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ENERGY SOVEREIGNTY IN UZBEKISTAN: BETWEEN REALISM AND LIBERAL INSTITUTIONALISM

Abstract. 2016 marked the 25th anniversary of Uzbekistan's independence. The article reviews the idea of independence and sovereignty and their link to energy. The author offers some questions to ponder about the balance between interdependence and independence, and the use every country can or should do with their natural resources. Uzbekistan is a hydrocarbons region producer. For this reason, the energy sovereignty connection is understood differently than in countries that are practically net recipients of energy or that are used as transit countries for oil and gas pipelines. The energy crisis of 1973 resulted in an economic crisis in 1974 and in subsequent years. Similarly, the economic crisis of 2008 caused a decrease in world energy consumption, which in turn led to producing countries entering the economic crisis. Experience shows that independence does not mean isolation but maintaining a balanced interdependence in relations with other countries. This article sets out tne argumebts inthiskey.

Key words: Belt and Road Initiative, Central Asia, energy security, energy sovereignty, European Union, Uzbekistan.

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Өзбекстандағы энергетикалық егемендік: реализм мен либералды институционализм арасында

Аңдатпа. 2016 жылы Өзбекстан тәуелсіздігінің 25 жылдығы аталып өтілді. Мақалада тәуелсіздік және егемендік идеяларының табиғат байлықтарымен байланысы жөнінде айтылады. Автор өзара тәуелділік пен тәуелсіздік арасындағы тепе-теңдікті, сондай-ақ әр елдің өзінің табиғи ресурстарын қалай пайдалану керектігін көрсету үшін бірнеше сұрақтарын ұсынады. Өзбекстан елдегі көмірсутегі өндірушісі болып табылады. Сол себептен бұл елде энергетикалық тәуелсіздікпен байланысы мұнай мен газ құбырларын таза өндіретін немесе транзиттік елдерге қарағанда басқаша түсініледі. 1973 жылғы энергетикалық дағдарыс 1974 жылы және кейінгі жылдары экономикалық дағдарысқа әкелді; Сол сияқты 2008 жылғы экономикалық дағдарыс жаһандық энергияны тұтынудың төмендеуіне алып келді, бұл өз кезегінде өндіруші елдерді экономикалық дағдарысқа түсуіне әкеліп соқтырды. Тәжірибе тәуелсіздік оқшаулануды білдірмейді, басқа елдермен теңгерімді қарым-қатынаста ұстап тұруды көрсетіп отыр. Бұл мақала осы дәлелдер баяндалады.

Түйін сөздер: Белдеу және жол бастамасы, Орталық Азия, энергетикалық қауіпсіздік, энергетикалық егемендік, Еуропалық Одақ, Өзбекстан.

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Энергетический суверенитет в Узбекистане: между реализмом и либеральным институционализмом

Аннотация. В 2016 году исполнилось 25 лет независимости Узбекистана. В статье рассматриваются идеи независимости и суверенитета и их связь с энергией. Автор предлагает рассмотреть несколько вопросов о балансе между взаимозависимостью и независимостью, а также вопрос об использовании, которое каждая страна может или должна делать со своими природными ресурсами. Узбекистан является производителем углеводородов в регионе. По этой причине связь с энергетическим суверенитетом понимается иначе, чем в странах, которые являются практически чистыми получателями энергии, или которые используются в качестве транзитных

стран для нефте- и газопроводов. Энергетический кризис 1973 года привел к экономическому кризису в 1974 году и в последующие годы. Аналогичным образом, экономический кризис 2008 года вызвал снижение мирового потребления энергии, что, в свою очередь, привело к тому, что страны-производители вступили в экономический кризис. Опыт показывает, что независимость означает не изоляцию, а поддержание сбалансированной взаимозависимости в отношениях с другими странами. Данная статья излагает свои аргументы в этом ключе.

Ключевые слова: Инициатива «Пояс и дорога», Центральная Азия, энергетическая безопасность, энергетический суверенитет, Европейский Союз, Узбекистан.

Introduction

The Islam Karimov's dead in 2016 marked the end of a cycle, as Uzbekistan celebrated its 25th anniversary of independence. The end of the Cold War changed not only the status of Uzbekistan but also the international system, where every state must ensure the "energy security". Uzbekistan is an oil and gas rich country, but it is also one of the most landlocked countries in the world (maybe the most). That means that it is more difficult for them to put their products into the global market, so some questions arise: Is it easy to keep independence in Central Asia? Is that easier or harder in a hydrocarbons rich country? What kind of future can Uzbekistan expect? It is necessary to look at the neorealist model to understand international relations in Central Asia, especially for the topic of relationship between energy and sovereignty.

Nonetheless, although Churchill expressed his believe based on his experience ("nothing in History was ever settled except by wars"), nowadays international relations must be influenced not by wars (and the underlying competitions) but by peace, dialogue, development and cooperation. The use of energy resources in Uzbekistan can offer a very good chance to prove that History advances relying on peaceful relations among nations.

Energy security. A definition

The "energy security" concept can be defined, according to the IEA (International Energy Agency), as the "the availability of usable energy supplies, at the point of final consumption, in sufficient quantity and timeliness so that, given due regard for encouraging energy efficiency, the economic and social development of the country is not materially constrained". This concept is composed mainly of two key elements: sufficient supplies at affordable prices.

Some authors suggest that this approach of "energy security" is too narrow because it doesn't take into account the point of view of producer states or states of transit, but only that of the consumers. However, such objections must be rejected, mainly because the initial premise is false, not on the basis that they defend the position of producer and transit states, usually underdeveloped or developing states, which are supposed not to need so much energy; but in fact, every state needs energy. Looking for a warranty at the time of payment for selling oil or gas, or the payment for transit rights through the territory of another state, is not a matter of energy security but just the obligation to fulfill the agreements achieved and sovereignty in the international society. Every state is sovereign, which means, among other things, that it has the right to live in the international society on an equal base, so agreements among the parties must be always respected (the *"pacta sunt servanda"* legal principle). This is not an "energy" nor an "energy security" matter but a "sovereignty" one.

Therefore, "energy security", *stricto sensu*, is a concept referred to the warranty given to a state so that it is able to provide to its citizens with enough energy sources needed for the economic development and make it at affordable prices. This concept is measurable (International Energy Agency: 2007, 45-62) and it depends on these two variables: availability (IEA: 2007, 59-62) and affordability (IEA: 2007, 45-59). Moreover, according to *IEA Shared Goals*, there must be a "balance between the '3 Es', namely Energy security, Economic efficiency, and Environmental protection" (UNDP: 2011). So, according to the World Bank, the focus of the state must be to reduce "price volatility or exposure to disruptions in energy supplies" taking into account that "energy efficiency can reduce energy demand, and renewable energy diversifies the energy mix and reduces exposure to fuel price shocks." (World Bank: 2009, 191).

Moreover, from the point of view of the so called "human security perspective", the state must guarantee the energy supply to its citizens, as explained by the UNDP: "In recent years, access to reliable and affordable energy has become a key issue for social exclusion. The major challenge however is more related to affordability and availability of service and less to access." (UNDP: 2011).

On the other hand, "energy insecurity" is "the loss of welfare that may occur as a result of a change in the price or availability of energy" (IEA: 2007, 32). Here, it is important to take into account the market structure, and in particular the extent to which prices are set competitively or not. (IEA: 2007, 32).

In order to ensure energy supply, Governments distinguishes between short-term and long-term actions. Some short-term problems can be energy system disruptions linked to extreme weather conditions or accidents and short-term balancing of demand and supply in the electricity market; long-term problems are usually linked to regulatory failures and to concentration of fossil fuel resources. In this regard, IEA works towards improving energy security by: promoting diversity, efficiency and flexibility within the energy sectors of the IEA member countries; remaining prepared collectively to respond to energy emergencies; and expanding international co-operation with all global players in the energy markets. Among these long-term measures for energy security, the challenges of climate change are escalating positions at the political agenda and the security agenda. (IEA: 2009, 1).

What does independence really mean?

It is necessary to review the concept of sovereignty in order to clarify the role of energy in the new game developing in Central Asian region, especially after (more than) 25 years of independence. After being under Russian role for more than 125 years, Soviet period compressed, Uzbek people had to rule their own country by themselves. Following the modern state-building theorists (i.e., Bodin, Maquiavelo and Hobbes among others), the three elemental functions of a nation-state (Dunleavy and O`Leary: 1987, 2) were to maintain the Security (Rule of Law, Order and Army), to produce Coin (the capacity of coin your own money) and perform the Foreign Policy (the right to live with other countries peacefully in the international society or community). According to this view, contemporary "energy security" is involved in, at least, two of these aspects.

Although the concept of "sovereignty" has changed along the centuries, it remains the basic idea of Jean Bodin that is "the supreme power" inside a territory, an "absolute and perpetual power" (Bowle: 1961, 292), and "inalienable" (Maritain, "The concept of Sovereignty", 50-51).

Of course, this concept of sovereignty offers some problems to the international community, composed of independent, sovereign states. Hans Kelsen tried to solve these problems by underlying the fact that "[…] "sovereignty" of the state means only that the state is not subject to a legal order superior to its own legal order, i.e., the national law." (Kelsen, "Sovereignty and International Law", 119). So, international order is a relationship among equal members (*"inter pares"*). And, again according to Kelsen, "The sovereignty of the state, as seen from the viewpoint of a theory of law, is not a certain amount or degree of real power. Even states which in comparison with the so-called "great powers" do not have any significant power are regarded as equally sovereign as these great powers. The question whether a state is sovereign is only the question of whether one presupposes a national legal order as a supreme order." (Kelsen, 119).

However, in the international field, this sovereignty, this equality and freedom (Krasner, "Rethinking the sovereign state model", 21), is limited by the other's, being necessary instruments such as "balance of power, international law, international morality, and disarmament and arms control […] to preserve order and to prevent the abuse of power in international arena." (Scheleicher: 1962. 354).

Despite those nice theories, our contemporary world and its international relations are based not on equality but on inequality as a matter of fact. For instance, The UN Security Council is a "great power club" where "the maintenance of world order can only rest on recognition of the realities of power relations and the contemporary norms that generally govern those relations." (Gray: 2009, 248).

Apart from the three functions of the nation-state building mentioned above (Army, Coin, Foreign Policy), sovereignty is usually defined by its four main components: territory, population, resources and a government ruling over them. Inside the component "territory" are compressed the natural resources, being the energy one of them. These natural resources "are among the factors which influence the manner and extent of its involvement in international affairs" and "determine the capability of a state", and therefore, "the capacity to attain an end. Capability is relative, and depends on a number of factors, including resources, the consent of other states, and the conditions which prevail." (Scheleicher: 1962, 233).

Said that, natural resources are ambivalent as they can be an instrument to raise the nation's wealth or to impose its will to other nations. Sometimes, natural resources are used to influence the other sovereign state policy, or to guide the behavior of other nation at the international society. The

former is what it is usually called "influence", *id est*, the "ability to exercise restraining or directing control to make a state do what otherwise not do." (Scheleicher: 1962, 233). This influence is a function composed of three elements: the state resources (which it may use to cooperate as well to exercise power); the consent of other states, international organizations, and dependent peoples; and the circumstances under which action takes place (Scheleicher: 1962, 234). And talking about influence, the most important problem in international relations is the "imposition of restraints on the exercise of power", because "the consequences of the abuse of power are very great" and because "the means for regulating it have hitherto quiet deficient" (Scheleicher: 1962, 354). Therefore, the use of natural resources, namely oil and gas in the Uzbek case, can lead to the exercise of sovereignty or to the surrender of it. But "state only surrenders its sovereignty when it becomes subordinate to another state or states, or to some body of persons capable of assuming authority over it." (Middleton, "Sovereignty in Theory and Practice", 153).

The main actors at the international system are "Westphalian sovereign states", *i.e.* unitary rational actors operating in an anarchic setting and striving to enhance their wellbeing and security, constrained only by external environment, that is, by the power of other states (Middleton, "Sovereignty in Theory and Practice", 22-23).. The international order is a reflection of the underlying distribution of power (Ikenberry, "American Power and the empire of Capitalist Democracy", 195). To sum up, states are rational actors sharing the same space (that is, the world) where living together, which must guarantee security and wealth.

Following the neorealist theory, a way to organize the international system is the "balance of power", which is the ability to maintain equilibrium among the different powers in a geographic area (a region or the whole world), as a way to limit and control the behavior of international decision-makers (Scheleicher: 1962, 355). In this way, Georg Schwarzenberger explained the forms of sovereignty in international relations, tabulating them into a simple scale from "absolute supremacy and independence" to "absolute subjection and dependence". The complete scale is, following the absolute supremacy, "relative independence", "interdependence" and "relative dependence". Only these three last are compatible with the international law (Schwarzenberger, "The forms of sovereignty", 163-174), and any interference in internal affairs should be forbidden because interfering in the government of another "is opposed to the natural liberty of nations, by virtue of which one is altogether independent of the will of other nations in its action" (Krasner, "Rethinking the sovereign state model", 20).

The security concept broadened

Many years before the end of the Cold War, some authors were engaged in a discussion on the concept of "security" and the necessity of broadening it or not (Sheehan: 2005). Some authors defended that the *Security Agenda* must be expanded (the "wideners") and others said that security is only a matter of military affairs (the so called "narrowers"). For the purpose of this article, it's useful to keep in mind that security –indeed survival– is the fundamental goal of states, whose distrustful nature drive it to be very sensitive to rely its own security on other states (or even on international organizations, where, perhaps, it cannot play the most important role). Therefore, states are also very sensitive to their relative power position. (Ikenberry, "American Power and the empire of Capitalist Democracy", 194).

Barry Buzan expanded the *Security Agenda* by adding other dimensions to the military one: political, economic, societal and environmental (Buzan: 1991, 19-20). Energy should be included in the economic security, while recognizing the links to environmental security. Looking at recent or significant crisis –such as the "cucumber" or "E.coli crisis" (started in May 2011), the economic-financial crisis (started in 2007-2008), or the "mad cow disease" (started in November 2000)— or those related to energy (supply cut on Ukraine), it's evident that Market is not stable and every little statement on whatever product can cause panic and chaos, generating great damages (for example, the "E.coli crisis" impact in Spain was estimated in around € 200 million per week). Thus, it's clear that every country economy is very sensitive and vulnerable (Kehoane and Nye: 2000).

As stated by Wirtz: "Sensitivity and vulnerability are terms drawn from Robert Kehonae and Joseph Nye's work on complex interdependence. Sensitivity refers to the ability of developments outside national boundaries to influence domestic events in other countries. […] Sensitivities and vulnerabilities now seem endemic across a whole range of issue areas, produced by complex global systems and relationships that are not well understood. The 2008 economic crisis rocked global credit and equity markets as policy-makers and investors alike learned too late about the "risks" that were buried deeply

inside their portfolios". (Wirtz, "A new Agenda for Security and Strategy?", 350-351).

The oil and gas sector in Uzbekistan. Reserves, exploitation and transport

Although there are other energy resources in Uzbekistan, oil and gas are the most important in order to understand the interest of foreign powers in this country. The energy consumption for this country was 40.1 billion kWh in 2009, 145,000 billion bpd (barrels per day) of petrol, 52.6 bcm (billion cubic meters) of natural gas, which represented the main part of country's total energy consumption (86%), followed by oil (11%). That mix of energy consisted of 86.3% gas, 1.9% hydro, 2.5% coal and peet, and 9.3% crude oil. According to the *BP Statistical Review of World Energy* (June 2012), the oil consumption in Uzbekistan felt from 140 billion bpd in 1997 to 88 in 2009, and then the figure increased until 91 in 2011. Meanwhile, Uzbekistan produced 182 billion bpd in 1997 but only 86 in 2011. On the other hand, consumption of natural gas has been maintained (44.1 bcm in 1997 and 49.1 in 2011) as it is the production (50.3 bcm in 1997 and 57 bcm in 2011).

Ten years later (2019), the data were different, with higher degree of consumption because the population growth (from 20 million in 1990 to 32 million people in 2018) and the development of the industry. They consumed 49.07 billion kWh. The Uzbek energy mix was based on oil 2.6 gas 36.6 coal 3.1 and hydroelectricity (1.6). the following table shows relevant data to this topic (BP: 2019):

Table 1 – Energy production and consumption in Uzbekistan 2008-2018

Uzbekistan	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Oil production in thousands of bpd	102	95	78	77	68	63	61	59	58	61	64
Oil Refinery throughput in thousands of bpd	93	88	73	69	62	61	50	57	57	58	70
Natural gas: Production in bcm	61.0	58.4	57.1	56.6	56.5	55.9	56.3	53.6	53.1	53.4	56.6
Consumption of hydroelectricity in millions of tonnes oil equivalent	1.0	1.5	1.9	1.3	1.4	1.4	1.4	1.4	1.2	1.7	1.6
Electricity generation in terawatt-hours	50.2	50.1	51.9	52.8	53.0	54.9	55.4	57.3	58.3	60.3	62.4
Carbon dioxide emissions in million of tonnes of carbon dioxide	103.3	102.9	100.7	107.1	104.0	103.5	108.1	103.1	103.2	107.2	104.3

The major natural gas trade movements 2018 from Uzbekistan were to Russian Federation (5.3 bcm) and to Kazakhstan (2.4 bcm).

The exploration of oil fields in this country started in 19th century (in 1885) and the first natural gas field was in 1953, but the transcontinental pipelines was built later when Gazli gas field found and extortion started in 1962. According to other authors, the first discovery of an oil field in Uzbekistan is assumed to be before 1880 as the Ferghana basin (now rest on three different countries, Uzbekistan, Kyrgyzstan and Tajikistan) was drilled for first time in 1880 and the first important gas discovery was made in 1956 when the Gazlinskoye Field was found in the Amu-Darya Basin in the east (Lujala, Rød and Thieme: 2007, 65; Kulke: 1995, 729; World Energy Council, 2001).

Nowadays there are more than 171 oil and gas fields in Uzbekistan. Most of them (60%) are concentrated in the Fergana Valley and the Bukhara regions. The 60% of the territory of the Republic of Uzbekistan is prospective for oil and gas: Ustyurt Region (110,000 km2.), Bukhara-Khiva Region (44,400 km2.), Gissar Region (4,400 km2), Surkhandarya Region (12,500 km2.) and Fergana Region (17 000 km2). Apart from that, new oil fields have been explored in south western regions, at the Southwest Gissar block in the Kashkadarya region ("Lukoil discovers gas field in Uzbekistan", 2012), in places like Kokdumalak, Shurtan, Olan, Urgin and South-Tandirchi; and the Ustyurt plateau (shared with Kazakhstan) and the Aral Sea have also substantial oil deposits. Gazli, Shurtan, Pamuk, and Khauzak are the major oil fields. The American company *Baker and Hughes* is investing to increase production in the North Urtabulak field and is also trying to develop and explore new fields in Adamtash, South Kemachi and Umid fields. There are

three oil refineries located at Fergana, and AltyArik, although a new and modern refinery has come up in Bukhara. The largest oil reserves in Uzbekistan are located in the Ustyurt Region. In total there are 52 natural gas fields. The Mubarak gas processing plant is the largest in the country. But it is necessary to take into account that "The producing fields in Uzbekistan had been, on average, almost half exhausted and their remaining available reserves had fallen virtually to 50 million tons" (Tereshchenko: 2011).

In 1988 the Uzbek Government created a national Uzbek Company for oil and gas, UzbekNefteGaz (UNG), which is organized as a holding company composed by several subsidiaries: UzgeoNefteGaz-Dobycha (which is in charge of exploration and production of oil, gas, and condensate along with gas processing), UzTransGaz (owns the trunk pipelines and handles gas transportation and delivery), UzNeftePererabotka (owns all of Uzbekistan's oil refineries plus the Shurtan Gas Chemical Complex), UzBurNefteGaz (owns companies that engage in exploratory and production drilling and is the only drilling company in the country), UzNefteProduct (sells oil products within the Uzbekistan territory; it operates on the retail market through its ownership of all petrol stations and on various wholesale markets), UzNefteGazStroy (specializes in building and assembly works in the oil and gas industry), UzAvtoGaz (produces and retails alternative vehicle fuels such as compressed natural gas, CNG, and liquid petroleum gas, LPG) and UzNefteGazMash (groups enterprises producing machinery and equipment for the chemical industry and the oil and gas sector).

Uzbekistan uses some pipelines to bring oil and gas to global markets (Zhukov, "Uzbekistan: a domestically oriented producer", 355-394). The oil pipelines are: the Turkmenistan-Bukhara-Ural (from Turkmenistan to Russian Federation) (Olcott , "International Gas Trade in Central Asia: Turkmenistan, Iran, Russia and Afghanistan", 24); the Pavlodar–Chimkent–Seidi (from Kazakhstan to Turkmenistan); the Chimion–Alty-Arik and the Severny Sokh–Izbaskent (from Uzbekistan to Kyrgyzstan); and the Kanibadam–Severny Sokh (from Tajikistan to Uzbekistan) (European Commission: 2010, 16-21). The gas pipelines link Turkmenistan to China via Uzbekistan, using the Central Asia–Centre (loop line), the Tezedurmysh–Khodzheyli (which links those two cities located near the Turkmen-Uzbek border) and the Turkmenistan–China line. Asia Trans Gas, a joint venture between Uzbekneftegaz and China National Petroleum Company, has been asked to design, construct and operate the Uzbek section of Turkmenistan – China gas pipeline (Watkins, "Uzbekneftegaz, CNPC form Asia Trans Gas joint venture", 2008).

Uzbekistan often uses the Bukhara-Ural 2.300-km pipeline system, built up in 1963-65, following a discovery of a major gas field in Gazli (Uzbekistan), reaching from northern Turkmenistan to Bashkiria and Tatarstan (Russian Federation) and the Urals (Olcott , "International Gas Trade in Central Asia: Turkmenistan, Iran, Russia and Afghanistan", 24).

All these gas pipelines have their origin in Turkmenistan and their end in China European Commission: 2010, 20), one in and the other at Horgos Port in Xinjiang (Xing: 2011; "Silk Road port in Xinjiang to become trade hub", 2011; Kan: 2012). Following the opinion of Stanislav Zhukov: "Uzbekistan's unfavorable geographical location constraints its potential both as an exporter of its own gas to distant markets and as a supplier of transit services. […] Uzbekistan is likely, to one degree or another, to remain dependent on Russia and Kazakhstan for transit of its exports for the foreseeable future" (Zhukov, "Uzbekistan: a domestically oriented producer", 364).

In recent times, it seems that Chinese presence in the region is growing and growing, and it could limit the traditional idea of independence in that region. The Belt and Road Initiative is being used to limit the sovereignty in some other countries such as Sri Lanka (managing some ports built by Chinese companies) and Pakistan (the Gwadar port); in Turkmenistan, for first time since independence, Turkmen people have to pay for their gas consumption (Bugayev and Najibullah: 2018) because almost all Turkmen gas is exported to China (Bhutia: 2019), and that is a matter of Russian concern (Putz: 2019). As bruce Pannier explained:

"Line "D" of the Turkmenistan-China gas pipeline network was to be more than just the largest of four pipelines connecting western China to gas fields in Turkmenistan -- it also would have been the largest single gas pipeline connecting Turkmenistan to any consumer state. Line D was supposed to carry some 30 billion cubic meters (bcm) of gas annually to China. The line took a different route. Lines A, B, and C all went from Turkmenistan through Uzbekistan and Kazakhstan before reaching China. To include all the Central Asian states, Beijing decided to route Line D through Uzbekistan, Tajikistan, and Kyrgyzstan, and then into China". (Pannier, "The End Of The (Gas Pipe-) Line For Turkmenistan", 2017).

The production of those hydrocarbons fields was 86.000 bpd of oil and 57 bcm of natural gas in 2011. The oil proved reserves are the same (0,594 billion

bpd) since 1998 until now, and the natural gas proved reserves are around 1.6-1.7 trillion cubic meters since 1998 (The Titi Tudorancea Bulletin: 2010). In spite of being the second largest of the Caspian producers, Uzbekistan plays only a marginal role in international gas trade due to its high and inefficient domestic consumption. Moreover, though reserves are estimated at 1.75 tcm (thousands cubic meters), remaining reserves are spread among a large number of relatively small fields. And, as remarked by some experts, "Gas savings through greater efficiency in the domestic market could increase the volumes available for export, but a fast growing population and political constraints on gas-sector reforms will dampen this effect." (IEA: 2009, 475-476).

The main international investors in gas sector are Russia's Gazprom and Lukoil and other companies from Malaysia, Korea and China, and their role is likely to remain small relative to state-owned Uzbekneftegaz. In 2002 and 2003 Gazprom set up joint ventures with the national gas companies in Kazakhstan, Kyrgyzstan and Uzbekistan. In January 2003 Gazprom signed contracts with KazTransGaz and UzTransGaz on transiting 38 bcm of Turkmen and Uzbek gas in 2003 at a price of $40 USD per tcm. This contract would allow Gazprom to fulfil its obligations to Ukraine. In August 2003 Karimov agreed to appoint Gazprom operator of its section of the Central-Asia-Centre (CAC) pipeline. These pipelines were laid down after a discovery of the Dzharkak field. Its first section was completed in 1960, the second section reached Tashkent in 1968 and was extended to Frunze (Bishkek) in 1970 and to Alma-Ata (Almaty) in 1971. By the mid-1970s the 13,750-km CAC transmission system had been completed, including four parallel lines from the junction point of Beyneu in northwest Kazakhstan, two lines going northwest to Moscow, and two others proceeding westward across the Volga river to the North Caucasus-Moscow transmission system. Nowadays, CAC system moves gas 1,000 miles from supply regions in Central Asia and has a maximum of 90 bcm per year of gas.

Gazprom and Uzbekneftegaz ("Zarubezhneftegaz and Uzbekneftegaz signed agreement to keep developing Shakhpakhty field", 2004; "Pushing Boundaries "Gazprom zarubezhneftegaz" Sees No Continental Divides", 2009; "Gazprom, Uzbekneftegaz chiefs hold meeting in Moscow", 2010) are exploring and developing joint gas reserves in the Uztyurt region of Uzbekistan since 2003, when Kyrgyzstan and Gazprom signed a cooperation agreement to promote joint efforts to explore and develop oil and gas deposits ("Inogate Partner Countries: Kyrgyzstan", 2011; "Open Joint Stock Company Gazprom", 2011, 120); under this agreement, Gazprom would be buying gas from Uzbekistan and Turkmenistan and then selling to Kyrgyzstan. Under the agreement about 3 bcm of Kazakh gas will be annually sold in European markets through the KazRosGaz joint venture with Gazprom, and Gazprom will be buying gas from Uzbekistan and Turkmenistan and then selling it to Kyrgyzstan. So payments for gas will be made to Gazprom not the Uzbek government, which in the past insisted on charging Kyrgyzstan world prices for gas instead of favourable rates it had initially granted its neighbours ("Open Joint Stock Company Gazprom", 2011, 26).

Table 2 – Natural gas production by country/region in the Reference scenario (bcm) (IEA: 2009, 429)

	1980	2007	2015	2020	2025	2030	2007-2030
OECD	889	1124	1146	1183	1179	1181	0.2%
Non-OECD	648	1918	2249	2495	2817	3132	2.2%
Eastern Europe / Eurasia	480	858	903	958	1023	1097	1.1%
Azerbaijan	n.a.	11	20	33	38	43	6.2%
Kazakhstan	n.a.	30	43	50	59	70	3.8%
Russia	n.a.	646	655	688	723	760	0.7%
Turkmenistan	n.a.	69	86	96	106	118	2.4%
Uzbekistan	n.a.	65	68	70	73	75	0.6%

Diversifying to keep stable the independence

Uzbekistan has energy sources coveted by diverse actors, as EBRD recognizes: "Inflows of foreign direct investment (FDI) continued to increase in 2009-10 to just over US$ 710 million […] mainly concentrated in the energy sector" (EBRD: 2010, 155). This fact makes even more difficult its insertion in the international system and the global markets (IEA: 2009, 475). Thus, being a hydrocarbons producer country can be understood in two different ways: as an opportunity or as a challenge.

Uzbek energy sources are determinant to keep Uzbekistan independent because the Government can create a network of good relationship with Russia, China, India, Iran, EU and US. Three questions remain: Is there enough oil and gas for everybody? Can be those energy resources shared whomever? Are they exclusive? Products are limited and usually consumers do not want to share this kind of products.

But, at the end of the day, what country can warranty more independence for Uzbek people? U.S. and EU usually want to interfere in internal affairs wherever they do business (except in some rich oil countries) although "Europe is becoming increasingly dependent on imported hydrocarbons. With "business as usual", the EU's energy import dependence will jump from 50% of total EU energy consumption today to 65% in 2030. Reliance on imports of gas is expected to increase from 57% to 84% by 2030, of oil from 82% to 93%." (Commission of the European Communities: 2007, 3).

Moreover, according to European Commission, the EU member states must articulate a common Foreign Policy, addressing as a whole sustainability, security of supply and competitiveness: "EU energy relations with its neighbours are fundamental to European security and stability. The EU should aim to build up a wide network of countries around the EU, acting on the basis of shared rules or principles derived from the EU energy policy." (Commission of the European Communities: 2007, 19). The EU needs energy for its development, so "The EU must therefore develop effective energy relations with all its international partners, based on mutual trust, cooperation and interdependence. This means relations broadened in geographical scope, and deepened in nature on the basis of agreements with substantial energy provisions." (Commission of the European Communities: 2007, 18).

Other European institution, the European Bank for Reconstruction and Development (EBRD) complaint about Caspian Sea producers, basically because "Low domestic tariffs, together with slow progress in enterprise restructuring, mean that energy efficiency remains poor", and because Governments are subsiding domestic fossil fuels and nuclear energy, which distorts competitiveness (EBRD: 2010). Despite the efforts made by the Uzbek Government to offer new opportunities for foreign investment in their country, such as the Navoi Free-Industrial Economic Zone, the Navoi FIEZ ("First five enterprises launched in Navoi free industrial-economic zone", 2010) and some others special trade zones, the EBRD complaint about state interference in the industrial sector (EBRD: 2010, 12) and that "the energy sector remains largely unreformed and state controlled and has only recently embarked on a programme of efficiency improvements. Tariff reforms were adopted to ensure cost-recovery but lack proper collection mechanisms, payment systems and discipline". (EBRD: 2010, 154-155). Finally, the EBRD remains concerned in Uzbekistan because the lack of progress in building democratic and market institutions (EBRD: 2010, 60), adding one recommendation more: "It is probable inflows of FDI would be stronger if the state ceased to sponsor new joint ventures in which it will retain stakes of 50 per cent or more" (EBRD: 2010, 155).

Of course, with the new president, Shavkat Mirziyoyev, the situation is different and the EU institutions recognized it:

"New Momentum and Dynamism in EU-Central Asia Cooperation and Partnership. I am pleased to note that through these years our partnership has matured and, in particular, in recent years it acquired new content and dynamism also thanks to a pro-active attitude of our partners to inter- and intra-regional cooperation. Indeed, we clearly registered this new spirit of regional cooperation and solidarity in Samarkand in 2017 during the Conference on regional development and security. We welcome these "new positive winds blowing' in Central Asia conducive to strengthening regional cooperation. Regional cooperation as a factor of stability and sustainable development is deeply rooted in EU's DNA. That is why the EU very much welcomes and supports this direction and wants to help and contribute to translating this positive spirit into concrete action". (Burian: 2019).

The new EU Strategy towards Central Asia states clearly since the very beginning that "Central Asia's strategic geographical location at the crossroads of Europe and Asia, its share in EU energy imports and the market potential of seventy million inhabitants, as well as the EU's interest in regional security, have made Central Asia an increasingly important partner for the EU" ("The EU and Central Asia: New Opportunities for a Stronger Partner-

ship", 2019, 1). Besides that, Peter Burian has underlined many times that the relationship between European Union and Central Asia is a non-exclusive agreement, which means that this agreement is compatible with other signed with different countries. It is clear that the European Union is not motivated by neo-colonialism interests and they respect absolutely their independence and sovereignty.

However, the former President Islam Karimov stated in an official address in a joint session to the Parliament that the changes toward an open, free market are steadfast but gradual, as they are involved in a process of deideologization of economy and reducing the role of state in it: "We consciously rejected the revolutionary option of reforms by the methods of "shock therapy" in favor of evolutionary and phased development. By this we have saved our people from the severest economic and social turbulences" (Karimov: 2010). In any case, EU is also interested in helping Central Asian countries to make a transition to a low carbon economy and to improve the energy grid and to boost the regional connectivity and cooperation.

In the beginning of post-Cold War, almost every author wrote on the hypothesis that US should be the hegemonic super power (Steinbruner, "Can the United states lead the world?", 1998) and Russia would be a giant slept (Smolansky, "Can Russia escape its past?", 1998). In that scenario, Eurasia won't be at risk under the Russian influence (Dawisha, "Imperialism, Dependency and Autocolonialism in the Eurasia space", 1998). China was seen as an emergent super power (Cox, "New China: new Cold War?", 1998). But some of these authors (Ikenberry, "American Power and the empire of Capitalist Democracy", 2001, 191) were wrong about the American supremacy after the sudden collapse of the Soviet Union as they expected the raise of American unipolarity and the so called *"Pax Americana"*, but the current world is one of multipolarity. After the 9/11 attacks US supremacy, both in military and economy, was almost absolute, but after the Iraq campaign (2003) and the difficult, problematic evolution there and in Afghanistan after 2005, the situation was changed and emerging China and Russia appeared stronger in the world scenario. In Central Asia this is more evident and US influence there is shrinking.

So, what about Russia or China? Both respect absolutely the principle of sovereignty of every country as stipulated at the UN General Assembly Resolution 2625 (XXV) and the Helsinki Final Act. They understand that each ruler has his own way to behave in internal affairs. Moreover, they value more order and security than democracy and human rights (which are mainly Western concepts, born and developed there), so "Russia provides the route to market for over 85% of the gas exported from Kazakhstan, Turkmenistan and Uzbekistan." (IEA: 2009, 472). It seems Russia is playing its cards in this scenario (Blagov: 2006).

China invested many millions in gas and petroleum joint ventures: "The China National Petroleum Corporation (CNPC), which is developing the Mingbulak oilfield in eastern Uzbekistan, has increased its investment plans to US$ 212 million over the next four years to cover the costs of further exploration and development. In June 2010 Uzbekneftegaz (UNG) and CNPC reached an agreement regarding the export of 10 billion cubic metres of gas from Uzbekistan to China" (EBRD: 2010, 155).

Iran is another option. They want to break their international isolation by all means. They say they need more energy for their development and that is their main reason for their nuclear energy projects. Besides that, it is also evident that they want to compete with Israel to become a regional power; and the nuclear weapon may could help. Uzbekistan should calculate very carefully if they want to support a new nuclear state near their borders, because selling them energy is not like selling watches, bags or shoes.

India and Japan ("Japanese Companies to Develop Uzbek Oil Shale Fields", 2010) are also candidates to become customer states, via Afghanistan-Pakistan and via China. It should help to integrate a turbulent area and put it into the global market.

Diversification can come also from the mix of energy, not being so dependent on using hydrocarbons. The role of the so called renewable is very important in this way. Here, it is possible to find the nuclear energy and the generation from renewable sources including wind, geothermal, solar, biomass and waste. However, Uzbekistan doesn't produce energy through these sources, unless until this moment.

The data offered by the *BP Statistical Review of World Energy* (BP: 2019) are very interesting to see how Uzbekistan is an energy producer and its energy sovereignty depends on its ability to send their natural resources to the rest of the world.

Uzbekistan must keep its independence by using its energy resources to diversify its relationship with the world markets. The best option both for energy security and keeping independence and sovereignty of Uzbekistan is diversifying their export options and customers via Kazakhstan and Russia to EU; via Turkmenistan to Iran and global markets; and via Af-Pak (using the TAPI project) to India and global markets again.

Table 3 – Energy consumption by fuel

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Hydroelectricity: Consumption in million tonnes oil equivalent	1.0	1.5	1.9	1.3	1.4	1.4	1.4	1.4	1.2	1.7	1.6
Oil: Consumption in thousands of bpd	93	89	76	71	63	60	57	53	49	55	52
Natural gas: Consumption in bcm	44.1	44.1	44.0	47.4	46.2	46.2	48.5	46.3	43.3	43.1	42.6
Coal: Consumption in million tonnes oil equivalent	1.0	1.0	0.9	1.1	1.2	1.1	1.2	1.1	2.7	3.5	3.1

Table 4 – Primary energy: consumption per capita in Gigajoules per capita

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Uzbekistan	67.3	66.6	65.0	67.1	64.5	63.0	64.7	60.7	58.1	59.1	56.8
Kazakhstan	147.7	131.5	140.2	152.1	155.1	154.5	154.3	150.1	150.6	155.5	173.8
Turkmenistan	103.6	166.5	176.6	192.7	206.4	179.9	183.1	215.3	203.1	208.6	225.4

Conclusion

As IEA said: "Creating a diverse and flexible system of export routes will enable the Caspian region to gain access to international market prices for its resources and contribute fully to global oil and gas security" (IEA: 2009, 3). This should "ensure more reliable market-based export pricing, and improvements in the region's access to international markets underpin a more positive investment and production outlook to 2030" (IEA: 2009, 472-473).

Therefore, Uzbek energy security relies on Uzbekistan itself but also on the cooperation with its neighbours. However, Uzbekistan has to take into account also the issue of security of transport to deliver its oil and gas, and enforce its transit rights. This should be easier in an environment of cooperation among members of same international organizations such as Commonwealth of Independent States (CIS), OSCE, the Economic Cooperation Organization (ECO), the Central Asian Cooperation Organization (CACO), the Central Asian Union and Shanghai Cooperation Organization (SCO), among others.

Finally, it is necessary to underline the link between water and energy in the Central Asian region: while Kyrgyzstan and Tajikistan have the key for watering the whole region (through Syr Darya and Amu Darya rivers), Uzbekistan, Turkmenistan and Kazakhstan, lacking water, are rich in hydrocarbons. This can be an opportunity for cooperation or for fights or even wars in the region (Linn: 2005, 5 and 83; "Central Asia: long-term challenges and short-term crises", 2009; World Bank: 2004).

After the Karimov's dead and the arrival of the new president, Mirziyoyev, the general situation in Central Asia as a region has changed. It seems that he brought a new era of understanding as he is prone to dialogue, pragmatic and a very good negotiator. Water and energy have been always a field for conflicts but in recent years it is a field of cooperation. Uzbekistan found in its neighbors a good will to get an agreement on those issues. The International Fund to save the Aral Sea launched at the United Nations by the end of 2018 is an evidence of that.

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