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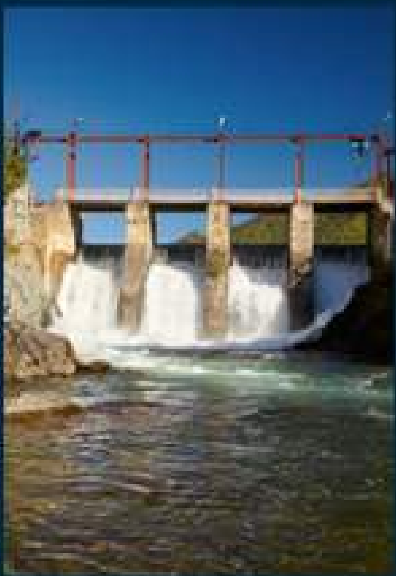



EUCERS Newsletter

European Centre for Energy & Resource Security
Department of War Studies, King's College London

Issue 43
April 2015

Introduction

Welcome to the 43rd edition of the EUCERS Newsletter for the month of April.

This issue's general article section includes one piece by our current KAS fellow at EUCERS, Flavio Lira on Petrobras' current corruption scandal and its impacts on the company's. Our second article is by Eser Özdil, Secretary General at Petform, on the opportunities and challenges of Turkey becoming an energy trading hub or a transit state.

In our Activities section, our current KAS fellow at EUCERS, Flavio Lira, reports from EUCERS' latest event as part of the EUCERS/ISD/KAS Energy Talks Series on "*Kazakhstan as an Emerging Energy Superpower*" that took place on April 20, 2015 at King's College London.

We are most happy to announce that EUCERs, together with the Atlantic Council U.S., ECO Energy Israel and the Konrad Adenauer Foundation (KAS), is organising a workshop on "*Natural Gas Developments in the Eastern Mediterranean: Geopolitical & Economic Challenges*", taking place in Jerusalem on the 19th and 20th of May.
Furthermore, we are delighted to announce that the Konrad Adenauer Foundation will again be funding a *KAS Energy Security Fellowship* for a research stay at EUCERS for the academic year 2015/2016. For more information, please see www.eucers.eu.
Also, EUCERS is conducting its yearly *Executive Energy Seminar 2015* from 13th to 17th of July, at King's College London, under the chairmanship of Dr Frank Umbach, Research Director at EUCERS. The one week seminar will revolve around "*Changes and Challenges in International Energy Markets*".

In EUCERS on the Road we continue to inform you about conference participation and presentations of our members, as well as latest publications.

I hope you enjoy the newsletter!

Justus Andreas
Research Associate and Newsletter Editor at EUCERS, King's College London

In this Month's Edition:

ARTICLES

Image, capitalisation and production: the delicate scenario of post-scandal Petrobras

Flavio Lira

Flavio Lira is a PhD candidate with the Institute of International Relations at the University of Sao Paulo, studying the Russo-Chinese geopolitical partnership for hydrocarbon control in Central Asia. He is also an assistant professor of International Relations at the Federal University of the Pampas in Southern Brazil. At EUCERS, Flavio analyses the current status of the hydrocarbon industry in Brazil.

For the past 12 months, Brazil's national hydrocarbon corporation, Petrobras, has been subjected to extensive press coverage in the country and abroad due to deep-rooted corruption involving the company's high ranks. According to Brazil's Federal Police, a money-laundering scheme operated by business people and politicians may have embezzled US$3.5 billion, part of which came from Petrobras. Some reports state that government allies may also have appropriated much of this money (FOLHA DE SÃO PAULO, 2014). This has caused the company to lose much of its credibility both domestically and abroad. Recently, Petrobras has published its latest audited earnings report, the first since August 2014, amidst a US$95 billion debt burden (LEITE; SAMBO, 24 April, 2015).

According to current police investigations, the NOC's former Head of Supply and Refining (from 2004 to 2012), Paulo Roberto Costa, was the inside accomplice of an embezzlement scheme, working alongside Alberto Youssef, who devised the plot and operated the money laundering making sure involved politicians would receive their share. Costa was first arrested in March 2014 and as investigations continued, the Federal Police would discover bank accounts linked to him in Switzerland. As investigators keep on bringing new evidence to light, heads of the country's biggest contractors (such as Odebrecht, Queiroz Galvão and Camargo Corrêa) have been identified as part of those illegal operations.

This has proved to be a very intricate kickback scheme involving business people and politicians from a wide range of the country's political and corporate spectrum, many of which have close ties with the current administration. Although this does not prove all government officials knew and condoned these illegal activities, an investigation was long overdue. This particular arrangement seems to have involved at least 12 politicians, among state representatives, senators and governors. Refineries in the states of Pernambuco and Rio de Janeiro, as well as in Pasadena (US), which were bought and/or developed by Petrobras, all had signs of illegal overpricing, sometimes up to 10 times their original value. Notwithstanding the clear impact of corruption, the company attributed much of the fall in profits in the third trimester of 2014 to the construction of the Premium I and Premium II refineries in the states of Maranhão and Ceará, estimated at US$1 billion, as well as taxes collected to make up for tax payment errors between 1999 and 2002 (LIMA, 28 Jan. 2015). In early February 2015, Graça Foster, Petrobras' CEO, resigned amidst heavy media coverage of her apparent inability to lead the company towards greater transparency – under strong leadership – in a time of crisis.

It is, therefore, undeniable that Brazil's NOC has been facing a reputation crisis, whose deeper extent is still unknown. To make matters worse, current oil prices are not particularly helpful and the aforementioned US$95 billion burden is in fact massive. The company has announced it lost US$7.3 billion in 2014. As for the impact of corruption itself, the write-down, according to Petrobras, has been US$2.1 billion, along with US$15.1 billion due to overpricing and incomplete projects of refineries (LEITE; SAMBO, 24 Apr. 2015). The much feared risk of default was averted as the company finally published its financial results, thus not breaching rules on its bonds. However, the company's rating remains very low at "BBB-" according to Standard & Poor's (CARRANÇA, 02 Feb. 2015).

The company had lost US$51 billion of its market cap from November 2014 to February 2015 (NUNES; PITA, 01 Feb. 2015) down to US$43.4 billion as of 20 February, according to BMF Bovespa. The company's capacity for quick recovery is still uncertain. After considerable lows in February and March, its market cap has again started to pick up at around US$65.16 billion as of April (Y CHARTS, 24 Apr. 2015); a fair recovery, but still quite far from its better days when it boasted US$300 billion in 2008.

Major international oil companies operating in Brazil have not taken part in this scandal, which seems to relate to Petrobras only. For the domestic consumer, the fall in world oil prices has not resulted in cheaper fuel like it has happened elsewhere and some analysts see this as a result of Petrobras quasi-monopoly in the Brazilian hydrocarbon market. For the past two months Brazilian gasoline has averaged US$1.078 per litre, whereas it has averaged US$0.69 per litre in the U.S., and US$1.31 and US$0.02 in neighbouring Argentina and Venezuela, respectively (GLOBAL PETROL PRICES, 28 Apr. 2015). In fact, the company usually has usually kept domestic prices lower than the world average when global oil prices are high, thus subsidising domestic fuel purchases (in a government attempt to avoid high inflation), whereas consumers tend to pay more when world oil prices are low, thus subsidising the national oil company (this has been the case during the current scandal as the company has not been particularly attractive for its revenues).

In spite of currently being the world's most indebted major oil company, amidst recurring accusations, the company's petroleum output was 2.065 million bpd in the 3rd quarter of 2014, surpassing Exxon Mobil and making Petrobras the world's largest publicly traded petroleum producer for the first time (REUTERS, 08 Jan. 2015). The company has recently announced its March production of crude oil, which increased by 9.5% from March 2014 to 2.1 million bpd in March 2015. Overall, Petrobras' total oil and gas production has grown to 2.57 million barrels of oil equivalent per day, around 10.5% over March 2014 (TREFIS, 17 Apr. 2015). The pre-salt reserves had an increase in production in the past year and although total oil and natural gas production by Petrobras in March is slightly below the December 2014 historical record (at 2.6 million barrels of oil equivalent) there has been little change. Production-wise, seven new offshore fields began operating in the Campos and Santos basins in January. Two FPSOs (Floating Production Storage and Offloading) units were closed in early 2015, although start-ups in Lula and Roncador fields (Campos Basin) have offset those interruptions (PETROBRAS, 19 Feb. 2015).

On the one hand, Petrobras remains highly productive. On the other, its losses may prove difficult to reconcile with its plans of bold expansion of production in the future, particularly in the pre-salt layer. The fact that Petrobras remains a company that is mostly owned by the Brazilian government may, nevertheless, still make it attractive to many investors, especially those who see the release of its 2014 figures as the first step towards revamping its balance and image. The government's quick approach in investigating and punishing those who have been involved in the scandal is a somehow new public move in Brazil, which might suggest more responsible management of state-owned companies in the future. It remains to be seen, however, how fast the company's reputation can be recovered – and what bondholders and shareholders will consider more crucial in the long run: a high market cap or prospects of increasing production. As far as numbers go, it might still be too early to find the interception of both trends in the minds of many hydrocarbon investors.

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Can Turkey be a Central Country for Natural Gas Trade?

Eser Özdil

Eser Özdil has been working as Secretary General at PETFORM since 2012. He holds a BA from Karadeniz Technical University in International Relations Department and MA degrees from Istanbul Bilgi University of Turkey, Department of European Studies, and the Institute Europeen of France, Department of International and European Studies. He wrote his master thesis on "Energy Geopolitics and Turkey's Future Role as an Energy Hub Between Caspian Basin and European Union".

The contents of this paper are the author's sole responsibility. They do not necessarily represent the views of the PETFORM or any of its Members

Wind of Liberalization on Turkey's Energy Markets

The strategy to establish a liberal market economy in Turkey has been associated with structural reforms since the second half of the 1980s, the energy sector not being an exception to this policy when looking at the bigger picture. Within the framework of the liberalization of the market, the establishing of energy supply security had been accepted as a main approach to be achieved via the private sector. The goal "to Become an Energy Trade and Distribution Hub" which will provide more economic and political benefits for Turkey was mentioned for the first time in the "Long Term Strategy and 8th Five-Year Development Plan 2001-2005" published in 2000 although the references regarding the goals to become an "energy transit corridor" and "energy trading hub", which are opposed to each other, are sometimes stated together in official documents published by policymakers and regulatory institutions. Although there has not been significant progress with regards to the natural gas sector in order to accomplish the stated goal over the past 14 years from the year 2000 until now, notably due to its geopolitical position, Turkey has important advantages to become a hub in regional natural gas trade.

Development Phases of Turkey's Natural Gas Market and Liberalization Process

The first commercial natural gas exploration in Turkey was carried out in Kırklareli in 1970 and this first explored natural gas had been fuelled into the Pinarhisar Cement Factory in 1976. The policy to generalise the consumption of natural gas had been adopted to satisfy the energy demand due to increasing energy consumption because of the developed industry and in order to prevent air pollution in the urban centres based on the polluting effects of coal consumption. We can say that there are three major points from the beginning of the natural gas usage in Turkey's economy until now.

The first important major point is the natural gas purchase agreement signed by the USSR and Turkey in the 1986. The beginning of the natural gas trade among the two countries which belong to different political poles caused both the establishment of multidimensional politic and economic relations as well as the policy of dissemination and usage of the natural gas around the country based on its comfort for the household. Between the years of 1986 and 2001, natural gas transmission and distribution infrastructure had been advanced and the construction of LNG terminals was completed, with LNG purchase agreements with Algeria and Nigeria and pipeline gas import agreements having been signed to make natural gas import possible beyond Russia. With the Decree Law No. 397 passed in 1990, the Turkish Petroleum Pipeline Corporation, BOTAS, had secured its monopoly in all segments of the sector for many years.

The second major point has been carried out after the economic crisis in 2000 with the acceleration of the competition and privatization process in the sectors including energy and telecommunication as a result of the negotiations with the IMF. Progress in the energy sector happened fast within the framework of EU Membership aspirations and the programme for alignment with the acquis, as well as the Natural Gas Market Law 4646 having been published in the year 2001 with the purpose of the establishment of a liberal gas market. When it was compared to the conditions of the time, the law spelled out quite assertive targets including the separation of the vertically-integrated structure of BOTAS and the reduction of its market share to 20% and the restriction of BOTAS not to sign any new import contract until it reached the stated level and the distribution activities would be carried out by private companies. Although BOTAS has now fallen behind the 2009 targets, it can be argued that law 4646 facilitated important progress towards the establishment of a market mechanism.

The third major point occurred following the involvement of private sector importers and wholesalers on the market with a total of 4 billion cubic meters contract release tender that took place in the 2007, thereby providing BOTAS Transmission System third party access. A total of 6 billion cubic meters of natural gas import had also been transferred to the private sector in 2012, 1.2 billion cubic meters natural gas import had been started to be carried out by the Turkish branch of the Azerbaijani incumbent SOCAR in terms of the international agreement signed by Turkey and Azerbaijan in 2010. By the end of 2014, a total of 11.2 billion cubic metres were sold through private importers. These volumes were in turn traded by 35 wholesale companies.

approach which allowed BOTAS to conclude long-term contracts has been deficient. As a result, competition in the supply business was not able to develop. Experience gained from other markets showed that the supply business can be made more competitive without endangering the security of the wholesale and trade. The amount of natural gas imported by Turkey has increased, compared to the previous years, to 48 billion cubic meters due to draught in spring months and is a direct result of electricity generated through natural gas plants, instead of hydroelectric plants.

Private importers and BOTAS are importing through long term contracts based on oil prices. Even though import contracts and price formula listed on these contracts are confidential documents, it can be said that 2014 import prices corresponded to price ranges given below, since prices indicated below covered in media are often taken to be as the real prices.

Natural Gas Import Resources, Prices and Supply Security

Year/billion cubic meters	Russia	İran	Azerbaijan	Algeria	Nigeria	Spot LNG	Total
2005	17.5	4.2	0	3.7	1	0	26.4
2006	19.3	5.6	0	4.1	1.1	0.1	30.2
2007	22.7	6	1.2	4.2	1.4	0.2	35.7
2008	23.1	4.1	4.6	4.2	1	0.3	37.4
2009	19.5	5.2	5	4.5	0.9	0.8	35.8
2010	17.5	7.7	4.5	3.9	1.2	3	38
2011	25.4	8.2	3.8	4.2	1.2	1	43.8
2012	26.4	8.2	3.3	4	1.3	2.5	45.9
2013	26.2	8.7	4.2	4	1.2	0.9	45.2
2014	-	-	-	-	-	-	49.8

When Turkey's sources of natural gas supplies are examined, it is seen that natural gas is being imported from five different countries through long term contracts. Apart from these long term contracts, spot LNG import is made depending on the increased consumption, especially in winters. Based on the 2013 end year statistics, 58% percent of Turkey's import is made through two pipelines (Blue Stream and Western Line) from Russia whereas the rest of it comes from as follows: 18% from Iran, 9% from Algeria, 7% from Azerbaijan, 3% from Nigeria and 5% as spot LNG.

While security of supply is one of the most critical subjects for Turkey as much as any developing country, the current

BOTAS Iranian gas import: 468-510 USD/thousand cubic meters

BOTAS Russian gas import (average of Blue Stream & Westward Line): 400-425 USD/thousand cubic meters

BOTAS Azerbaijani gas import: 320-340 USD/cubic meters

Private businesses Russian gas import: 306 USD/Thousand cubic meters

It is important to note that last year the price paid by the private gas sector was on average 25% cheaper than that of

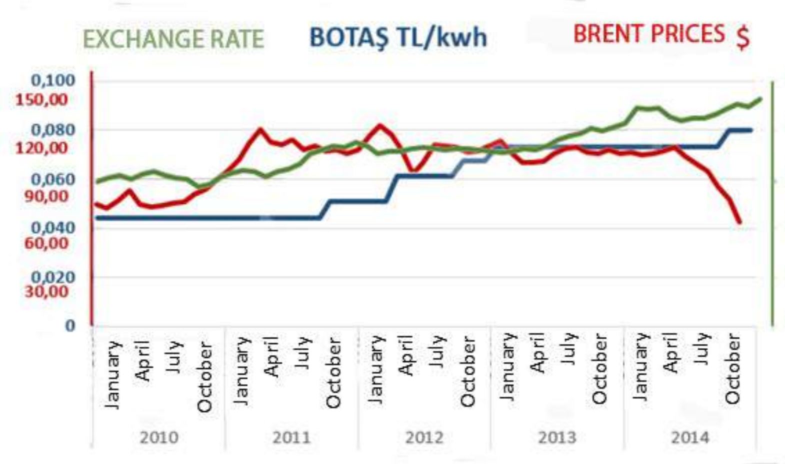
BOTAS. Last year, private importers agreed with Gazprom on a 10% price reduction that lowered an initial importing price of $340.00/1000sm3 to $306.00/1000sm3. This was made possible by the fact that the counterparties agreed on suspending the oil-indexation formula and proceed with a fixed price. The reduction was essential because the Turkish lira had depreciated at the beginning of last year from 2.19 to 2.32 to the US dollar and the private sector need to compete against BOTAS which can afford to sell at subsidised price.

The particular, destructive effects of selling of the imported gas by BOTAS on a price not reflecting the costs on the market will be evaluated in the next chapter. It can be stated that it is an obstacle for private business investments and this situation hardens the establishing of supply security due to its effects of not allowing predictable investment atmosphere and measurable exposure management.

Domestic Market, Supply-Demand and Prices

Natural gas import rates also have a parallel structure in market-share distribution. Currently, 75% of the natural gas wholesale in the domestic market of which is carried out by BOTAS and 25% of it is carried out by private sector companies. BOTAS sale prices are accepted as reference prices by private sector players also because of the fact that most of the activities in the market are carried out within one-year contracts between gas suppliers, distribution companies and free consumers and BOTAS is the dominant player on the domestic market. Because of cross-subsidies which effectively allow BOTAS to sell gas volumes to the final consumers at prices that are lower than its purchase costs, market mechanisms cannot be implemented. The subsidy system also includes the electricity sector which allows end consumers to receive cheaper prices, but which essentially creates market distortions across the board.

Graph 1: BOTAS Eligible Customer Sales Price, Source: BOTAS, Central Bank of Turkey and EIA

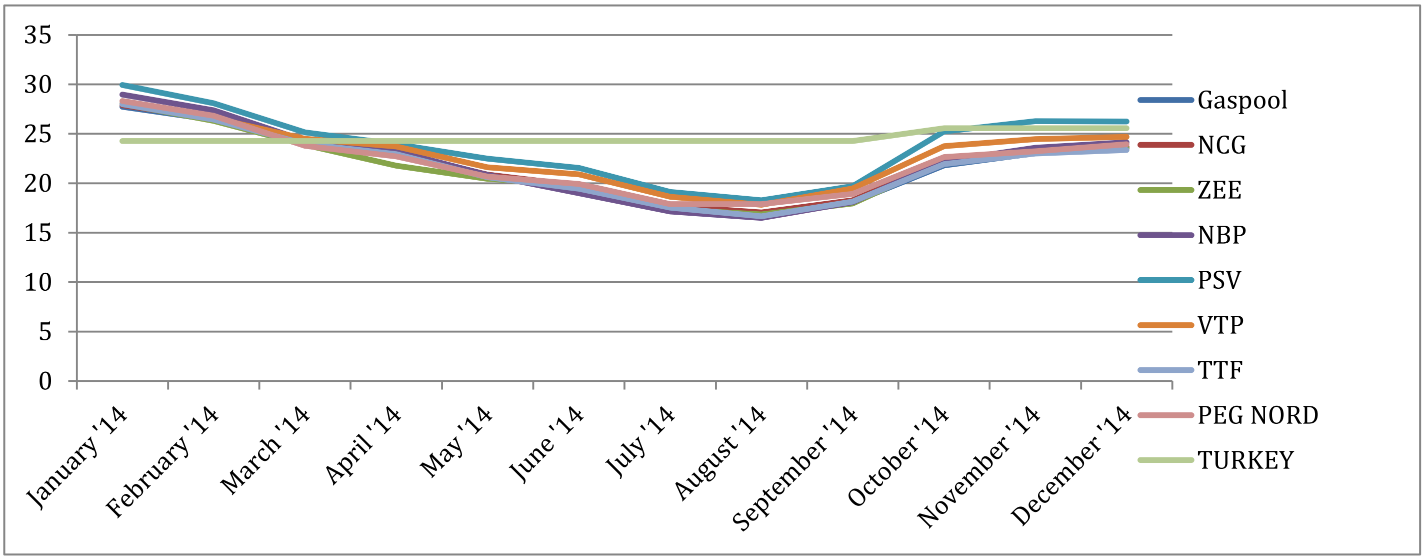


In the Graph 1, natural gas market sale price of the last 5 years, including the year 2014, which are implemented by BOTAS to free consumers have been compared to fluctuations in the exchange rate of dollar and Brent oil prices. Under normal conditions, it is seen that when the balance-sheet of BOTAS gets worse because of the serious increase in the rate or oil prices, there is an increase in the prices on the domestic market, although BOTAS which undertakes its gas import in US dollar as part of long term contracts indexed to oil prices that should determine sale prices regarding the domestic market in terms of changes in these two main parametres.

In Graph 2, BOTAS sale prices were compared against natural gas sale price in European natural gas markets. The EU is carrying out studies regarding development of the natural gas trading hubs which have capacity to work interconnectedly in order to establish the sustainability of energy supply security without any interruption. The main goal of these studies is to provide gas-on-gas competition, thereby activating liberal market mechanisms. In this context, gas will be sold to the consumers at cheaper prices by removing all technical, commercial and legal obstacles which stand in the way of the gas trade. The graph above shows the liquid European hubs NBP (UK) and TTF (Netherlands) but also mid-sized or developing ones such as ZEE (Belgium), PSV (Italy) and PEG Nord (France).

While it is seen that the prices at the different trading hubs in the year 2014 are determined and fluctuated in terms of liberal market conditions, as we mentioned in the previous part, in Turkey the BOTAŞ price remained flat, because there are no market mechanisms for it to respond to supply and demand. As it is, when BOTAS is compared to the other hubs, it has the most expensive gas sale, especially in spring and summer months. In December 2014, although European gas demand had increased with the effects of seasonality, as well as the Ukrainian crisis' impacts, increasing uncertainty on the European natural gas market with the market having priced out these risks, BOTAS sale price only managed to be lower than one European hub price, the PSV, which is the natural gas trading hub in Italy.

Graph 2: Hub Prices ve BOTAS Eligible Customer Prices, €/MWh, Source: ICIS & BOTAS



domestic natural gas market, and the consumers buy gas at the subsidized prices so the other players in the natural gas market do not get to supply cheap gas to these consumers.

One of the issues which should be evaluated carefully is that the UK's and Netherlands' markets which are considered as the most advanced examples of the liberal market mechanism always provide cheaper gas than the other markets to their consumers and they are competitive. It is estimated that by diversifying supply resources, especially ending price implementation which damages domestic market will reduced our country's natural gas import bill in the short and medium term.

How Can Turkey Become A Lead Player In Natural Gas Trading?

The advent of Turkish Stream, a 63bcm/year pipeline designed to carry gas along the Black Sea corridor of the now defunct South Stream, has raised the question whether Turkey could become a lead player in the region thanks to the new supplies of gas. Turkey needs to make important infrastructural changes to achieve these goals. These changes are listed in six topics as follows.

• Passing to Transparent Cost-Based Price Application

The Turkish regulator EPDK ruled on 18 December 2014 that according to the 5362nd board decision, the market's competitive consumers' sales price lists do not reflect the costs except for the residential consumers who consume less than 75.000 sq3 yearly. In addition, BOTAS tariffs draw a different image from fundamental parameters such as fluctuations in foreign exchange rates, seasonal consumer profile shifts, balancing and capacity costs, transportation system costs. In this situation, it is impossible to establish a competitive market because BOTAS controls 80 % of the

• Implementation of Structural Reforms which will allow Reference Price Formation for Region in framework of Turkey's Gas Trading Hub Aim

Structural reforms should be carried out urgently in Turkey with the aim of creating a trading hub spanning its influence in North Africa, the Middle East and Eastern Europe and establishing a reference price for the region. This situation will contribute to our country's market liberalization and will help towards the establishment of supply security of Turkey, the EU and neighbouring countries by integrating different regional markets. The most important issue here is that the legal delivery point should be specified within the borders of the country with a view to establish a reference price. National Balancing Point (NBP) which is being used for virtual trade at the present time or EPIAS which is planned to integrate day-ahead market and balancing gas market are thought to be legally defined delivery points. In this manner and in accordance with global developments July 2015, following the removal of pressures on subsidized gas prices on the domestic market, the implementation of structural reforms can take place because BOTAS import contracts will be affected from decline in oil price with 6 months delay.

• Addition to gas-based price components to Import Contracts

Today, oil and natural gas are not interchangeable commodities, so the prices of these products stay on different levels. Hence, people who work in the natural gas trade do not set the natural gas prices parallel to the oil prices to avoid risks which are hard to manage. Therefore, dependent countries like Germany evaluate import contracts with the exporter corporation. They include natural gas indexes to their price formulations. Turkey should start working on domestic market prices for long term and an affordable international gas index for short term to include in the import contracts at a specific rate.

• Implementation of independent system operator

According to the Third Energy Package published by the European Union and principle of the implementation of independent system operators and analysing of good examples from the UK market, the most important point is that operations are carried out by independent transmission system operators of the physical infrastructure which is the most important element of natural gas market. On the Turkish gas market, BOTAS is the largest commercial player and also operates the pipeline system as a Transmission System Operator. Private sector companies which trade in system are obliged to share information that constitutes trade-related privacy. These situations bring to mind question marks about transparency and their effect on the development of the free market. As in the example of developed countries, the unbundling of trading unit form the transmission system operator as separate and independent legal entities will help to increase competition. Otherwise, restructuring of BOTAS based on of Decree Law No. 233 and ENTSO-G membership will contribute to market transparency and thus, BOTAS will play a much more active role in domestic and foreign markets with a rational management approach.

• Strengthening Physical Infrastructure

A physical infrastructure which is purified from constraints must be formed in order for a well-functioning market. Only under these circumstances, can trading be standardised and carried out freely. If Turkey's transmission pipeline constraints in the network will be fixed by infrastructure investments such as compressors, storage, and LNG plants, Turkey will be made the center of attraction for new investments promoting the market and energy exchange. If necessary, different incentive mechanisms can be evaluated and can be promoted to inclusion of the private sector.

• Establishment of High-End Software Infrastructure

Taking the developed market examples in consideration, there is nothing more important than to have a strong substructure for enterprise usage instead of the mistaken importance on commerce; and strong software infrastructure to keep track of everything in an expeditious way. Therefore, natural gas as the initial trade platform; advanced software technology should be marketed towards market players.

Evaluation

Since 2001, Turkish natural gas market has made important progress to become a free market; however the current situation of the market is not where it needs to be. Accordingly, the main subject to be decided is if Turkey is going to be a main country in the natural gas trade or a transit country for natural gas. When economic and political benefits are considered, becoming a main country for natural gas trade is more beneficial in terms of supply safety and supplying cheap natural gas opportunities. Accordingly, if the private sector's efficient involvement occurs and market's mechanisms become functional, and the infrastructural changes explained above happen. Turkey will step up to become a main county in the natural gas trade, a goal that would coincide with its ambitious to become a political and economic hub.

ACTIVITIES

2nd EUCERS/ISD/KAS Energy Talk 2015

Flavio Lira

On 20 April, 2015 at the River Room at King's College London (KCL), the European Centre for Energy and Resource Security (EUCERS), together with the Institute for Strategic Dialogue and the Konrad Adenauer Foundation (KAS) in London, organized the second event of the "EUCERS/ISD/KAS Energy Talks 2015" on "Kazakhstan as an Emerging Energy Superpower", followed by a panel discussion organised together with the Nazarbayev University and KAS Kazakhstan on EU-Kazakh Relations.

Professor Dr Friedbert Pflüger, Director of EUCERS and chair of the discussion, opened the debate highlighting the importance of Kazakhstan as an emerging energy actor due to its natural reserves of hydrocarbon and its geographical position. He thanked ISD, KAS London and Kazakhstan and also emphasised the importance of the partnership between EUCERS and Nazarbayev University and mentioned future plans of EUCERS, Nazarbayev University and KAS Kazakhstan on establishing a joint energy competence centre based in Astana.

Flavio Lira is a PhD candidate with the Institute of International Relations at the University of Sao Paulo, studying the Russo-Chinese geopolitical partnership for hydrocarbon control in Central Asia. He is also an assistant professor of International Relations at the Federal University of the Pampas in Southern Brazil. At EUCERS, Flavio analyses the current status of the hydrocarbon industry in Brazil.

Kazakhstan's massive oil reserves at 30 billion barrels (the world's 12th largest) and its important natural gas and coal production are one important side of its energy mix, although plans for renewable and greener energy production are being carried out. This rationale underlined most of the workshop and seminar discussions throughout the day.

Mr Hans-Hartwig Blomeier, Director of the Konrad Adenauer Foundation (KAS) in London stressed the importance of the EUCERS/KAS partnership, as well as the EUCERS/ISD/KAS Energy Talks series, as a way to have a relevant analysis of energetically important regions in the world that are usually not in the spotlight (but should). He has also stressed that these kinds of studies and discussions have an important link to European energy well-being and security and are not isolated from global dynamics.

Dr Kanat A. Baigarin, Vice President of the Nazarbayev University and General Director of Research and Innovation System at the NU, praised the cooperation between EUCERS and Nazarbayev University and the future prospects of collaboration.

Mr Federico Tarantini, International Relations Officer at the DG Energy in the European Commission, highlighted Kazakhstan's status as a frontrunner in the region not only concerning its energy scenario but also its handling of the market environment. According to Mr Tarantini, Kazakhstan ranks 12th in the world when it comes to oil reserves and 18th in gas reserves, as well as the world's biggest producer of uranium, accounting for 20% of the EU demand for the metal. The country also relies heavily on coal for domestic power generation and Mr Tarantini spoke about the potential for solar and wind generation in the country. He also highlighted the Memorandum of Understanding signed between the EU and Kazakhstan in 2006, which deals with modernisation of infrastructure and harmonisation in several areas of bilateral relations, such as market conversion and regulatory approximations. This document was a starting point for the more institutionalised framework of EU-Kazakhstan relations and has borne important fruits since then, relevant examples being the Baku Initiative under the INOGATE Programme.

Dr Frank Umbach, Research Director at EUCERS, stressed the geographical characteristics of Kazakhstan which make it prone to challenges, since it is landlocked and very dependent on pipelines for its energy transportation. Dr Umbach also mentioned how the country is not only a great oil producer but also a transit country for natural gas from Turkmenistan and Uzbekistan. The estimated production of 1.7 million barrels per day in 2014 is noteworthy, particularly in light of the development of the Tengiz, Karachaganak and Kashagan fields.

Mr Amos R. Helmsis, Director of the Konrad Adenauer Foundation in Kazakhstan, mentioned the importance of this encounter and how Kazakhstan must be taken in consideration as a growing power and an energy actor. He also expressed his appreciation of a productive meeting jointly organised by EUCERS, ISD and both KAS offices in Astana and London.

Ms Aktoty Aitzhanova, chairperson at the JSC National Analytical Centre of Nazarbayev University, talked about the prospects for energy in Kazakhstan, particularly in the oil sector, presenting both the country's conservative and innovative economic strategies for this production and their impact on national economy and fiscal balance. Ms Aitzhanova presented the history of oil production in Kazakhstan (from 0.6 million barrels a day at independence to the current 1.7 million barrels a day). According to some projections this amount can double in twenty years and keep growing, which might result in rapid depletion of oil reserves. This may have negative impacts in the country's trade balance and export capacity due to falling oil revenues in the medium term. Economic diversification is thus important for the country and oil revenues might be transferred to projects via different routes of investments.

Mr Yerbol Akhmetbekov, Head of Laboratory of Energy, Ecology and Climate at Nazarbayev University, discussed the topic of non-efficient Kazakh energy management. This can be attributed to the harsh geographical and climate conditions in the country, a large territory with scarce population density, which impacts negatively on transport procedures, leading to significant heat and electricity loss. Measurements are still not well applied (metering and statistical) and remaining Soviet technological stock is outdated. The metal industry is also very consuming and drains much of the energy produced in the country.

Ms Aura Sabadus, EUCERS Research Associate and Senior Reporter at ICIS, stressed the links between the Kazakh government and international investors since Kazakhstan's independence and how the country is committed to participating in peaceful world dynamics, as exemplified by the dismantling of its nuclear capabilities in exchange for continued Western investments. Ms Sabadus mentioned how intertwined the European Union and Kazakhstan are, since the former is now the country's main trading partner. She also highlighted that both the country's political-economic elite and international investors must realise world dynamics in Central Asia have changed significantly since the end of the Cold War and the (re)definition of Kazakhstan's relations with the world must be taken up in a constructive manner.

Adiya Belgibayeva, PhD candidate in Economics at Birkbeck University, as well as a Weidenfeld Scholar alumna of the Institute for Strategic Dialogue, discussed Kazakhstan's potential to become a country of transition between the EU and Eastern Asia. One important obstacle for the country's integration with world markets and dynamics is its heavy dependence on oil exports, whose share is still growing in the country's overall foreign trade. Kazakhstan mainly imports goods from the Eurasian Economic Union and not from the European Union, although the latter is the main investor in the country (comprising 50% of its FDI). The bulk of this investment, however, is still in the hydrocarbon sector, although Kazakhstan is in strong need of infrastructure and institutional development if it is to become an important player in trade and energy both in the region and worldwide.

The roundtable discussion was followed by Q&A involving academics, government personnel and business people. The video coverage of our event can be found on our YouTube Channel.

DISCLAIMER

ANNOUNCEMENTS

EUCERS, together with the Atlantic Council U.S., ECO Energy Israel and the Konrad Adenauer Foundation is organising a workshop on "*Natural Gas Developments in the Eastern Mediterranean: Geopolitical & Economic Challenges*".

The event starts on **19th of May** with an evening keynote from Hildegard Müller, former Minister of State in Germany, Chairwoman of the General Executive Management Board and Member of the Executive Board at the German Association of Energy and Water Industries (BDEW) and Chairperson of the Society of German Friends of Yad Vashem, the Center of Holocaust remembrance in Israel and President of the German-Israeli Trade Association.

The one-day workshop focusing on topics such as geopolitical challenges, how natural gas can promote regional cooperation, economic opportunities for the eastern Mediterranean and implications for the U.S. and Europe will take place on **20th May in Jerusalem**, **Israel**.

Partners to the workshop will be the MITVIM Institute for Regional Foreign Policies in Israel, the Truman Institute of the Hebrew University and the Center for Marine Strategy at the University of Haifa.

KAS Energy Security Fellowship 2015/16

We are delighted to announce that this year, the Konrad Adenauer Foundation (KAS) in London will again be funding a research stay at EUCERS, King's College London. The topic of this year's fellowships is: *"From Peak Oil to Oil Glut – What Future for Oil?"*

The Konrad-Adenauer-Foundation funds a 12-month research stay for a European Union (EU) resident research Fellow at the European Centre for Energy and Resource Security (EUCERS) at King's College London. The Fellowship includes a stipend of £28,179, which will pay a monthly stipend of £1,879 for the fellow, university fees and a conference subsistence.

For more information, please visit www.eucers.eu

EUCERS Executive Energy Seminar 2015

The European Centre for Energy and Resource Security (EUCERS) King's College London in cooperation with King's Summer School is offering the EUCERS Executive Energy Seminar (EEES) for the fourth time in 2015. Last year's success of the programme has encouraged us to run the seminar again this year. The one-week seminar titled

"*Changes and Challenges in International Energy Markets*", will take place from **13-17 July 2015** and will again be chaired by Dr Frank Umbach, Research Director of EUCERS.

In order to attend please RSVP to carola.gegenbauer@kcl.ac.uk or call 020 7848 1912 for more information.

EUCERS ON THE ROAD

Our team represents EUCERS at various conferences and events all over the world. This section gives a regular update and overview of conferences and interview contributions by EUCERS Director Professor Dr Friedbert Pflüger, Associate Director Dr Adnan Vantansever and Research Director Dr Frank Umbach.

20.04.2015 London, UK	Frank presented at the EUCERS/ISD/KAS Energy Talks, titled "Kazakhstan's Emergence as an Energy Superpower" on EU-Kazakhstan Relations.
13.04.2015 Hannover, Germany	Frank gave a presentation of the results of his forthcoming joint EUCERS-Alstom study "The Future Role of Coal: International Market Realities vs. Climate Protection', London, King's College, April 2015, 75 pp. at the Hannover Fair.
20.03.2015 St. Gallen, Switzerland	Frank presented on "Energiesicherheit: Aktuelle Entwicklungen in Europa" (Energy Security: Present Developments in Europe") at the "Erdgastagung 2015: Roadmap Gasversorgungsge¬setz" ("Natural Gas Symposium: Roadmap of Gas Supply Law"), at the University St. Gallen
18.03.2015 Vienna, Austria	Frank talked on "Strategic Trends and Challenges of International Energy Security" at the annual NATO Strategic Foresight Analysis Workshop „ Forging the Future Leading NATO Military Transformation", organized by Organized by Allied Command Transformation, Norfolk in partnership with the National Defence Academy

PUBLICATIONS

Prof Dr Friedbert Pflüger and Dr Frank Umbach share with us their most recent publications and interviews:

Friedbert wrote on "EU investigation Gazprom comes at the wrong time" published on April 24 at Energy Post http://www.energypost.eu/eu-russia-energy-dialogue-go/

Frank talked about "No Country or Supplier Group To Stabilize World's Oil Market in Future" with Aygun Badalova, in the News Agency "Trend" (Azerbaijan), on 21 April

Frank gave an interview to Aygun Badalova, titled "Situation of World Oil Market Underestimated" and published in the News Agency "Trend" (Azerbaijan), on 21 April 2015.

Frank spoke on the Russian gas pipeline project Turkish Stream, the role and energy interests of Greece and the European gas market for the Russian news agency "Sputnik", 17 April 2015.

Frank published a chapter on "The Energy Security of Japan after Fukushima 3/11", in: Espen Moe/Paul Midford (Eds.), 'The Political Economy of Renewable Energy and Energy Security. Common Challenges and National Responses in Japan, China and Northern Europe' (Houndmille/Basingstoke-New York: Palgrave-MacMillan 2014), pp. 46-66.

SOCIAL MEDIA

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If you have found our Newsletter interesting, wish to hear more about our activities, or, indeed, contribute with ideas or essays, please contact Carola Gegenbauer, Operations Coordinator EUCERS on carola.gegenbauer@kcl.ac.uk or call 020 7848 1912.

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