugözü Power Plant, South of Adana, Turkey.

This contract for the upgrade of

ISKEN's air preheaters on the existing 2 x 660 MW hard coal boilers will introduce performance improvements and operation flexibility, in conjunction with the Selective Catalytic Reactor (SCR) retrofits being implemented to improve ISKEN Sugözü Power Plant's environmental efficiency.

Project execution will be performed primarily in Heidelberg, Germany, with

components being supplied through LJUNGSTRÖM's European supply chain.

"We look forward to growing our worldwide footprint of air preheater upgrades and support services into Turkey, by providing our innovative services and capabilities within the thermal power plant community," said LJUNGSTRÖM Heidelberg Unit Managing Director Dennis Yilmazoez.



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How the EU-Gazprom compromise will affect Turkey

The developments in the middle of March relating to the competition investigation opened by the European Commission into Gazprom contain elements which carry the potential to seriously affect the Turkish natural gas market, if not in the very near-term, at least in the few years ahead of us.

For some time, it has been seriously discussed in Brussels that a compromise may be reached between Gazprom and the European Commission in relation to the aforesaid competition investigation, particularly with the heavy pressure from Germany.

These views were no surprise, since last October the European Commission had given off signals of a compromise with the statement that Gazprom may not be given a fine in relation to the investigation and the decision they took concerning Gazprom's being able to use OPAL's extra 30% capacity. This had been reflected in the international press a few days earlier when the EU Commission sent a letter to member states in the name of negotiating the construction of the Nord Stream 2 pipeline.

The content of Gazprom's document containing their commitments in order to bring the investigation to an end has been explained by the European Commission. The Commissioner responsible for competition, Margrethe Vestager, stated that they had begun a market test process that would take in the comments of all shareholders concerning the commitments undertaken by Gazprom. These views will reach the Commission by May 4 at the latest.

If an agreement is reached on the points to which Gazprom has committed and the investigation is brought to an end, Gazprom will have escaped from paying a fine of up to 10% of their total income

globally. This would undoubtedly be a significant achievement.

On the other hand, if Gazprom do not fulfil its' commitments, the European Commission will this time be able to enforce a heavy fine on Gazprom without the need for a new investigation. An outcome similar to this was when Microsoft was unable to fulfil their commitments and had to pay a fine of 731 million dollars.

However, we can see from the international media that negative views in relation to the market test have begun to appear. The Polish state company, PGNIG, has clearly expressed the view that the commitments were seriously insufficient. PGNIG had previously stated that if the Commission did not fine Gazprom, they would take the issue to court.

When we look at the commitments shared by Gazprom, we can see that there had been a step backwards on the points that the company had long insisted upon.

Before going into the details of the commitments, I believe it would be useful to take a look at the details and reasons for the competition investigation being opened in order to refresh our memories. The Commission made a statement in 2011 relating to Gazprom's having acted in breach of the EU's competition rules in the Eastern and Central European natural gas markets, and a competition investigation was officially begun in 2012. There were three main reasons for the opening of this investigation:

1) It had been stated that there being places given in contracts to regulations that restrict cross-border trade, especially physically re-export of gas, was seen as the company imposing its preferences through the misuse of their dominant position.

2) Gazprom's following an, in the European Commission's words, "unfair" pricing strategy.

3) Making natural gas supply a prerequisite to force regional states taking place in large infrastructure projects (generally within the framework of inter-governmental agreements).

If we look at the reality, at the beginning the points we have summarised above were not accepted as competition infringements by Gazprom, and they seriously led with the defence that they were natural provisions for import contracts to contain.

However, because of the development of liquid natural gas trading hubs in Western Europe, market share competition created due to the fall in the EU's gas demands, new gas discoveries, and the rise in LNG supply intensifying even further market share competition, Gazprom had to loosen the structures and regulations of contracts with suppliers. On the other hand, Gazprom understood that while free market conditions were operative they had no rivals and they began to take bolder steps.

So, I shall briefly set out the significant points in the commitments stated on March 13:

■ The most important of the commitments given by Gazprom is that they would not impose restrictions on current or future natural gas import contracts for the delivery of gas or on re-exports to third parties. Additionally, they agree to remove delivery point and sales restrictions (destination clauses) in current contracts within 10 weeks if their commitments are accepted. This

provision is in line with the EU's principle of free trade in gas.

- It is committed to refraining from provisions that impede all interconnected pipelines to be constructed between EU countries, chiefly Bulgaria and Greece, including measurement methodologies. This provision appears to be in line with the EU's principle that natural gas is physically transported by integrating all the markets with each other.
- As another important provision, Gazprom commits to fair pricing within the framework of a transparent methodology in relation to Eastern European countries. Also in this commitment, they agree to make changes to contracts that will permit importer parties to negotiate gas prices and to index price formulas to liquid hubs. This heading, as will be remembered, constituted one of the three main headings of the competition investigation together with the other two provisions committed to above.
- Gazprom additionally commits to making no demands of any kind relating to compensation for damages from Bulgaria due to the cancellation of South Stream.

The commitments briefly summarised above have been put down in an official document sent by Gazprom and will be valid for 8 years. Negative comments relating to the time restriction will arrive since Eastern European countries are at risk of not being able to take steps to diversify their gas supply resources within the time frame given.

Another possible important recommendation is, if an agreement can be reached, the establishment of a committee to follow up whether or not the commitments are being implemented. It is important from the point of view of the process being followed, but the impartiality of committee members and their abilities to protect this will always be under scrutiny.

Even though there is much

disagreement between EU member countries, the point that they will work to achieve in the EU's energy markets is clear: the creation of electricity and natural gas markets which operate within the framework of market mechanisms, and are transparent, competitive and completely integrated with one another.

These principles, which had begun to be expressed in the 2000s, created the basis of an Energy Union strategy, the framework of which was planned by the Polish Prime Minister of the time, Donald Tusk, and officially accepted in 2015. The energy regulations, particularly the 3rd Energy Package, developed within the framework of these principles constituted the legal basis of the competition investigation that was opened into Gazprom.

It is possible to separate the European gas markets into two, according to their levels of maturity. The Western European countries, in which a large majority of the consumption is realised, present a competitive structure, while the Central and eastern European countries, the majority of which belonged to the former Soviet Bloc, are markets without competition, reliant to a large degree on a single supplier:

While the Western European countries, thanks to their developed infrastructure, are physically connected to one another via their interconnected pipelines, the problem of insufficient physical infrastructure is felt in the majority of Central and Eastern European states. This situation was clearly seen in the stress test that was carried out in 2014.

The price of natural gas in Western European states is determined in trading hubs in a transparent manner according to supply and demand, while the countries in the other group import their gas within the framework of long-term contracts which are not transparent and prevent competition.

For these reason, the Eastern European countries, despite being geographically close to Russia, pay more for their natural gas in comparison with those of Western Europe.

Naturally, when they act politically taking into account the wishes of Russia, the gas bills can fall, and when they do not,

they can rise considerably. Ukraine, Poland, Bulgaria, and Romania have tested this at various times. The natural gas market in Turkey presents a situation close to the appearance of the countries in the second group.

The EU is putting into practice a series of projects in order to change this pattern of trade. While working to physically connect the countries within the scope of the CESEC to one another, they are making an effort to create a transparent pricing index through the Balkan Hub strategy. Although each of the projects has serious obstacles in front of them, we can say that they are proceeding comfortably.

Since October 2016, transmission system operators in Eastern Europe, by accepting the nominations of third parties, have begun to include the private sector in the game. A reverse gas flow agreement was signed between Greece and Bulgaria. DEPA has started on a quantity transfer via a virtual platform. The construction process of the Bulgaria-Greece interconnector has officially begun. For this reason, Gazprom's commitments correspond entirely with the EU's market design plans for the region.

If we examine the issue, particularly in the case of Turkey, what gains can the country make in this process? As has been frequently expressed by President Erdoğan and Minister Albayrak in particular; how can this window of opportunity that has been created be evaluated in order for Turkey to become a hub for the natural gas trade and an exporter of natural gas?

I would like to remind you again of a principle: states do not establish natural gas trading hubs. For natural gas trading hubs to be created, states bring in the necessary reforms. The investor enters the market by trusting these reforms, competition is created, and as a result of this competition a transparent price index that reflects the dynamics of supply and demand and is trusted by all parties emerges, and then you become a trading hub. In order for this to succeed, Turkey needs to further liberalise domestic gas market.

Gazprom is currently the main supplier for Turkey and for many Central and Eastern European states. Those who have the knowledge of natural gas import agreements know this well: although import prices are determined

within the framework of price formulas indexed to crude oil and oil products in long-term contracts, the factors that are affected by the formulas being different cause a differentiation of the price of gas that is imported from different countries. However small the factor is, your gas import price falls, however large it rises.

However, in these agreements there are clauses aimed at making the gas price determined by formula in the contract competitive with alternative products or alternative gas resources. If an agreement cannot be reached in the price negotiations held every four years, the party that goes to arbitration generally predicates their argument for a discount on these provisions. In this argumentation, geographical proximity finds a place for itself as a significant parameter. A similar approach, in the case of trading parameters changing as a result of geographical proximity, can also be formulated with the aim of practices being implemented for different countries.

We may understand better why Gazprom's commitments aimed at Central and Eastern Europe are presented in parallel with developments in the markets of Western Europe. Demanding that the commitments aimed at the Bulgarian, Greek, Romanian, and Balkan markets be also implemented for Turkey could be justified in the same manner.

For this reason, there is a benefit also in interpreting Gazprom's commitments for Turkey. Gazprom clearly commits to removing provisions in gas procurement contracts pertaining to delivery points (destination clause) and restricting exports to third parties (re-export).

From Turkey's perspective, this is an important commitment because, in the

current situation, these restrictions exist in all the contracts that have been signed between Gazprom and BOTAŞ and private sector firms. Restricting the physical flow of gas is one of the greatest obstacles in the way of the gas trading hub vision.

It is necessary to change the clauses relating to delivery points in the contracts for natural gas imported via the Western Pipeline within the framework of the Turk Stream agreement. By reading this process well, Turkey must be insistent on the issue of removing these kinds of restrictions from Gazprom aimed at the European markets.

Furthermore, they must develop arguments aimed at shortening contracts periods and making the take or pay rates, that are different for summer and winter months, more flexible by taking into account the load factor that changes depending on the country's gas consumption between the summer and winter months. The specialising of trading hubs and the increase in the level of competition, the increase in competition and the trustworthiness of the price index, and the installation of this trustworthiness and the flexibility of contract provisions are directly proportional.

Another significant point is that Gazprom accepts the indexing of provisions which contain regulations relating to the price in the contracts of Central and Eastern European states to the liquid hubs in Western Europe. In the current situation, the import prices of Western European countries, including Turkey, are cheaper than those in Eastern Europe.

Trading hubs create such absolute transparency in both the creation of price and the pattern of trade that these

provisions bring about both interest and an increase in investors. While Turkey currently follows the policy of creating its own price index under EPİAŞ, during the transition process it may be able to demand that import contracts originating from Russia be indexed to the Western European hubs.

While Gazprom is making commitments to changing the dynamics of trade in the region, why should Turkey not take advantage of this? If such a demand from Turkey is not accepted by Gazprom, the court in the arbitration process between Gazprom and BOTAŞ, which has been continuing since 2015, and that between Gazprom and private sector players will doubtless pay attention to the demands presented to the EU.

It should not be forgotten that although there are nevertheless price revision demand rights sourced from BOTAŞ and private sector importer contracts, this issue has on multiple occasions been made a precondition by Gazprom for the implementation of political processes and projects such as Turk Stream. We have witnessed from time to time the decrease in the quantity of physical gas flow or the leisurely removal/withdrawal of discount rates, the last example of which occurred in January 2017.

In the process ahead of us, it is highly likely that we will witness a positive resolution in prices created between contracts indexed to petrol and hub-indexed contracts in favour of hubs. This window of opportunity that will provide the possibility of changing the pricing methodology in our existing contracts should definitely be evaluated in the most effective manner: