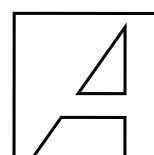




**STRATEGIC PERSPECTIVES FOR  
BILATERAL ENERGY COOPERATION  
BETWEEN THE EU AND KAZAKHSTAN**  
GEO-ECONOMIC AND GEOPOLITICAL  
DIMENSIONS IN COMPETITION WITH RUSSIA  
AND CHINA'S CENTRAL ASIA POLICIES

Dr. Frank Umbach/Slawomir Raszewski



Konrad  
Adenauer  
Stiftung



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# Foreword

**By Dr Gerhard Wahlers, Deputy Secretary General, Konrad-Adenauer-Stiftung (KAS) and Professor Dr Friedbert Pflüger, Director, EUCERS, King's College London.**

In 2015 the Konrad-Adenauer-Stiftung (KAS), together with the European Centre for Energy and Resource Security (EUCERS) and the Nazarbayev University Astana, jointly organised a panel on "EU-Kazakh Relations" within the framework of the EUCERS/ISD/KAS Energy Talks on (Re-) Emerging Energy Superpowers. The discussion highlighted the importance for further research on the topic of Kazakhstan's role between the two key energy demand centres: Europe and Asia.

The Ukraine crisis has intensified discussions on possibilities of EU energy import diversification. Several options can be identified on the horizon: U.S. shale gas, Azerbaijani and other Caspian gas through the Trans Adriatic Pipeline (TAP), gas from the Eastern Mediterranean, Iraqi-Kurdistan or Iran. Can Kazakhstan fit into this constellation? Could it be connected to TAP for gas exports, or could the country's oil export capacities through the Baku-Tbilisi-Ceyhan pipeline be increased?

And it's not just oil that plays an important role. Kazakhstan is also a key player for worldwide uranium exports and is increasingly focused on exploiting its huge potential of renewable energy sources. The EU would be a logical technology partner for expanding renewables. However, the EU, and particularly Germany, have much more to offer to Kazakhstan in regard to its policies, concepts, strategies and regulations. At the same time, does Europe constitute an interesting and viable alternative to Kazakhstan's eastward looking energy policy, despite growing energy demand in China and Chinese pressure for more intense energy cooperation? What is Russia's stance on this? Which role does the new Eurasian Economic Union play? Would a stronger cooperation between Kazakhstan and the EU in the field of energy resources underline the 'multi-vector' foreign policy of Kazakhstan and push the declared will of a deeper relation between the partners? How would Kazakhstan be affected by Western sanctions against Russia, which is the most important transit country for Kazakh oil? The following study aims to answer these key questions.

We are delighted to present the joint EUCERS/KAS Study on "Strategic Perspectives for Bilateral Energy Cooperation between the EU and Kazakhstan - Geo-economic and Geopolitical Dimensions in Competition with Russia and China's Central Asia Policies". The study is to support the discussion with political and economic decision-makers as well as representatives from academia, media and the general interested public.

EUCERS and KAS would like to take the opportunity to thank Dr Frank Umbach, Research Director of the European Centre for Energy and Resource Security (EUCERS), King's College London for writing this timely and important study. We would also like to thank the co-author Dr Slawomir Raszewski for his contribution. Last, but not least, we would also like to thank Thomas Helm, Head of the Office of the Konrad-Adenauer-Stiftung in Astana, for his support in realizing this project.

# Summary

Alongside its integrated energy and climate policy of 2007, the EU has adopted a Central Asia strategy in 2007, to enhance the energy and general political-economic cooperation with Central Asia. But the EU has had to compete mostly with Russia and China, the two major powers and potential rivals in Central Asia and the Caspian Region (CACR). While Azerbaijan has become the most important gas partner of the EU, due to the planned Trans-Anatolian Gas Pipeline (TANAP) and Trans-Adriatic Pipeline (TAP) pipeline network of the EU's Southern Gas Corridor project, Kazakhstan is the most important oil partner in CACR. For Europe, Kazakhstan has become a crucial energy and raw material partner country in its energy foreign policy since 2007. Kazakhstan is a vital partner for the EU due to its wellbalanced multivector foreign and energy policy, which has strengthened its role in the region as a 'bridge' between Europe and Asia, as well as beyond. Kazakhstan is also a key player for worldwide uranium exports and many other critical raw material supplies to Europe, which are needed for renewable energy resources (RES), batteries (for electricity storage) and many other 'green technologies'.

Similarly, the EU has become Kazakhstan's most important trading partner, representing more than 50 per cent of total Foreign Direct Investments (FDI) in Kazakhstan, amounting to nearly US\$100bn in 2013. The EU imports around 5-6 per cent of its oil consumption and 21 per cent of its uranium demand. In 2013, the EU's share of Central Asia's total trade (26.9%) was also bigger than Russia's (14.4%), but has already been surpassed by China (31%). For Kazakhstan, the EU - with its unique integration experiences enhancing its intraregional energy policies - has been perceived as a model seeking to increase its regional energy cooperation and integration.

For the EU as well as Russia and China, the overall regional economic and strategic importance of Kazakhstan has grown beyond its geographic location and oil exports: its GDP meanwhile exceeds those of the other four central Asian states combined. Its business environment is the best in Central Asia, and will also play a fundamental role in new transcontinental transport routes such as the 'Western-Europe-Western China Transport Corridor', the EU's Transport Corridor Europe-Caucasus-Central Asia (TRACECA), and China's new Silk Road concept of 'One Belt, One Road' (OBOR). However, the Kremlin has always viewed CACR as its geopolitical 'hinterhof' and 'special sphere of influence'. It has intensified its regional energy cooperation and pipeline projects with individual CACR states after the EU's declaration of its Central Asia strategy in 2007. China has also enhanced its energy foreign policies as the result of a rapidly growing energy demand, deteriorating prospects for major new energy discoveries in its own country, and rising oil as well as gas imports.

Furthermore, the regional states of CACR have not only widened and deepened their energy ties to Russia during the last decade, but have also diversified their energy exports and energy foreign policies to China, the EU and other energy partners. But CACR has also become increasingly fractured as the regional states have developed their national energy, economic and foreign policies with contrasting as well as often competing perspectives.

Under these circumstances, the EU and Kazakhstan agreed in January 2015 to initiate a new 'Enhanced Partnership and Cooperation Agreement'. But the energy field has not explicitly been defined as one of the 'main areas of cooperation' despite Kazakhstan being the third largest non-OPEC supplier to the EU. Notwithstanding this, Kazakhstan's President Nursultan Nazarbayev views the bilateral energy cooperation as becoming even more important as European companies participate in the exploration of its huge Kashagan oil field and are supporting Kazakhstan's efforts to adopt ambitious 'green policies' by expanding RES.

Moreover, the accession of Kazakhstan as the 162nd member of WTO on 30th November 2015 offers new positive perspectives for enhanced cooperation with the EU and other foreign investors. While the EU has welcomed the accession, the dramatic fall of oil prices, international sanctions against Russia, and technical problems in its Kashagan oil field have threatened Kazakhstan's economic growth, and could even undermine its political stability. As the country holds the eleventh global largest energy reserves, and its mineral reserves belong to some of the world's largest, any larger instability could have wider impacts on its regional CACR neighbours and even internationally as Kazakhstan may become the second largest non-OPEC supplier to global oil markets by 2020.

## **Kazakhstan's Energy Policies until 2010**

Since the nation's independence, Kazakhstan has emerged as the economic and political leader of post-Soviet Central Asia, and energy has been the main determining factor for Kazakhstan's internal and external policies. On this path, the 2003 Caspian Pipeline Consortium (CPC) and the 2006 Baku-Tbilisi-Ceyhan (BTC) oil pipelines opened up the oil potential of the greater Caspian Sea region to the world markets. The relationship with the EU and the Technical Aid to the Commonwealth of Independent States (TACIS) programme allowed the transfer of normative and administrative capacity-building tools, which further strengthened Kazakhstan's international standing. Kazakhstan became the first signatory to the European Energy Charter on 17th December 1991 and later to the Energy Charter Treaty (ECT) on 17th December 1994. Kazakhstan has also been part of the Interstate Oil and Gas Transportation to Europe (INOGATE) platform since its inception in 1996, benefiting from 41 of the programme's 69 projects. Geopolitically, Kazakhstan's status in Eurasia is being defined as a transit country for the Omsk (Russia)-Pavlodar (Kazakhstan)-Shymkent-Turkmenabat (Turkmenistan) oil pipeline, the Central Asia-Center gas pipeline system, the Bukhara-Urals gas pipelines, and the Orenburg-Novopskov and Soyuz gas pipelines from Orenburg processing plant to Europe.

The Caspian Sea has received enormous attention from International Oil Companies (IOCs) since the break-up of the Soviet Union due to the Tengiz and Kashagan, and later Karachaganak, fields. Exploration and production of oil from the fields has required international cooperation and new export outlets to deliver the oil to global oil markets. Since the early 1990s, Central Asian states have attracted considerable attention from the east. In 2004, the construction of the 2,798km Kazakh-China Oil Pipeline (KCOP) started by linking the two countries from Atasu in Kazakhstan to China's border town of Alashankou in Xinjiang.

In the 2000s, Kazakhstan's energy policy was increasingly determined by Astana's efforts to strengthen its control over its oil and gas sectors, as well as national resources, in times of rising oil prices. But its pressure on IOCs has been detrimental to this effort, and has led to delays of international projects. But some of its reforms in energy policy, new laws, and improved investment conditions have also helped diversify its energy exports towards China.

Kazakhstan has welcomed Russia's Eurasian Economic Union (EEU) project, with its leadership emphasizing its economic importance and benefits for its members. But it has been reluctant to pursue further political and security integration, and transforming the EEU into a political-economic-military Eurasian Union counter-bloc to the EU, in order to ensure Russian domination and control. Beyond regional security cooperation, Russia's EEU has been rather unpopular in CACR, as China and the EU have economically and financially much more to offer. Only Kazakhstan, Belarus, Kyrgyzstan and Armenia have become members, who have openly been pressured by Russia and/or have felt to have no other choice for the time being.

## **Impacts of the Ukraine Conflict**

The Ukraine conflict since 2014 has created new security dilemmas for Kazakhstan and other CACR countries. In the EU, discussions and plans of new supply options for its energy import diversification have intensified – including gas from other Caspian countries through TANAP and TAP. This could involve Kazakhstan in the light of an enhanced trilateral energy cooperation between Turkey, Azerbaijan and Turkmenistan since 2014 and renewed bilateral discussions between the EU and Turkmenistan to build a Trans-Caspian Pipeline (TCP) for gas supplies from Turkmenistan starting as early as 2019. But the EU's energy security policy and its Central Asia strategy have adopted conflicting goals since its declaration in 2007, with the consequence that the EU could be torn between Russia and CACR. Against this background, many geo-economic and geopolitical parameters have rapidly changed, both in Europe and CACR. They provide a very dynamic and challenging environment for the EU, but also for Russia, China, the U.S., India and others in the years and decades to come.

### *Russia's Assertive Energy Foreign Policies and Pipeline Diplomacies*

The strategic importance of hydrocarbons for Russia's wider national security, its state budget, economic growth, social-political stability, and its foreign and security policies, has been confirmed in Russia's 'Foreign Policy Concept of the





Russian Federation' of February 2013 and other state documents. They focus on the importance of access to energy resources globally and the potential for military conflicts as worldwide competition for scarce energy resources increases. The Kremlin has used Gazprom as its arm for spreading its geo-economic and geopolitical interests in Europe and Eurasia, ranging far into many businesses and banks in these regions. Holding the world's second largest remaining conventional gas resources, Russia does not lack gas reserves, but presently struggles with the availability of gas markets and the future competitiveness of its gas exports. This is due to higher production and transport costs of its new, more remote and much more expensive gas fields, at a time of fundamental changes in the international gas markets. The U.S. shale gas revolution has led to a worldwide gas glut, coinciding with presently stagnating or even shrinking markets, such as in Europe. It has changed the power relationship between producers and consumers by strengthening the latter and creating a 'buyers' market.

But maximizing its geopolitical clout, using pipeline dependencies and Gazprom as its tool for its foreign policy, has become much more difficult for Russia, as the EU is trying to diversify its energy mix and gas imports. Confronted with losing market shares and geopolitical influence, the Kremlin has clearly recognized the arising challenges that the EU energy policies pose for its own future gas exports. The EU's Southern Gas Corridor project and the TANAP-TAP pipeline network would end Russia's monopoly in exporting Caspian gas exclusively to Europe through Russian-controlled gas pipelines. Hence, the Kremlin has sought to strengthen its gas footprint in Europe through its own mega-pipeline-projects such as South Stream (cancelled by President Putin in December 2014), and its successor Turkish Stream (recently suspended). Both pipelines had a planned capacity of 63bcm per year. In Southeastern Europe, after the TAP project succeeded over the Nabucco pipeline in the summer of 2013, the geopolitical rivalry between Nabucco and South Stream has been replaced by a similar geopolitical competition between the TANAP-TAP network and Turkish-Stream.

The present Ukraine conflict has increased the strategic importance of CACR for Russia. Turkey is already Russia's second largest gas export market after Germany. The recent escalating Russian-Turkish conflict, after the shooting down of a Russian air-fighter last November, limits Russia's energy foreign policy and geopolitical ambitions. Russia is confronted with the increasing dilemma of finding alternative oil and gas markets, at a time when its most lucrative commercial market of Europe for natural gas is already declining and Russia itself having an overproduction capacity of almost 100bcm, which it cannot sell on European or Asian gas markets. In this regard, it is hardly surprising that Russia is opposing a TCP and not allowing other CACR countries like Turkmenistan or Kazakhstan to become new suppliers for the shrinking European gas market. Despite Russia perceiving the EU's Central Asia strategy as a major threat to its influence in CACR, it was China that broke Russia's oil and gas export monopoly in Central Asia. China - much more so than the EU or the U.S. - is challenging Russia's traditional geopolitical influence and economic interests in CACR.

#### *China's CACR-Policy and its new Silk Road-Concept 'One Belt, One Road (OBOR)'*

As the most globally populous country with a fast-growing economy, China has become the largest energy producer, consumer, and oil importer in the world. China has to cope with a dual challenge: an energy demand projected to rise by another 44 per cent by 2040 and, at the same time, shifting its energy mix from coal to gas and non-fossil fuels. Given the global energy demand and the potential vulnerability of shipping routes through the Indian Ocean to the U.S. Navy, CACR has gained particular importance for Beijing as a more secure, strategic land bridge between the Middle East, the Persian Gulf, and China for its energy imports. China's energy and foreign policy ties to Central Asia, particularly Turkmenistan and Kazakhstan, have steadily increased during the last decade. China has quietly managed about half of the Kazakh energy market, secured a 49 per cent stake in the Kazakh MangistauMunaiGaz company, controls around 24 per cent of Kazakh's present oil production, and has covered more than a quarter of Kazakh exports in less than a decade. China has also negotiated uranium imports from Kazakhstan and has exploited its hydroelectric potential. At the same time, Turkmenistan has become the most important gas partner for China. The world's longest (2,238km) gas pipeline is starting in Turkmenistan, crossing Uzbekistan and Kazakhstan and extending to Xinjiang. Its initial capacity of 10bcm annually at the end of 2009 has been expanded to 55bcm and will become operable in 2016. China's costly

investments and projects in CACR have not been based just on short-term economic calculations, but more on long-term strategic and geopolitical objectives.

China's new Silk Road foreign policy concept OBOR has strong geo-economic dimensions and geopolitical implications, and continental and maritime dimensions. Like centuries ago, China views itself as the 'Middle Kingdom' geographically and geopolitically. Its pro-active engagement strategy envisages developing China's bilateral relations with its neighbors to create a regional bloc. It is underpinned and bolstered by multiple strategic initiatives, covering some 65 countries and more than four billion people. For decades to come, it will make Eurasia, including South Asia and Southeast Asia, the top focus of its energy, foreign and security policies as well as its foreign direct investments. It should help to solve its growing structural economic problems and ensure political stability both at home and in its regional neighborhood. For these reasons, China will expand its Overseas Direct Investments (ODI) and use its newly created Asia Infrastructure Investment Bank (AIIB), the New Development Bank (NDB) of the BRIC countries, and its Silk Road Fund to finance future infrastructures and transportation networks. But the OBOR initiative and future Chinese investments in CACR are highly dependent on a stable and politically safe neighborhood. However, neither CACR nor South Asia and China's own bordering province of Xinjiang in its western region or Tibet in south-west are politically stable regions.

The EU has not really recognized the overall geo-economic and geopolitical implications of China's OBOR grand design initiative, and the prospects for common enhanced political and economic cooperation. Nor has it debated to what extent its future CACR energy foreign policy might be complicated, or what new perspectives may arise, because of China's OBOR initiative. But in contrast to Russia's energy foreign policies in CACR, China's OBOR initiative offers more opportunities for mutual bilateral or trilateral energy cooperation between the EU, CACR countries and China. However, it equally cannot be excluded that the EU's and China's energy foreign policies may increasingly compete against each other.

#### *Perspectives of the EU Transformation to an Energy Union*

Despite expanded and deepened ties for energy cooperation between the EU and CACR, and particularly Kazakhstan, the EU policies towards CACR have remained contradictory as its energy security and energy foreign policies are torn between its diversification efforts of gas imports and its interests to maintain a stable energy partnership with Russia. Despite slow progress, the EU is on the way to establish an Energy Union based on enhanced cooperation in 28 different energy policies and a fully integrated common energy market.

#### *Increasing Role and Status of Turkey in Eurasia*

Turkey is a key player in Eurasia's energy policies; worldwide it is one of the most rapidly growing gas markets, and is the only one in wider Europe that has significant future gas consumption growth. Turkey has become Europe's most important transit state for Caspian and other potential future gas supplies from Iraq (Kurdistan), Turkmenistan and theoretically Iran (though Tehran currently seems to prefer LNG exports to Europe). Its bilateral Azeri gas pipeline project TANAP and the connected TAP gas pipeline will supply Caspian gas to Albania, Italy, Bulgaria and other prospective South-East European countries of the EU's larger Southern Gas Corridor (SGC)-project. The recent eroding of the Russian-Turkey energy relationship since the end of November 2015 may have further far-reaching geopolitical implications, as Turkey is forced to find alternative oil and gas suppliers. This situation, however, offers other suppliers such as Azerbaijan, Turkmenistan, Iran, Iraqi-Kurdistan, Israel, and the U.S. new opportunities of access to the Turkish gas and oil market.

#### *The EU's 'Southern Gas Corridor (SGC)'-Project is Entering a Critical Time*

The regional bilateral pipeline competition in South-eastern Europe between the EU and Russia may further increase as the result of a shrinking European gas market and new forecasts of decreasing gas consumption and imports, newly built EU gas interconnectors (with reverse-flow capabilities) and regional pipelines. Those increasing market rivalries are also the result of Russia's efforts to circumvent Ukraine by its newly planned mega-pipelines of Nord Stream-2 and Turkish Stream. Both are being opposed by the U.S. and the European Commission, at least as long as Russia is not accepting and following EU regulations such as the Third Party-Package and its Third Party Access rule. While the overall relationship between the West and Russia has deteriorated after Russia's annexation of Crimea, and offers

hardly any prospects for rapidly improving, Russia still tries to divide the individual EU member states through its bilateral energy foreign policies and pipeline politics. However, if the EU's SGC infrastructure plans and regulations are implemented and competing intraregional ambitions and interests are overcome, Russia's regional market shares may decline over time – and, therewith, its geopolitical influence in Central and South Eastern Europe.

#### *Increasing Cooperation between the EU, Turkey, Azerbaijan and Turkmenistan*

Since 2014, the EU, Turkmenistan, Turkey and Azerbaijan have enhanced their cooperation as the result of the Ukraine conflict, and their common strategic interests in reducing their energy dependence on Russia and diversifying their gas export and import supplies. While the project of a TCP has already been negotiated alongside the original Nabucco pipeline, the new negotiations highlight changing dynamics and geopolitical patterns in Central Asia through the opening of new prospects for Turkmen gas exports to Europe. Even though the status of the Caspian Sea as a sea or lake has no agreed definition between the littoral states, bilateral understandings on Caspian maritime borders have progressed as the Turkmen-Kazakh agreement of May 2015 highlighted. If Azerbaijan and Turkmenistan can solve their bilateral conflict over an oil field in the Caspian Sea, it would also greatly increase the prospects for the TCP. However, despite Russia's overall declining influence in the region, its spoiler function should not be underestimated. Equally, Turkmenistan has still not declared that the agreed trilateral energy cooperation will lead to the construction of the TCP against Russia's will. Furthermore, it remains unclear what kind of risks and security obligations the EU is ready to provide for building a TCP in the light of the Ukraine conflict.

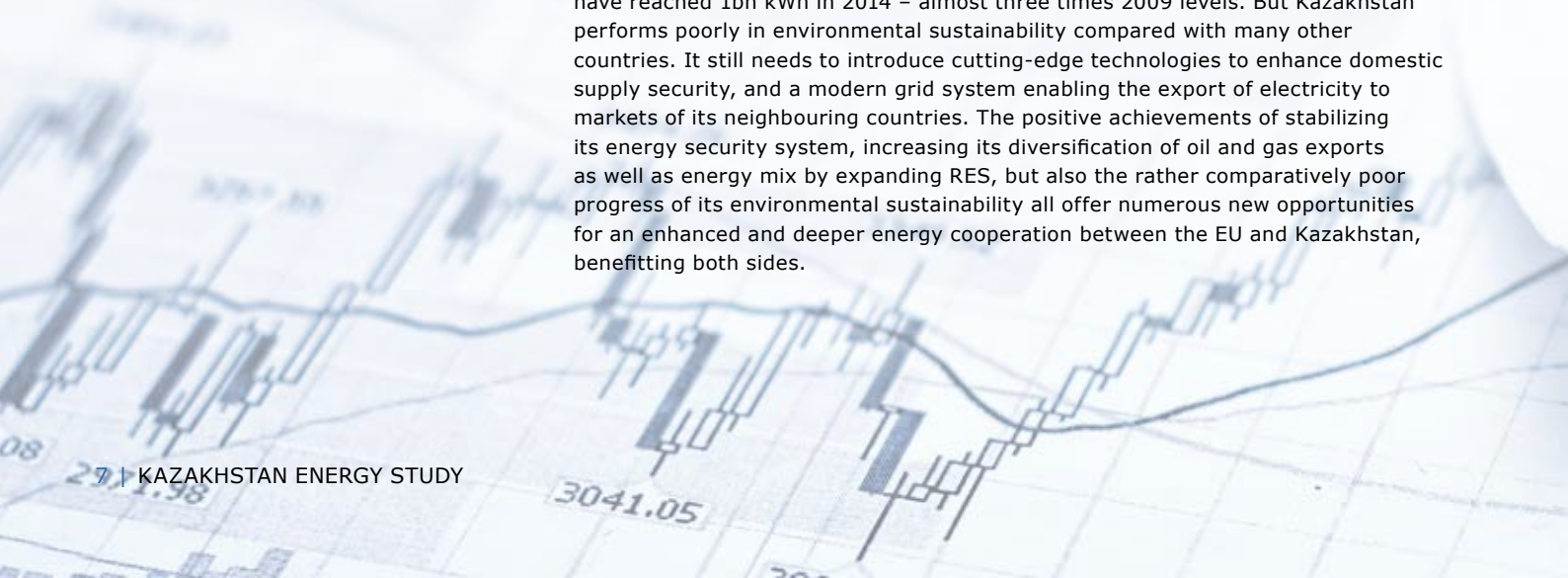
#### *Strategic Implications of the TAPI-Pipeline for Turkmenistan and CACR*

TAPI may not just diversify Turkmenistan's gas exports, but it could also permanently alter the overall geopolitical patterns of Central Asia as a resource basis for Eurasia, South and East Asia, as the region becomes more independent from Russia. TAPI may also fuel the efforts for new transnational and interregional road and rail transportation connectivity between Central and South Asia, creating new economic and political alliances. This would prevent Central Asia from becoming a hostage of some form of a Sino-Russian joint hegemony and condominium.

#### **Prospects for Future EU-Kazakhstan Energy Cooperation**

While Kazakhstan's accession to the World Trade Organisation last November offers new positive perspectives for an enhanced cooperation with the EU and other foreign investors, the dramatic fall of oil prices, international sanctions against Russia and technical problems at its Kashagan oil field have threatened Kazakhstan's economic growth and its currency stability. While Kazakhstan enjoyed robust macroeconomic stability until 2014, it went down 21 positions in the last international '2015 Energy Trilemma Index' of the World Energy Council, falling from the rank 56 to 77, due to the deteriorating conditions of its traditional political, societal and economic strength.

During the last decade, Kazakhstan made substantial progress in developing a relatively strong and robust national energy security system, as it has reduced transmission and distribution losses, enhanced energy efficiency in the power sector, reduced energy and emission intensity, and diversified its electricity generation portfolio away from fossil fuels to include more hydropower and RES, which also decreased CO<sub>2</sub>-emissions. Its inclusion of RES in electricity generation may have reached 1bn kWh in 2014 – almost three times 2009 levels. But Kazakhstan performs poorly in environmental sustainability compared with many other countries. It still needs to introduce cutting-edge technologies to enhance domestic supply security, and a modern grid system enabling the export of electricity to markets of its neighbouring countries. The positive achievements of stabilizing its energy security system, increasing its diversification of oil and gas exports as well as energy mix by expanding RES, but also the rather comparatively poor progress of its environmental sustainability all offer numerous new opportunities for an enhanced and deeper energy cooperation between the EU and Kazakhstan, benefitting both sides.





## Political Recommendations for Deepening and Expanding Energy Cooperation between EU and Kazakhstan



- The lack of solidarity in the EU's common energy foreign policy towards Russia and CACR is often the result of shortsighted, defined national interests, preferences and failing long-term strategic visions, overlooking future challenges and the insufficiency of national responses. In this light, it does not make any sense that national governments spend state subsidies on individual energy resources with hardly any cooperation between EU member states and not taking adequate conditions into account. If member states wish to strengthen their national energy security and maintain their international leverage, then they have no real alternative than to create a robust 'Energy Union'.
- Despite Russia's commercial and geopolitical interests, and its traditional perception to see the CACR as its 'hinterhof', the EU cannot afford to overlook CACR – neither for its security policy nor for its regional and global energy cooperation. Although these regional oil and gas resources cannot replace the Persian Gulf, the CACR oil and gas reserves have become a strategically important fossil fuel supply base for global energy security.
- The EU must decide whether they want to be a part of and influence China's OBOR initiative, or whether to stand at the sidelines and lose numerous opportunities for business projects and influence of China's future foreign, security, economic and energy policies. If the U.S. and Europe do not become more actively involved in China's OBOR initiative, they do not only risk to lose business and investment opportunities in the economically most dynamic region worldwide, but they also risk undermining their own wider geo-economic influence, which could have vast geopolitical implications for the EU.
- While the Ukraine conflict since 2014 has intensified discussions on new options of EU energy import diversification, a TCP with a capacity of at least 30bcm could also connect Kazakhstan to the EU's Southern Gas Corridor. But a TCP, which the EU, Turkey, Azerbaijan and Turkmenistan want to implement by 2019, appears only realistic either with the agreement of Russia – which is unlikely due to strong opposition from Moscow – or if the EU becomes more involved in TCP's financing, and addressing its accompanied hard security questions. The EU's TCP discussions are also just one example of its energy foreign policy ambitions, declared long-term strategic interests and inherent contradictions: the EU raises expectations of its targeted energy partners, but does not think through or live up to its realization or the consequences these expectations create – with the result of undermining its own long-term international credibility and reputation.
- While an enhanced EU energy cooperation through the inclusion of future Kazakh gas supplies to Europe appears complicated given Russia's objections, Kazakhstan's 'green energy concept' for the expansion of RES, and increasing energy efficiency, have not been considered as controversial by Russia. Furthermore, it offers numerous opportunities for the EU to engage in CACR and to support Kazakhstan's energy transformation and decarbonization efforts on its path to a sustainable future. However, European and German views often overlook the most recent experiences with Russia and Gazprom they have encountered with the shrinking European gas market and the German 'Energiewende': by diversifying the energy mix away from fossil fuels, enhancing energy efficiency and reducing the overall energy consumption, all the previous forecasts of the European gas demand and imports have proved wrong and too optimistic. Thus, even in the short-term, an enhanced EU energy cooperation focusing on RES and energy efficiency with Kazakhstan and other CACR countries is not in Russia's strategic and geopolitical interest. This is because it would free more gas resources of the CACR countries for exports on the shrinking or stagnating European and Asian (Chinese) gas markets, further decrease the energy dependence of CACR countries on Russia, and hinder its own energy cooperation with the region. But ultimately, the EU cannot avoid clearly defining its strategic and geopolitical interests and needed instruments in CACR, nor to address the hard security questions with all relevant actors – including Russia and China.

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# 1. Introduction: EU-Kazakhstan Energy Relations at the Crossroads

Since the adoption of a common integrated energy and climate policy in 2007, the EU's dependence on the import of natural gas has widely been seen as the 'Achilles heel' of Europe's energy security due to the Russian-Ukrainian gas supply crisis in 2006 and 2009.<sup>1</sup> Indeed, the gas import profile of the EU-28 is still not very diversified: in 2013, more than 81 per cent of the EU's gas import demand had been imported from three countries: Russia (39%), Norway (29.5%), and Algeria (14%). Russia also accounted for no less than 27 per cent of the EU's total gas consumption.<sup>2</sup>

In June 2007, the EU has also adopted a Central Asia strategy to enhance the energy and political-economic cooperation with Central Asia.<sup>3</sup> The EU's main competitors are Russia and China, and to a lesser extent Turkey, Iran, and India. The U.S. presents competition with the EU at the company level in Central Asia and the Caspian Region (CACR). While Azerbaijan has become the most important gas partner of the EU, Kazakhstan is the most important oil partner in CACR. Kazakhstan is the world's ninth largest country in territorial size (some 2.7 million km<sup>2</sup>), but has a modest population of less than eighteen million people. Its well-balanced multi-vector foreign policy has strengthened its role in CACR, as a 'bridge' between Europe and Asia, as well as beyond.<sup>4</sup>

The implementation of the bilateral EU-Kazakhstan Partnership and Cooperation Agreement (PCA) of 1999 has been viewed as successful on both sides: they have established an effective bilateral political dialogue, including on human rights, and bilateral trade has significantly increased. A new 'Memorandum of Understanding' had been signed in December 2006 for a deeper cooperation between both sides, which was completed by a bilateral cooperation agreement to develop nuclear trade.<sup>5</sup> But the nuclear agreement of 2006 was never signed in the following years. In 2009, both sides agreed to review the 1999 PCA with the aim to strengthen the relationship, to enhance their cooperation particularly in the energy field "in order to promote diversification of supplies and export routes towards the EU", as well as to develop cooperation on other economic issues and investments.<sup>6</sup>

The EU has become Kazakhstan's most important trading partner, representing more than 50 per cent of total Foreign Direct Investments (FDI) in Kazakhstan, amounting to nearly US\$100bn in 2013.<sup>7</sup> Bilateral trade amounted to above €31bn (US\$53bn) in 2013, accounting for 32.8 per cent of Kazakhstan's total external trade: €24bn are the result of Kazakhstan's exports (i.e. oil), whereas EU exports to Kazakhstan amounted to €7.5bn of mainly manufactured goods, machinery and equipment.<sup>8</sup> The EU imports 5-6 per cent of its oil consumption and 21 per cent of its uranium demand.<sup>9</sup> In 2013, the EU's share of Central Asia's total trade (26.9%) was also bigger than Russia's (14.4%), but has already been surpassed by China (31%).

For the EU, Russia and China, the regional economic and strategic importance of Kazakhstan has grown beyond its geographic location: Kazakhstan's GDP meanwhile exceeds those of the other four central Asian states combined.<sup>10</sup> Its business environment is also the best in Central Asia: in the World Bank's 'Doing Business' ranking, Kazakhstan has climbed up twelve ranking positions up from 53rd in 2015 to 41st in 2016.<sup>11</sup> Kazakhstan will also play a fundamental role in new transcontinental transport routes such as the 'Western-Europe-Western China Transport Corridor', which will cut delivery time by half compared with seaborne transport, and the EU's Transport Corridor Europe-Caucasus-Central Asia (TRACECA). For Kazakhstan, the EU - with its unique integration experiences enhancing its intra-regional energy policies - has been perceived as a model seeking to increase their regional energy cooperation and integration.

In this light, the EU and Kazakhstan have agreed in January 2015 to initiate a new 'Enhanced Partnership and Cooperation Agreement'.<sup>12</sup> But the 'energy field' has not explicitly been defined as one of the 'main areas of cooperation'<sup>13</sup> in this document, albeit Kazakhstan is the third-largest non-OPEC-supplier of energy to the EU (behind Russia and Norway). By contrast, Kazakhstan's President Nursultan Nazarbayev sees bilateral energy cooperation becoming even more important, as European companies will participate in the exploration of its huge Kashagan oil field (the largest in the Caspian Sea), and supporting Kazakhstan's efforts to adopt new 'green

policies' by expanding renewable energies (RES).<sup>14</sup>

The Ukraine conflict since 2014 has created new security dilemmas for Kazakhstan and the other CACR countries. In the EU, it has intensified discussions of new supply options for EU energy import diversification. These options include U.S. shale gas, Azerbaijani and other Caspian gas through the Trans-Anatolian Gas Pipeline (TANAP), and the Trans-Adriatic Pipeline (TAP), and gas from the Eastern Mediterranean, Kurdistan or Iran. Can Kazakhstan fit into this picture after the EU and Turkmenistan bilaterally, as well as Turkey, Azerbaijan and Turkmenistan trilaterally, have already enhanced their energy cooperation since 2014 and are planning Turkmen gas supplies for 2019?<sup>15</sup> Could Kazakhstan be connected to the TANAP-TAP network for gas exports, and/or could the country's oil export capacities through the Baku-Tbilisi-Ceyhan pipeline be increased?

Kazakhstan is also a key player for worldwide uranium exports and many other critical raw material supplies to Europe, which are most needed for RES, batteries for electricity storage, and many other 'green technologies'. Germany, for instance, signed in 2012 a 'landmark deal'<sup>16</sup> on exploration of rare earths and other critical raw materials.<sup>17</sup> For Europe, Kazakhstan has become an important energy and raw material partner in its energy foreign policies during the last years.

During the last few years, Astana has also shown interest in using its huge potential for RES. The EU would be a logical technology partner for expanding RES. In addition, the EU and in particular Germany, could share its experiences with Kazakhstan in regard to its concepts, strategies and regulations of its energy systems' transformation (i.e. 'Energiewende'). Such an increase of bilateral and interregional energy cooperation between the EU and Kazakhstan would benefit both sides and could also help to diversify their energy mix, and strengthen their energy foreign policies as well as intra- and interregional cooperation.

Europe could further constitute a viable balancing factor to Kazakhstan's eastward looking energy policy. Despite the growing energy demand in China and Beijing's pressure for more intense energy cooperation, Kazakhstan is conscious of not becoming over-dependent on Chinese energy demand.

At the same time, Russia's energy foreign policies in CACR need to be considered and taken into account on the EU side, particularly the future evolution of its Eurasian Economic Union (EEU). From the beginning of the evolving EU Central Asia strategy in 2007, it became clear that the EU is confronted with the challenges of (1) a lack of a common view and political will to establish a more congruent energy foreign policy towards Kazakhstan and Central Asia, (2) the same lack of a common (energy) foreign policy towards Russia, which plays the Kremlin into its hands to enforce a 'bilateralization' of its energy and energy foreign policies towards the EU-27/28, and (3) the growing political and economic ties that will complicate the future EU-Russian relations. Notably the EU's strategic interest to diversify and increase its energy imports from CACR threatens Moscow's commercial and geopolitical influence in the European and CACR energy markets. The Kremlin has viewed CACR as its geopolitical 'hinterhof' and 'special sphere of influence', and has tried to intensify its regional energy cooperation and pipeline projects with individual CACR states after the EU's 2007 March summit.<sup>18</sup> China has also intensified its energy foreign policies as the result of a rapidly growing demand for energy, deteriorating prospects for major new energy discoveries in their own country, and rising oil and gas imports. For Beijing, CACR has played an increasing role for economic and security reasons since 1996. Both interests are closely interlinked in China's energy security nexus.<sup>19</sup> The overarching problem is that the EU's energy security policy has adopted conflicting goals, with the consequence that it could be torn between Russia and CACR.<sup>20</sup> Furthermore, the regional states of CACR have not only widened and deepened their energy ties to Russia during the last decade, but have also diversified their energy exports and energy foreign policies to China, the EU and other energy partners. CACR has become increasingly fractured as the regional states have developed their national energy, economic and foreign policies, with contrasting as well as often competing perspectives.<sup>21</sup> These developments have created new challenges and problems to cope with the diverging interests on all sides in an ever more competitive international arena.<sup>22</sup>

But the EU can neither geo-economically nor geopolitically afford to overlook CACR in its long-term security and energy policy. CACR with its regional oil and gas reserves has become increasingly important for global energy security and worldwide oil and gas supply. Although these regional oil and gas resources cannot





replace the Persian Gulf, it has become a strategically important fossil fuel supply base for global energy supply.

Whilst the accession of Kazakhstan as the 162nd member of WTO on 30th November 2015 offers new optimistic perspectives for an enhanced cooperation with the EU and other foreign investors<sup>23</sup>, the dramatic fall of oil prices, international sanctions against Russia, and technical problems at its Kashagan oil field have threatened Kazakhstan's economic growth and could even undermine its political stability.<sup>24</sup> The country holds the worldwide eleventh largest energy reserves, has mineral reserves belonging to some of the world's largest, and it may become the second-largest non-OPEC supplier to global oil markets by 2020.<sup>25</sup> Any larger instability could have even wider impacts on its regional CACR neighbours, and could even resonate internationally.

Meanwhile, the EU has become more engaged with neighbouring countries and other regions, including Russia, China and CACR, in order to widen and deepen its energy dialogues.<sup>26</sup> In July 2015, the European Council adopted an 'Energy Diplomacy Action Plan'<sup>27</sup> to support a more coherent foreign and energy policy and its energy diversification efforts, with a "focus on the Southern Gas Corridor, the Southern Caucasus and Central Asia".<sup>28</sup>

Against this background of a proclaimed more pro-active EU energy foreign policy towards CACR, this study will review the EU-Kazakhstan energy cooperation in the context of a rising geopolitical rivalry with Russia and China, and analyse the strategic perspectives for an enhanced EU-Kazakhstan energy partnership by taking the Kremlin's and Beijing's increasingly assertive energy foreign policies, as well as their geopolitical interests, into account.

## 2. Eurasia's Energy Dimensions and Competing Geopolitical Interests

### 2.1 Russia's Gas Strategy and Pipeline Diplomacy in Europe



The EU and Russia has often been described as having a mutually dependent gas and energy partnership. Whereas Europe benefits from Russia's stable gas supplies for its energy security, Russia profits from European investments, technology transfers, and its energy demand. However, it is often overlooked that their mutual dependency has been asymmetric, due to Russia often being the stronger actor. Russia has steadily tested Europe's willingness to cooperate with Moscow by only taking its own geopolitical interests into account at the expense of those of other smaller states. In the words of a Russian defender of the Kremlin: "To put it bluntly, the Russian budget can survive without gas income, but can the fragile European economy survive a year without the supply of 25 per cent of its gas consumption?"<sup>29</sup>

The strategic importance of hydrocarbons for Russia's wider national security, its state budget, economic growth, social-political stability as well as its foreign and security policies has been confirmed in Russia's 'Foreign Policy Concept of the Russian Federation' of February 2013. It has focused on the importance of access to energy resources globally, and the potential for military conflicts as worldwide competition for scarce energy resources increases, particularly in CACR.<sup>30</sup> The Kremlin has used Gazprom as its arm for spreading its geo-economic and geopolitical interests in Europe and Eurasia, ranging far into many businesses and banks in these regions as well as beyond.<sup>31</sup>

Holding the world's second largest remaining conventional gas resources (after Iran), Russia has presently no problems with a lack of gas reserves, but rather with the availability of gas markets and the future competitiveness of its gas exports due to the much higher production and transport costs of its new, much more remote gas fields.<sup>32</sup>

Whilst the EU is trying to diversify its energy mix and gas imports, Russia has clearly recognized the arising challenges that the EU energy policies will pose for its own future gas exports.<sup>33</sup> The EU's Southern Gas Corridor project and the TANAP-TAP pipeline-network would end Russia's monopoly position of exporting Caspian gas exclusively through Russian-controlled pipelines.<sup>34</sup> Hence, the Kremlin has sought to strengthen its gas footprint in Europe through the originally planned South Stream Pipeline, with a capacity of 63bcm in 2018 and an initial supply of 15.75bcm by late 2015.

In South Eastern Europe, after the TAP project succeeded over the Nabucco-gas pipeline in the summer of 2013, the geopolitical rivalry between the original Nabucco-pipeline and South Stream has been replaced by a similar geopolitical rivalry between an expanded TANAP-TAP network and South Stream.<sup>35</sup> Although South Stream could not economically compete with the TANAP-TAP network due to its much higher total costs of up to €60bn<sup>36</sup>, most Russian experts did believe that the pipeline circumventing Ukraine would be built due to the overall geopolitical importance of the project. But even before the cancelation of South Stream in December 2014, only two of the original four pipelines appeared realistic.<sup>37</sup>

At the same time, Moscow has pushed a third and fourth Nord Stream pipeline (also called 'Nord Stream 2') and even expressed interest in building a second branch of the 4,000km long Yamal-Europe gas pipeline in 2013.<sup>38</sup> It would have increased the already redundant gas pipeline export capacities of Russia and, therewith, questioned the commercial profitability of any new gas pipeline projects at a time when the European gas import demand has not returned to the pre-crisis level of 2008. The prospect of a significantly reduced European dependence on Russian gas supplies has not just a significant impact on Gazprom's future businesses and market position in Europe. It also directly affects Russia's state budget and entire economy. Since 2010, all previous forecasts of Europe's gas demand have been reduced. Together with the EU's liberalization efforts of its gas sector through its Third-Energy Package regulation, which involves unbundling, third-party access to pipelines, and other infrastructures, it has forced Gazprom to look for alternative markets and to sign a record-breaking deal for exporting gas via a new 'Power of Siberia' gas pipeline to China in May 2014. But its price compromise has raised serious doubts about the profitability of that bilateral deal at the expense of

Gazprom and Russia.<sup>39</sup>

Russia's future gas exports, based on even more remote and expensive new gas fields, as well as longer and more costly pipelines, could become the most expensive option for Europe's future gas imports (when all higher development and transport costs are really taken into account), in comparison with indigenous unconventional gas production and many future LNG-imports. Future gas exports will be based increasingly on spot-market prices, and even Russia's Ministry of Economic Development warned Gazprom in August 2012 of increased competition from North American exports of LNG, which would force Gazprom to lower its export prices by 2016 at the latest.<sup>40</sup> The Ministry called Gazprom's export prices to 'far abroad' outside the former Soviet Union as 'inadequate', with further rising price pressures on the company. It expected that after 2015 production costs of unconventional gas in the U.S. and in other countries will further decrease, and that production volumes will increase globally, leading to even more worldwide competition and lower gas prices.<sup>41</sup> The Ministry anticipated declining gas prices in Europe from the peak of US\$411 per 1,000cm in 2014 to US\$329 in 2016. In 2015, they had actually fallen to around US\$220 per 1,000cm. In addition, Gazprom's imports from Kazakhstan, Turkmenistan and Uzbekistan had already declined from 38bcm in 2010 to 27bcm in 2011<sup>42</sup>, which further decreased revenues and profits. At the same time, Russia's ageing energy sector needs a huge investment of US\$2.4-2.8tn until 2030.<sup>43</sup> Russian gas producers must invest alone US\$730bn by 2035 merely to replace most of their current production of more than 600bcm a year from its old gas fields.

On 1st December 2014, Russia's President Vladimir Putin surprised the EU and the South Stream consortium by announcing at his Ankara meeting with Turkish President Recep Tayyip Erdogan, that the construction of the South Stream gas pipeline had been cancelled. He cited the Commission's non-constructive approach and Bulgaria's unwillingness to continue the construction. As the Gazprom's CEO Aleksey Miller made clear in January 2015: "South Stream is dead. For Europe there will be no other gas transit options to risky Ukraine other than the new 'Turkish Stream pipeline'".<sup>44</sup>

The European Commission had refused to give Gazprom an exemption for operating the pipeline at full capacity, in favour of the EU's Third-Energy Package rule of allowing Third-Party Access of up to 50 per cent. In addition to the lack of approval by Brussels and that the new interim government in Bulgaria had frozen the pipeline construction in its country in the summer 2014 under the pressure of the European Commission, the project had also struggled to raise the €14bn offshore pipeline section, due to Western sanctions that made European banks much more cautious about lending to a Gazprom-led consortium.<sup>45</sup>

By agreeing to build the new Turkish Stream pipeline, Russia hoped that the first pipeline and gas supplies to Turkey would start delivering by December 2016. It had been projected to deliver 16bcm gas to Turkey, and up to 49bcm to the Greece Black-Sea coast, where the EU would need to build itself a pipeline as soon as possible to supply this Russian gas circumventing Ukraine to its European customers. As Moscow warned, the EU needs to build this pipeline as soon as possible, as time is running out. As Russia announced in January 2015, it wants to stop all Russian gas supplies transiting Ukraine by 2019 due to the remaining high transit risks for Russian gas to European customers, when its gas transit contract with Ukraine expires.<sup>46</sup> But the Commission declared that the Turkish pipeline transporting Russian gas to Europe via Greece is not a sound economic project and it does not see any need on its side to build this pipeline. It warned that the change would harm Gazprom's reputation as a reliable supplier and made clear that it will "not accept any blackmailing" (Commission President Jean-Claude Juncker).<sup>47</sup> The Commission has also questioned the economic, legal and technical viability of the Turkish Stream project.<sup>48</sup>

In June 2015, Russia took advantage of growing tension between Greece and the EU by signing a bilateral deal with Athens to extend the Turkish Stream pipeline through Greek territory.<sup>49</sup> The so-called South European Gas Pipeline would be controlled by the two countries, but its costs of €2bn would be financed by Russia. Its construction should begin in 2016, completed by the end of 2018 and begin to operate in 2019.

While Bulgaria, Hungary, Italy and Austria have also been in favour of the Turkish Stream, the European Commission and the U.S. have voiced major objections.<sup>50</sup> After President Putin's visit to Budapest in February 2015, the Hungarian

## Figure 1: Russia's Turkish Stream Gas Pipeline Project

- Capacity: four strings x 15.75bcm per year = 63bcm per year
- Transport length: >1,100 km (930 km offshore section and 265 km onshore section);
- Official Costs:
  - Total Costs: €11.4bn (US\$12.1bn), excluding VAT;
  - Estimated Real Costs: > €14bn (excluding costs of Russia's own Southern Corridor);
  - First line to Turkey: €4.3bn.

Source: Dr. F.Umbach based on various sources.

government had already organized a meeting with Serbia, Macedonia, Greece and Turkey (notably Bulgaria, Romania and Croatia were not invited) in April. They proposed an extension pipeline ('Tesla') for Turkish Stream from Greece through Macedonia and Serbia to Hungary and Baumgarten in Austria.<sup>51</sup> Its northern route coincides with the northern route of the original South Stream pipeline, only Bulgaria would be replaced by Macedonia. The invited countries have promised to respect EU regulation and expressed their hope of receiving financial support from the EU.

The project will compete with another pipeline plan of the state-owned Slovak energy company Eustream. It already proposed the Eastring pipeline project in November 2014 to linking Central with South Eastern Europe (CSEE). It has a planned capacity of 20-40bcm and is based on two variants: it would either run 832km through Slovakia, Hungary or Ukraine, and Romania, and the second option additionally through Bulgaria (1,274km long).<sup>52</sup>

For the Commission, building Turkish Stream would by no means decrease the EU's import dependence on Russia and Gazprom. Turkish Stream – like South Stream – would only offer a route diversification, but not a real diversification of gas supplies, which is the major strategic rationale for the EU's Southern Gas Corridor project. It would also undermine the EU's agreed energy and gas supply cooperation with Kiev of March 2014. Ukraine's close energy cooperation has become increasingly crucial for enhancing Europe's energy security by using its free huge gas storage capacities and gas pipeline networks, with its new reverse-flowing options.<sup>53</sup>

Forcing European countries to buy Russian gas at the Turkey-Greece border instead of using Ukraine's existing large pipeline network would also abandon a well-functioning system in favour of investing billions of Euros into a new, expensive and redundant infrastructure. Like South Stream, Turkish Stream would have to comply with the EU's internal market rules that require Gazprom to relinquish its control of the pipelines beyond Russia's border. The Commission has started the official anti-trust case against the Russian company, focusing on Gazprom's attempts to foreclose markets, denial of access to competitors to competing pipelines, and other gas infrastructures, as well as overcharging gas prices. It is presently very uncertain whether the bilateral conflict can be "amicably settled" in the near future.

Despite the similar route between the original South Stream pipeline and Turkish Stream, the latter would completely redesign the energy route to Turkey and the EU by circumventing and isolating Ukraine. While Russian gas to Romania, Bulgaria and Turkey has been supplied via Russia's Trans-Balkan pipeline, in this case Turkey would benefit, as it would become the first and not the last importer of Russian gas in its supply chain to CSEE.

As Russia wants to end all gas exports via Ukraine, it also means giving up the Trans-Balkan Pipeline, which is feeding Turkey's most populous Istanbul and Marmara region, with 20 per cent of Russian total gas exports to Turkey. Russian gas flows via the Trans-Balkan-pipeline already decreased 20 per cent towards between May 2014 and May 2013.<sup>54</sup>

Figure 2: Turkish Stream and TANAP-TAP Pipeline Network





Source: John Roberts, 'The Impact of Turkish Stream on European Energy Security and the Southern Gas Corridor', Atlantic Council of the U.S. (ACUS)/Global Energy Center, Washington D.C. 2015, p. 9.

In the early summer of 2015, Turkey's evaluation of Russia's Turkish Stream project became more sceptical and critical.<sup>55</sup> Shortly before launching the Turkish Stream project in December 2014, Russia decreased its gas exports to Turkey via the Trans-Balkan Pipeline. It caused confusion and mistrust in the Turkish government, making Turkey fear blackouts in the winter because the region demands two-thirds of the country's energy consumption. Alternative gas supplies from Azerbaijan and Russia via the Blue Stream pipeline lack the national gas infrastructure to transport those gas supplies from East to West, therefore not presenting Turkey with a viable alternative. Only when both sides agreed on Turkish Stream, Russian gas exports increased again via the Trans-Balkan-Pipeline without giving any official explanation for the two-month gas export decline.<sup>56</sup> Hence Turkish concerns have increased, particularly in regard to its 265km long onshore section of Turkish Stream, as Russia may gain access to Turkey's critical gas infrastructure in its most populous region. Furthermore, Gazprom already expressed its interest in acquiring Istanbul's gas distribution network.<sup>57</sup>

Until autumn 2015, Russia had not received a draft agreement for the Turkish Stream project from Turkey's government, after Moscow offered two proposals to Ankara in July for just one pipeline and another one for all four strings, but explained to be interested in a "phased implementation".<sup>58</sup> Both sides could also not solve the price dispute. Russia wanted to grant a discount only after Ankara signed off on all four pipelines of Turkish Stream. Turkey, however, wanted just one pipeline and intended for Gazprom to find European customers for the other three pipelines, as otherwise they would directly compete with TANAP and TAP.

In this light, the project has faced increasing challenges and problems:

1. Close advisers of Gazprom have warned that by re-routing Russian gas supplies to Europe to bypass Ukraine, Russia may not fulfil its gas contracts with European gas partners because the gas delivery is agreed in the contracts to a certain border in specific volumes, such as the transit contract with Slovakia.<sup>59</sup> It is binding until 2028. Many other contracts between Gazprom and its European gas partners have specified as delivery points either the Slovak-Austrian border and the Central European Gas Hub at Baumgarten, or Velke Kapusany between Ukraine and Slovakia.<sup>60</sup> As a result, difficult and lengthy re-negotiations would be needed, which would involve the European Commission.
2. Even in the best-case scenario for building Turkish Stream, Russia might be forced to use Ukraine's gas transit network, as the timetable of 2019 for stopping all gas supplies to Europe via Ukraine is unrealistic. At the end of June 2015, Gazprom already announced to discuss with Ukraine future gas transit supplies via its territory after 2019.<sup>61</sup>
3. At the same time, Gazprom signed a Memorandum of Intent with the European companies E.ON, Shell and OMV, to build two additional Nord Stream gas pipelines, with costs of around €10bn in June 2015.<sup>62</sup> It would increase Nord Stream's total capacity to 110bcm, albeit Russia's total pipeline capacity to the EU is presently used at only around 57 per cent. It questions the need of Turkish Stream in the light of much lower EU gas consumption and import forecasts, as well as its diversification efforts.
4. Neither Gazprom and Russia themselves have the financial clout to finance Turkish Stream, Nordstream-2 and two LNG terminals in the Baltic Sea, nor have the regional states of CSEE countries the funds alone to build the projected Tesla pipeline.<sup>63</sup>
5. Gazprom itself is facing major problems; its gas production in 2015 has been expected to decrease to a historical low of 414bcm.<sup>64</sup> Although it could defend its market share in Europe with around 30 per cent of the European gas demand and around 40 per cent of Europe's gas imports during the last years, Russia has presently a production oversupply of up to 100bcm per year, which it can neither sell on the shrinking European gas market, nor in Asia, which lacks regional infrastructure. Moreover, Russia's 'pivot to China' is facing major setbacks: the construction of the 'Power of Siberia' pipeline by May 2019 is no longer realistic and might be postponed for two years to May 2021 due to numerous problems. In addition, China suspended in late July 2015 its second pipeline project to supply

30bcm from its Western Siberia gas fields to China's northern-western region of Xinjiang.<sup>65</sup> President Putin had originally introduced this option last spring as Russia's geopolitical alternative, as the Western Siberia fields normally exports gas to Europe.

6. Declining European gas consumption, TANAP/TAP, Nord Stream 3-4 and Turkish Stream (in particular with four pipelines and a total capacity of 63bcm), cannot all economically coexist. At the beginning of July, Russia unexpectedly terminated the €2.4bn construction contract with the Italian company Saipem (providing two pipeline laying vessels, anchoring near the Russian city Anapa), who was meant to build the first line of the offshore section of the Turkish Stream pipeline. But it reassured its project partners that it would not threaten the project itself.<sup>66</sup> In August 2015 Russia proposed to Turkey two options: either to build just one gas pipeline instead of four, or all four planned strings. The Turkish government, however, failed to respond to the new proposal.<sup>67</sup>

The Kremlin has certainly hoped not just to expand its gas supplies to Turkey, but also to acquire more influence in Turkey's energy policy direction and Azerbaijan's gas supplies via Turkey to Europe.<sup>68</sup> But before the recent escalation of the Russian-Turkish relations at the end of last November, Ankara appeared to have become less enthusiastic about the Turkish Stream project.<sup>69</sup> The Turkish government reassured its Western partners by making clear that its newly agreed gas supply contracts and planned projects with Russia will not take place at the expense of TANAP and TAP. TANAP has been considered as the central strategic link between the Caspian and European gas markets, and having overall strategic importance for the EU's and Turkey's energy supply security and for the realization of the Southern Gas Corridor. Turkey is currently considering acquiring a share in the TAP project.<sup>70</sup>

The arrival of 16bcm of Azerbaijani gas by 2018 via TANAP and TAP to European gas markets is already significantly reducing Gazprom's prospects of building expensive rival pipelines and concluding new long-term gas contracts. Russia's intention of constructing two additional Nord Stream pipelines has further questioned the economic rationale for the Turkish Stream project. But Russia still maintains plans for new additional pipelines and two LNG-export terminal projects at the Baltic Sea, with investments costs of US\$150-200bn, which are not economically realistic. Moreover, by transporting 47bcm at the Turkey-Greece border, Russia threatens Turkey's own energy hub ambitions. It may create significant bottlenecks inside the Turkey-Greece gas infrastructure system, as the 10bcm Azeri gas for Europe is being transported through the same regional gas infrastructure to Albania.

In June 2015, Russia stopped the construction of its 1,625km onshore Pochinki-Anapa pipeline in its own Southern Corridor region due to the unclear bilateral price negotiations with Turkey and the uncertain future of the other three planned pipelines of Turkish Stream.<sup>71</sup> As a result, the overall future capacity of Turkish Stream may have been halved to 32bcm to a local Russia-Turkish project, rather than a regional Russia-Turkey-Europe one.<sup>72</sup>

Even in the most optimistic scenario for Russia, its Turkish Stream project and the discussed extension pipelines through Greece and CSEE would need many more years from initiation to completion - whereas TANAP-TAP with an expanded SCP are already constructed as alternative non-Russian pipeline projects. Around 30 per cent of the TANAP-TAP network has already been implemented.

In the late summer of 2015, it became clear that the Turkish Stream project had been frozen until November after Turkey's parliamentary elections, as both sides could not agree on construction details and discounts for Russian gas.<sup>73</sup> After the shooting down of a Russian air-fighter by Turkey on November 24th, Moscow's following suspension of the Turkish Stream pipeline project and the following deterioration in bilateral Russia-Turkish relations, the future of Turkish Stream appears more uncertain than ever, albeit Russia has already invested US\$1.95bn in gas pipelines for the project.<sup>74</sup> Turkey is actively looking for alternative gas supply options and is fastening both the TANAP project with Azerbaijan to be completed by 2018, and its previous plan to build an underwater gas pipeline to Israel's new offshore gas fields.

At the same time, Gazprom and Russia are losing strategically important market shares in the region of the post-former Soviet Union. Ukraine has reduced its gas imports from 42bcm in 2010 to just 18bcm in 2014, whilst Moldova (via a new pipeline to Romania) and the Baltic states (with their new floating LNG-terminal

in Lithuania) have new import options available, which will reduce their future gas imports from Russia.<sup>75</sup> In this light, Russia's gas exports in 2014 had already been the lowest in the last decade.<sup>76</sup> Its forecasted gas production in 2015 may even hit the lowest level in the company's history.<sup>77</sup>

## **2.2 Post-South Stream: New Perspectives for the EU's Southern Gas Corridor and the TANAP-TAP Gas Import Diversification**

South Eastern Europe (SEE) and the Balkan countries are the region which are the least diversified and most threatened by a possible gas supply crisis. Over the last years, debates of gas strategies in the EU-28 and CSEE-countries have often overlooked, marginalized, and underestimated the changing parameters of the global and European gas markets, and the potential for new supply options to enhance the member countries' energy security. These new diversification and import options are partly the result of the new EU gas strategy and partly because of new supply options - particularly from CACR, Romanian and Bulgarian offshore gas fields in the Black Sea, the East Mediterranean Sea (Israel, Cyprus, Lebanon, Egypt), and the Adriatic Sea (Croatia).<sup>78</sup>

Confronted with Russia's annexation of Crimea and a new Russian gas supply cut, the EU Council on 21st March 2014 decided to diversify further its gas imports and reduce its gas supply dependence on Russia.<sup>79</sup> The EU's new energy and gas strategy, based on the in-depth study concluded at the end of May 2014<sup>80</sup>, was approved and confirmed at the European Council summit next June 26th-27th, 2014.<sup>81</sup>

The EU's 3,500km Southern Gas Corridor (SGC) project, a system of interconnecting pipelines running from the Caspian region through Turkey to CSEE, is the most complex and strategic element aimed at expanding the regional liquidity and enhancing Europe's future energy supply security. It can supply at least 20-50bcm of gas supplied by Azerbaijan, but also by Turkmenistan, Iraq (Kurdistan) and Iran.<sup>82</sup>

Whilst the implementation of the first section of this pipeline network with the expanded South Caucasus Pipeline (SCP) – running from Azerbaijan through Georgia to Turkey - and the newly built TANAP (from Turkey's east to its Greece border), and TAP (from Greece through Albania to Southern Italy) – has made important progress, the connecting pipeline network in CSEE has been developed at a much slower pace. At the beginning of 2015, the European Commission created the Central East-South Europe Gas Connectivity (CESEC) High Level Working Group. It promotes the implementation of the EU's SGC and other gas infrastructure plans, aiming to ensure regional energy cooperation and integration.<sup>83</sup>

After Putin's cancellation of South Stream, Bulgaria and other regional countries have become interested in the Nabucco-West pipeline project (a shorter version of the shelved Nabucco project), and becoming a gas hub in South-Eastern Europe.<sup>84</sup> The EU has also welcomed the plan of a 'Vertical Gas Corridor' (VGC) between Greece, Bulgaria and Romania by building a two-way gas pipeline with a capacity of 3-5bcm per year, and has offered the possibility of funding it through the 'Connecting Europe Facility' programme, with its investment package of €315bn announced last November.<sup>85</sup>

But the situation for the EU, Turkey, and Azerbaijan, building the TANAP-TAP gas pipeline network has become more geopolitically complicated because of the collapse of the Greek economy and the future energy and foreign policies of the new left-wing coalition Greece government. It has used its close Russian ties as a bargaining chip towards the EU.<sup>86</sup> It has signed with Russia a €2bn landmark deal for an extension of Gazprom's planned Turkish Stream gas pipeline through Greek territory (called 'South European Pipeline' with a capacity of 47bcm per year) last June, against objections of the European Commission and the U.S.<sup>87</sup> Greece hoped to benefit from transit fees and the creation of 20,000 new jobs during the time of the pipeline's construction, but remains dependent on Turkey's final support of Russia's Turkish Stream project and EU support for its plans to build new LNG-terminals.<sup>88</sup>

At the same time, the left-wing energy minister Panayotis Lafazanis also demanded from the TAP-consortium new efforts for compensation for farmers affected by the pipelines, and called for additional benefits for communities nearby. He also opposed the DESFA sale to SOCAR and tried to review its TAP contract, which also increased concerns in Azerbaijan about the future course of the Syriza Party-led coalition government in Athens.<sup>89</sup>

### Figure 3: Overview of Bilateral Gas Interconnectors in CSEE

- Poland-Lithuania: 500km long bilateral gas interconnector with a capacity of 2.3bcm per year, estimated to cost €558 million. It has received the highest priority by both sides and the European Commission to be implemented as part of the NSGC.
- Poland-Slovakia: design work has started for the bilateral gas interconnector as part of the NSGC with an initial capacity of 4.7bcm per year on the Slovak border and 5.7bcm per year on the Polish side.
- Bosnia-Herzegovina: both are planning a joint 200km gas interconnector, for which the European Bank for Reconstruction and Development (ERBD) has already expressed its willingness to finance the pipeline project. Bosnia has presently a modest and inconsistent annual gas consumption of just up to 400 million cubic meters (mcm) during the last few years. But Gazprom is the only source of supply for Bosnia's gas demand, which was in 2012 just 260mcm.
- Serbia-Bulgaria: bilateral agreement signed on the construction of a 150km gas interconnection with a capacity of 1.8bcm last June to begin it in 2018, for a gas flow starting in 2019. It will allow gas imports from TANAP and TAP as well as from the LNG-import terminal in Alexandroupolis (Greece). The European Commission is considering giving financial support to the project.
- Slovakia-Hungary: transmission capacity has been tested last March.
- Romania-Moldova ('Iasi-Ungheni'): inaugurated in August 2014 with small Romanian gas exports to Moldova, with the plan to expand it to 1bcm per year with a very competitive price comparative to Gazprom.
- Bulgaria-Romania: the bilateral gas interconnector becomes operational in early 2016. By 2020, it may transport Caspian gas further via the existing Romanian-Hungarian gas interconnector (capacity up to 4.4bcm) to Hungary. The required reverse-

The European Commission warned the Greek government that its energy sector would suffer if the country leaves the single currency. Having only scarce oil and gas reserves, Greece would have to pay more for its energy imports. A 'Grexit' would also undermine its investment climate, raise security supply concerns both in the short and in the long-term future, and force the Greek government to reconfigure its entire energy policies and system. The EU feared that its key gas infrastructure projects connected with Greece such as TANAP, TAP, and the IGB gas interconnector to Bulgaria as part of the VGC, would be threatened.<sup>90</sup>

Since the beginning of 2015, the Greek government demanded cheaper gas prices from SOCAR and wanted to reduce SOCAR's DESFA share of 66 per cent to just 49 per cent. Greece's huge debts jeopardize both Azerbaijan's investments in Greece as well as the EU's SGC project. Until the break-up of the Syriza-government, its energy policies have been highly contradictory and have resulted in a further loss of Greece's reputation, credibility and trustworthiness in the view of foreign investors.<sup>91</sup> SOCAR and the Azerbaijani government have resisted all demands and requests by Athens.<sup>92</sup> But SOCAR's high expectations in investments in Greece and neighbouring countries have been disappointing, as the revenues have shrunk alongside the declining oil and gas prices.

The building of TANAP with an initial capacity of 16bcm (6bcm to Turkey and 10bcm to Europe) is already underway as well as the expansion of the SCP from Azerbaijan's Shah Deniz gas fields through Azerbaijan and Georgia to Turkey (also known as the 'Baku-Erzurum' gas pipeline). However, the contracted 10bcm of Shah Deniz II gas supplies to Europe via TANAP and TAP will be exported to Greek, Bulgarian and Italian markets, but not to other countries in SEE, who need to diversify their gas imports.

Given TAP's small capacities of gas for Greece, the TAP consortium has also proposed to create natural gas markets from scratch in Albania, Kosovo, and Montenegro. In addition, Croatia is only 61 per cent self-sufficient of natural gas and has to cope like all other CSEE countries with high energy and gas prices. TAP and the regional states are also considering new sub-regional pipelines such as the planned Ionian Adriatic Pipeline (IAP) with an annual capacity of 3-5bcm traversing Albania, Montenegro, Bosnia Herzegovina and Croatia. Albania and Azerbaijan have also agreed to develop a general plan for gas supplies to Balkan nations in December 2014. Another plan would be to use and expand the Western Balkan Ring (WBR), which would allow Caspian gas supplies to Macedonia and Serbia.<sup>93</sup> But not all planned cross-border pipelines are being implemented with the needed support of governments and energy companies, which still try to balance their EU energy policies with those of Russia and Gazprom.<sup>94</sup>

The European Commission and the regional states in CSEE have responded to the Ukraine conflict by quickening the building of already planned bilateral and sub-regional gas infrastructure projects within its SGC. The technical, regulative and financial support of these projects has been strengthened by the European Commission, through its 'Connecting Europe Facility' programme (with 107 gas projects with investment costs of €53bn), its newly established 'European Fund for Strategic Investments', and the implementation of its EU *acquis communautaire* in their energy sectors.<sup>95</sup> Furthermore, the expansion of reverse-flow capacities has also been increased since 2015.

The regional energy supply security and diversification of imports can also be enhanced by building additional bilateral gas interconnectors as part of the EU's sub-regional North-South Corridor (NSC) project. It will create a web of reverse flow gas interconnections in CSEE as a physical pre-condition for a single, united gas market. In this context, LNG-import terminals in Lithuania (already operating since January 2015), and Poland (starting its operation in few months), will be connected by new two-way cross border gas interconnectors (Poland-Lithuania), expanding national gas networks, alongside the additional planned LNG-import terminal in Croatia (at the island of Krk). The overall costs of the energy projects of the NSC have been estimated at around €27bn.<sup>96</sup> The small national gas markets will be transformed into a much larger and more competitive regional gas market with almost the same EU regulations, creating much more attractive investment conditions.



flow capability needs additional investments for its capacity expansion.

- Greece-Bulgaria: the planned Greece-Bulgaria gas interconnector (IGB with a capacity of 1-3bcm) can supply Caspian gas in addition to the already existing Kula-Sidirokastro pipeline with a capacity of 4.3bcm (presently exporting Russian gas from Bulgaria into Greece) by including a reverse-flow capability. A final investment agreement has been signed at the beginning of December 2015.

Source: Dr. F.Umbach based on various sources.

**Figure 4: The EU's Southern Gas Corridor and Newly Planned or Proposed Gas Pipelines**



Source: John Roberts, 'The Impact of Turkish Stream on European Energy Security and the Southern Gas Corridor', Atlantic Council of the U.S. (ACUS)/Global Energy Center, Washington D.C. 2015, p. 10.

In July 2015, the CSEE countries agreed to strengthen their joint efforts to accelerate the building of missing gas infrastructure links and to solve remaining technical and regulatory problems.<sup>97</sup> While the past slow progress of building bilateral gas interconnectors in CSEE, particularly in the Balkans, had often reflected the lack of political will and vested interests of state-owned energy companies with close ties to Gazprom, the present problems are increasingly a consequence of rapidly falling oil and gas prices, making investment in expensive gas infrastructure projects commercially risky or even unviable.

### 2.3 The Energy Potential of Central Asia and the Caspian Region (CACR)

The proven oil and gas reserves in CACR have been estimated at 3.4 per cent of the world's total oil reserves (more than Libya - see next figure), and 11.3 per cent of proven global gas reserve (almost comparable with Qatar). Regional oil production of 2014 exceeded Venezuela's 2005 capacity, South America's largest oil producer.<sup>98</sup> Although the Caspian countries with a combined population of just 76 million account for only 1.4 per cent of global primary energy use and have even reduced their energy demand by 15 per cent between the early 1990s and 2008, the Caspian region cannot replace the Persian Gulf for satisfying the world's total crude oil demand. But Kazakhstan's proven oil reserves have been anticipated to triple from 38.8 billion barrels in 2008 to 100-110 billion barrels in the next decade. It could make the country the fourth largest producer behind Saudi Arabia, Iran and Iraq, and ahead of Kuwait, Russia and Venezuela.<sup>99</sup>

**Figure 5: Proven and Oil and Natural Gas Reserves in CACR in Comparison with the EU-28, US and the Middle East (2008 and 2014)**

Country/Region	Proven Oil Reserves (Thousand million barrels)/ Share of Global Reserves (in Percentage)		Proven Natural Gas Reserves (tcm)/Share of Gobar Reserves (in Percentage)	
	2008	2014	2008	2014
CACR				
Azerbaijan	7.0 (0.6%)	7.0 (0.4%)	1.20 (0.6%)	1.2 (0.6%)
Kazakhstan	39.8 (3.2%)	30.0 (1.8%)	1.82 (1.0%)	1.5 (0.8%)
Turkmenistan	0.6 (>0.05%)	0.6 (>0.05%)	7.94 (4.3%)	17.5 (9.3%)
Uzbekistan	0.6 (>0.05%)	0.6 (>0.05%)	1.58 (0.9%)	1.1 (0.6%)
<b>Total</b>	<b>48.0 (&gt;3.82%)</b>	<b>38.2 (&gt;3.4%)</b>	<b>12.54 (6.8%)</b>	<b>21.3 (11.3%)</b>
Iran	137.6 (10.9%)	157.8 (9.3%)	29.6 (16.0%)	34.0 (18.2%)
Russia	79.0 (6.3%)	103.2 (6.1%)	43.3 (23.4%)	32.6 (17.4%)
EU-28	6.3 (0.5%)	5.8 (0.3%)	2.8 (1.6%)	1.5 (0.8%)
US	30.5 (2.4%)	48.5 (2.9%)	6.7 (3.6%)	9.8 (5.2%)
<b>Total Middle East (incl. Iran)</b>	<b>754.1 (59.9%)</b>	<b>810.7 (47.7%)</b>	<b>75.9 (41.0%)</b>	<b>79.8 (42.7.0%)</b>

Source: Dr .F.Umbach based on British Petroleum, 'BP Statistical Review of World Energy 2009', June 2009 and June 2015.

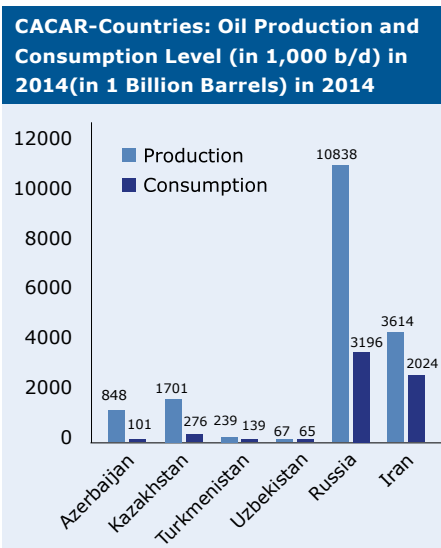
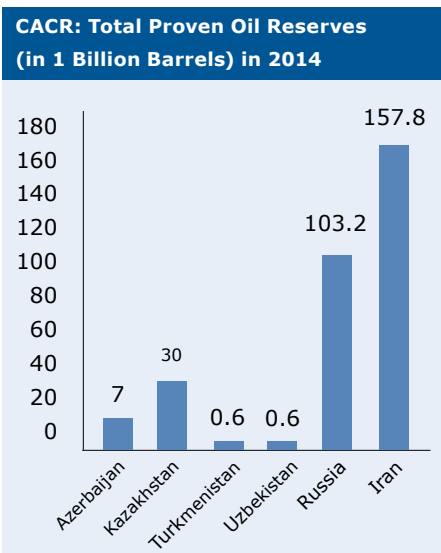
The global gas reserves are more concentrated than the oil reserves. Russia, Iran and Qatar as a potential 'gas cartel' control almost 49 per cent of the global gas reserves. The CACR's proven gas reserves (even by excluding Iran and Russia) are more important, estimated at 21.3 trillion cubic meter (tcm), which have significantly increased since 2008.

In 2014, the region's natural gas production amounted to 162.8bcm (4.7% of the world gas production), almost comparable to the combined production of South and Central America. In this context, it is interesting that not only Kazakhstan's proven oil reserves and present annual oil production, but also its proven gas reserves and annual gas production rate are both higher than those of Azerbaijan – the EU's main gas partner in CACR.<sup>100</sup> However, in contrast to other CACR countries, Kazakhstan's gas production results almost entirely from its oil production. Around 50 per cent of its extracted gas is being used for re-injection. Roughly 70 per cent of its marketable gas production is coming from its Tengiz and Karachanak oil fields. While its gas production is expected to increase further, it remains uncertain after re-injection how many volumes can be provided for commercial use.<sup>101</sup>

In 2010, the regional energy demand was expected to rise 1.4-1.7 per cent per year, and might be up to 46 per cent higher in 2035 than today. Regional oil production was forecasted to grow from 2.9mb/d in 2009 to a peak of around 5.4mb/d between 2025-2030, before declining to 5.2mb/d in 2035. Caspian gas production is expected to jump from 159bcm in 2009 to almost 260bcm by 2020 and more than 310bcm in 2035 (IEA-New Policy Scenario). Exports of oil would double to a peak of 4.6mb/d in 2025, whereas gas exports are estimated to increase from 63bcm in 2008 to 100bcm in 2020, and 130bcm in 2035.<sup>102</sup>

While Kazakhstan and Azerbaijan are leading in oil production (together accounting for 92% of the region's total proven oil reserves), Turkmenistan (with 40% of the region's proven natural gas reserves) and Uzbekistan (27% of those) are the major natural gas producers in the region. But Uzbekistan consumes 80 per cent of its production, whereas Turkmenistan's gas reserves have been significantly increased between 2008 and 2014. During this timeframe, Turkmenistan climbed up from the twelfth largest gas producer in the world to the fourth largest producer and the second largest in the former Soviet Union (behind Russia). Presently it owns 17.5tcm of proven gas reserves, accounting for 9.3 per cent of the world's gas reserves. Its gas exports have grown from 20bcm in 2009 to 67.5bcm in 2014, and will further

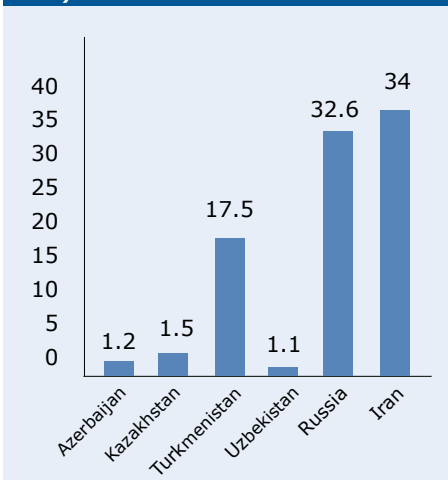
**Figure 6: CACR-Proven Oil Reserves, Production and Consumption Levels (2014)**



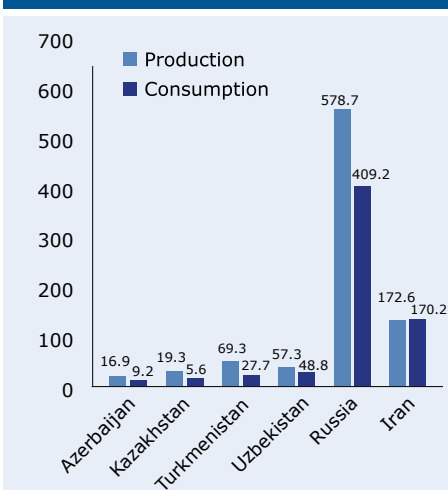
Source: Dr. F. Umbach based on BP, 'Statistical Review of World Energy', June 2015.

**Figure 7: CACR-Countries: Total Proven Gas Reserves (in Trillion Cubic Meters/TCM) in 2014**

**CACR-Countries: Total Proven Gas Reserves (in Trillion Cubic Meters/TCM) in 2014**



**CACR-Countries: Natural Gas Production and Consumption (in Billion Cubic Meters/CBM) in 2014**



Source: Dr. F. Umbach based on BP, 'Statistical Review of World Energy', June 2015.

increase to around 85bcm in 2020, and more than 100bcm by 2030.

Although for Europe, CACR cannot replace Russia as its most important gas and energy partner, it could be an important supplementary supplier and an alternative diversification source for oil and especially gas to the EU.<sup>103</sup>

Despite some positive developments during the last decade, the full expansion of the CACR's oil and in particular gas reserves is still hampered by an inadequate export infrastructure, disagreements over new export routes (mainly with Russia), and unresolved border disputes between the littoral states, as well as regional instabilities. The five Caspian littoral states have not been able to agree on the division of Caspian Sea resources, albeit three have (Russia, Azerbaijan, and Kazakhstan) reached a trilateral agreement on sub-surface boundaries and collective administration in May 2003.

Given the competing vital interests within the region between major powers – such as Russia, China, India, Iran and the U.S., as well as the CACR countries themselves - the declining regional oil and gas import demand of Europe and Asia, as well as the low gas prices, have increased the geo-economic competition between Russian and CACR countries. They all seek to increase and diversify their oil and gas exports to Europe as well as Asia.

### 3. Kazakhstan’s Energy Policies from 1990s - 2010

Energy is the main factor that shapes Kazakhstan’s internal and external policies.<sup>104</sup> Nearly 25 years since the nation proclaimed its independence, Kazakhstan has emerged as the economic and political leader of post-Soviet Central Asia, having skilfully crafted its energy and foreign policy prerogatives. Determined to ensure its international standing in the turbulent early days of the Republic, the country’s political elite steered a resource-led development through a ‘multi-vector’ foreign policy, aimed at ensuring good relations within the region while looking beyond it for economic opportunities. Following the 1990s US-Russia negotiations, in 1996 Kazakhstan witnessed the removal of the Soviet-legacy nuclear arsenal from its territory. In the backdrop of the great powers nuclear arrangements, Kazakhstan’s new foreign policy prospects were facilitated by the US foreign and energy policy involvement in the region. The focus of US policy in CACR was on large-scale oil and gas infrastructure projects that would help to ensure the region’s stability and viability.<sup>105</sup>

**Figure 8: Major Caspian Oil and Gas Pipelines**



Source: Energy Information Administration (EIA), Washington D.C. 2015 ([https://www.eia.gov/beta/international/analysis\\_includes/countries\\_long/Kazakhstan/kazakhstan.pdf](https://www.eia.gov/beta/international/analysis_includes/countries_long/Kazakhstan/kazakhstan.pdf)).

Two key regional projects approved by Moscow and Washington – the Baku-Tbilisi-Ceyhan (BTC) and the Caspian Pipeline Consortium (CPC) oil pipelines - opened up the oil and gas potential of the greater Caspian Sea region to the world markets. These developments in the 1990s shaped Kazakhstan’s multi-vector choices and continued to include its early partnership and association agreements with Europe. The relationship with the European bloc allowed the transfer of normative and administrative capacity-building tools, which further strengthened Kazakhstan’s international standing. In the 2000s, Kazakhstan’s energy policies had been increasingly determined by the impacts of oil and gas investments and rising oil prices. In this period, Kazakhstan strengthened its role in the oil and gas sector, and solidified its international political profile through participation in some of the key international organisations.<sup>106</sup> The rise of the petro-state initiated reforms of its energy policy as well as new laws, and improved investment conditions for an increasing diversification of its energy exports towards China. Its GDP of more than US\$400bn exceeds the combined GDP of all its Central Asian neighbours. All of this has helped Kazakhstan to rise “as the undisputed economic and political leader of the region”.<sup>107</sup>

### 3.1 Period Prior to Independence

Understanding Kazakhstan's energy policies in the 1990s and 2000s is difficult without applying a broader historical lens. The way Kazakhstan's energy policies unfolded following the country's independence was directly linked to the path dependence created in, and dating back to, the Soviet times.

Up until the declaration of independence on 16th December 1991, the business of running the Kazakhstan Socialist Soviet Republic's (SSR) oil and gas industry was governed centrally from Moscow with little involvement of local authorities in the SSR. The horizontal rather than vertical structure of the Soviet oil industry itself meant that the overall oil governance was dispersed across a number of industries, rather than being contained within a single ministry exercising control over the entire process.<sup>108</sup> The structure of the Soviet industry and the legacy of the horizontal governance the industry had followed made a substantial impact on the way early energy policy making of the independent Kazakhstan unfolded in the 1990s.

The Kazakhstan SSR resources had been widely regarded to have been of high potential and treated as the 'jewel in the crown' by the Soviet planners, with the area around the Caspian Sea being arguably the most promising region in the country.<sup>109</sup> The Soviet oil and gas strategy envisaged tapping these resources within the framework of the so-called fourth generation<sup>110</sup> of large-scale exploration by the end of the 1990s. Due to a number of issues, including the oil price drop in the 1980s, as well as the Soviet Union's increased and wasteful energy consumption, development of the Kazakh and Central Asian resources slowed down. Instead of developing the fourth generation of 'green-fields' in the Caspian region, focus was placed on addressing energy demand by draining the production from the existing wells.

The disintegration of the Soviet Union and the emergence of newly independent Kazakhstan opened up a new chapter in the country's foreign and energy policy-making. Due to its importance in the energy field, the Republic of Kazakhstan's foreign and economic policies were tightly linked with the role the country played in Soviet energy policy. Established in July 1991, the Kazakhstan Oil and Gas Corporation (KOGC) was the first body to fill the vacuum in the country's oil and gas governance. The KOGC changed its name in 1992 to Kazakhstanmunaigaz, becoming a National Oil Company (NOC) responsible for various state-owned operating units in oil and gas exploration, development, production, transportation, and refining throughout the country. 1992 witnessed the establishment of the Ministry of Energy and Fuel Resources, which was to be responsible for regulating oil and gas production and refining. Finally, the Ministry of Geology and Protection of Mineral Resources was established to regulate the development of Kazakhstan's mineral resources.<sup>111</sup>

### 3.2 Europe-Oriented Partnerships and Associations of the 1990s

Kazakhstan's relations with the EU played a very important role for the newly established Republic in the early 1990s due to the bloc's international political status. Establishing and strengthening relations with the Western European Member States' in general, and the Community in particular, were viewed in Kazakhstan as highly beneficial both in terms of trade and the international standing of the newly established state.<sup>112</sup>

Direct and formal relations between the EU and Kazakhstan began in the early 1990s and have largely revolved around economic and energy dimensions. In April 1992 the Memorandum of Understanding was signed between the Republic of Kazakhstan and the EU, paving the way for opening the Technical Aid to the Commonwealth of Independent States (TACIS), a process further cemented in July 1993 when the country was granted initially €3million to promote economic development within the TACIS framework.<sup>113</sup> The TACIS initiative provided grant-financed technical assistance designed to facilitate the transition of the Commonwealth of Independent States (CIS) and Mongolia towards market economies and democratic societies. Out of €4.22bn (\$5.11bn) allocated from TACIS to all participating countries from the Region between 1991-1999, Kazakhstan ranked third in obtained funds, receiving €111.9 million (\$145.1 million).

The funding provided by TACIS helped to establish energy efficiency centres in the Former Soviet Union (FSU), including in the then capital of Kazakhstan, Almaty, while assisting in the development of energy efficiency through the provision of



good-quality technical advice.<sup>114</sup> Apart from the legal, fiscal and financial framework, the TACIS programme was also actively involved in upgrading the oil and gas extraction in Kazakhstan, as well as the processing and transportation of oil and gas products, including training in environmental planning. Kazakhstan's involvement in the TACIS framework helped to establish a formal structure for monitoring the performance of international investor contracts and compliance with them. Finally, the TACIS based EU-Kazakhstan energy relations helped Astana in setting up a control system with training for government staff on modern drilling technology, safety standards, and environmental impact assessments.<sup>115</sup>



Kazakhstan became the first signatory for the European Energy Charter on 17th December 1991 and later, to the Energy Charter Treaty (ECT) on 17th December 1994. With five broad areas, the ECT is a legal framework to ensure foreign energy investment protection and promotion, provide for WTO rule-based free trade in hydrocarbon energy, enable free transit of energy through pipelines and grids, as well as state-to-state and investor-to-state dispute settlement mechanisms, and to address environmental concerns through efficiency improvements.<sup>116</sup> Kazakhstan ratified the ECT on 18th October 1998 and the international agreement entered into force on 16th April 1998.

The Interstate Oil and Gas Transportation to Europe (INOGATE) is a regional energy cooperation programme between the European Union and the littoral states of the bloc and countries of the Caspian Sea region. Kazakhstan has been part of the INOGATE platform since its inception in 1996, benefiting from 41 of the programme's 69 projects.<sup>117</sup> The remit of the INOGATE programme expanded in 2000s following two respective ministerial conferences: the 2004 Baku Conference and the 2006 Astana Conference. Kazakhstan took constructive steps towards broadening the scope of the INOGATE platform, which built a stronger link in ensuring the common goals of Brussels and Astana in the field of energy security. Following the Astana Conference, INOGATE has been a platform for (a) enhancing energy security, (b) harmonizing participating countries' energy law and markets on the basis of the EU energy law, (c) internalizing broad principles of sustainable development, and (d) attracting investment in the energy sector regionally. Being the EU's preferred partner in the energy sector, Kazakhstan benefited from pragmatic EU policies in the region, helping it to strengthen its international role and increasing its stability.<sup>118</sup>

### 3.3 Foreign and Energy Policy Outlook

Engaging foreign investors with Kazakhstan's oil and gas sector was assumed in late 1980s in the times of the Soviet Union. Chevron Corporation signed a preliminary agreement in December 1988 to carry out a work survey on the Korolevskoye oilfield in the North Caspian basin, east of the Tengiz field, which 'never materialised due to a number of issues including difficulties at the negotiations stage as well as overly complex terms envisaged in the agreement'.<sup>119</sup> The Independent Republic of Kazakhstan cancelled the previous Soviet-era agreement with Chevron, offering a brand new basis for cooperation with the American oil major. After two years of negotiations a new agreement with Chevron was made in April 1992 on the basis of 'Operation TengizChevrOil', a joint venture between Tengizneftegaz, a local enterprise established in 1985, and Chevron Overseas Petroleum.<sup>120</sup>

Since the collapse of the Soviet Union, Kazakhstan's foreign policy has been heavily determined by the energy factor. From the beginning of the country's independence the only route to export Kazakh oil abroad was the Atyrau-Samara pipeline. It has made Russia the key actor in defining Kazakhstan's energy and foreign policy prerogatives. Geopolitically, Kazakhstan's status in Eurasia is being defined as a transit country for the Omsk (Russia) – Pavlodar (Kazakhstan) – Shymkent – Turkmenabat (Turkmenistan) pipeline. The Central Asia-Center gas pipeline system and the Bukhara-Urals pipelines are the main gas pipeline systems transporting natural gas from Turkmenistan and Uzbekistan to Russia, and Orenburg-Novoposkov pipeline and Soyuz pipeline from Orenburg processing plant to Europe.<sup>121</sup>

As opposed to other post-Soviet Central Asian republics that have sought insulation by isolationism, Kazakhstan's external policies focused on ensuring international legitimacy "as being the direct function of a collaborative international outlook."<sup>122</sup> Having this in mind President Nazarbayev pursued a multi-vector foreign and economic policy to ensure the development of close ties with China, Europe, and the United States. At the same time, he strengthened the autonomy of Central Asian states from the great powers by balancing Kazakhstan's policies towards all countries in the international arena.<sup>123</sup> The foreign policy objectives of post-Soviet

Kazakhstan have been pursued through strict adherence to stability priorities. They have opened Kazakhstan to the world through integration into regional and global energy markets, as well as an increased active participation in multilateral organisations - such as Commonwealth of Independent States (CIS), Shanghai Cooperation Organisation (SCO), Organisation for Security and Cooperation in Europe (OSCE) as well as the Organisation of the Islamic Conference. The long-standing ambition of the OSCE Chairmanship was finally granted on 1st December 2007.<sup>124</sup>

The Caspian Sea has received enormous attention from International Oil Companies (IOCs) since the break-up of the Soviet Union due to the Tengiz and Kashagan and later Karachaganak fields. Exploration and production of oil from the fields has required international cooperation and new export outlets to deliver the oil to global markets. Two oil pipelines were conceived to transport the Caspian oil – the BTC and CPC pipelines.<sup>125</sup> The latter offered a direct link between the Tengiz field in Kazakhstan through the Black Sea coast to Novorossiysk in Russia. Originally proposed in 1992, the CPC epitomised the multi-vector foreign policy in action, involving the Russian and Kazakhstan governments, America’s Chevron Corporation, and a number of minority stake holding IOCs. Commissioned in 2001, the 1,510km long and \$2.67bn costly pipeline is “the product of a fragile balance of power between states eager to maintain control of hydrocarbon flows and private companies able to finance the necessary infrastructure”.<sup>126</sup>

Since the early 1990s, Central Asian states attracted considerable attention from the east. China’s Prime Minister Zhou’s policy of aiding and empowering the newly-formed Central Asian states were focused on opening trade and energy transport infrastructure to link China with the region and beyond.<sup>127</sup> First proposed in 1997, the construction of the 2,798km Kazakh-China Oil Pipeline (KCOP) started in 2004, linking the two countries from Atasu in Kazakhstan to the border town of Alashankou in China’s Xinjiang Uyghur Autonomous Region. The KCOP is a joint venture between the China National Petroleum Cooperation (CNPC) and Kazakhstan’s KazTransOil and has a capacity of 10mt of crude oil per year.<sup>128</sup>

Throughout the 2000s Kazakhstan’s energy wealth helped to streamline the development of the country’s economy and achieve impressive GDP growth for over a decade, while providing the government with large revenues.<sup>129</sup> On 5th October 2005 Kazakhstan signed the Extractive Industries Transparency Initiative (EITI) following President Nazarbayev’s announcement on joining the strategy in February 2005.<sup>130</sup> Conceived by British Prime Minister Tony Blair, the EITI aims to increase the transparency of payments that oil, gas and mining companies made to the government and state revenue from extractive industries.

The increasing price of oil in the mid-2000s, along with access to new export pipelines, significantly improved Kazakhstan’s energy security standing internationally, bolstered by its ‘multi-vector’ foreign policy.<sup>131</sup> In September 2006 Kazakhstan pledged to increase its oil and gas output over a ten-year-period to reach the levels of 3.5 billion barrels of oil a day, out of which 3 billion was aimed at exportation, and natural gas production to amount to 60-80bcm over the same time period. In the words of the President Nazarbayev, Kazakhstan was ‘becoming a factor of energy security in Asia and Europe’.<sup>132</sup>

### **3.4 Legal Aspects and Energy Security Priorities in the 2000s**

Kazakhstan’s energy policy in the 2000s was driven by the need to strengthen Astana’s control over the oil and gas sector in times of rising oil prices. To this end a number of legislative changes were introduced in three chronological phases.<sup>133</sup> The first phase was characterised by the state’s desire to increase tax revenues from subsurface users. On 1st January 2004 the Tax Code of the Republic of Kazakhstan was amended to simplify relationships between subsurface users, and “to ensure the observation of reasonable sovereign interests” of Kazakhstan, in particular “mechanisms to guarantee the state a fixed share of profits under Production-Sharing Agreements (PSAs), irrespective of any decline in production or possible problems in contract implementation”. The Tax Code was also amended to institute the rent tax for oil exports viewed as a way to maximize the benefits from world oil prices increase.<sup>134</sup>

Phase two took place in 2005, and was characterized by “the rights that the government had awarded itself to buy released stakes in oil projects and to suspend company’s activities in cases where investors violate contracts”.<sup>135</sup> Marked by several

developments, phase two included an additional taxation increase on production volumes (royalty payments), as well as payment of royalties on gas condensate. Local content, defined as the “presence of Kazakhstani human resources, goods and services in project implementation”, was introduced in joint oil projects. A new law on PSAs for oil production in the Caspian Sea shelf was initiated in July 2005, which was “the first legislation that regulated production-sharing agreements and was meant to serve as an indicator for future contracts for developing Kazakhstan’s offshore reserves”. The same legislation strengthened the position of Kazmunai-gas (KMG), the nation’s oil and gas company, as it guaranteed KMG the right to a minimum of a 50 per cent stake in the capacity of contractor in all subsequent PSAs. The 2005 Oil Law amendment specified the functions of KMG as “a representative of the state’s interests in oil contracts”. Integrating KMG into Samruk (the integrated holding company for the management of state assets), the creation of the state-owned Samruk Holding and the Kazyna Development Fund ended up in their merging into the Sovereign Wealth Fund Samruk-Kazyna in October 2009, strengthening the role of the Kazakh state in the oil and gas sector.<sup>136</sup>

In the third phase unilateral cancellation of contracts was assumed by the state, further consolidating Kazakhstan’s role in the energy sector. The ‘Law on Subsurface Operations’ was amended again in November 2007 with a provision on the government’s exclusive right to cancel contracts unilaterally if the actions of subsurface users “should lead to considerable change to the economic interests of the Republic of Kazakhstan that pose a threat to national security, and also with respect to the fields of strategic importance to the country’ with the government”.<sup>137</sup> The latter is entitled to approve the reserves of ‘strategic importance’.

The three-phase legislative changes reflect a broader context of the Kazakhstani oil and gas industry in the 2000s. Positive developments in the time period included international participation in the sector and a sharp increase in FDI, which were both welcomed by Kazakhstan. Yet, the pace and implementation of these developments in the oil and gas sector, which was underpinned by challenges experienced by some of the international companies operating in the country, produced dissatisfaction in Astana. Hence, the government’s move to strengthen its role in the sector became the landmark of Kazakhstan’s energy policy in the 2000s. Aiming at exercising a degree of pressure on IOCs (without taking full control of some key energy companies), the State reasserted its sovereign interest over the industry to strengthen its energy security, and to be dependent on revenues from petroleum exploration and production. The new Tax Code effective from January 2009 reaffirmed the State’s aim by providing for “substitution of royalties with the Natural Resource Extraction Tax (NRET), to be calculated on the basis of a progressive scale, depending on the amount of recoverable reserves and world oil prices”.<sup>138</sup>

### 3.5 Ecology and Energy Efficiency

Kazakhstan’s commitment to energy efficiency and ecology is reflected by state policies and strategies. The Programme for Development of Renewable Sources in the Republic of Kazakhstan, approved by the Minister of Energy and the Minister of Science in 1995, has become a constituent part of the ‘State Energy Saving Programme’.<sup>139</sup> In the framework of the ‘Hydrocarbon Initiative’, initiated in 1997 by the Ministry of Ecology and Natural Resources together with the Ministry of Energy, Industry and Trade with a view to reduce the Greenhouse Gas Emissions (GHGE) into the atmosphere, energy saving entered the list of priority directions for the implementation of this initiative.<sup>140</sup> The Ministry of Energy, Industry and Trade adopted in 1999 the ‘Energy Sector Development Program’ until 2030. Rehabilitation and energy efficiency improvement of existing power plants are the main strategy for the development of the energy sector in the period 2000-2030.<sup>141</sup>

Since 2005 the Kazakhstani Government has ordered oil companies to avoid gas flaring. In his 2011 address to the nation, President Nazarbayev assigned Kazakhstan’s Government to prepare a comprehensive plan to increase energy efficiency and ensure 10 percent reduction of energy intensity by 2015.<sup>142</sup>



# 4. Russia and China as Major Powers in CACR and Kazakhstan

## 4.1 Russia's Strategic Interests in CACR

### 4.1.1 Russia's Central Asia and Integration Policies

Using instruments of 'soft power' and 'hard power', Russia seeks to ensure Kazakhstan and CACR stays in the centre of Russia's 'cultural and civilizational' sphere of influence in the post-Soviet space. The soft power of cultural and linguistic links is crucial in this context as Russian is the dominant language of communication in the region. In Kazakhstan the process of reviving the nation-state has been unfolding with both the Turkic-Kazakh and Slavic-Russian cultural trajectories, and is accompanied by Kazakhstan's 'multi-vector' foreign policy opening up to Western (Anglo-Saxon) and non-Western (Asian) countries.

Nonetheless, the Kazakh-Russian cultural trajectories are dominant. Kazakhstan was a country with the largest Russian-speaking population following the collapse of the Soviet Union<sup>143</sup> and one of the most ethnically diverse regions of the former Soviet Union. It is also a country where Islam is the most commonly practiced religion. Kazakhstan's multi-ethnic composition has shaped the country's widespread culture of religious tolerance. Yet, the growth of political Islam coupled with challenges posed by insecurity in poor countries of the region poses numerous security challenges to Kazakhstan and the Russian state. Russia's growing economy in the 2000s, largely driven by its energy revenues, attracted an influx of immigrants from the poorer, predominantly Muslim countries of Central Asia. Real or perceived security threats linked with immigration is one of the weakest links of Russian policies and a possible challenge for its societal security.<sup>144</sup>

Since the collapse of the Soviet Union it has been the Northern Caucasus that is 'traditionally' viewed as a potential source of Islamic terrorism in Russia. Yet, the military intervention in Afghanistan and porous, remote borders between post-Soviet Central Asia and Afghanistan has been another major spot of vulnerability. Russia has long ignored the risks associated with the flow of radicals across borders. With the current Russian military intervention in Syria, a new challenge is looming. Reports on Uzbek, Tajik and Kyrgyz Central Asian workers in Russia being radicalized and recruited to fight in Syria may be harbingers of a threat Moscow is yet to reckon with.<sup>145</sup>

While for a long time the 'people factor' of Central Asian demography may have been neglected, Russia's involvement in Central Asia can be increasingly seen as being about addressing security. The challenge of increased terrorist activities of extremist groups along with the destabilization of borders in Central Asia has been discussed within the Russia-led Collective Security Treaty Organization (CSTO) at the group's Dushanbe summit.<sup>146</sup> While the organization provides Russia with a solid standing as the leading security provider in the post-Soviet space, CSTO is yet to live up to its posture to become recognized as a multilateral, regional security organization.<sup>147</sup> The Customs Union/Eurasian Union composition mirrors that of CSTO's yet "mutually agreed exclusion of security matters leaves the CSTO without any useful guidelines, so reform of this institution is ineffectual".<sup>148</sup> For instance, due to its energy interest in Azerbaijan and Georgia, Kazakhstan's neutrality in the Armenian-Azerbaijan conflict remains a strict line. In absence of a greater integration of post-Soviet states of CACR (Uzbekistan's departure, Armenia's stance towards the security bloc) in addition to Russia, the CSTO relies on Belarus and Kazakhstan. The authoritarian nature of politics in the latter two results in a risk of selective participation within the Organization and, thus, is a main challenge to Russia.<sup>149</sup>

Since Yeltsin's presidency, Russia has always sought to prevent the U.S. and other powers from asserting themselves in the CACR by playing a balancing and 'divide-and-rule' game in order to maintain or expand its geopolitical as well as geo-economic influence in its oil and gas export monopoly from the region.<sup>150</sup> Thus Russia has often used energy dependencies and its gas export policy as an instrument not just of its economic and energy strategies, but also of its foreign, security policies and geopolitical interests. As Nadejda Makarova Victor stated in her Gazprom study of 2008: "Where Gazprom as a company ends and Gazprom as a tool of the state begins is purely a rhetorical question".<sup>151</sup>



But as the result of its zero-sum thinking, Russia has regarded the EU's Central Asia strategy of June 2007 and its new neighboring policy as a threat to its own geopolitical and energy interests in the region. After the March summit of 2007, Russia has intensified energy cooperation and pipeline projects with individual EU and CACR states, alongside its bilateral military and multilateral security cooperation.<sup>152</sup> Although the EU does not perceive a growing Russian role through a zero-sum prism, it has threatened the EU's strategy for diversification and cooperation with Central Asia.<sup>153</sup>

Until 2009, Russia became increasingly dependent on gas imports from CACR in order to satisfy domestic gas consumption and maintain high-price gas exports to Europe. At that time, one third of all European gas imports from Russia were supposed to come from Central Asia. While Russia's 'Energy Strategy for the Period to 2030' of 2009 envisaged annual gas imports alone from Turkmenistan up to 70-80bcm from 2009 onwards, and 88-94bcm in the mid-term perspective, they never climbed up and, instead, even declined to under 12bcm in 2009.<sup>154</sup> In 2008, over 80 per cent of the Caspian gas exports had been sent to Russia. The share of Caspian exports to Russia had been reduced to around 55 per cent. Russia increasingly lost its Central Asia gas export monopoly to China due to the 40bcm Chinese-Turkmen gas pipeline. When Russia's export monopoly of Caspian gas to Europe was still existing, the commissioning of the China-Turkmenistan pipeline in 2009 marked a major strategic shift with far-reaching geo-economic and geopolitical implications for Russia and the region.

In the Kremlin's and Gazprom's view, the most dangerous EU-project threatening Russia's pipeline monopoly from CACR to Europe was the Nabucco gas pipeline as the major 'Southern Gas Corridor' project of the EU.<sup>155</sup> Turkmenistan's interests in diversification of its gas exports are also explained by its own experiences with Russia and Gazprom. In 2003-2005, Russia used its gas pipeline monopoly for paying just US\$44 per 1,000cm, while Russia sold its gas to Europe for US\$250. Since January 2006, however, Turkmenistan was able to negotiate higher gas prices of US\$150 for the second half of 2008, but still under the European prices for Russian gas (US\$350). But with new large gas fields coming into production in 2009, Gazprom finally offered 'European prices' for Central Asian gas in 2009 in the range of US\$-200-300 per 1,000cm as part of a strategy to persuade CACR countries not to agree to any new pipeline routes circumventing Russia and going directly to Europe.<sup>156</sup>

Russia has faced not just a loss of its gas export monopoly in CACR, but also a growing competition with CACR gas exporters. Following a reduction of 90 per cent of Russia's gas imports from Turkmenistan without prior warning from Moscow, and an explosion of its main gas import pipeline from Turkmenistan a day later in April 2009, the exports were stopped immediately. Turkmenistan's government declared that this was not a technical matter, whereas Russia made the resumption of gas deliveries dependent on renegotiation of volumes and prices, costing Turkmenistan about US\$1bn a month. Since the following Russian-Turkmen diplomatic 'gas war', Turkmenistan's government has sought more than ever new alternative gas export routes<sup>157</sup>, following Kazakhstan's 'multi-vectored' energy exports and energy foreign policies.<sup>158</sup>

In addition, the new rapprochement and the markedly improved bilateral relationship between Turkmenistan and Azerbaijan is not in Russia's interest. Although both countries could not solve their bilateral conflict over the division of the Caspian Sea and the legal status of the oil fields in the area, both sides have a strategic interest to normalize their relationship and to initiate joint energy projects. In this light, Turkmenistan's pipeline plans included not just its Turkmen-Uzbekistan-Kazakhstan-China pipeline, but also its newly in January 2010 inaugurated Dauletabad-Sarakhs-Khangiran gas pipeline to Iran with an annual final capacity of 12bcm in its second stage. It is complementing another 8bcm gas pipeline to Iran and the newly constructed East-West gas pipeline to China, with up to 40bcm a year from the country's eastern gas fields to its Caspian Sea shore.<sup>159</sup>

The Russian-Georgian war August 2008 has raised new questions for the EU's ambition for closer energy cooperation with CACR by highlighting the vulnerability of Western-funded and built Caspian export pipelines, which are avoiding both Russia and Iranian territory.<sup>160</sup> Even before the outbreak of the bilateral war, the intention of the Kremlin was to discredit Georgia's role as an important transit state and a lasting competitor for European and Western oil, and in particular gas supplies from CACR, in order to maintain Russia's pipeline and export monopolies. Although



Russian President Medvedev claimed a 'privileged sphere of influence' in the world in general and in CACR in particular<sup>161</sup>, the overall knock-on effect of Russia's military intervention on any future Western investments, pipeline plans or the 'multi-vector' foreign (energy) policies of Azerbaijan, Kazakhstan, Turkmenistan or Turkey's for crossing Georgia as an increasingly important transit state was largely short-lived.<sup>162</sup> Like the energy crisis before 2006, the Russian-Georgian war pushed forward the EU's common energy and energy foreign policy by decreasing its gas import dependence on Russia. In CACR itself, Russia was hoping to get support from its allies in the SCO and the CSTO. But neither China nor the regional states of CACR declared their official support for Russia's military intervention and recognized the independence of Abkhazia and South Ossetia.<sup>163</sup> At the end, Russia was diplomatically largely isolated. The only remaining key allies have been big European companies with their large stakes in the expanding consumer markets in Russia.<sup>164</sup>

Following the 2008 Georgian War and the 2014 Ukrainian crisis, policy makers and international affairs specialists have been forced to acknowledge the possibility of Putin's Russia seeking to re-organize its foreign and domestic policy with a single objective of establishing "a new kind of union comprised of former Soviet republics and headed by Russia itself".<sup>165</sup> Reminiscent of the widely cited statement Russia's President made in 2005 calling the collapse of the Soviet Union "the greatest geopolitical catastrophe" of the 20th century<sup>166</sup> only strengthened the assumption the Georgian War could be part of a larger strategy. In the aftermath of the 2008 August war, the question of the oil and gas pipelines, the BTC and the BTE, have been widely cited as a key implication for energy security, with Georgia perceived as a vulnerable spot in the transit of Caspian energy.<sup>167</sup> Yet, despite rolling back of some of President Saakashvili's reforms to improve relations with Russia, Georgia remained on track with its pro-Western aspirations. Tbilisi did not join the Eurasian Economic Union (EEU) and, instead, signed the EU association agreement.<sup>168</sup> The two westwards oil and gas pipelines, legacy of the early deal between Russian and American oil majors, remained operational. Since then, despite a strong rationale for economic relations with Russia, Georgia's governments have weighted their options and have seemed to distance Georgia from the EEU.<sup>169</sup>

The EU policies in Russia's 'near abroad' through the 'European Partnership (EaP)' strategy have been viewed in Moscow as competitive to its own vision of the 'near abroad'.<sup>170</sup> Russia has viewed the EaP as unacceptable and as an EU tool to draw Eastern Europe away from Russia.<sup>171</sup> As Russia sought to undermine the EU's Nabucco project and any new EU gas imports from CACR such as from Kazakhstan, the Kremlin invited the head of the KAZENERGY association of oil and gas companies and son-in-law of the President, Timur Kulibayev, to join the board of directors of Gazprom in order to prevent any closer Kazakh energy policy rapprochement with the EU.<sup>172</sup>

The impact of China's economic policies in Central Asia has been remarkably increased during the last decade. China's investments in infrastructure, including in long-distance pipelines, is changing the face and the depth of its involvement in the region. Russia has been wary of this, and has built policy platforms of its own that would counter-balance the institutional strength of the China-led SCO by focusing on the CSTO and the Eurasian Union platforms. Increasing the profile of CSTO and seeking to gain international recognition for the projects from partners such as NATO and SCO has been limited owing to Chinese reservations and NATO's reluctance to enter into contracts with CSTO.<sup>173</sup> The Russian-Chinese agreement to construct the epic 'Power of Siberia' pipeline has been a major development and a move to diversify Russia's gas exports. While the economics of the pipeline have been considered as questionable if constructed<sup>174</sup>, it will be a major development in piped-gas trade, providing a competitive benchmark for the Turkmenistan-China gas pipeline as well as the EU-destined exports of natural gas from Russia.

Russia's policies towards Central Asia are mainly security oriented – explicitly through the CSTO and indirectly through the EEU. But Russia's strategic objectives of an EEU are largely of a political and geopolitical nature. The objectives have been leaning towards regaining Moscow's status as a great power (hard security), and being the cultural centre of gravity for the region (soft power), and the sole security provider for CACR. It has been difficult for the Kremlin to achieve these goals due to the challenges of divergent security interests of the CSTO's core, comprised of Belarus and Kazakhstan. Divergence of policy objectives of the core members of the military bloc has impacted Russia's ability to use CSTO effectively.

The latter – the cultural and linguistic attractiveness of Russia's led Eurasianist

project – may be currently taking a new turn. With internal terrorist threat levels high, Russia might be now facing the new challenge of radicalisation of its immigrant community in the wake of the Syrian intervention. The rise of non-traditional insecurity, including radicalisation and Islamic terrorism, is likely to potentially steer Russia's CSTO to focus on military.

#### 4.1.2 Russia's Geopolitical Concept of an Eurasian (Economic) Union

The key question following the collapse of the Soviet Union has been how to accommodate the post-Soviet space, and what organisational measures could and should be made to integrate the post-Soviet space anew under new institutional frameworks. Owing to its economic, cultural and political influence in the region, Russia has dominated the process and integration efforts since 1990s. These integration attempts include the Union State of Russia and Belarus in the 1990s, the Eurasian Economic Community (EEC) unveiled in 2000, as well as the organization of GUAM (grouping Georgia, Ukraine, Uzbekistan, Azerbaijan and Moldova) launched in 1997. Out of the three projects, the Customs Union of Russia, Belarus and Kazakhstan, and its further expansion into Eurasian Economic Union (EEU), has been viewed as the one most likely to come to fruition.<sup>175</sup>

The regional organization of the Commonwealth of Independent States (CIS), comprised of all the former Soviet republics save the Baltic states, was established on 8th December 1991 by Belarus, Russian Federation and Ukraine, with eight further post-Soviet Republics, including Kazakhstan, joining later that month through the Alma-Ata protocol. The CIS was envisaged as a transitional grouping to absorb possible shockwaves of the Soviet Union's disintegration process. Owing to the path dependence created by the structure of the Soviet Union, the CIS platform nominally included the economic and energy dimension. Nevertheless, origins of a more concrete and functional economic organization in the post-Soviet space can be traced back to Kazakhstan's President Nazarbayev's 1994 speech at Moscow when he proposed creating a regional trading block stretching across Eurasia.<sup>176</sup> President Nazarbayev's call to think 'Eurasianist' reflected geopolitical, economic and socio-political developments in the CIS at that time. Emerging trading blocks of the EU to the west and emerging economies to the east opened up an economic opportunity for the CIS countries, in particular Russia and Kazakhstan, to form a broader regional organisation that would, at the same time, be well placed geopolitically. Nazarbayev's idea served a socio-political purpose, too. Calling for a 'Eurasian Union', he sought to accommodate the substantial size of the Russian minority in Kazakhstan by calling for an overarching Eurasianist identity at the time of growing national awareness of peoples in Central Asia.<sup>177</sup>

From its inception the idea of regional integration has taken a number of shapes including economic, political and cultural elements at various degrees of strengths. Owing to its geography, history and custom, Russia has been the dominant player in the process of building supranational institutions in the region.<sup>178</sup> Ukraine – viewed as a key element of Russia's integrationist policies in the post-Soviet space – has proved to be a serious stumbling block in Moscow's Eurasian strategy, breaking out from its supposed role as the link and bridge between Russia and Central Asian countries.

Aiming at an economic union, on 24th September 1993 state leaders of the former Soviet Republics signed the treaty 'On Economic Union'. Following this further treaties were signed including the Free Trade Zone on 14th April 1994, the Payment Union on 21st October 1994 and the Customs Union on 20th January 1995. Despite the legal framework in place - that nominally provided a platform for economic relations between the former Soviet countries until 1999 – progress in shaping the Customs Union was made only in 2000-2006. In 2000 Russia, Belarus, Kyrgyzstan, and Tajikistan also founded the Eurasian Economic Community (EurAsEC), a strongly institutionalised framework which became the platform for three of the five states – Russia, Belarus and Kazakhstan – to later create the Eurasian Customs Union (ECU). The Treaty establishing the Customs Union was signed on 6th October 2007 and the Customs Code of the EEU took effect in July 2011 when border controls were lifted.<sup>179</sup>

Both the Custom Union and the EEU aim to expand markets and resurrect some production chains that operated in Soviet times.<sup>180</sup> Hence, the Eurasian Union has been presented as an attempt to reinvigorate the financial markets of the post-Soviet region and has often been seen as a geopolitical project strongly backed by Russia's President Vladimir Putin.<sup>181</sup> Yet, the full scale of the economic dimension of



the project needs still to be realised. While being enthusiastic about the Eurasian project domestically, the Kazakh leadership has emphasized the importance of the economic benefits the projects carries to its existing members in interactions with the project's partners.<sup>182</sup> By contrast, reintegration of the former Soviet space has been viewed as a key foreign policy objective of Putin's administration, with significant financial endowment assigned towards the project. It also enjoys significant political and societal support in the Russian domestic audience.<sup>183</sup> Eurasia has also been viewed as a form of macro-regional integration akin to that epitomised by the BRIC concept.<sup>184</sup>

The geopolitical 'Eurasian Union' project, which also is playing the role of a platform of integration between Russia and the region, equips Russia with a degree of control over neighbouring countries.<sup>185</sup> The political and societal support granted by the Russian domestic audience towards the idea of a 'Eurasian Union' does not have a single rationale. Some of the strongest supporters of the Eurasian Union value the project as a tool of Russia's resurgence as an assertive great power. Yet, a large part of the project supporters are various sections of Russian society, which could be labelled as 'liberal imperialists', who see the project as a regional pole of an emerging multi-polar order. Irrespective of the nature of control, the Russian-led Eurasian Union project is aimed at managing the geopolitical space – characterised by weak institutionalisation and a strong role of leaders of the respective members of the project – ensuring the political domination of Moscow.<sup>186</sup> It also explains why Kazakhstan is supporting the EEU, but not its further integration into a real Eurasian Union, which would constrain the country's sovereignty over its foreign, security, economic, and energy policies.

But as many Russian foreign policy experts have repeatedly admitted and criticized, Russia is confronted with a constantly declining geopolitical influence as the result of its waning soft power, including using energy dependencies and its traditional instruments of pipeline diplomacies, as well as pushing long-term energy contracts.<sup>187</sup> On all these fronts Russia is facing major challenges as the result of global energy market developments and European and CACR countries seeking to reduce their energy dependence on Russia – leaving the Kremlin only its hard military power and other coercive instruments in place to remain a leading power in CACR.<sup>188</sup> Beyond regional security cooperation and Kazakhstan's more supportive stance, Russia's EEU has been rather unpopular in CACR as China and the EU have economically and financially much more to offer. Only those regional states have become members, which were confronted with open Russian pressure and perceived to have no other choice for the time being.<sup>189</sup>

## **4.2 China's Geopolitical Interests in Central Asia**

### **4.2.1 China's Energy Foreign Policy in CACR**

As the world's most populous country with a fast-growing economy, China is already the largest energy producer, consumer, and oil importer.<sup>190</sup> China has to cope with a dual challenge: an energy demand projected to rise by another 44 per cent by 2040 (consuming about 80% more than the U.S.) and at the same time, shifting its energy mix from coal to gas, as well as non-fossil fuels (nuclear power and RES). But even in the most optimistic scenario, China will be unable to shift its energy completely to RES by 2040/50 as it is considered too expensive and unrealistic.<sup>191</sup>

Its surging energy demand has already transformed global energy markets, and has created long-term geopolitical and geo-economic implications for the U.S., Russia and Europe, as well as the global energy and other resource markets. Energy security has always been seen in China a core national interest since Mao Zhedong's rule and its traditional self-sufficiency policy.<sup>192</sup> Hence, China's definition of energy security is closely linked with domestic stability and Beijing's foreign and security policies.<sup>193</sup> Due to its energy demand and rising import demand, China has significantly expanded its energy foreign policy and cooperation with the Middle East, Africa, and even Latin America during the last decade.

Given the global energy demand and the potential vulnerability of shipping routes through the Indian Ocean to the U.S. Navy, CACR has gained particular importance for Beijing as a strategic land bridge between the Middle East, the Persian Gulf and China – both in regard to its security policy perceptions and for its energy imports.<sup>194</sup> Around 90 per cent of China's seaborne oil imports are coming from the Middle East and Africa. This land bridge offers China the prospect of not becoming too dependent on oil and gas imports from the Middle East via vulnerable Sea-Lines

of Communications (SLOCS), as well as from Russia. It mitigates its maritime energy imports and dependence on unstable SLOCs and its critical Choke points, such as the Malacca-Strait where 90 per cent of its oil transports run. Moreover, a stable western flank enables China “to maintain its current eastward focused military posture, prioritise the development of power-projection capabilities and enhance China’s position in the western Pacific and South China Sea”.<sup>195</sup>



However even in the mid-term perspective of 2020 and beyond, China’s ambitious expansion of oil and gas pipelines might be some kind of ‘pipe dream’ as they will diversify and mitigate the seaborne vulnerabilities of its maritime energy imports only to a limited extent, as its projected increase of oil and gas imports may overwhelm the planned oil and gas pipeline capacities. The latter are also comparatively much more expensive than maritime energy transports, and may even be more vulnerable to supply disruptions.<sup>196</sup>

In regard to its security concerns, Beijing has exercised its increasing influence in the region not just by expanding bilateral relationships, but also through the SCO acting as a regional security organisation since 2001. China has been concerned in particular about Uyghur ‘separatism’ and terrorist threats from Islamic forces. Given China’s increased economic and political leverage in the SCO, Russia has also deepened and expanded its security cooperation with the regional partners through its Russian-led CSTO. CACR together with Xinjiang Uighur Autonomous Region offers China an ethnic buffer zone and a bulwark against Uighur and pan-Turkic nationalism and separatism. But it is also a bridgehead for projecting Chinese influence into CACR by expanding energy-economic cooperation with CACR - which, simultaneously, also prevents an ‘encirclement’ by the United States.

Chinese experts have identified four strategic interests for expanding its ties to the CACR countries: (1) maintaining stable and peaceful borders with Russia and CACR states; (2) preventing international linkages between separatist forces in Xinjiang and outside Islamic extremist forces; (3) the increasing need to secure access to CACR energy resources and raw materials; and (4) extending its economic-political influence beyond the region to bolster China’s worldwide geopolitical position.<sup>197</sup>

In the view of the CACR countries, China not only offers a diversification source for its energy exports; it also reduces their energy export dependence on Russia, and its oil and gas infrastructures. China is also seen as a partner refraining from criticizing their internal power politics, in contrast to the EU, its member states and the U.S. Furthermore, Beijing has used its increasing financial power to support expensive energy and other economic projects within much shorter time frames.

Given China’s growing energy and security ties in Central Asia, Russia fears that Central Asia’s small population, its underdeveloped economy, and the declining strength of its own military presence since the mid-1990s have made Central Asia vulnerable to a rising Chinese hegemony in its backyard. But both sides still see counteracting U.S. hegemony in the region a priority. Russia also hopes to benefit from China’s economic and financial investments in CACR, and its own cooperation with China, as its geopolitical influence is declining in the region. China has also tried to counterbalance the negative impacts of its increasing energy ties to CACR by cooperating with Russia in the SCO, other regional organisations, and bilaterally with Moscow.<sup>198</sup> But Putin’s idea of an ‘Energy Commonwealth of the SCO’ to combine the rising demand of China, India, and Pakistan with the abundant oil and gas resources of Russia, Kazakhstan and Uzbekistan has been opposed by China and other regional countries.<sup>199</sup> They have feared a Russian led cartel, which would also constrain their ‘multivector’ foreign policies and a diversification of exports. From Moscow, Russian experts can hardly overlook China’s increasing energy and foreign policy ties to the region, in particular with Kazakhstan. After the third and last section of the Sino-Kazakh Atyrau-Alashankou oil pipeline has been completed, it will have secured about 5 per cent of the total oil imports of China. Although Russia still wields considerable influence in the production of Kazakh oil, China has quietly managed about half of the Kazakh energy market, secured 49 per cent stake in the Kazakh MangistauMunaiGaz company, around 24 per cent of Kazakh’s present oil production, and has covered more than a quarter of Kazakh exports in less than a decade.<sup>200</sup> In 2013, their bilateral trade amounted to US\$22.53bn.<sup>201</sup>

China has also negotiated increasing uranium imports from Kazakhstan and has exploited its hydroelectric potential. In April 2008, both sides agreed to develop more than 40 projects with a focus on natural resources.<sup>202</sup> In April 2008, China Guangdong Nuclear Power Co announced it would develop a uranium deposit

in Kazakhstan, with reserves of 40,000 tonnes together with Kazakh state firm Kazatomprom. Between 2008 and 2012, China had planned to import a total of 24,200 tonnes of Kazakh uranium.

At the same time, Turkmenistan became the most important gas partner for China. The world's longest and expensive gas pipeline – at 2,238km in length and costing US\$7bn, starting in Turkmenistan, crossing Uzbekistan and Kazakhstan and extending to Xinjiang with an initial capacity of 10bcm annually – became operational at the end of 2009. But it has been expanded to 55bcm, becoming operable in 2016.<sup>203</sup> In mid-2009, China gave Turkmenistan a US\$4bn loan to develop its largest gas field South Iolotan, and both sides expanded its cooperation into telecommunications, tourism and transportation sectors.<sup>204</sup> In September 2013, the bilateral energy cooperation increased by agreeing to build the fourth (Line D) China-Central Asia Gas Pipeline (CACG), also being fuelled by Uzbek gas, which will increase the total Central Asia gas supplies to China up to 80bcm beyond 2020. In 2013, Turkmenistan provided almost 23bcm of gas supplies to China and, therewith, covered around 44 per cent of China's total gas imports.

China's costly investments and projects in CACR have not been based just on short-term economic calculations, but even more on long-term strategic and geopolitical objectives.<sup>205</sup> Thus Chinese experts expect that the Indian engagement and energy cooperation with CACR countries will increase in the upcoming decades "... in the backdrop of this increasing Chinese penetration, and declining Russian presence".<sup>206</sup>

#### **4.2.2 China's New Silk Road Concept of 'One Belt, One Road'**

China's rise to being a global economic power would not have been possible without massive investments into its domestic transport and energy infrastructures. Between 1992 and 2011, China spent 8.5 per cent of its GDP on infrastructure modernization and expansion. That was much more than the average of 2-4 per cent in other developing countries in that timeframe. From 1992 to 2007, Beijing spent US\$120bn alone on building 35,000km of highways.<sup>207</sup>

When China's President Xi Jinping launched its 'One Belt, One Road' (OBOR) initiative in a 'historic' speech at the Nazarbaev University in September 2013<sup>208</sup>, its wide-ranging geo-economic and geopolitical implications were rather overlooked in the West – despite the U.S.' own Silk Road Initiative of July 2011 and the EU's TRACECA, as well as RETRACK concepts.<sup>209</sup> Initially, the OBOR initiative had been perceived in the West rather in continuity of Beijing's traditional 'March West' policy.

The new foreign policy concept has made China's direct neighborhood the 'top strategic priority for the first time'. Like centuries ago, China views itself as the 'Middle Kingdom' geographically and geopolitically.<sup>210</sup> Its new pro-active engagement strategy of OBOR envisages developing China's bilateral relations with its neighbors into more of a regional block, with China being the leader. This new regional diplomacy is underpinned and bolstered by multiple strategic initiatives, including those of CACR itself.<sup>211</sup> The previous 'Silk Road Economic Belt' and the '21st Century Maritime Silk Road' (MSR) had been merged into the new grand design Silk Road concept of OBOR.<sup>212</sup>

The Chinese government views its OBOR initiative as an instrument to solve its presently increasing economic problems. It has officially connected its OBOR initiative with its domestic economic development strategy and considers the new Silk Road concept as a driver of its future economic growth. But it is also a vehicle to strengthen the central government's control over China's economy as part of a more conservative economic policy.<sup>213</sup>



Figure 9: China's 'One Belt, One Road'-Initiative

### THE SIX ECONOMIC CORRIDORS OF THE BELT AND ROAD



Source: Stratfor.com (Courtesy of Stratfor).

The present investment strategy is focusing on six regions - especially Xinjiang and Fujian (whilst Jiangsu is being left out up to now) - in the shipping, construction, energy, commerce, tourism, and comparative advantage manufacturing sectors. These investments are also considered to safeguard social stability and lasting political order in China and its neighboring regions.<sup>214</sup> China's provinces such as Xinjiang and Fujian will have to play a major role in the OBOR strategy. But they will try to follow their own specific interests and further increase their influence on China's foreign economic and foreign policies.<sup>215</sup>

China's OBOR strategy also seeks to use and benefit from the advantage of economic complementarities between China and its regional neighbors in CACR, South Asia, Southeast-Asia and East Asia, and has stretched the initiative to Europe. It is based on the common interests between China and its neighboring countries to upgrade regional production, transportation, ports, highways, fibre optic cables, airports, energy infrastructures and value chains. It also envisages significantly expanding the overland trans-continental container trade, as 90 per cent of the global container trade still travels by shipping via oceans. Alongside new transport infrastructures, massive investments in energy projects are expected.

Since its announcement, OBOR has attracted widespread interest from China's neighbors in strategic partnerships with the OBOR initiatives. Around 65 countries are involved and have begun with Beijing to coordinate their economic and regional policies, connecting facilities, and enhancing their integration of trade and finance with China. It envisions six corridors across Eurasia, which has often combined overland and maritime infrastructures. But the strength of its complex initiative with so many projects, involving around 65 states and 4.4bn people in this strategic regional initiative can also be its weakness as it needs a much closer cooperation between multiple stakeholders: governments, enterprises, NGOs, and the general public, both at home and abroad to support various smaller initiatives and projects.

Whether China's OBOR initiative and its transport infrastructure plans outside the country have military implications is unclear - officially of course it is denied. But the People's Liberation Army (PLA) is actively debating how the OBOR concept can be used to promote China's military power.<sup>216</sup>

Some observers have already seen in the interlocking developments linked with China's OBOR initiative a geopolitical tectonic shift in Eurasia, which is being overlooked by the American and European media, even though it may upset the international order.<sup>217</sup> In China, the EU's failing response has been perceived and evaluated as largely being 'ignored', 'lukewarm', 'disappointing' and 'tepid to non-existent', as if Brussels had simply 'turned away'.<sup>218</sup> The EU is only slowly awakening and responding by recognizing the 'win-win-model of cooperation' in light of its own Eurasian transport networks designs. But a large number of European countries, including 14 EU-members, have joined the Asian Infrastructure Investment Bank (AIIB), which is seen as a major vehicle for China's future investments in the

targeted countries of its OBOR initiative. China has also increased its cooperation with CSEE countries by institutionalizing a regular cooperation through its so-called '16+1'-framework countries, and in order to increase Europe's support of the OBOR initiative.<sup>219</sup>

The other three most important actors in the Asia-Pacific region - the U.S, Japan and Australia - have not supported China's AIIB proposal. While China has accumulated endless volumes of U.S. Treasury and other government bonds, Beijing now prefers more direct overseas investment to bolster its future economic growth, and to oppose U.S dominance in global financial institutions, and geopolitically in Asia. China has also used the opportunity of the European economic and financial crisis to expand its investments to more than US\$60bn in shares of European companies, including in critical infrastructures such as ports and telecommunication companies.

Since 2014, Chinese investments have focused on CSEE countries, which have received almost US\$7bn mainly for energy and infrastructure projects.<sup>220</sup> At an EU-China workshop involving five Chinese banks, including the world's largest bank - the Industrial and Commercial Bank of China -, both sides have sought cooperation and Chinese contributions to the Juncker Investment Plan. It aims to mobilize public and private investments in the European economy of at least €315bn from 2015-2017. China in particular is interested in an EU-China investment treaty. The scale of bilateral investment was merely US\$20bn in 2014.<sup>221</sup>

As the world's largest economy and biggest global manufacturer, as well as exporter of goods, China presently also accounts for between one-quarter and one-third of manufacturing imports in Japan, the EU, and the United States. It is expected that China will become the world's largest overseas investor by 2020 with global offshore assets tripling presently from US\$6.4tn to almost US\$20tn by 2020.<sup>222</sup> China's Ministry of Commerce has already announced in 2012 that it aims with Chinese investors to make Overseas Direct Investments (ODI) worth US\$390bn, while the global stock of Chinese ODI were around US\$170bn at that time. Its official ODI rose twentyfold in just eight years from US\$2.85bn to US\$68.8bn in 2010, by preferring to upgrade the Chinese economy through strategic asset-seeking ODI.<sup>223</sup>

One of the most important instruments for China's investments of various transport, energy and other infrastructure projects as part of Beijing's OBOR grand design initiative is China's newly created AIIB in 2013. The bank will officially be launched at the end of 2015 with a capital of US\$100bn, with 75 per cent being provided by Asian countries.<sup>224</sup> In June 2015, the United Arab Emirates also became an official founding member of the AIIB. The ADB itself has estimated that the developing Asian economies will need alone to invest US\$8tn from 2010-2020 in order to cope with infrastructural needs. The existing banks, however, are not able to increase their financial support for new infrastructure projects significantly because of the political constraints on expanding their financial forms. The 2008 global financial crisis has diminished the lending capabilities of Western financial institutions.<sup>225</sup> For Western investors, however, many questions in regard to the AIIB are still unanswered.<sup>226</sup>

In addition to the AIIB, the BRICs nations - Brazil, Russia, India, China, and South Africa, who contribute some 20 per cent of global GDP - have created their New Development Bank (NDB). The NDB was officially launched with just US\$50bn, but might be increased to US\$100bn capitalization - China: US\$41 bn, Russia, India, Brazil: each US\$18 bn and South Africa: US\$ 5bn - in the coming years. It might even be capable of collecting as much as US\$400bn in capital in the mid- and long-term future.<sup>227</sup> Both the AIIB and NDB have their headquarters in China, but will cooperate with each other's initiatives and projects.

Furthermore, China has already invested more than US\$50bn in CACR infrastructure and has established another US\$40bn Silk Road Fund to finance future infrastructures and transportation networks as part of its OBOR initiative. In addition, Russia's foreign investment instrument, the 'Russian Direct Investment Fund' (RDIF) will also cooperate with the Chinese and BRICs initiatives and new banks.

Beyond rail, road, and maritime transport projects, the AIIB and NDB will in particular finance energy infrastructure projects. But these investments are also important for regional security reasons. While the new system of mega-transport infrastructure projects also help and support China's future energy imports of oil, gas and coal, it is not the primary objective of the OBOR initiative. It is intended to

**Figure 10: International Development Banks and Their Capital Base**

Development Banks (Approximate Capital Base)	
European Bank For Reconstruction & Development	\$20
Islamic Development Bank	\$47
BRICS Development Bank	\$50
Asian Infrastructure Investment Bank	\$100
African Development Bank	\$103
Inter-American Development Bank	\$129
Asian Development Bank	\$163
World Bank	\$223
European Investment Bank	\$331

Source: Dr. F. Umbach based on Stratfor.com

increase the export of excess capacity in its domestic industries hurt by its recent economic slowdown and crisis. The OBOR initiative is also aimed at enhancing China's state-owned energy companies for international mergers and acquisitions after the on-going anti-corruption campaign.<sup>228</sup>

However, the new economic crisis in China may also constrain China's future investment plans and capabilities. Furthermore, in the BRIC's block exists not just common interests, but also competing ones, and neither Russia nor Brazil are in the economic position to contribute more heavily to the NDB.<sup>229</sup>

Moreover, the OBOR initiative and future Chinese investments in the OBOR regions are highly dependent on a stable and politically safe neighbourhood. But neither Central and South Asia nor China's own bordering province of Xinjiang in its western region, or Tibet in China's southwest, are politically stable regions.<sup>230</sup> As the result of its new Silk Road grand strategy, China might be forced to increase its domestic security presence in Xinjiang, Tibet and other non-Han border regions. Beijing might also use the OBOR initiative to increase its influence over the Tibetan exile community and the Islamic minority of Uighurs in Xinjiang.

Beijing's primary security concerns are directed towards Afghanistan and its peace process. China has become more pro-actively engaged as a supporter of reconciliation negotiations between the Taliban and the Afghan government. China has become more engaged for a peaceful settlement in Afghanistan as Beijing perceives its neighbour as a safe haven for Uighur militants. The Muslim Uighur population in Xinjiang is still growing and local tension in Xinjiang has increased after worsening terrorist attacks during the last few years.<sup>231</sup>

China's OBOR initiative also depends on whether it can improve its bilateral relations with India.<sup>232</sup> Indian and Chinese interests have already clashed in regard to the planned Iran-Pakistan pipeline (IP) with a capacity of around 31bcm. In April 2015, China signed an agreement with Pakistan to construct the pipeline through a US\$2bn loan (covering 85% of the construction cost) from Pakistan's Chinese built Gwadar port<sup>233</sup> to Nawabshah, where it can be linked to Pakistan's domestic gas distribution network.<sup>234</sup> For Beijing it is another geopolitically important mega-project, advancing its OBOR initiative. The pipeline is also part of the US\$46bn infrastructure package to establish the 'China-Pakistan Economic Corridor' (CPEC). It extends from the Gwadar port on Pakistan's Indian Ocean coast to China's westernmost city Kashgar (Kashi) in Xinjiang.<sup>235</sup> But the pipeline's operation will be dependent on an unstable security environment, as it passes through Balochistan, which is in conflict with Pakistan's central government. Neither terrorist attacks on the pipeline nor kidnapping of Chinese workers can be avoided as Pakistan's security forces are underfunded and overstretched throughout the country. Reportedly, Pakistan has promised China to create a new, armed division of 7,000-10,000 troops to protect Chinese engineers and workers, but that won't stop terrorist attacks.<sup>236</sup>

As China needs a stable security environment to implement its new grand design Silk Road concept, regional security policies may remain the most challenging task for China due to the geopolitical rivalries and competing strategic interests between China, India, Russia, Japan and the U.S.<sup>237</sup> Despite Russia's official welcome of China's OBOR initiative, which is also directed against U.S. influence in the region, it runs counter to Moscow's protectionist strategy for its EEU. But as Russia has become more dependent on China in order to bolster its own claim to great power status, Russia cannot afford to be in the periphery of China's OBOR initiative.<sup>238</sup>

In this context, Kazakhstan has become the centre of the geopolitical and energy rivalry between Russia and China.<sup>239</sup> Both have strengthened their energy cooperation with Kazakhstan. Since January 2014, Russia has transported 7mt of oil per year via the Priirtyshsk-Atasu-Alahankou pipeline, whose section's capacity from Atasu to Alahankou has been expanded from 12 to 20mt of oil per year. China has also strengthened its oil and gas cooperation with Kazakhstan, and has increased its stake in Kazakhstan's oil and gas industry to 22-24 per cent. Despite some concerns in Kazakhstan about a future overdependence on China, both sides are interested in strengthening their cooperation in the logistics, communications, and aviation sectors. As China is expanding its nuclear power generation, China has increased its imports of uranium from Kazakhstan and has pushed joint ventures in Kazakhstan's mining industry. Furthermore, as part of its global expansion, China's nuclear power companies have also declared their interest in building at least one nuclear power station in Kazakhstan, opening a new round of competition between Russia and China. Kazakhstan's uranium mines and nuclear sector have become a 'cold conflict' of competing interests between Russia and China in Kazakhstan.<sup>240</sup>



**Figure 11: EU-Energy Package and Its Five Dimensions**

Five Dimensions of the EU-Energy Union (February 2015):

- Energy security, solidarity and trust;
- A fully integrated European Energy Market;
- Energy efficiency contributing to moderation of demand;
- Decarbonising the economy; and
- Research, Innovation and Competitiveness.

Source: European Commission, 'Energy Union Package. A Framework Strategy for a Resilient Energy Union with a Forward-Looking Climate Change Policy.' Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee, the Committee of the Regions and the European Investment Bank, Brussels, 25 February 2015 COM(2015) 80 final.

## 5. The EU on the Way to an Energy Union and its Oil and Gas Diversification Efforts

### 5.1 The EU's Energy Union Concept versus Re-Nationalization Trends

In February 2015, the European Commission published its strategy for an Energy Union. It has proposed a package of gas and electricity infrastructure projects to fasten the completion of an internal energy market, with the original December 2014 deadline having already passed by. In the words of the European Commission's new President Jean-Claude Juncker to the European Parliament after his election in July 2014: 'We need to pool our sources, combine our infrastructures and unit our negotiating power vis-à-vis third countries'.<sup>241</sup>

The EU's idea of and discussions on an Energy Union go back to the proposals in March and April 2014 of the previous Polish Prime Minister Donald Tusk, now the newly appointed President of the European Council. He wanted to create an Energy Union to ensure stable gas supplies and fair market-based gas prices as a more effective mechanism for gas solidarity of the EU-28 towards Moscow. His idea of an Energy Union included a controversial joint purchasing body that would seek to secure gas supplies on behalf of all 28 EU member states.<sup>242</sup> A following 'non-paper' further detailed the Polish proposals for a comprehensive Energy Union.<sup>243</sup> Politically, the principle idea of an Energy Union was based on political solidarity and common economic interests.<sup>244</sup>

These ideas ahead of the Commission's in-depth study on the EU's energy security challenges and further diversification efforts have been controversial with the EU-28.<sup>245</sup> Some countries such as the United Kingdom and the Czech Republic have favoured a less ambitious integration policy with discussions on national energy plans to be conducted informally and bilaterally between member states and the Commission. In contrast to Germany, which favoured only RES, many other EU member states supported all low carbon technologies (including advanced nuclear and CCS), and did not want to discriminate one or prefer specific low carbon technologies.<sup>246</sup> Most of the criticism has highlighted the fact of a lack of political solidarity in the European energy policy. Many EU member states still put their own, often short-sighted defined national energy security above and at the expense of the entire EU-28 block.

At the beginning of 2015, the Commission took a pragmatic stance, as it favoured the idea of a joint purchasing body on a voluntary basis, or in the event of a market failure or supply crisis, as part of the EU's efforts to reduce Russia's negotiating power on the European gas market.<sup>247</sup> The official 'Energy Union Framework Strategy' of February 2015 is based on the traditional EU-energy objectives of a "sustainable, low-carbon and climate-friendly economy" and "five mutually-reinforcing and closely interrelated dimensions" to enhance energy security, sustainability and competitiveness.<sup>248</sup>

The 'Energy Union Framework Strategy' has also defined fifteen 'action points' for implementing a real Energy Union (see next figure).<sup>249</sup> While the Energy Union concept has been defined rather as an inward-looking project, the framework strategy has also highlighted its role and interdependence of global energy markets, and the need to engage constructively with its energy partners to their mutual benefit, as part of the EU's energy foreign policy. It called to use all of its foreign policy instruments to establish strategic energy partnerships with important producing and transit countries or regions. Although neither Kazakhstan nor Central Asia has been mentioned explicitly, the countries being named includes Azerbaijan as the main gas supplier for TANAP and TAP from the Caspian region, and Turkmenistan.<sup>250</sup>

Since spring 2015 and the official adoption and confirmation of the Energy Union concept, the EU's internal discussions have highlighted again that the individual member states are still following different strategic objectives of the Energy Union concept as Europe is still dominated by national energy markets and supported by national energy policies, strategies and objectives. But what becomes equally clear is that the Energy Union must be more than the sum of its individual parts and that it needs a holistic concept. Over time, integration of gas markets and electricity networks will inevitably lead to more common policies, strategic and defined

**Figure 12: Action Points for an EU-Energy Union**

1. Full implementation and strict enforcement of existing energy and related legislation is the first priority to establish the Energy Union;
2. The EU needs to diversify its supply of gas and make it more resilient to supply disruptions;
3. Intergovernmental agreements should comply fully with EU legislation and be more transparent;
4. The right infrastructure is a precondition for completing the energy market, integrating renewables and security of supply;
5. Creating a seamless internal energy market that benefits citizens, ensuring security of supply, integrating renewables in the market and remedying the currently uncoordinated development of capacity mechanisms in Member States call for a review of the current market design;
6. The regulatory framework set-up by the 3rd Internal Energy Market Package has to be further developed to deliver a seamless internal energy market to citizens and companies;
7. Regional approaches to market integration are an important part of the move towards a fully integrated EU-wide energy market;
8. Greater transparency on energy costs and prices as well as on the level of public support will enhance market integration and identify actions that distort the internal market;
9. The EU has set itself the target of reaching at least 27% energy savings by 2030;
10. Buildings have huge potential for energy efficiency gains. Retrofitting existing buildings to make them energy efficient and making full use of sustainable space heating and cooling will reduce the EU's energy import bills, reinforce energy security and cut energy costs for households and businesses;
11. The EU needs to speed up energy efficiency and decarbonisation

common objectives, and a conversion of national interests.<sup>251</sup>

In November 2015, the European Commission presented a first review of the Energy Union framework strategy and its defined five dimensions by identifying 'key building blocks for an implementation mechanism', and the progress and non-progress that has been made since 2014, and the definition of new energy and climate goals. For a fully integrated internal energy market, the Commission has also reviewed its infrastructure plans and the list of the Projects of Common Interests (PCIs). The list has been shortened from 249 to 195 projects – partly because thirteen projects have been finalized and implemented and another 62 projects are expected to be completed by the end of 2017. More than 100 PCIs are in the permitting phase, and more than a quarter face delays. While the Commission has encouraged increasing investments in these PCIs, it simultaneously has warned that those investments in resilient infrastructures need to take into account the rapidly changing political environment and international energy markets in order to avoid these new infrastructures becoming stranded assets.<sup>252</sup> Furthermore, the internal controversies and conflicts towards the Nord Stream-2 pipeline<sup>253</sup>, the EU's ambitious climate objectives and the failing strategy and path for the binding 27 per cent of the EU's renewable target, highlights the long road the EU has to go before it becomes a real Energy Union. In addition, the EU-28 still imports 42 per cent of its external gas supplies from Gazprom as a single supplier. Several members are still dependent on Gazprom as their single supplier. But some progress of the creation of the EU's Southern Gas Corridor and its links to Central Asia, including the 'Declaration on energy cooperation between Turkmenistan, Turkey, Azerbaijan and the European Commission' on 1st May 2015<sup>254</sup> as well as the establishment of the Southern Gas Corridor Advisory Council set up on 1st February 2015, have been identified.<sup>255</sup>

## **5.2 The Impact of the Ukraine Conflict on the EU's Energy Security Strategy, Energy Mix and Energy Foreign Policies**

In 2010, thirteen European countries still relied on Russia for more than 80 per cent of their total gas consumption; and a total of seventeen countries were dependent for more than 80 per cent of their gas imports on Russia.<sup>256</sup> In total, 35 per cent of EU-27 gas imports depended on Russia.<sup>257</sup> In addition, most of the CSEE countries have been locked into contracts for overpriced Russian gas, which is significantly more expensive than Russian gas supplies for Germany and other western EU-member states, despite the fact of a considerably longer transport distance. Before 2010, Russia's global and regional position as the world's largest gas producer looked to become ever stronger: the IEA projected in 2011 its gas production between 2009 and 2035, accounting for 17 per cent of the worldwide gas supply increase.<sup>258</sup>

But even in 2010, it had been overlooked that Russia's share of EU gas imports had already fallen from almost 50 per cent in 2000 to 34 per cent in 2010, and in Europe from 45.1 per cent in 2003 to 31.8 per cent in 2010.<sup>259</sup> Equally, the share of EU based revenues in Russia's total gas sales revenue dropped from 60 per cent to 40 per cent within the last decade.<sup>260</sup> In 2012, Russian gas exports to Europe decreased from 160bcm in 2010 to 138.8bcm, representing just 25 per cent of Europe's total imports.<sup>261</sup> Despite the declining German gas imports from Russia until 2013, Gazprom's insistence on oil-indexed prices resulted in skyrocketing costs of its gas exports to Europe. German wholesale gas prices increased from US\$270 per 1,000 cubic meters (cm) in 2010 to US\$353 per 1,000cm in 2012.<sup>262</sup>

In order to strengthen its future energy security, the European Commission's energy demand management strategy has emphasized the broadest possible energy mix, diversification of energy supply and imports, promotion of renewable energies, and a neutral policy towards the nuclear option. Its 20-20-20 per cent formula in its Energy Action Plan (EAP) of March 2007, aims to reduce GHGE, to raise the share of RES, as well as to improve energy efficiency and conservation. If the EU is able to implement and achieve its March 2007 aims by 2020, the EU could be using 13 per cent less energy than today, which is equivalent to a saving of more than €100bn.<sup>263</sup> According to some estimates, the EU's new energy security strategy and agreed efficiency and energy conservation efforts agreed in 2014 will further lower its gas import demand from Russia by another 12 per cent by 2030.<sup>264</sup>

Since 2010, Europe's gas consumption and import demands have dramatically decreased. In 2013, Europe's gas consumption already decreased to a historical record low since 1990.<sup>265</sup> In 2014, gas consumption declined by another 11.6 per cent to 387 bcm, compared with 502 bcm in 2010, and EU net imports by 8 per cent (also 11.6% fall from Russian pipeline gas) compared with 2013. Russia's

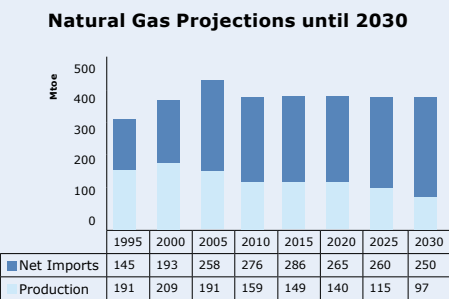


in the transport sector, its progressive switch to alternative fuels and the integration of the energy and transport systems;

12. The EU agreed a climate and energy framework for 2030 at the October European Council. This now needs to be implemented. The EU will provide an ambitious contribution to the international climate negotiations;
13. The EU has agreed the target of at least 27% at EU level for renewable energy by 2030;
14. The EU needs to develop a forward-looking, energy and climate-related R&I strategy to maintain European technological leadership and expand export opportunities; and
15. The EU will use all external policy instruments to ensure that a strong, united EU engages constructively with its partners and speaks with one voice on energy and climate.

Source: European Commission, 'Energy Union Package. A Framework Strategy for a Resilient Energy Union with a Forward-Looking Climate Change Policy.' Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee, the Committee of the Regions and the European Investment Bank, Brussels, 25 February 2015 COM(2015) 80 final.

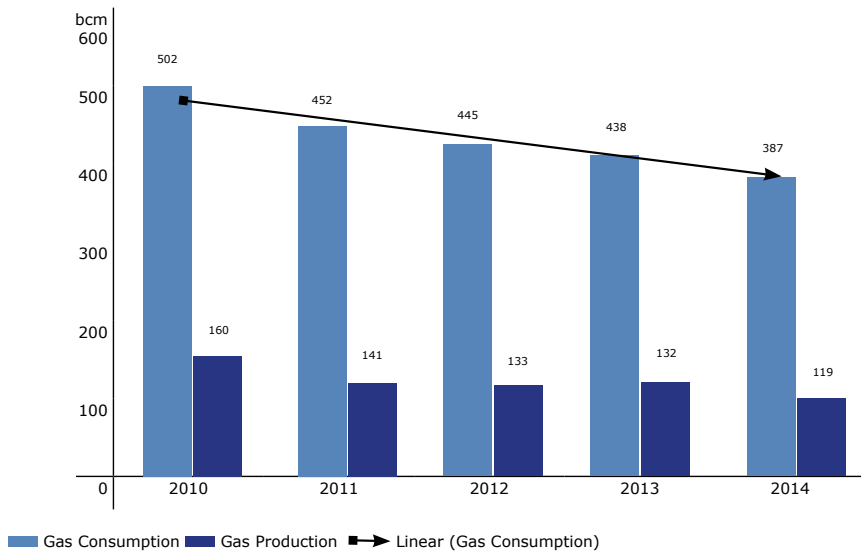
**Figure 14: Projected EU Gas Import Dependency (1995-2030)**



Source: Dr. F.Umbach basierend auf European Commission, 'In-Depth Study of European Energy Security. Commission Staff Working Document. Communication from the Commission to the Council and the European Parliament, COM(2014) 330 final, Brussels, 28 May 2014 SWD(2014) 330 final, Part 1/5.

share of total EU imports only slightly declined from 43 per cent in 2013 to 42 per cent in 2014.<sup>266</sup> But the EU's import dependency remains a strategic concern as the combined gas production of the EU-28 member states fell by 34.6 per cent between 2003 and 2013, and may decline by another 35 per cent within the next decade.<sup>267</sup>

**Figure 13: EU – Natural Gas Consumption and Production 2010-2014**



Source: Dr. F. Umbach based on BP, 'Statistical Review of World Energy', June 2015.

Instead of a projected need of an import rise from around 300bcm in 2010 to more than 500bcm in 2030 as forecasted by the IEA and the European gas industry before 2010, Europe's gas consumption may decrease further, and not return to the demand level of 2010 by 2040. Until recently, at least a rising, but on a much lower scale, import demand has been forecasted, after it had already been revised downwards during the last few years. But the EU's new energy security strategy envisages a lower import demand by 2030 than in 2012, in contrast to the IEA and the European gas industry, which still anticipate a significant import demand rise by 2035/40.<sup>268</sup> But in contrast to the U.S., Europe is still confronted with rising oil and import dependency from politically unstable or other problematic suppliers. Furthermore, the EU-28 spent more than €500bn on energy imports in 2012 – seven times more than in 1999, and amounting to more than 4 per cent of GDP.

The newly reduced EU gas consumption and import demand have significant strategic implications for both Russia's gas export strategy as well as for the EU's gas strategy and its SGC-project. In addition, all regional pipeline plans and LNG-terminal expansion plans are hampered by the drastic decline of oil and gas prices. Equally, Europe does not need as much Russian gas as previously projected. A smaller European gas market will further intensify the competition between various import projects and supply options.

Furthermore, the unconventional gas revolution in the US and the ensuing gas glut have not just led to the delinking of gas prices from the oil price. They have also destroyed the old European gas market structure, based on bilateral long term contracts and controversial take-or-pay clauses between a limited number of large suppliers and buyers that are required to pay for volumes they may not need. In 2011, only around 56 per cent of oil-indexed long term contracts in Europe were still indexed, a share continuously decreasing from 69 per cent in 2009 to 59 per cent in 2010.<sup>269</sup> At the same time, the share of spot market gas contracts increased from 27 per cent in 2009 to 37 per cent in 2010, and to more than 40 per cent in 2011.<sup>24</sup> In the view of its European gas partners, Russia and Gazprom do not just jeopardize their own gas market share in Europe, but the commercial viability of the gas power generation in Europe, due to its insistence on non-competitive oil-indexed gas prices.<sup>270</sup>

Even without U.S. LNG exports to Europe, the EU's gas supply security has significantly improved since 2009. This is due to the latest Russian-Ukrainian gas crisis interconnectors between the member states have been built, and the Southern Gas Corridor project has been implemented, with the TANAP and TAP pipelines importing Azerbaijan gas. The expansion of LNG-terminal capacities, and new gas

## Figure 15: Review of (Positive) Progress of the EU's Energy Strategy since 2007

### Review of Progress of the EU's Energy Strategy since 2007:

- By 2012, GHGE had already decreased by 19.2 per cent in comparison with 1990 levels, and they are expected to reach a 24 and 32 per cent drop in 2020 and 2030, respectively.
- The share of RES has grown from 8.7 per cent in 2005 to 14.4 per cent in 2012 and was originally expected to increase further to 21 per cent by 2020 and 27 per cent in 2030 – agreed to in October 2014. At the same time, the EU's consumption of solid fossil fuels – coal and coal products – decreased by 37.1 per cent.[276]
- The EU is – together with China – the largest investor in RES. Of the US\$100 billion of worldwide subsidies for RES, more than 50 per cent are in Europe.
- It has created various eco-industries, employing more than 4.2 million people, and has become a job motor even during the EU's economic recession.
- At the end of 2012, the EU had installed about 44 per cent of the global renewable electricity production - excluding hydro.
- Between 1995 and 2011, the energy intensity of the EU economy was reduced by 24 per cent and even 30 per cent in its industry, though its economy has grown by around 45 per cent in real terms since 1990.
- Subsidies for generation from RES reached €52bn (US\$65bn) in 2013 within the EU-28.
- The EU's energy consumption level had fallen to a 20-year low in 2013, returning to 1990s levels; from its peak in 2006, energy consumption decreased by more than 9 per cent in 2013 and 0.2 per cent between 1990 and 2013.[277]

regulations and institutions to control and overview the EU's reform policies by the Gas Coordination Group and ENTSOG-Gas, have all contributed to creating a united internal gas market. Those reform efforts have been further strengthened by the present Ukraine conflict, which has resulted in a new energy security strategy favouring to reduce further future EU gas consumption. This has been done through enhancing energy efficiency and conservation, as well as expanding other energy sources, notably RES, and to diversify its gas supplies through indigenous unconventional reserves.<sup>271</sup>

The EU intends to diversify its gas supplies and expand its LNG imports, including from the U.S, starting in 2015-2016. The major problem is not a lack of LNG import capacities, but rather its related costs. At present, the EU has 22 LNG import terminals with a total capacity of 196bcm per year. Six additional LNG terminals are under construction with a capacity of 32bcm. The EU can import much more LNG from conventional and unconventional gas reserves worldwide as its terminals have not used 73 per cent of its regasification capacity in 2013. Even limited exports may have some significant implications on national or even European energy supply security in combination with a reduction of its gas consumption and imports, as well as new import options in the forthcoming years. Given new global liquefaction capacity becoming active in the next years from Australia, Africa and Southeast Asia, any other US-LNG export projects may have a disproportionately large impact on reducing global gas prices and the general tightness in the LNG market.<sup>272</sup> The IEA has forecasted that European LNG imports might double between 2014 and 2020 and then surpassing 90bcm – covering 65 per cent of Europe's gas import demand.<sup>273</sup> In its new list of PCIs in November 2015, the European Commission has already reduced the number of supported LNG-projects from previously 21 to just eight by taking the smaller gas demand and a reduced rise of future gas imports, as well as other changing conditions into account.<sup>274</sup>

### 5.3 Lessons to Learn and Experiences to Share: The EU's and Germany's Energy Transformation and Decarbonization Strategies

In order to strengthen its future energy security, the European Commission's energy demand management strategy has emphasized the broadest possible energy mix, diversification of energy supply and imports, promotion of RES, and a neutral policy towards the nuclear option. Its 20-20-20 per cent formula in its Energy Action Plan (EAP) of March 2007 aims to reduce GHGE, to raise the share of RES, and to improve energy efficiency and conservation. At the same time, the EAP has promoted a liberalized internal market for gas and electricity, enhanced measures for security of supply, and a common approach to an external energy policy with a global dimension.<sup>275</sup> Thereby, the EU's energy policy aims at a careful balance between all three parameters: security of supply, competitiveness, and environmental sustainability.

According to the Commission, its 2007 EAP and the present energy and climate policies have made significant progress to achieve its 20-20-20 targets.

At the same time, several other targets and strategic objectives may not be achieved:

### Figure 16: Review of Failing Progress of the EU's Energy Strategy since 2007

Review of Progress of the EU's Energy Strategy since 2007:

- The fulfilment of the 20 per cent target for enhancing energy efficiency remains unrealistic.
- Despite the achievements towards the EU's targeted 20 per cent reduction in emissions, those emissions have also grown in several EU member states – including in Germany in 2012 and 2013 because of higher and cheaper coal imports and coal consumption.
- Even the 20 per cent target for renewables has become questionable given disparate levels of implementation across member states.<sup>278</sup>
- The European Commission like the World Economic Forum have repeatedly criticised the 'suboptimal deployment' of RES, which has cost the EU approximately US\$100bn more than if each country in the EU had invested in the most efficient capacity according to their natural resource advantages – wind and/or solar power.<sup>279</sup>

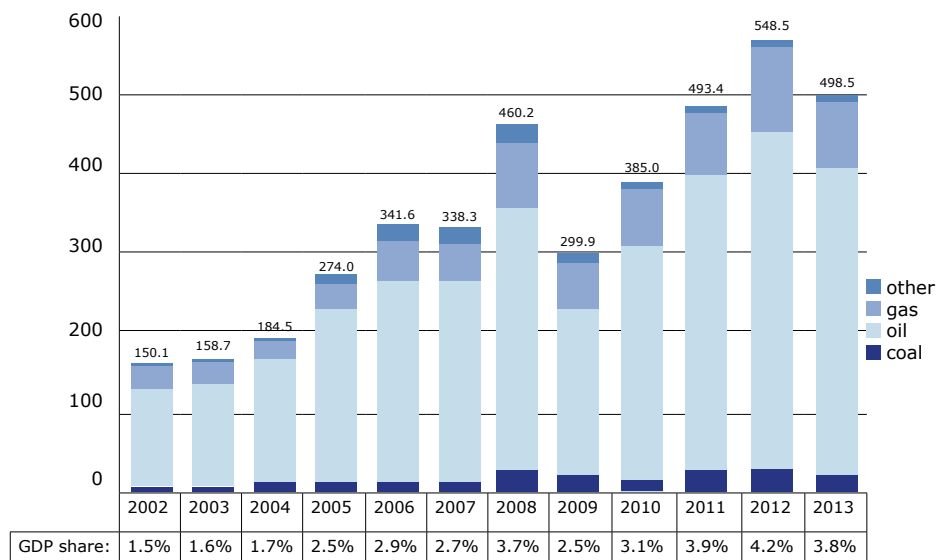
On 22nd January 2014, the European Commission unveiled a new energy strategy for 2030 with different headline targets. The Commission has proposed a binding carbon dioxide emissions reduction of 40 per cent by 2030, which doubles the 2020 target. In addition, it also adopted a binding 27 per cent share of renewable energies in energy consumption at the EU-level. This expansion of RES serves not only the EU's climate policies, but also its common energy security, as it will change the energy mix and decrease the EU's overall energy consumption, including its gas demand.<sup>280</sup> In October 2014, the EU officially adopted these targets. It also confirmed an energy efficiency target of 27 per cent by 2030 (only indicative), which could be raised to 30 per cent following a review in 2020.<sup>281</sup>

The EU's targets also have a geopolitical and energy security angle. The EU hopes that the two 27 per cent targets for increasing energy efficiency and RES – incidentally binding at the EU level, but non-binding at the national level – will reduce the EU's gas imports from Russia in the twelve most vulnerable EU member states by around 20 per cent.<sup>282</sup> Other analyses point out that a 25 per cent efficiency target could reduce EU gas imports by 9 per cent, while a 35 per cent target may decrease the EU's gas imports by 33 per cent by 2030.<sup>283</sup>

But as the world's largest energy importer, there are persistent doubts about Europe's future economic competitiveness and energy supply security. In 2012, the EU reached a new energy spending record of €548bn – 4.2 per cent of the EU's GDP, against 1.5 per cent in 2002 – compared to just €180bn on average during the timeframe of 1990-2011.<sup>284</sup> By contrast, the U.S. import bill for fossil fuels had already decreased that year to US\$340bn by maximizing its own indigenous fossil-fuel resources.<sup>285</sup> The record EU import bill is expected to stay at around €500bn by 2035, which will draw away much needed financial power from industrial innovation, research and development programmes, infrastructure and others.

Its energy conservation and efficiency efforts notwithstanding, the EU's energy costs are expected to rise further by 2030 to a level of 14 per cent of GDP compared with 12.8 per cent in 2010. The Commission reckons that its electricity costs will further rise from 2011 to 2030 by another 31 per cent – before inflation – and, thereby, consume a further increasing share of the EU's GDP. During the last decade, the EU's industry share of GDP has already declined from 20 per cent in 2000 to 15.1 per cent by 2012, pointing to an alarming de-industrialization trend.<sup>286</sup> Consequently, the EU declared a fourth 20 per cent objective in 2012: to push the industrial share of its GDP to that level by 2020. At the end of 2013, however, this share was still stuck at 15.1 per cent.

**Figure 17: The EU's Energy Import Bill for Oil, Gas and Coal, 2002-2013**



Source: Euracoal 2014.

The gap between EU and U.S. energy prices has been widening and keeps growing. Industrial gas prices in the United States have dropped by 66 per cent since 2005, while gas prices in the EU have increased by 35 per cent. Worse yet, gas prices in the EU are now three to four times higher than in the United States, Russia and

## Figure 18: Major Problems and Challenges of the German Energiewende – A Lesson for other Countries

### Major Problems and Challenges of the German Energiewende:

- Its total costs have grown faster and greater than anticipated. Since 2002, the ballooning costs of subsidizing feed-in tariffs under Germany's EEG renewable law have increased to more than €120bn by the end of 2013. By 2022, German consumers will have to pay more than €100bn for RES that have already been installed.
- Germany's electricity costs have increased faster than elsewhere in Europe and are now twice the level of those in the U.S. Germany's electricity is 40% more costly for private consumers and 20% more expensive for industrial users than the EU average.
- Germany has to cope with the third-highest electricity prices in the EU due to its EEG feed-in tariff system. The subsidy system is fifteen years old, and has been copied around the world and helped Germany turn into Europe's biggest green energy market. But in 2013, total annual costs of Germany's EEG rose from €14.1b in 2012 to a staggering €23bn in 2014. By 2020, costs may reach €35bn to €40bn, absent of a major reform.
- Germany's subsidies for installed solar panels are, in particular, cost inefficient. Its already installed solar panels will ultimately cost taxpayers US\$130bn over the next 20 years through the heavily subsidized feed-in-tariff contracts, compared to US\$15bn for building a state-of-the-art nuclear reactor that will generate more than 50 per cent of the electricity of Germany's entire solar fleet over a similar 20-year period. Worse still, despite these heavy subsidies, German solar companies have experienced a wave of insolvencies and a market developing away from Germany since 2012.
- Wind and solar power do provide more than 60 per cent of Germany's electricity production – but only for few short moments when the weather is windy and

India, as well as 12 per cent higher than in China. The IEA expects this gas price disparity will last for at least another 20 years. Correspondingly, this comparative energy cost advantage has boosted foreign investment in the United States and a revival of its manufacturing industry.<sup>287</sup>

The experience of the German 'Energiewende' as the world's most ambitious energy transformation is equally ambivalent. After the Fukushima catastrophe in March 2011, the German government adopted unilaterally and with limited prior notice, the challenging task of transforming its entire energy system. Berlin decided to phase out nuclear power by 2022, to break its dependence on fossil fuels and to expand wind, solar and other renewable energies to 50 per cent of all electricity by 2030 and 80 per cent by 2050.

As of 2014, Germany presents a mixed record in electricity generation: while RES have constantly expanded, the share of coal was still more than 43 per cent.<sup>288</sup> Even less impressive is the fact that the share of RES in the even more important entire Primary Energy Consumption has expanded much less and accounted for just 11.1 per cent in 2014.<sup>289</sup> Even so, after increasing in 2013, Germany's GHGE decreased to 301m tonnes in 2014, reaching the lowest level since 2009. Germany also remains Europe's largest electricity producer of solar panels with more than 35TWh. The wholesale price for power on the Leipzig power exchange fell to a record low of 33 EuroMWh – compared with €38 in 2013.<sup>290</sup>

While expanding RES has been singled out as Germany's success story<sup>291</sup>, its total costs are often ignored. Cost estimates of the entire policy have constantly increased since 2011 and are due to reach €1tn over the next 25 years. The feed-in tariff programme has cost more than €348bn, and may further increase to €680bn by 2022.<sup>292</sup> Until now, Germany is on track to meeting only one of its three major targets – one third of renewables in energy generation. Meanwhile, it appears to be failing to meet its second goal; to cut energy consumption by a fifth by 2020, which will in turn make it difficult to reach the third target; a 40 per cent cut in emissions compared to 1990.<sup>293</sup> More importantly, it is increasing Germany's dependence on energy imports. In 2012, it imported 61 per cent of its overall energy consumption – higher than the EU-28 average of 53 per cent.<sup>294</sup>

Rising energy prices are challenging the future of Germany's economic strength.<sup>295</sup> Germany's feed-in tariff system – the EEG – has made Germany the world's largest, but also the most subsidized, solar market. Experts have increasingly warned that only a drastic policy shift will prevent the 'Energiewende' reform from threatening the very international competitiveness of the German economy. In this context, Germany's industry has called for the abolition of feed-in tariffs for new wind and solar installations, as well as for a 'strategic reserve' of fossil fuels in order to ensure the base-load supply of reliable gas and coal-fired power stations for the stability of the national grid.<sup>296</sup> While some reform steps have been made in the right direction in 2015, many experts doubt whether they are sufficient for reducing the expected cost increases.

Ultimately, the transformation of the entire German energy system has led to two parallel existing and operating energy systems: RES and fossil fuel power plants. The main lesson is that not just RES, but also the traditional fossil fuel power plant sector need to be heavily subsidized. But subsidizing two parallel energy systems is very expensive. Whilst Germany is able and willing to carry these huge costs for a temporary period of transition, many other European and other countries are not politically willing or are financially able to shoulder these transformation costs.<sup>297</sup>

In the light of the recent Paris global climate summit and its declared, but unbinding, ambitious goals, the question of whether Germany's 'Energiewende' can be a blueprint for Kazakhstan and other countries is indeed not so much questioning the long-term strategic objective of decarbonizing Europe's and the world's energy system based primarily on RES in the future. It is rather a question of finding an adequate strategy and the right instruments to balance the transition without overburdening countries and societies with too high costs and, thereby, undermining their energy supply security and overall economic competitiveness.

sunny enough, as a few hours later this proportion can drop to only 20-40%. In early December 2013, Germany's solar and wind power production of more than 23,000 wind turbines came to an almost complete standstill. For a whole week, coal, nuclear and gas power plants had to generate an estimated 95% of Germany's electricity supply.

- The grid has to maintain voltage balances by matching supply and demand within about 5% of each other or risk electricity blackouts. Nevertheless, Germany has far too little storage capacity to serve as a buffer against the fluctuating supply of wind and solar energy. As a result, even larger electricity blackouts cannot be excluded.
- Germany's preference for renewables and its EEG is ensuring that favour is given to green energy to feed in ahead of any electricity generated by fossil and nuclear fuels. As a consequence, fossil fuel and nuclear plants frequently have to shut down to avoid overloading the grid, which reduces their revenues while increasing costs. Utilities are forced to shut down even most modern fossil plants, as they are unable to recover operating costs even though these plants are needed to ensure the stability of energy generation, the grid, and base-load capacity.
- The disregard for the need to expand and modernize the grid network by focusing just on the expansion of heavily subsidized RES-production has led to an overproduction of RES-based electricity generation that cannot be transported to the consumers. Thus, German taxpayers are paying for heavily subsidized electricity generation that cannot be supplied to and used by consumers.
- An underlying assumption of the German Energiewende of 2011 was that it could be implemented without taking European and global energy developments into account. But Germany has increasingly been forced to export unplanned electricity loop flows to neighbouring countries to prevent electricity blackouts, which then often destabilizes their own grid and electricity supply.

## 6. New Regional Energy Cooperation Perspectives for CACR

### 6.1 A New Strategic Axis Between Turkey, Azerbaijan and Turkmenistan?

On 1st May 2015, the EU, Turkmenistan, Turkey and Azerbaijan adopted a joint declaration to "welcome the completion of the preliminary environmental study on the Trans-Caspian Pipeline", with the financial support of the European Union and the World Bank, which was originally scheduled to be published before the end of 2015.<sup>298</sup> They agreed to establish a joint working group on a TCP project by including the deputy energy ministers and foreign ministry experts.<sup>299</sup> In the same month, Turkmenistan's President Gurbanguly Berdymukhamedov stated at his official visit in Austria that the possibility of supplying Turkmen gas supplies to Europe would be seriously considered.<sup>300</sup> The EU hopes that it may start receiving Turkmen gas by 2019.<sup>301</sup> Reportedly, Berdymukhamedov has also criticized his own industry for not working enough to diversify routes for delivery of natural gas and new gas pipeline projects.<sup>302</sup> Turkmenistan has also enhanced its bilateral relations with Georgia due to its interest in a strategic transit corridor involving TCP.<sup>303</sup>

The construction of a TCP would allow the EU to expand TANAP and TAP from its present capacity of 10bcm to 30bcm beyond 2020. The first Azerbaijani gas, supplied by its huge Shah Deniz-2 offshore gas field in the Black Sea, is projected to flow to European markets by 2019. Theoretically, gas supplies can feed TANAP additionally from Kazakhstan and Uzbekistan via TCP, which would be in the EU's strategic interest in order to diversify its gas imports from CACR.<sup>304</sup> But Russia has already prevented the option of Kazakhstan exporting oil from its giant Kashagan field via a Trans-Caspian oil pipeline to Baku, and then using the Baku-Tbilisi-Ceyhan oil pipeline from Azerbaijan to Turkey. Russia's harsh opposition has forced Kazakhstan to increase its oil transports via tankers to Baku.<sup>305</sup>

Discussions of Turkmen gas exports to Europe are not new and had previously been underway in context of building the original Nabucco pipeline from Turkey to Europe. Despite EU support, the gas pipeline project from eastern Turkey to Greece via Southeastern Europe to Baumgarten (Austria) failed in the summer of 2013. But the Ukraine conflict and the potential lifting of Western sanctions on Iran have changed the dynamics of the energy (foreign) policies on almost all sides, as the distrust towards Russia has increased in the EU, as well as in Turkmenistan, Azerbaijan, Georgia and Turkey.<sup>306</sup> These new dynamics have already changed some of the geopolitical patterns and EU-energy foreign policies in CACR:

(1) At the beginning of 2015, Russia announced to further decrease its gas imports from Turkmenistan from 45bcm in 2008 to just 4bcm in 2015.<sup>307</sup> Russia is dissatisfied with the Turkmen gas price and is currently coping with its own gas crisis, having a potential production oversupply of up to 100bcm not finding any markets.<sup>308</sup> Gazprom's reduction of gas imports from Turkmenistan has angered the government in Ashgabat, which already has to cope with a currency devaluation of 19 per cent against the US-dollar, as the result of the Ukrainian conflict and Western sanctions towards Russia.<sup>309</sup> It has criticized Gazprom as an "unreliable partner", as it would violate bilateral agreements at the interstate, intergovernmental and interdepartmental level.<sup>310</sup> Russia has largely given up importing greater volumes of gas from Central Asia, and rather competes with CACR countries in the European and Chinese gas markets.<sup>311</sup>

#### Figure 19: Russia's Declining Gas Imports from Turkmenistan 2008-2015

- 2008: 45bcm
- 2012: 19.6bcm
- 2014: 10.5bcm
- 2015: 4bcm

Source: F.Umbach based on various sources.

Turkmenistan's bilateral relationship with Russia has eroded since 2009 after an explosion of its gas pipeline, in the midst of increasing difficulties in bilateral negotiations over the gas price and capacity volumes of Turkmen gas supplies to



## Figure 20: Turkmenistan's Gas Sector in 2014

- Gas Production: 76bcm (rising to 85bcm in 2015);
- Gas Consumption: 29.2bcm
- Exports: 46.8bcm (rising up to 48bcm in 2015).

Source: F.Umbach based on BP, 'Statistical Review of World Energy of June 2015 and 'Milestone Year for Turkmen Gas Export to China', www.naturalgasasia.com, 10 February 2015.

## Figure 21: Bilateral and Trilateral Energy Meetings between Turkey, Turkmenistan and Azerbaijan 2014-2015

- April 2014: at a meeting of Turkmenistan's President Gurbanguly Berdimukhamedov with the head of the State Oil Company of Azerbaijan (SOCAR), Rovnag Abdullayev, they agreed to build transit pipelines for diversification of gas supplies in both countries.
- July 2014: meeting of the Turkish and Turkmen presidents in Ankara where they agreed that Turkey would deliver Turkmen gas to European markets. Both countries rejected any objections of Russia and Iran, as their joint projects affects only the interests of the two littoral states and hence can be resolved and implemented on a bilateral basis.
- In November 2014: Turkey and Turkmenistan signed a bilateral 'framework agreement' for diversifying gas exports via TANAP and other pipeline projects to world markets, but did not disclose the terms of their bilateral agreement.
- January 2015: meeting of the foreign ministers, when Turkey and Azerbaijan invited Turkmenistan to join TANAP and made progress to resolve their border demarcation issues.
- In March 2015: all three countries agreed to establish a trilateral mechanism on energy issues, and to transport Turkmen gas via the TANAP-TAP projects to Europe.
- September 2015: all three countries discussed the TCP construction.

Sources: Dr. F.Umbach, based on various sources.[320]

Russia. Ashgabat believed and claimed to have evidence that Russia deliberately exploded the pipeline to pressure Turkmenistan. It has also not chosen to join the Russia-led CSTO and has only a 'guest' status within the SCO.<sup>312</sup> With a population of 5.2 million, it is much smaller than Kazakhstan (<18 million) and Uzbekistan (30 million), but consuming 36.7 per cent of its gas produced, in comparison to Kazakhstan that consumes 24 per cent. Therefore, Turkmenistan needs to balance its 'multivector' foreign policy by taking Russian countermoves into account.<sup>313</sup>

(2) As Turkmenistan holds the world's fourth-largest total proven gas reserves with 17.5tcm - 9.3 per cent share of the global gas reserves - and having a small population, the ratio of its gas reserves versus production is more than 100 years, which is more than the U.S. with 13.4 years and even Russia with 56.4 years.<sup>314</sup> With its Galkynysh gas field, together with its nearby gas field of Yashlar, its reserves may even increase up to 26.2tcm. It has already become the largest regional gas exporter to China. Turkmenistan plans to enhance its total gas production from about 76bcm in 2014 to 230bcm by 2030, and its gas exports to 180bcm by 2030. Turkmenistan will now start the third phase of development of the Galkynysh gas field with an overall production rising to 95bcm in 2016.<sup>315</sup> Reportedly, Turkmenistan's President called the TCP project in 2014 the most important tasks for the country's energy diversification.<sup>316</sup>

(3) Since the proclamation of the EU's new energy security strategy in May 2014 and its increased efforts for gas import diversification, the EU and Turkmenistan have restarted and intensified their discussion on Turkmen gas exports to Europe by building a TCP between Turkmenistan and Azerbaijan.<sup>317</sup> Gas exports from Azerbaijan's Shah Deniz gas field with its 1.2tcm reserves to Turkey already started in 2007 through the Baku-Tbilisi-Erzurum (BTE) gas pipeline (also known as the South Caucasus Pipeline/SCP). Turkey is the world's ninth largest gas importer, importing 45bcm in 2014. At the same time, Turkmenistan's total gas exports have grown from 40.1bcm in 2013 to around 46.8bcm in 2014, and are aimed to expand further to 48bcm in 2015. Gas from Turkmenistan, Kurdistan and Iran could be transported via the TANAP-TAP network, whose capacity can be increased up to 60bcm with new compressor stations.<sup>318</sup>

(4) At the same time, Turkey, Azerbaijan and Turkmenistan have intensified both their individual bilateral and trilateral energy cooperation (see the following figure). They have reopened new perspectives and discussions about building a TCP with a capacity of 10-30bcm from Turkmenistan to Azerbaijan, ahead of the next summit between the Caspian heads of states in Astana next year. Even Uzbekistan's President Islam Karimov has discussed with Berdimukhamedov a 'Central Asian Nabucco pipeline' construction project to circumvent Russia at his trip to Ashgabat at the end of October 2014.<sup>319</sup>

(5) While Russia seems to have no interest in any short-term solution of the status of the Caspian Sea, other regional states have moved ahead in their bilateral cooperation. In June 2015, for instance, Kazakhstan ratified an agreement on the delineation of the Caspian Sea boundaries between Kazakhstan and Turkmenistan.<sup>321</sup>

### 6.2 Turkmenistan's Growing Gas Export (Over)Dependence on China

As part of its 'multivector' foreign and gas export policy, in 2007 Turkmenistan had already signed an agreement with China to supply 30bcm per year via a new gas pipeline from its gas fields to China. The pipeline was launched in 2009, but the contracted volumes had only reached 25.9bcm in 2014. In 2015, Chinese imports of Turkmen gas had grown to 40bcm and a total of Central Asian gas to 55bcm via its East-West-pipeline.<sup>322</sup> Between 2009 and August 2015, Turkmenistan delivered a total of 125bcm of natural gas to China.<sup>323</sup>

This Central Asia-China gas pipeline (via Uzbekistan) has commissioned its third line C in 2014 with a length of 1,830km, starting at the Turkmen-Uzbek border, running through Kazakhstan and ending in the Xinjiang Uyghur Autonomous Region of China, and connects there with China's West-East gas pipeline. It will be added by another line D from Turkmenistan via Uzbekistan, Tajikistan and Kazakhstan to China, increasing the overall transport capacity to 65bcm by 2020 and 85bcm after 2020.<sup>324</sup> Uzbekistan is expected to deliver 10bcm per year in addition to Turkmenistan's 30bcm. The remaining 40bcm per year to China by 2020 will also be supplied by Turkmenistan's new and currently developing giant gas field South Elotan, according to a new gas agreement with China signed at the beginning of September 2013<sup>325</sup>, and smaller gas supplies by Kazakhstan.

China has financed the huge South Elotan project with direct-credit, and controls the field's development through Chinese subcontractors. This is not really in Turkmenistan's long-term strategic interest as it has always sought to maintain direct control over its projects. Thus it has continued its strategy of gas sales at its Western border for the TCP, but has not directly engaged by building a TCP.<sup>326</sup> Moreover, Turkmenistan is still a rather difficult partner for IOCs. Few IOCs are currently operating in Turkmenistan. But while the EU was still discussing Turkmen gas supplies via a TCP to Europe, China had already implemented gas supply contracts and were building gas pipelines (up to 80bcm beyond 2020) from Turkmenistan to China. Therewith, Russia has lost its gas export monopoly in Turkmenistan and the region. But Turkmenistan does not want to become over-dependent on China, and, therefore, is interested in further developing its other gas export projects – in particular TAPI.

### 6.3 The TAPI-Gas Pipeline Project

When the EU's Nabucco project and building the TCP failed in 2013, Ashgabat intensified another gas export project by diversifying its gas export routes via a new pipeline from Turkmenistan to Afghanistan, Pakistan and India (TAPI). But this 1,814 km long gas pipeline with an annual capacity of 33bcm, first conceived in the 1990s, is facing a big challenge with its transfer route of 1,735 km via very politically unstable countries such as Afghanistan (735km) and Pakistan (800km). Its original time schedule for the construction starting this year has already become questionable. But the political will on all sides to implement the gas project has grown during the last few years.<sup>327</sup>

A meeting on March 15th in Kabul of TAPI's steering committee finally achieved a breakthrough regarding financing the US\$10bn Central Asia-South Asia gas pipeline, due to the Turkmen government's new determination to diversify the markets of its natural gas supplies. For the first time, Turkmenistan has offered the international oil company Total – together with its state-owned company TurkmenGaz - a sufficient profit share as a consortium leader for the pipeline construction (potentially also with Russia's Rostec and China's CNPC), whilst Ashgabat will retain legal ownership of the land.<sup>328</sup> But TurkmenGaz as the consortium leader would have a majority stake with 51 per cent, whereas India's GAIL-company would not receive more than 10 percent equity in TAPI.<sup>329</sup> For the time being, Turkmenistan has agreed to contribute 85 per cent of the US\$10bn pipeline costs, Pakistan and India each 5 per cent (2 x US\$500m) and Afghanistan 3 per cent (US\$300m). The rest will be covered by the ADB. The presently established consortium of Turkmen-Gaz, Afghan Gas Transit, Pakistani Inter State Gas Systems and Indian GAIL needs only to raise about 30 per cent of the US\$10bn pipeline investment to begin TAPI's construction.<sup>330</sup>

While many Indian and international energy experts are still skeptical about TAPI's chances for realization<sup>331</sup>, Indian experts consider TAPI a major confidence building measure, not just with Turkmenistan, but also with its rival Pakistan. It is also expected that Japanese companies will become involved<sup>332</sup>, albeit dependent on whether Turkmenistan will ease its investment rules and being able to develop a credible legal institutional and organizational infrastructural framework for the pipeline project.<sup>333</sup> In the past, Ashgabat refused to sign any production-sharing agreements with foreign companies for its major onshore gas fields, and instead has only offered service contracts. Meanwhile last November, Dragon Oil - a Dubai-based oil and gas company and the sole operator of two Caspian offshore oil and gas fields in Turkmenistan - has almost finalized its investment in the TAPI project.<sup>334</sup> This highlights the fact that Turkmenistan has offered more attractive investment conditions<sup>335</sup>, which may pave the way for other international investors in TAPI and other Turkmen gas projects.<sup>336</sup> Given the declared interest to involve Turkmenistan in the TANAP-project, a Turkish participation and investment in TAPI has already been discussed. In the view of Turkish experts, it would allow Turkey to increase its influence in Central Asia, as well as to strengthen its position in the regional energy sector.<sup>337</sup>

On December 12th-13th, the groundbreaking ceremony for building the 1,800 km TAPI pipeline finally took place with all four countries being involved, including India. All sides have promised and shown some confidence that the looming security challenges can be solved and overcome.<sup>338</sup> But despite India's increasing energy demand and strategic interest to balance China's growing geopolitical influence in CACR, Turkmen gas will be unlikely to reach India before 2020.<sup>339</sup>

#### 6.4 Will TCP and Turkmen Gas Supplies to Europe Become Reality?

In addition to its mega gas fields on land, Turkmenistan also has in the nation's Caspian Sea shelf more than 6tcm of gas and 12bn tonnes of oil.<sup>340</sup> By 2030, Turkmenistan plans to increase its natural gas production to 230bcm, and gas exports up to 180bcm per year.<sup>341</sup> For Turkmenistan, finding a solution for transporting its gas to Europe has become more urgent, as it has completed its own domestic US\$2bn East-West Gas pipeline (EWP) to ship gas from its giant fields to the Caspian Sea by the end of 2015. It connects its big gas fields and gas compressor stations 'Shatlik' in its Mariysk region in the East with 'Belek' in its Western Balkan province and the Caspian Sea coast.<sup>342</sup> Turkmenistan started to build its 773km gas pipeline with a capacity of 30bcm in 2010 with the EU promise to build its Nabucco gas pipeline and the TCP.<sup>343</sup>

Despite the interests of the EU, Turkey and Turkmenistan, Azerbaijan's declared support of the TCP appeared more uncertain till 2014. Azerbaijan had discovered new gas fields in addition to Shah-Deniz 2 as the main gas source for feeding the TANAP-TAP pipelines with annual supplies of 16bcm by 2019. Turkey has contracted a supply of 6bcm, and the other 10bcm of Azerbaijan's gas will be transported to Europe. But given the huge investments of TANAP and TAP, the hitherto contracted 16bcm might not be sufficient to cover the total investments. Thus Baku has a strategic interest to increase its gas supplies to Europe and Turkey to at least 30bcm by providing another 14-16bcm after 2020 from its new gas fields.

Azerbaijan's position towards TCP depends very much on the availability of future export routes for its increasing gas production. Given its own financial commitments to TANAP, with its overall costs of more than US\$20bn, it will certainly not be the locomotive for building the TCP with its estimated costs of more than €2bn. However, Azerbaijan is interested and dependent on enhancing its regional cooperation with Turkey and Turkmenistan for its overall national security, as all three countries have become more suspicious of Russia's regional foreign and energy policies. At the same time, Azerbaijan fears that Russia can always fuel the 'frozen conflict' of Nagorny-Karabakh and other latent instabilities around its country.

The prospect for additional Azerbaijani or Turkmen gas supplies to Europe is also complicated by the fact that European gas consumption has continuously declined since 2010. While Europe's own gas production in the North Sea is decreasing and is presently facing additional problems with gas production in its Groningen field in the Netherlands, it does not necessarily mean that Europe's gas imports will definitely increase. As new forecasts by the EU and others suggest as the result of the expansion of RES and agreed energy efficiency measures, Europe's imports by 2030 and beyond could be even lower than those of 2010.<sup>344</sup>

Furthermore, in contrast to the 2009 gas crisis, Europe has many more alternatives for pipeline gas and LNG imports, such as from Israel, U.S., Africa, and by exploring its own conventional and unconventional gas resources, including in the Black Sea offshore areas (Romania, Bulgaria), and in the Adriatic Sea (Croatia, Greece). In addition, Russia has not given up its plan (despite the present shelving of the project due to the Russian-Turkish diplomatic crisis) to build the Turkish Stream gas pipeline to Turkey and Europe with a capacity of up to 63bcm. Russia also announced last summer to build two additional strings of Nord Stream with an added capacity of 55bcm, despite the fact that it only uses its existing Nord Stream capacity to just 56 per cent. In 2014, its pipeline gas exports to the EU-28 fell by more than 11 per cent from 2013 to just 119bcm. It reflects, like Lithuania's opening of a floating LNG terminal in January 2015, Gazprom's declining ability to leverage its gas supplies as a strategic instrument of Russia's foreign policy.

But the real challenge for building a 300km TCP under the Caspian Sea, also supported by the U.S., are the opposing strategic interests of Russia and Iran, which have no interest in finding a compromise for the unresolved status of the Caspian Sea. Russia in particular has a strong interest in preventing Turkmenistan exporting gas to Europe, as it would be another economic competitor and would undermine Russia's geopolitical influence in Europe. Hardly surprising, Russia has become increasingly concerned about the increasing cooperation between Turkey, Azerbaijan and Turkmenistan, as well as of the EU's renewed interest to push the TCP project bilaterally with Turkmenistan.<sup>345</sup>

Russia has always been a strategic interest in the control and resale of Turkmen

**Figure 22: Azerbaijan's Gas Reserves of Its New Gas Fields**

Azerbaijan Gas Reserves for Potential Exports		
Name	Gas Reserves (in bcm)	Condensate (mt)
Shafag - Asiman	500 bcm	65 mt
Absheron	350 bcm	45 mt (of oil)
Nakhichevan	300 bcm	38 mt
Umid	200 bcm	40 mt
Babek	400 bcm	80 mt
Azeri - Chirag - Guneshli Deep - Level Gas Deposits (ACG)	Large untapped gas reserves under ACG oilfields expected	
Total	>1.75 tcm	268 mt

Source: Dr. F.Umbach based on IHS CERA 2013 and other sources.

## Figure 23: EU Energy and Gas Consumption in 2014

### EU-Energy and Gas Consumption in 2014:

- Total energy consumption: -3.9% from 2013;
- Gas consumption: -11.6% (biggest annual decline on record) from 2013;
- Gas Production: -9.8% from 2013;
- Net Gas imports: -8% from 2013;
- Russian gas pipeline exports to EU-28: -11.6% from 2013.

Source: Dr. F.Umbach based on various sources.

gas. During the last decade, Russia has lost more influence as its gas imports from Turkmenistan declined dramatically and its wider ability to leverage its pipeline diplomacy as an instrument of its foreign policy increasingly diminished.<sup>346</sup> Hence, it is insisting that any decision can only be made by the consensus of all five Caspian littoral states. Therefore Russia has strongly protested against any 'EU intervention' in TCP discussions and that such issues should be resolved between the coastal nations rather than in Brussels.<sup>347</sup> At the last summit of all five Caspian countries in the autumn of 2014, despite finding bilateral solutions on Caspian Sea conflicts, no multilateral compromise involving all littoral states could be achieved.<sup>348</sup>

### Figure 24: Trans-Caspian Pipeline Route from Turkmenistan to Azerbaijan



Source: [www.interfaxenergy.com](http://www.interfaxenergy.com)

Both Azerbaijan and Turkmenistan have become increasingly interested to involve the EU and the US in the implementation of their energy projects, as they are based on common interests.<sup>349</sup> This is even important as Russia's stated pre-condition to resolve the status of the Caspian has neither constrained its own pipeline projects in the region, nor Russia's increased militarization of the Caspian Sea.<sup>350</sup> But the Kremlin needs to balance its open opposition and assertive foreign policies in CACR with its other pipeline projects (i.e. Turkish Stream) and its overall relationship with Turkey, Kazakhstan and other regional countries.<sup>351</sup>

Turkmenistan has still not explicitly declared whether the agreed trilateral energy cooperation will lead to the construction of the TCP. But it has changed significantly some of the main parameters of its gas policies by overtaking financial obligations and risks, becoming the consortium leader of the entire TAPI project, and has undertaken responsibilities not just for building the pipeline sections on its own territory, but also beyond its borders. However, it is still uncertain whether international companies are willing to take larger financial risks in building a TCP and other larger mega projects in the wake of the present gas oversupply and declining gas prices on the world markets. While the EU is willing to promote the TCP, it remains unclear whether it will create an international consortium consisting of leading European companies, and directly support the financing as well as control the implementation process of the TCP project. Moreover, both the EU and Turkmenistan have not answered the strategic question of whether they will shoulder the risks and related security obligations for building a TCP against Russia's will in the midst of the Ukraine conflict. As long as these questions remain unanswered, a TCP appears rather unrealistic until 2019. But a much smaller pipeline connection to Azerbaijan might be possible between an offshore Turkmen gas field in the Caspian Sea, developed by the Malaysian company Petronas. It has extracted 10bcm from its field much closer to Baku, but has presently no option to ship and sell it.<sup>352</sup>

### 6.5 Turkmen Gas Exports via Iran to Europe

Turkmenistan is not solely dependent on Azerbaijan in regard to its potential gas exports to Europe. It theoretically can also export its gas to Europe via Iran as an alternative gas transit route to Europe.<sup>353</sup> In the past, Iran has also expressed its





own interest to act as a transit state or regional gas hub for Turkmenistan. Although Iran has the world's largest proven gas reserves, it has been a net importer of gas since 1997. Turkmenistan has become an important gas supplier for Iran. In 2012, Turkmenistan exported 9bcm to Iran, but this declined to 6.5bcm in 2014. But during the last few years, Iran had problems paying for its Turkmen gas imports and, therefore, has favored barter deals by exchanging Turkmen gas for Iranian manufacturing goods. That however, is not in Turkmenistan's long-term strategic interest.

Any larger Turkmen gas exports via Iran to Turkey and Europe faces three problems: (1) Turkmenistan's pipeline network with its present spare capacity of 10bcm is mostly disconnected from Iran's central gas transportation trunk-lines.<sup>354</sup> It severely limits Turkmenistan's ability to expand its gas exports to Iran, and to use Iran as a transit state for its potential gas exports to Europe. (2) With the prospect of lifting Western sanctions, Iran wants to expand its own gas production rapidly, and is looking for new export options for its own gas reserves via new pipelines to neighboring countries, and LNG-exports to more distant markets before lending assistance to Turkmenistan. But given the need for huge foreign investments in its oil and gas sectors, Iran may only be able to become a larger gas exporter after 2020. (3) Iran recently declared it would not export gas via pipelines to Turkey due to commercial disagreements between both sides.<sup>355</sup>

However, at the beginning of June 2015, Iran proposed to Turkmenistan a gas-for-food deal totaling US\$30bn. Iran would import US\$2-3bn of Turkmen gas annually as part of a ten year contract with Ashgabat, and to export US\$2-3bn of Iranian goods, technologies and services per year.<sup>356</sup> While that deal could open new perspectives for Turkmen gas supplies to Europe, the alternative Iranian transport route for larger Turkmen exports also appears rather unlikely in the short-term. But without a much wanted European export route for its gas supplies, Turkmenistan will remain dependent on China. Due to this, TAPI has become an even more geopolitically important project for Ashgabat's gas export diversification policies.

# 7. Kazakhstan's Energy Policies and Strategic Perspectives for an Enhanced EU-Kazakhstan Energy Cooperation

"The lack of well-developed institutions, frequent changes to the structure of government and ministerial appointments and the lack of a clear decision-making and accountability within government provide ample opportunity for frustration and delay in obtaining regulatory consents for activities covered by existing contracts. This problem is more apparent in Kazakhstan on account of its more decentralized political structures."<sup>357</sup>

The EU has defined the energy cooperation in its overall relationship with Central Asia as one of the most important cooperative relationships for both sides, because:

- (1) The EU has a strategic interest in diversifying its future oil and gas imports, including from CACR;
- (2) Energy is a crucial area of economic growth for CACR countries;
- (3) The EU can support the regional development of a sustainable energy policy, which also relies more on energy efficiency, conservation, and the expansion of renewables in changing and enhancing the demand side management;
- (4) EU assistance for a convergence of energy markets, governance, regulatory frameworks and standards will benefit Kazakhstan;
- (5) The EU can facilitate investments, modernization and technology transfers to CACR. But despite this common strategic interest to enhance the mutual energy cooperation, it did not play a major role in the concrete cooperation programmes.<sup>358</sup>

Even so, both sides cooperate in INOGATE programmes such as the Covenant of Mayors, in which eight Kazakh cities are committed to reduce their CO<sub>2</sub>-emissions, and the EU provides technology transfers to increase energy efficiency, and offers best practices in managing as well as transforming Kazakhstan's energy system.<sup>359</sup>

Only recently have both sides expressed their interest to strengthen their cooperation in the field of energy efficiency and RES, as Kazakhstan's new energy policy is paying much more attention to a diversification of the energy mix and a modernization of its energy system for a sustainable green transformation. It is also constructing a unified energy system across its three time zones to fully meet the country's electricity demand in order to become less dependent on Russia. As a legacy of the Soviet Union central planning system, Russia still supplies Kazakhstan with electricity and is a major source of imports of finished petroleum products and raw materials, accounting for 40 per cent of Kazakhstan's total needs.<sup>360</sup>

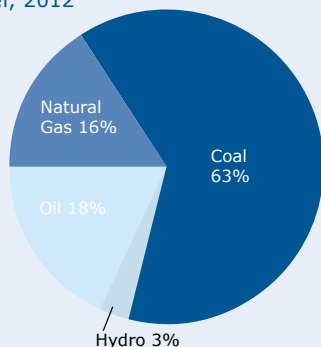
## 7.1 Kazakhstan's Fossil Fuel Sector in Crisis

Around 25 per cent of Kazakhstan's coal production is exported - mostly to Russia. Kazakhstan is a net-exporter of coal, natural gas, oil and electricity. Its primary domestic energy consumption still depends heavily on coal. Although it is the world's twelfth largest coal producer, it is a relatively small contributor to global coal volumes. In January 2013, Kazakhstan became the first Central Asian country to establish an economy-wide carbon emission system to curb GHGE in its coal, oil and gas extraction sectors, alongside its 'Energy Efficiency 2020 Programme'. Its heavy dependence on coal also explains why Kazakhstan is interested in Carbon Capture and Storage (CCS) projects, which are a key technology for the future worldwide decarbonization efforts.<sup>361</sup> As its coal resources have predominantly a high ash share, and most of its thermal power plants are still not refitted with sulfur and nitrogen oxide flue gas scrubbers, Kazakhstan needs to enhance the energy efficiency of its coal plants, and to modernize them by refitting them with clean coal technologies to curb GHGE and air polluting emissions. Thus CCS and other clean coal technologies could be another important topic for the bilateral EU-Kazakhstan energy cooperation agenda, but it is presently hampered by a lack of progress on CCS projects on the European side.<sup>362</sup>

Kazakhstan produced 1.7mb/d of oil and 19.3bcm of conventional gas in 2014.<sup>363</sup> Its

**Figure 25: Primary Energy Consumption of Kazakhstan in 2012**

Kazakhstan's energy consumption by fuel, 2012



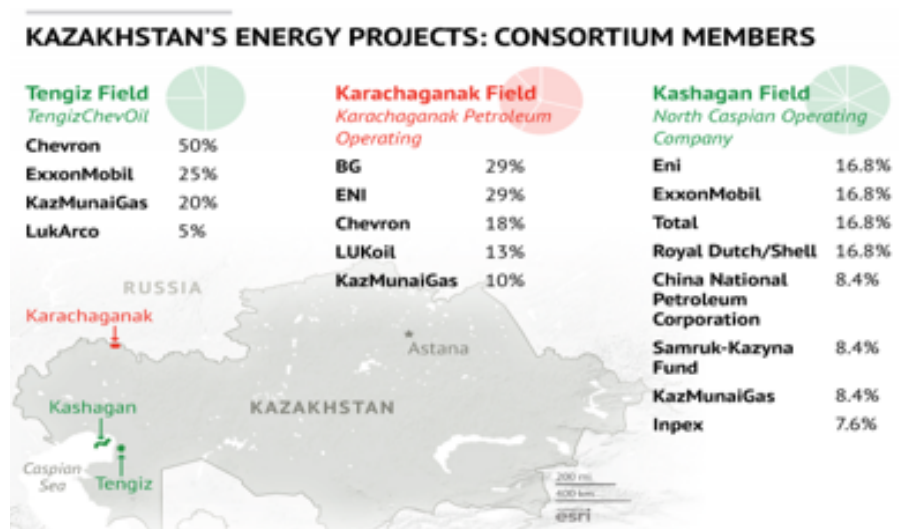
Source: Dr. F.Umbach based on Energy Information Administration (EIA), Washington D.C. 2015 ([https://www.eia.gov/beta/international/analysis\\_includes/countries\\_long/Kazakhstan/kazakhstan.pdf](https://www.eia.gov/beta/international/analysis_includes/countries_long/Kazakhstan/kazakhstan.pdf)).

oil production has increased by 24 per cent since 2005.<sup>364</sup> Almost 40 percent of its oil and gas production comes from just two large fields in Tengiz and Karachaganak. Both were launched by major Western energy companies during the last two decades. Its third large field of Kashagan has not developed as scheduled due to rising costs (by exploding from US\$10bn to US\$46bn, and could even exceed US\$60bn) and conflicts between its consortium members.<sup>365</sup> But its forecasted oil production based on its new mega-fields would allow Kazakhstan to export 80-100mt of oil annually over the next 40-50 years.<sup>366</sup> Since the international oil prices declined, oil exports to Europe (i.e. Italy) have increased. Kazakh's oil exports to Italy are still three times greater than those piped to China.<sup>367</sup>

A major reform in its oil sector is directed to create more effective state regulation of the oil refining industry and the petroleum market in Kazakhstan. It is aimed to make them more competitive towards its Russian rivals as the present vulnerabilities of Kazakhstan's oil and gas industries as well as dependence on Russia may undermine its future energy security.<sup>368</sup>

As a land-locked, but littoral Caspian Sea country, it has - like other CACR countries - no access to open oceans and many foreign markets. It is still dependent on old Soviet oil and gas pipelines, controlled by Russia beyond its borders, despite the fact it could have considerably expanded its oil production and exports since the 1990s. More than 75 per cent of its crude exports are transported to Europe and around 16 per cent to China via the Atyrau-Alashankou oil pipeline to Xinjiang. In late 2013, Kazakhstan has increased its diversification of oil exports via tankers through the Caspian Sea, amounting to 4mt, of which 3mt are transported from the Kazakh port of Aqtau to the Azerbaijani port of Baku, and then piped via the BTC-pipeline to Turkey. Another 1mt of oil is being transported by railway to the Georgian Lulevi terminal on the Black Sea. Both oil production and exports will increase in the near future when oil production begins at Kashagan, and then later at Tengiz and Karachaganak.<sup>369</sup>

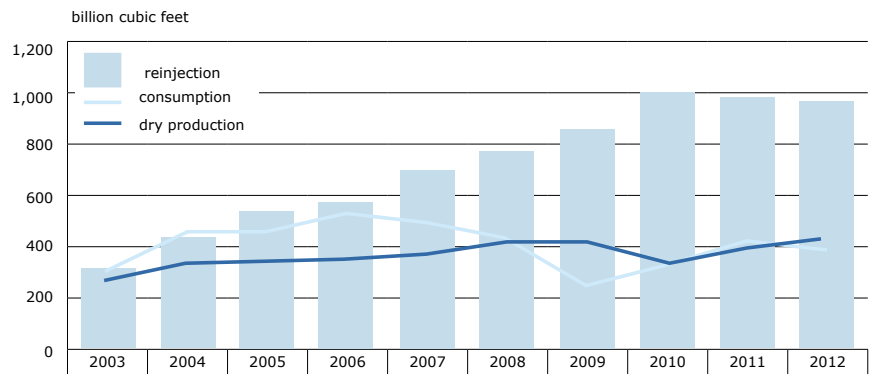
**Figure 26: Kazakhstan's Major Energy Projects and its Consortium Members**



Source: Strafor.com (Courtesy of Stratfor).

Despite having some 1.5tcm of proven gas reserves at the end of 2014, its gas consumption of around 5.6bcm in 2014 has remained rather low. It is the result of a lack of expensive gas infrastructure, as its gas fields in the country's western region are too far away to connect them to the widely dispersed population and its main consumption centres in the south of Kazakhstan. Gas has mostly been produced as associated gas to its oil production, and is then used for re-injection in order to boost its oil production.

**Figure 27: Kazakhstan’s Gas Production and Consumption 2003-2012**



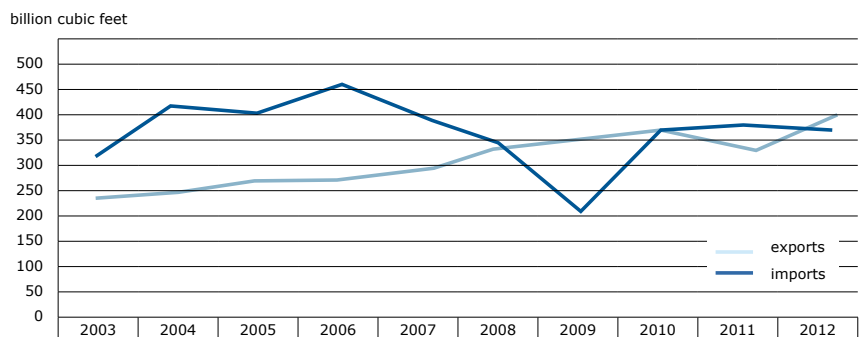
Source: Energy Information Administration (EIA), Washington D.C. 2015 ([https://www.eia.gov/beta/international/analysis\\_includes/countries\\_long/Kazakhstan/kazakhstan.pdf](https://www.eia.gov/beta/international/analysis_includes/countries_long/Kazakhstan/kazakhstan.pdf)).

But since 2007, Kazakhstan has increasingly exported natural gas. Its imports have decreased by almost 50 per cent between 2002 and 2012. In 2013, it had supplied net exports of 10.2bcm.<sup>370</sup> After ending its gas re-injection, Astana might be able to increase its gas exports to 30-40bcm by 2030.<sup>371</sup> Ukraine has also negotiated with Astana about future Kazakh gas exports. But it is not possible without agreement from Russia, which is unwilling to do so because of its aggressive Ukraine policies. Russia still retains a 50 per cent stake in the Tsentralnoye and Imashevskoye gas fields. Kazakhstan’s gas is also still processed at Gazprom’s Orenburg plant in Russia before it is sent back for Kazakhstan’s domestic consumption.

Kazakhstan is also very much interested in exploring its shale gas reserves. It is currently undertaking geological analyses to determine the potential resources.<sup>372</sup> Furthermore, it is expanding its domestic gas pipeline network to increase the share of its population having access to gas in their homes from 42 per cent in 2014 to 56 per cent by 2030.<sup>373</sup>

Kazakhstan’s fossil fuel sector and its energy revenues still generate 40 per cent of the government’s annual budget. Its remarkable GDP growth of 6 per cent annually since 2000 (with the exception of the years 2008-2009) is directly linked with its oil exports and high global oil prices. But since the two years following the oil price fall, Kazakhstan’s fossil fuel sector and its entire economy is increasingly suffering. It is confronted with the new situation wherein profits have declined by about 75 per cent, whereas expenses are rising. Many old Soviet-era oil fields are reportedly only profitable with international oil prices above US\$60 per barrel.<sup>374</sup> In this light, Kazakhstan’s GDP growth has just grown by less than 1 per cent in 2014. As the oil sector is more capital than labour intensive, Kazakhstan’s unemployment rate and poverty could increase again and has already caused social unrest.<sup>375</sup>

**Figure 28: Kazakhstan’s Gas Imports and Exports 2003-2012**



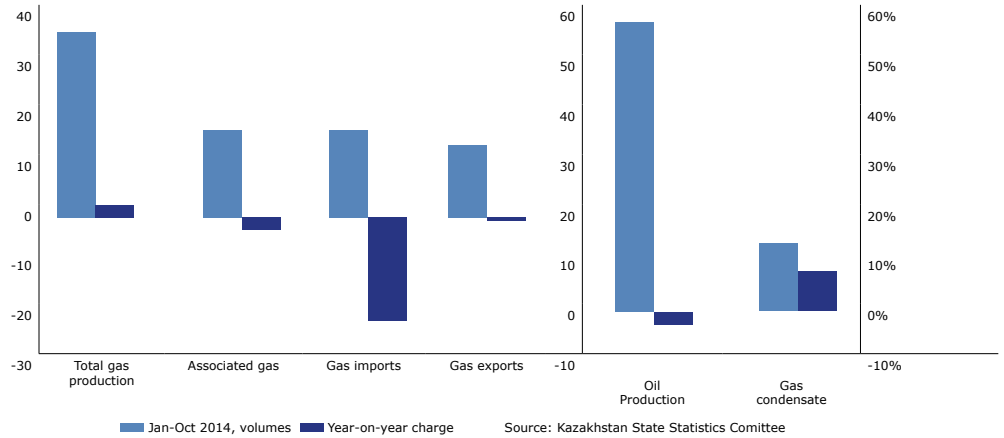
Source: Energy Information Administration (EIA), Washington D.C. 2015 ([https://www.eia.gov/beta/international/analysis\\_includes/countries\\_long/Kazakhstan/kazakhstan.pdf](https://www.eia.gov/beta/international/analysis_includes/countries_long/Kazakhstan/kazakhstan.pdf)).

For 2016, the government hopes that some GDP growth of 2 per cent can be achieved if the international oil prices remain at about US\$40 per barrel, and if the Kashagan mega-field starts producing. While the consortium members will



hardly benefit by making any profits from their investments in the years to come, Kazakhstan’s government might already be able to make billions in taxes and other financial obligations each year. It also hopes to expand the oil production of its Tengiz field to feed the oil pipeline of the Caspian Pipeline Consortium, which will have doubled its capacity to 1.4mb/d in the next year. Moreover, Astana hopes to launch its Eurasia Project with Russia, which involves sharing technology to drill deeper into its aging Soviet-era fields, which may double Kazakhstan’s drilling capabilities.<sup>376</sup>

**Figure 29: Kazakhstan’s Gas Imports and Exports as well as Liquid Production**



Source: [www.interfaxenergy.com](http://www.interfaxenergy.com)

### 7.2 Kazakhstan’s Nuclear Sector: Increasing Sino-Russian Competition

Although Kazakhstan has the world’s second largest uranium reserves after Australia, with around 1.5mt (or nearly 15% of the explored global reserves), and is globally the largest uranium producer since 2009 with around 22,500t in 2013 (38% of global production), it had only one nuclear reactor, which it decommissioned in 2001. Hence all produced uranium goes to exports. But Kazakhstan still has plans to build two new 1,500MW nuclear power plants in southeast Kazakhstan, and another one in Kurchatov in the East Kazakhstan Province (northeast of the country). An intergovernmental agreement was signed in September 2014. The Balkash-project with a modern reactor design is under review by the U.S. company Westinghouse. Both projects largely depend on Kazakhstan’s electricity demand rise, but the final decision has repeatedly been postponed.<sup>377</sup>

At present, both Russia and China have increased their nuclear cooperation with Kazakhstan, and seek to raise their share and influence in uranium mining and the building of two nuclear power stations in Kazakhstan. It has become the most heated conflict of competing strategic interests between Russia and China, both in their bilateral relations with Kazakhstan, as well as in their wider CACR regional energy foreign policies.<sup>378</sup>

In August 2015, Kazakhstan and the IAEA signed an agreement to create the first worldwide low-enriched uranium (LEU) fuel bank in Kazakhstan to make highly enriched uranium (HEU) available to fuel nuclear power plants. Countries being interested in supplying uranium to other countries for the peaceful use of nuclear power have now an opportunity to supply uranium to this bank under the auspices of the IAEA to prevent any military use of HEU of potential user countries. Those interested countries do not have to create costly and internationally destabilizing enrichment programs by themselves. At present, 66 new worldwide nuclear power plants are under construction, 186 are newly planned and another 322 nuclear power stations have been proposed.<sup>379</sup>

### 7.3 On the Way to a Sustainable Green Energy Future?

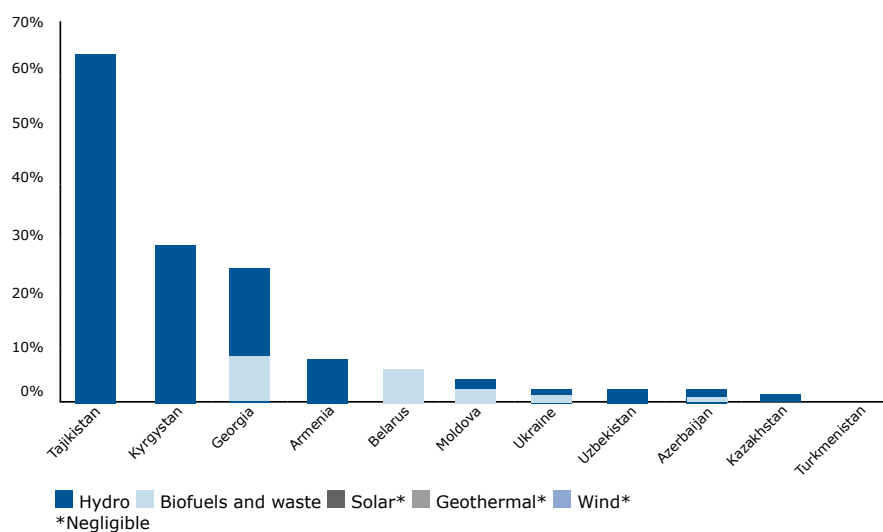
The IEA has also recently highlighted the long-term benefits if the CACR countries would transform their energy systems to a non-fossil fuel future. Kazakhstan itself has already recognized the need and aims for a 50 per cent renewable energy supply by 2050.<sup>380</sup> But like in other countries, those efforts and large-scale growth of the RES-sector are often hampered by an inaccurate accounting system, an ageing

existing energy infrastructure, and a lack of political and public awareness of the long-term benefits of increasing decarbonization.<sup>381</sup>

In its 'Kazakhstan 2050 Strategy', aimed at catapulting the country into the ranks of the world's 30 most developed countries by 2050, Astana has recognized the need for modernization and fundamental reforms.<sup>382</sup> It has huge opportunities for the development of RES such as wind, solar and hydropower.<sup>383</sup> At present, hydropower accounts for around 13 per cent of Kazakhstan's electricity generation. In May 2013, a 'Concept for Transition of Kazakhstan to a Green Economy' was adopted. Its primary goal is that the expansion of RES shall cover 50 per cent of its overall energy consumption by 2050, and to reduce the energy intensity of its economy.<sup>384</sup> Its 'Law on Supporting the Use of Renewable Energy Sources' was approved in the same year, which envisages establishing feed-in tariffs for wind and solar energy. It went into force in 2014 and provides alongside another law, a comprehensive legal, regulatory, and institutional framework for energy efficiency measures. According to these plans, Kazakhstan intends to expand the share of RES in its electricity generation from 3 per cent in 2020, to 10 per cent in 2030 and to 50 per cent by 2050.

In this context, Kazakhstan is the preferred modernization leader in CACR for the EU. Astana's RES-Action Plan has proposed 31 RES projects with a capacity of 1,040MW, including a wind farm of 13-793W capacity, solar photovoltaic (PV) installations of 77MW and a 170MW hydropower plant.<sup>385</sup> The first wind plant has been built in the Yerementau region.<sup>386</sup> Kazakhstan has also initiated the 'Green Bridges Partnership Programme', which aims to improve access to green technology and investment, as well as to transfer best practices of management experiences to interested countries and organizations in the region. As it will host the world Expo 2017 under the title 'Future Energy', it will offer another possibility for closer energy cooperation between Kazakhstan and the EU.

**Figure 30: Renewable Energy as a Percentage of Total Primary Energy Supply (TPES) in Kazakhstan and other CACR and East European Countries**



Source: © OECD/IEA (2015), 'Eastern Europe, Caucasus and Central Asia', Energy Policies Beyond IEA Countries, Paris: IEA Publishing. Licence: [www.iea.org/t&c/termsandconditions/](http://www.iea.org/t&c/termsandconditions/).

By adopting more far-reaching reforms (including new privatization efforts<sup>387</sup>), it has formulated – in contrast to many other regional CACR-countries – ambitious mid- and long-term goals and energy strategies. In this context, Kazakhstan offers the EU the best prospects for an enhanced energy partnership, which can support Kazakhstan's efforts for a sustainable transformation of its energy system. It can also help to stabilize the regional energy relationships, and even offer more prospects for regional integration and cooperation by sharing its own EU experiences, and lessons learned since the creation of a common integrated energy and climate policy in 2007 and the German 'Energiewende' of 2011.

## 8. Summary and Strategic Perspectives

By adopting a new Central Asia strategy in June 2007, the EU has intensified its energy and wider political-economic cooperation with CACR. But the EU has to compete in particular with Russia and China for the region's energy resources, raw materials and geopolitical influence. While Azerbaijan has become the most important gas partner of the EU in the Caspian region, Kazakhstan is the most important energy partner (i.e. oil supplier) in Central Asia: it is already the third-largest non-OPEC-supplier of energy to the EU (behind Russia and Norway). Three-quarters of its oil exports are currently supplied to the EU-28. In the years ahead, Kazakhstan may even become the second largest non-OPEC supplier to global oil markets by 2020. Its well-balanced, multi-vector foreign policy has strengthened its role in CACR, as a 'bridge' between Europe and Asia as well as beyond. For the EU, as well as for Russia and China, Kazakhstan's regional economic and strategic importance has grown beyond its geographic location, as its GDP exceeds those of the other four Central Asian states combined and its business environment is the most attractive in the region.

As the EU has become Kazakhstan's most important trading partner, both sides have initiated a new 'Enhanced Partnership and Cooperation Agreement' in January 2015. But the 'energy field' has not explicitly been defined as one of the 'main areas of cooperation', albeit Astana has explicitly expressed its interest and intention to deepen its energy relationship with Europe. For Kazakhstan, its energy cooperation and 'modernisation partnership' with the EU becomes even more important in the near and mid-term future, as it seeks to diversify its oil and gas exports, as well as its energy mix, by expanding the share of RES up to 50 per cent by 2050.

During the last decade, Kazakhstan has made progress by developing a relatively strong and robust energy security and energy equity ranking compared with many other countries in the world. It has reduced transmission and distribution losses, enhanced energy efficiency in the power sector, reduced energy and emission intensity, and diversified its electricity generation portfolio away from fossil fuels to include more hydropower and RES, which also decreased CO<sub>2</sub>-emissions. Its inclusion of RES in the electricity generation may have reached 1bn kWh in 2014 – almost three times 2009 levels. But Kazakhstan performs rather poorly on environmental sustainability compared with many other countries. It also needs to introduce cutting-edge technologies to enhance domestic supply security and a modern grid system that would enable electricity exports to the markets of its neighbouring countries. While Kazakhstan enjoyed robust macroeconomic stability until 2014, it lost 21 positions in the last international '2015 Energy Trilemma Index' of the World Energy Council, falling from the rank 56 to 77, due to many determining conditions of its traditional political, societal and economic strength, which have all declined across the board.<sup>388</sup>

For Kazakhstan, Europe also constitutes an interesting and viable alternative to its eastward looking energy policy of the last few years, despite the growing energy demand in China and Beijing's pressure for more intense energy cooperation with Astana. Kazakhstan seeks to reduce its energy dependence on Russia, and does not want to become over-dependent on China. During the last decade, the regional states of CACR have not only widened and deepened their energy ties to Russia and the EU, but have also diversified their energy exports as well as energy foreign policies to China and other energy partners. At the same time, CACR itself has become increasingly fractured, as the regional states have developed their national energy, economic and foreign policies with contrasting and often competing strategic perspectives.

Given its geographical location in the heart of Central Asia and entire Eurasia, Kazakhstan will also play a fundamental role in new transcontinental transport routes such as the 'Western-Europe-Western China Transport Corridor', which will cut delivery time by half compared with seaborne transport, and the EU's Transport Corridor Europe-Caucasus-Central Asia. It could also become one of the most important partners for critical raw material supply, which will become an ever more important political issue on the EU's security of supply agenda, by expanding RES and new storage options for electricity - which all need critical raw materials, such as rare earths, lithium, platinum and others.

The Ukraine conflict has intensified discussions on new supply options of EU energy import diversification. Theoretically Kazakhstan can also be connected to the EU's Southern Gas Corridor, but a TCP appears only realistic with the agreement of Russia – a project the EU, Turkey, Azerbaijan and Turkmenistan want to implement by 2019, but which Russia strongly opposes for both commercial and geopolitical reasons.

This highlights the geopolitical fact that any enhanced energy partnership between the EU and Kazakhstan is not only dependent on the political will and strategic vision on both sides, but also on third parties such as Russia and China. Recently, however, both Russia and China's energy foreign policies in CACR have become more assertive. On Russia's side in particular, these policies are not really proof of its great power status and geopolitical influence, but rather the opposite: since the 1990s, its geo-economic and geopolitical influence has deteriorated, as Russian foreign, security and energy experts have often confirmed. Although they have perceived the EU's Central Asia strategy from its beginnings in 2007 as a potential threat in its 'zero-sum-thinking', it was China who broke Russia's oil and gas export monopoly in Central Asia (i.e. Kazakhstan and Turkmenistan). China much more than the EU or the U.S. is challenging Russia's traditional influence and energy interests in CACR.

Against this rapidly changing energy foreign policy environment in CACR, an enhanced energy relationship between the EU and Kazakhstan needs to take into account the potential impacts and implications of their energy foreign policies on their relevant security strategies in the region. Azerbaijan and Turkmenistan, for instance, have rejected the objections of Russia and Iran against a TCP by pointing out that the project affects the interests of only two littoral states, and hence can be implemented on a bilateral basis. The EU does not consider the absence of a decision on the status of the Caspian Sea an obstacle to the implementation of the project. But if the EU and regional states in CACR want to go ahead by building a TCP, they must address the hard security consequences they may come up against with the building of the TCP. Otherwise, the EU has to take into account the advice of the former director of Azerbaijan's Center for Strategic Studies (SAM), Elkhan Nuriyev, who stated in September 2015:

'The EU must be realistic about its energy interests and capabilities in the Caspian basin. The EU has thus far declined to be a relevant security actor in this region, since Brussels is not able to engage in hard security approaches and to compete with Moscow and Beijing in geopolitical terms on energy matters. And yet, the EU needs to formulate an integrated energy policy on the basis of a new comprehensive strategic vision. New EU initiatives need bilateral and trilateral tracks. The EU should support the integration of partner countries in a common energy networks governed by EU rules. Furthermore, creating a kind of new format of multilateral dialogue between the EU and the five Caspian littoral states ... would probably make it possible to remove current differences on important strategic issues in relation to future gas exports onto the European market. The establishment of an EU-Caspian multilateral structure, in which Russia's participation is vital, could be a starting point for decreasing competition over energy resources in the wider Black Sea-Caspian basin.'<sup>389</sup>

An increased EU gas diversification with CACR supplies and an enhanced EU energy cooperation, which could even include future Kazakh gas supplies to Europe, might be more complicated given Russia's commercial and geopolitical objections. Instead, Kazakhstan's 'green energy concept' for the expansion of RES and increasing energy efficiency appears less challenging for Russia and offers new opportunities for the EU to engage in CACR, and to support Kazakhstan's energy transformation for a sustainable future. In this regard, Kazakhstan may also benefit by sharing the EU's and Germany's positive yet painful experiences and lessons, with their ambivalent decarbonization and transformation strategies. Germany is facing particular challenges as the result of the German 'Energiewende'. The 'Energiewende' finds itself at a crossroad: its inefficiently organized and mismanaged energy market as well as incoherent and imbalanced Energiewende strategy have caused spiraling costs for both private consumers and the industry. It is threatening its future national competitiveness on the global markets and puts the economy at increasing risk. Its over-subsidized expansion of RES have turned electricity prices - being among the highest in Europe - into a rising political problem and economic liability. Kazakhstan and many other countries will only be able to afford and be politically willing to implement those transformation strategies and find a sustainable path



to a green energy future, if they are willing to learn from European experiences. Simultaneously, the EU must be really willing to discuss both the positive and rather negative lessons and failures by sharing their experiences of their own transformation strategies with their energy partners.

Initially, it appears that the EU's energy partnership by focusing on expanding RES, enhancing energy efficiency and conservation, and supporting the decarbonization of Kazakhstan to a sustainable new 'green energy system', would be much less problematic for Russia - compared with energy cooperation on future gas supplies from CACR. However, those European and German views overlook the most recent experiences of Russia and Gazprom with the shrinking European gas market and the German 'Energiewende': by diversifying the energy mix away from fossil-fuels, enhancing energy efficiency and reducing the overall energy consumption, all the previous forecasts of the European gas market in regard to its overall consumption and imports have proved wrong and too optimistic. Instead, the European energy and gas consumption has dramatically fallen, and the competition on the largest gas market in the world has significantly increased. This has led to a gas glut and considerable price declines, alongside manifold new dynamics resulting from the U.S. shale gas and shale oil revolution. Thus, even in the short-term, an enhanced EU energy cooperation focusing on RES with Kazakhstan and other CACR countries is really not in Russia's strategic and geopolitical interest because: (1) it would free more gas resources in the CACR countries for exports on the shrinking or stagnating European and Asian (i.e. Chinese) gas markets, particularly at a time when oil prices have fallen up to 60 per cent between the summer 2014 and 2015; and (2) it would further decrease the energy dependence of CACR countries on Russia, and hinder its own energy cooperation with the Eurasian region.

But ultimately, the EU cannot avoid neither to clearly define its strategic and geopolitical interests, as well as needed instruments in CACR, nor to address the hard security questions with all relevant actors, including Russia and China.

This is even more true when the enduring dilemma for the EU, Kazakhstan and other CACR countries is considered: EU energy cooperation with Kazakhstan and other CACR countries is and will remain on both sides largely the result of their own ambivalent and contradictory energy relationship with Russia, and their political will to define their own strategic energy policy agendas and interests. They also need the political will to clarify to which extent Russian positions and interests, as presently defined by the Kremlin, can and will be taken into account without negating their own strategic interests and those of the smaller regional countries. Otherwise, the EU and Kazakhstan may lose the credibility and reputation of their energy and foreign policies inside and outside their countries.

# Footnotes

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- [3] See European Council, 'The EU and Central Asia: Strategy for a New Partnership (Brussels, 22 June 2007).
- [4] See also Johan Engvall, 'Asserting Statehood: Kazakhstan's Role in International Organizations', *Central Asia-Caucasus Institute/Silk Road Studies Programme*, Washington D.C.-Stockholm, December 2015.
- [5] European Commission, 'Memorandum of Understanding on Cooperation in the Field of Energy between the European Union and the Republic of Kazakhstan', Brussels. 4 December 2006.
- [6] Council of the European Union, '11th Cooperation Council EU-Kazakhstan', Brussels, 17 November 2015
- [7] In 2014, the EU accounted for 45% (US\$10.7bn) of the total inflows of US\$23.9 bn of FDI to Kazakhstan – see EU/EEAS, 'Kazakhstan. Trade and Economic Relations', Brussels ([http://eeas.europa.eu/delegations/kazakhstan/eu\\_kazakhstan/trade\\_relation/index\\_en.htm](http://eeas.europa.eu/delegations/kazakhstan/eu_kazakhstan/trade_relation/index_en.htm)). See also 'The EU and Kazakhstan: Economic Cooperation and Democratic Reforms', *EurActiv*, 20 June 2007.
- [8] See European Union External Action Service (EUEAS), 'Press Release: EU and Kazakhstan Initial Enhanced Partnership and Cooperation Agreement', Brussels, 10 January 2015.
- [9] See European External Action Service, 'Director for International Cooperation of the European Commission Cristina Russo Visited Astana on 1-2 October 2015 (02/10/2015)', Brussels, 2 October 2015 ([http://eeas.europa.eu/delegations/kazakhstan/press\\_corner/all\\_news/news/2015/20151002\\_en.htm](http://eeas.europa.eu/delegations/kazakhstan/press_corner/all_news/news/2015/20151002_en.htm)).
- [10] See S.Frederick Starr/Svante E. Cornell/Nicklas Norling, 'The EU, Central Asia, and the Development of Continental Transport and Trade', *Central Asia-Caucasus Institute/Silk Road Studies Programme, Silk Road Paper*, Washington D.C.-Stockholm, December 2015, p. 19 and 25.
- [11] See *ibid.*, p. 40 f.
- [12] EUEAS, 'Press Release: EU and Kazakhstan Initial Enhanced Partnership and Cooperation Agreement'.
- [13] Instead the five 'main areas of cooperation' are: (1) Values; (2) Enhanced cooperation in foreign and security policy; (3) Trade (in which energy and raw materials are mentioned); (4) Justice, Freedom and Security; and (5) Enhanced cooperation in some other 29 key sector policy areas – see EEAS, 'Fact Sheet: EU-Kazakhstan Enhanced Partnership and Cooperation Agreement', Brussels, 9 October 2014.
- [14] President Nursultan Nazarbayev, 'The Next Chapter in Kazakhstan-EU Relations', *The Wall Street Journal* 7 October 2014.
- [15] See F.Umbach, 'First Steps in Turkmenistan Deal to Supply Gas to Europe', *Geopolitical Information Service (GIS - www.geopolitical-info.com)*, 9 July 2015.
- [16] Nursultan Nazarbayev, 'The Next Chapter in Kazakhstan-EU Relations'.
- [17] See 'Abkommen zwischen der Regierung der Bundesrepublik Deutschland und der Regierung der Republik Kasachstan über Partnerschaft im Rohstoff-, Industrie- und Technologiebereich', Berlin, 8. February 2012.
- [18] See also F.Umbach, 'Energy Security in Eurasia: Clashing Interests', in: Adrian Dellecker/Thomas Gomart (Eds.), 'Russian Energy Security and Foreign Policy' (Routledge: Abingdon-New York 2011), pp. 23-38.
- [19] See F.Umbach, 'Competing for Caspian Energy Resources: Russia' and China's Energy (Foreign) Policies and the Implications for the EU's Energy Security', in: M.Amineh/Y.Guang (Eds.), 'Secure Oil and Alternative Energy. The Geopolitics of Energy Paths of China and the European Union', Volume II (Koninklijke Brill NV: Leiden-Boston 2012), pp. 75-114; *idem*, 'The EU-China Energy Relations and Geopolitics: The Challenges for Cooperation', in: M.Amineh/Y.Guang (Eds.), *The Globalization of Energy. China and the European Union* (Koninklijke Brill NV: Leiden-Boston 2010), pp. 31-69, and *idem*, 'Globale Energiesicherheit. Herausforderungen für die europäische und deutsche Außenpolitik' (Munich: Oldenbourg Verlag 2003), pp. 139 ff.
- [20] See F.Umbach, 'Zielkonflikte der europäischen Energiesicherheit. Dilemmata zwischen Russland und Zentralasien', *DGAP-Analyse No. 3*, Berlin November 2007. To other criticism (i.e. conflicting interests between promoting democratic and human rights pursuing energy and other commercial interests) see Joe Boonstra, 'The EU's Interests in Central Asia: Integrating Energy, Security and Values into Coherent Policy', *FRIDE, Working Paper No. 9*, January 2011.
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- [23] See also Richard Weitz, 'Kazakhstan Finally Gains WTO Membership', *Jamestown, Eurasia Daily Monitor (EDM)*; Vol. 12, Issue: 129, 10 July 2015, 'Kazakhstan Hails Completion of Historic' WTO Accession Talks', *EurActiv*, 23 June 2015 and Iana Dreyer, 'EU Welcomes Kazakhstan's Accession to the WTO', [www.borderlex.eu](http://www.borderlex.eu), 11 September 2015.
- [24] See also International Crisis Group, 'Stress Tests for Kazakhstan', *Central Asia Briefings No. 74*, 13 May 2015; 'Starving off Unrest in Kazakhstan', *Strafor.com*, 13 August 2015, 'Kazakhstan's Faltering Economy', *ibid.*, 28 April 2015; 'In Kazakhstan, Instability May be Unavoidable', *ibid.*, 25 April 2015.
- [25] See IEA, 'Eastern Europe, Caucasus and Central Asia', *Energy Policies Beyond IEA Countries (Paris: IEA/OECD 2015)*, p. 177.
- [26] To the EU's and the European Commission's energy external relations see also its website - [http://ec.europa.eu/external\\_relations/energy/index.htm](http://ec.europa.eu/external_relations/energy/index.htm).
- [27] See Council the European Union, 'EU Energy Diplomacy Action Plan (ANNEX)', Brussels, 20 July 2015 and Sergio Matalucci, 'EU Council Presents Energy Diplomacy Action Plan', [www.naturalgaseurope.com](http://www.naturalgaseurope.com), 23 July 2015. But the plan has remained vague in regard to its specific strategy and concrete EU relations to Russia, CACR as well as other energy partners and regions.
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- [40] See A.Chechel, 'Government Sees Trouble Ahead for Gazprom 2016', [www.interfaxenergy.com](http://www.interfaxenergy.com), NGD, 28 August 2012.
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- [42] See Sergei Blagov, 'Russia Eyes New Far Eastern Gas Export Hub, Reassesses Central Asia', *Jamestown-EDM*, Vol. 9, Issue 214, 21 November 2012.
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- [48] See also Andreas Walstad, 'Sefcovic Reiterates Doubts over 'Turkish Stream'', [www.interfaxenergy.com](http://www.interfaxenergy.com), [www.interfaxenergy.com/NGD](http://www.interfaxenergy.com/NGD), 5 February 2015, p. 4; Roman Ivanchenko/Alexey Novikov, 'Russia's Turkish Stream Threat is a 'Political Bluff' – Naftogaz', *ibid.*, 16 January 2015 and Andreas Walstad, 'Sefcovic Reiterates Doubts over 'Turkish Stream'', *ibid.*, 5 February 2015.
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- [58] See Daniel Graeber, 'Kremlin: No Word Yet on Turkish Gas Pipeline', [www.upi.com](http://www.upi.com), 19 August 2015
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- [97] See 'Central and South Eastern European Countries Join Forces to Create an Integrated Gas Market', [http://europa.eu/rapid/press-release\\_IP-15-5343\\_en.htm](http://europa.eu/rapid/press-release_IP-15-5343_en.htm), Brussels, 10 July 2015. See also the 'Memorandum of Understanding on a Joint Approach to Address the Natural Gas Diversification and Security of Supply Challenges as Part of the Central and South-Eastern European Gas Connectivity (CESEC) Initiative', Brussels, 10 July 2015 ([https://ec.europa.eu/energy/sites/ener/files/documents/CESEC%20MoU\\_signed.pdf](https://ec.europa.eu/energy/sites/ener/files/documents/CESEC%20MoU_signed.pdf)).
- [98] See British Petroleum, 'BP Statistical Review of World Energy', June 2015.
- [99] See R. ten Hoedt, 'Kazakhstan's Wants to Break Free', *European Energy Review (EER)*, September-October 2009, pp. 90-93.
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- [101] IEA, 'Gas Medium-Term Market Report. Market Analysis and Forecasts to 2020' (Paris: IEA/OECD), p. 83.
- [102] See IEA, 'World Energy Outlook 2010' (Paris: IEA/OECD, 2010.), pp. 495 ff.
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- [104] See also A. Yesdauletova, 'Kazakhstan's Energy Policy: Its Evolution and Tendencies', *Journal of US-China Public Administration*, Vol. 6, No. 4, August 2009, p. 31. To the U.S. policies see also S.Frederick Starr et.al., 'Looking Forward: Kazakhstan and the United States', Central Asia-Caucasus Institute, Silk Road Paper, Washington D.C.-Stockholm, September 2014.
- [105] See also Thrassy Marketos, 'Eastern Caspian Sea Energy Geopolitics: A Litmus Test for the U.S.-Russia-China Struggle for the Geostrategic Control of Eurasia', *Caucasian Review of International Affairs*, Vo. 3 (1)-Winter 2009, pp. 2-19 (pp. 5 ff.).
- [106] See Johan Engvall, 'Asserting Statehood: Kazakhstan's Role in International Organizations'.
- [107] Eugene Rumer/Paulk Stronski, 'Russia, Ukraine, and Eurasia at Twenty-Five – A Baseline Assessment', Carnegie Endowment for International Peace, Washington D.C., 14 December 2015.
- [108] See also W. Ostrowski, 'Politics and Oil in Kazakhstan', Routledge: London, 2010, pp. 31-32.
- [109] Full scale of production in Kazakhstan dates back to mid-1960s with the enterprises responsible for the early development continuing production



throughout the 1990s producing a local class of oilmen, see W. Ostrowski, 'Politics and Oil in Kazakhstan', p. 30.

[110] The first, second and third generations of the Soviet oil industry complex development includes respectively the North Caucasus and Azerbaijan resources (1917-1941/1945), the Volga Basin and the Ural Mountains resources (1945-1960s), Urals-Volga region (1960s-1980s).

[111] See W. Ostrowski, 'Politics and Oil in Kazakhstan', p. 32-33.

[112] See also K.D. Isaev, 'Республика Казахстан и Европейский Союз: Основные этапы сотрудничества за 15 лет независимости Казахстана', Kazakhstan Institute for Strategic Studies, 2007.

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[114] See Economic Commission for Europe, 'Experience of International Organisations in Promoting Energy Efficiency: Kazakhstan', ECE Energy Series No. 24, ECE/ENERGY/57, United Nations: New York, Geneva, 2005, p. 38.

[115] See Economic Commission for Europe, *ibid.*, p. 22.

[116] See G. Bahgat, 'Europe's Energy Security: Challenges and Opportunities', *International Affairs* Vol. 82, Number 5, 2006, pp. 968-969.

[117] See also the INOGATE website <[www.inogate.org/?lang=en](http://www.inogate.org/?lang=en)>.

[118] See L. Anceschi, *ibid.*, p. 3.

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[121] See IBP, 'Kazakhstan: Energy Policy, Laws and Regulations Handbook', Volume 1: Strategic Information and Basic Laws. Washington, D.C.: International Business Publications, 2015, p. 56.

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[124] See L. Anceschi, 'The Tyranny of Pragmatism: EU-Kazakhstani Relations', p. 4/5.

[125] The BTC pipeline and Neka in Iran can be supplied by oil tankers, IBP, 'Kazakhstan: Energy Policy, Laws and Regulations Handbook', p. 56.

[126] See also A. Dellecker, 'Caspian Pipeline Consortium, Bellwether of Russia's Investment Climate?', *IFRI Russie.Nei.Visions* no 31, June 2008, p. 2.

[127] See A. Bracken, C. Hajj, K. Hartman and S. Sivalingam, 'China's Quest for Energy Security: Redefining and Driving Foreign Aid', *The Michigan Journal of Public Affairs*, Vol. 10, 2013, p. 10.

[128] See *ibid.*, p. 11.

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[130] See G. Raball/R. Genté, 'Oil in the Caspian Basin. Facts and Figures', In: B. Najman, R. Pomfret and G. Raballand (Eds.), 'The Economics and Politics of Oil in the Caspian Basin: The Redistribution of Oil Revenues in Azerbaijan and Central Asia', Routledge: London, New York, 2008, p. 25.

[131] See also Ardak Yesdauletova, 'Kazakhstan's Energy Policy: Its Evolution and Tendencies', *Journal of US-China Public Administration*, August 2009, Vol. 6, No. 4, pp. 31-39; Diana Ismailova, 'Some Trends in Energy Policy in Kazakhstan', *European Journal of Business and Economics*, Vol. 3, 2011, pp. 9-11, and Robert M. Cutler, [www.EurasianSecurity.com](http://www.EurasianSecurity.com), 13 February 2008.

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[136] See A. Nurmakov, 'Resource Nationalism in Kazakhstan's petroleum sector. Curse or Blessing?', p. 24.

[137] See *ibid.*, p. 25.

[138] A. Nurmakov *ibid.*, p. 33.

[139] See IBP, 'Kazakhstan: Energy Policy, Laws and Regulations Handbook', Volume 1, p. 92.

[140] See IBP *ibid.*, p. 92.

[141] See *ibid.*

[142] See also B. Syrlybaeva, 'Энергосбережение Как Вектор Развития Энергетики Казахстана: Европейский Опыт', *Kazakhstan Institute of Strategic Studies*, 9 September 2011, <http://kisi.kz/ru/categories/ekonomika-i-energetika/posts/energoberezenie-kak-vektor-razvitiya-energetiki-kazah>.

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- [169] See P. Rimple, 'How Strong Is Russia's Soft Power in Georgia?', EurasiaNet, 23 March 2015.
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- [185] See F. Lukyanov, 'Building Eurasia and Defining Russia', p. 8.
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- [187] The ethnic Russia population in Kazakhstan, for instance, has decreased from 40% of Kazakhstan's total population in 1979 to just 21.5% in 2014. Alongside, the Russian language is fading, which is changing Kazakhstan's Eurasian identity, foreign policy and strategic interests - see also Stephen Blank, 'Russia's Waning Soft Power in Central Asia', The Diplomat, 9 January 2015 and Michael Emerson, 'Why Northern Kazakhstan Will not Follow Eastern Donbass', EurActiv, 7 September 2015,
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- [204] See R. Muzalevsky, 'Turkmen-Chinese Cooperation: Key to Turkmenistan's Diversification Strategy'.
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- [207] See Pradumna B. Rana, 'Building Silk Roads for the 21st Century', East Asia Forum, 16 August 2014.
- [208] The announcement was part of a speech before a SCO-summit in Kyrgyzstan in September 2013. In October 2013, the Chinese Communist Party Central Committee announced new priorities under its 'New Neighbourhood Diplomacy Guidelines' - see Jacob Zenn, 'Future Scenarios on the New Silk Road: Security, Strategy and the SCO', China Brief, Vol. 15, Issue: 6, 19 March 2015.
- [209] TRACECA: Transport Corridor Europe-Caucasus-Asia; RETRACK: Advanced Rail Freight Concepts - to these and other Silk Road concepts also see S.Frederick Starr/Svante E. Cornell/Nicklas Norling, 'The EU, Central Asia, and the Development of Continental Transport and Trade'.
- [210] See also F.Umbach/Ka-ho Yu, 'China's Expanding Overseas Coal Power Industry - New Strategic Opportunities, Commercial Risks and Geopolitical Implications', EUCERS-Strategy Paper, London, ~50 pp. (forthcoming in January 2016).
- [211] See 'The Grand Design of China's New Trade Routes', Stratfor.com, 24 June 2015 and Vusal Gasimli, 'The New Baku International Seaport: A Nexus for the New Silk Road', Jamestown-EDM, 2 October 2015.
- [212] It should spur regional cooperation by using China's huge potential for regional investment and trade. The MSR envisages linking China's economy with those of Southeast, South and Central Asia, but also with Africa and Europe - see Pepe Escobar, 'The Eurasian Big Bang: How China and Russia Are Carving Out Their Own World Order', Energy Post, 25 August 2015.
- [213] See also Willy Lam, 'One Belt, One Road' Enhances Xi Jinping's Control over the Economy', China Brief, Vol.: 15, Issue: 10, 15 May 2015.
- [214] To China's investments in Xinjiang, for instance, also see S.Frederick Starr/Svante E. Cornell/Nicklas Norling, 'The EU, Central Asia, and the Development of Continental Transport and Trade', p. 37 f.
- [215] Both provinces, Xinjiang and Fujian, will seek to benefit from their ancient roles of the historic Silk road and their natural geographic vicinity to Central Asia and the Caspian Region. Xinjiang in particular hopes to transform itself into a regional transport hub, a centre of trade and logistics, culture and technology, as well as financial and healthcare services - see Nathan Beauchamp-Mustafaga, 'NPC Meeting Touts New Silk Road as New Driver for Economic Growth', China Brief, Vol. 15, Issue 6, 19 March 2015 and *idem*, 'Chinese Provinces Aim to Find Their Place Along New Silk Road', *ibid.*, Vol. 15, Issue 10, 15 May 2015.
- [216] All larger domestic transport infrastructures in China are defined and designed with military implications (such as transporting troops and goods for the PLA) as many military exercises during the last years have demonstrated - see also Nathan Beauchamp-Mustafaga, 'Dispatch from Beijing: PLA Writings on the New Silk Road', China Brief, Vol. 15, Issue: 4, 20 February 2015.
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- [218] D.Pavlicevic, 'China, the EU and One Belt, One Road Strategy', China Brief, Vol. 15, Issue 15, 31 July 2015.
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- [221] See 'China Brings Big Banks Along to Talk EU Tech Investment', EurActiv.com, 5 June 2015; James Kynge, 'Li Keqiang Pushes for China-Europe Investment Treaty', FT, 29 June 2015 and Maaik Okano-Heijmans/Daniel Lanting, 'Europe Finds the China Connection', East Asia Forum, 23 July 2015.
- [222] See Jamil Anderlini, 'China to Become World's Biggest Overseas Investor by 2020', FT, 25 June 2015.
- [223] See B.Wang, 'Upgrading China's Economy through Outward Investment', East Asia Forum, 30 August 2012.
- [224] It had 57 founding members, despite U.S. opposition. The AIIB aims to expand road, rail, maritime transport links between China, CACR, Middle East and Europe as well as energy projects within the OBOR-region - see A.Elek, 'The Potential Role of the Asian Infrastructure Investment Bank', East Asia Forum, 11 February 2015 and 'UAE Signs Up As AIIB Founding Member', Gulf Research Centre, 30 June 2015.
- [225] Despite China's crucial role in setting up the bank, it has only a minority status, which can help to counter any criticism at the bank being merely an instrument of China's foreign policy and geopolitical ambitions. Although the AIIB is competing with the US-guided World Bank, the Japan-led Asia Development Bank (ADB), the International Bank for Reconstruction and Development (IBRD) and other developing banks, these banks have rather welcomed the AIIB as the Asia's and the world's infrastructure challenges are too huge for any single financial institution - see Gabriel Waldau, 'AIIB Launch Signals China's New Ambition', FT, 29 June 2015 and Suman Bery, 'Why the AIIB Could Work for India', East Asia Forum, 17 June 2015.
- [226] See Andrew Elek, 'Welcoming China's Asian Infrastructure Investment Bank Initiative', East Asia Forum, 21 September 2014; Peter Drysdale, 'Put Up or Shut Up on China's Infrastructure Bank', *ibid.*, 22 September 2014 and Tomoo Kikuchi and Takehiro Masutomo, 'Japan Should Influence the Asian Infrastructure Investment Bank from Within', *ibid.*, 18 March 2015.
- [227] See 'China, Russia: Interests Converge in Regional Blocks', Stratfor.com, 10 July 2015 and Pepe Escobar, 'The Eurasian Big Bang: How China and Russia Are Carving Out Their Own World Order'.
- [228] See Erica Downs, 'Mission Mostly Accomplished: China's Energy Trade and Investment along the Silk Road Economic Belt', China Brief, Vol. 15, Issue 6, 19 March 2015.
- [229] See Kathrin Hille/Joe Leahy, 'Brics Nations' Differences on Display as Club Stages Summit', FT, 8 July 2015.
- [230] See also Jacob Zenn, 'Future Scenarios on the New Silk Road: Security, Strategy and the SCO'.
- [231] Despite Beijing was largely able to ensure with the Taliban leader Mullah Mohammed Omar that its economic assets would not be attacked by the Taliban in Afghanistan and respect China's security concerns in the country, large Chinese investments. The Mes Aynak copper mine in Afghanistan's Logar province, for instance, has never been put in operation due to the uncertain security situation. While the Taliban benefited from Chinese arms, money, and modest political support, the recent death of Mullah Mohammed Omar may even signal that the era of avoiding much more direct militant jihadism inside Afghanistan affecting Chinese investments and assets as well as Xinjiang could come to an end - see also Andrew Small, 'China's Man in the Taliban', Foreign Policy, 3 August 2015.
- [232] India in particular has been concerned and distrusts the MSR as economic disguise for the 'string of pearls' theory, which concerns a strategically designed creation of Chinese commercial and military facilities (like the Pakistani port of Gwadar) as well as strategic relationships in the Indian Ocean - perceived in India as its own privileged sphere of influence - see also Geethanjali Nataraj, 'India Should Get on Board China's Maritime Silk Road', East Asia

Forum, 27 June 2015. But Chinese experts see the MSR rather as a possibility for changing China's South China Sea policies to become more cooperative as otherwise it would conflict with Beijing's OBOR-initiative.

[233] China's building of the Pakistani Gwadar harbour could serve as a terminal for Iranian oil and gas exports to Pakistan and being linked with an internal south-north oil pipeline in Pakistan which could be extended to China - see S.Blank, 'China's Recent Energy Gains in Central Asia: What Do They Portend?'. The planned Gwadar Port Energy Zone could also function as a hub for China's maritime energy imports from the Middle East and Africa, bypassing the Straits of Malacca, with the CACR pipeline network and connecting it with Xinjiang - See J.Bosporinis, 'Sustaining the Dragon, Dodging the Eagle and Barring the Bear?', p. 72. The Gwadar port has been seen as a part of a planned network of 'string of pearls'-network, which includes naval support bases in South Asia, the Indian Ocean and the Persian Gulf (like in Yemen) for the expanded role of the PLA-Navy to ensure uninterrupted seaborne-based energy imports.

[234] See A.Walker, 'China Investment Springboards Pakistan Section of IPI', [www.interfaxenergy.com](http://www.interfaxenergy.com), NGD, 19 August 2015.

[235] See also Michael Tanchum, 'Modi and the Sino-Indian Game for Iranian Gas', *The Diplomat*, 17 July 2015.

[236] See also Ahmed Rashid, 'It Will Take Silky Diplomacy to Build China's New Road', *FT*, 25 June 2015.

[237] The U.S. has recently tried to enhance its economic cooperation with Central Asia - see the visit of US Secretary of State John Kerry in Samarkand to meet his counterparts of all five Central Asian states - 'US Seeks Rapprochement with Authoritarian Central Asian States', *EurActiv*, 2 November 2015.

[238] See K.Hille, 'Great Game Echoes in Summit Halls for Putin's Pursuit of China Ties', *FT*, 6 July 2015 and L.Coffey, 'Russia Remains Leading Power in the Caspian Region at Heart of Eurasia', *GIS*, 18 May 2015.

[239] See also Arthur Guschin, 'China and the Tussle for Influence in Kazakhstan', *The Diplomat*, 23 March 2015; Jeffrey Mankoff/Richard Ghiasy, 'Central Asia's Future: Three Powers, Three Visions', *ibid.*, 25 May 2015 and Artyrom Luki 'MacKINDER Revisited: Will China Establish Eurasian Empire 3.0?', *ibid.*, 7 February 2015.

[240] See *ibid.* and George Voloshin, 'China Strengthens Clout in Kazakhstan amid Russian Weakness', *Jamestown-EDM*, 15 April 2015.

[241] Jean-Claude Juncker, 'A New Start for Europe: My Agenda for Jobs, Growth, Fairness and Democratic Change Political Guidelines for the next European Commission Opening Statement in the European Parliament', Plenary Session, 15 July 2014 [http://ec.europa.eu/priorities/docs/pg\\_en.pdf](http://ec.europa.eu/priorities/docs/pg_en.pdf), p. 6

[242] According to Tusk, an overdependence on Russian energy makes Europe weak. Russia's individual gas prices for its different EU customers are often not cheap, not based on real market factors and reflect rather its monopolistic power position to charge its European customers: The more dependent and the less diversified the individual European gas buyer and country from Gazprom is, the higher the gas price. This unfair gas price, also dependent to which extent the European gas consumer is politically allied with Russia in its foreign and security policies, is part of Moscow's energy foreign policy strategy that is using gas dependencies and gas infrastructures as well as gas prices as a political weapon to advance its geopolitical interests. Associated key elements of this proposal included infrastructure development and modernization in order to support diversification; law enforcement; enhancement of EU security of supply mechanisms; an increase of EU and Member States' bargaining power vis-à-vis external suppliers; rising the European energy production; and enhancing energy security in the EU's neighbourhood - see Donald Tusk, 'A United Europe Can End Russia's Energy Stranglehold', *FT*, 21 April 2014 and Polish Foreign Ministry, 'Roadmap towards an Energy Union for Europe. Non-Paper Addressing the EU's Energy Dependency Challenges', Warsaw 2014.

[243] To the pros and cons as well as criticism of a joint purchasing body - see F.Umbach, 'Europe's Challenge to Build an Energy Union Dealing with Supplies and Prices', *GIS*, 10 October 2014, and *idem*, 'Strategic Perspectives of the EU's Energy Union and its Southern Gas Corridor', *Caspian Report 2/2015*, *Hazar-Foundation/Caspian Strategy Institute*, Istanbul/Turkey, Spring 2015, Issue 9, pp. 10-25.

[244] The comprehensive Tusk proposal was founded on six major pillars and principles to strengthen the common power of the EU-28: (1) Strengthening the Bargaining Power of Member States and the EU vis-à-vis External Suppliers; (2) Solidarity Mechanisms; (3) Infrastructure; (4) Development of Indigenous Energy Sources in the EU (incl. RES, coal and shale gas); (5) Diversification of Energy Supply (i.e. gas and oil) to the EU; and (6) Reinforcing the European Energy Community - see also - see again Polish Foreign Ministry, 'Roadmap towards an Energy Union for Europe'.

[245] See, for instance, Karel Beckman, 'Mr. Tusk, on What Planet Do You Live (and in Which Century)?', *Energy Post*, 24 April 2014; Joshua Posaner, 'Polish Push for an Energy Union Attracts Support of Hungary', [www.interfaxenergy.com](http://www.interfaxenergy.com), NGD, 6 May 2014, p. 3; *idem*, 'Czech Republic Will Not Sign Up to Polish Union Plans', *ibid.*, 22 May 2014, p. 4; Annemarie Botzki, 'EU Must Press on With Energy Union - EESC President', *ibid.*, EPW, 19 June 2014, p. E2; 'Europe Discusses an Energy Union', *Strafor*, 25 April 2014, and A.Gawlikowska/Mark McQuay/Roderick Parkes, 'A Dummy Guide to Forming an Energy Union', [www.naturalgaseurope.com](http://www.naturalgaseurope.com), 12 June 2014.

[246] See Roman Kilisek, 'EU Energy Union: Fault Lines Emerge Between Pivotal Member States' Design Proposals', [www.naturalgaseurope.com](http://www.naturalgaseurope.com), 31 January 2015.

[247] In the view of the Commission, such a joint purchasing mechanism can be justified under competition and internal market rules as it was the concept of the Caspian Development Corporation (CDC): It was a response on Turkmenistan's offer of selling 30 bcm to Europe, but it wanted to sell its gas only to a single buyer. But no single buyer in the EU wanted to import more than 5 bcm. Thus the CDC, heavily criticized by EU gas companies, was envisaged as an aggregate purchasing body to Turkmenistan's insistence on a single buyer for its gas exports. But a joint gas purchasing mechanism is dependent on sufficient investment in overcoming regulatory, financial and political obstacles to strengthen the EU's resilience against Russia using gas as a geopolitical instrument - see 'EU Energy Boss Says Joint Gas Purchasing Would Have to be Voluntary', *EurActiv*, 3 February 2015. However, the European industry has been much more open minded and supportive to the idea of a common purchasing of LNG cargoes as one of several measures to mitigate potential gas supply disruptions from other countries such as Russia - see Andreas Walstad, 'European Leaders Divided Over Single Gas Buyer', [www.interfaxenergy.com](http://www.interfaxenergy.com), NGD, 9 February 2015.

[248] See European Commission, 'Energy Union Package. A Framework Strategy for a Resilient Energy Union with a Forward-Looking Climate Change Policy.' Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee, the Committee of the Regions and the European Investment Bank, Brussels, 25 February 2015 COM(2015) 80 final.

[249] See *ibid.*, pp. 19 ff.

[250] See *ibid.*, p. 6.

[251] See also 'Energy Union Requires 'Big Picture Approach', [www.naturalgaseurope.com](http://www.naturalgaseurope.com), 15 December 2015', Dieter Helm, 'The Energy Union: More than the Sum of Its Parts?', Centre for European Reform, Brussels 2015; Oliver Santor, 'State of the Union: The Political Work Has Yet to Be Done', *Energy Post*, 2 December 2015; Sonya van Renssen, 'EU's First State of the Energy Union Report: How It Will Deliver on Climate and Energy Goals for 2030', *ibid.*, 19 November 2015; Severin Fischer/Oliver Geden, 'Limits of the 'Energy Union': Expect Only Pragmatic Progress', *ibid.*, 4 June 2015 and Jacques de Jong/Thomas Pellerin-Carlin/Jean-Arnold Vinois, 'Governing the Differences in the European Energy Union. EU, Regional and National Energy Policies', *Notre Europe/Jacques Delores Institute*, Policy Paper 144, October 2015.

[252] European Commission, 'The State of the Energy Union'. Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee, the Committee of the Regions and the European Investment Bank, Brussels, 18 November 2015 and *idem*, 'Annex to Commission Delegated Regulations (EU) .../...amending Regulation (EU) No. 347/2013 of the European Parliament and of the Council as regards the Union List of Projects of Common Interests', Brussels, 18 November 2015.

[253] In the view of the critics like Poland and the Baltic states, the project should not get any EU support as it contradicts the principles of the Energy Union as well as previously adopted Council decisions such as maintaining the status of Ukraine as a transit state for Russian gas supplies to Europe.

[254] See Asghabat-'Declaration on energy cooperation between Turkmenistan, Turkey, Azerbaijan and the European Commission' on 1 May 2015 ([https://ec.europa.eu/commission/2014-2019/sefcovic/announcements/ashgabat-declaration\\_en](https://ec.europa.eu/commission/2014-2019/sefcovic/announcements/ashgabat-declaration_en)).

[255] See European Commission, 'State of the Energy Union on the European Energy Security Strategy'. Commission Staff Working Document, Brussels, 18 November 2015, SWD(2015) 404 final.

- [256] See F.Umbach, 'Russia Seeks New Strategies in the Rapidly Changing European Gas Market'.
- [257] European Commission, 'Energy Production and Imports' ([http://epp.eurostat.ec.europa.eu/statistics\\_explained/index.php/Energy\\_production\\_and\\_imports](http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Energy_production_and_imports)).
- [258] See International Energy Agency, "World Energy Outlook 2011 Summary (page 6)," [http://www.unece.org/fileadmin/DAM/energy/se/pp/EnComm2016Nov11/1\\_Briol.pdf](http://www.unece.org/fileadmin/DAM/energy/se/pp/EnComm2016Nov11/1_Briol.pdf)
- [259] See IEA, 'World Energy Outlook 2011' (Paris: IEA/OECD), p. 343, and Eva Bertrand, EU-Russia Gas Supply Partnership, The Voice of Russia, 23 November 2012.
- [260] See F.Umbach, 'Russia Seeks New Strategies in the Rapidly Changing European Gas Market'.
- [261] See Alexey Novikov, 'Testing Times for European Gas Market', [www.interfaxenergy.com](http://www.interfaxenergy.com), NGD, 15 March 2013, p. 5.
- [262] See Joshua Posaner/Tom Washington, "Precedent Set in RWE-Gazprom Contract Ruling", *ibid.*, 28 June 2013, p. 5.
- [263] See European Council 2007, p. 13.
- [264] See Christian liver/Pillita Clark/Henry Foy, 'EU Climate Change Deal Seen as Blow to Russia Exports', FT, 25-26 October 2014.
- [265] See Andreas Walstad, 'EU Energy Consumption Returns to 1990 Level', [www.interfaxenergy.com](http://www.interfaxenergy.com), NGD, 11 February 2015, p. 8.
- [266] See 'EU Gas Consumption on the Road to Recovery', [www.interfaxenergy.com](http://www.interfaxenergy.com), NGD, 17 July 2015, p. 6; 'Norway Overtakes Russia as Western Europe's Top Gas Supplier', Reuters, IPGC, 25 May 2015, and 'European Gas Demand Fell 11% on Year in 2014 to 409 bcm: Eurogas', Platts, 26 March 2015..
- [267] See Andreas Walstad, 'EU Increasing its Reliance on Energy Imports', [www.interfaxenergy.com](http://www.interfaxenergy.com), NGD, 30 November 2015, p. 6 and *idem*, 'EU Gas Production Down 35% in a Decade', *ibid.*, 25 November 2015, p. 5.
- [268] To some other independent forecasts see Dave Jones/Manon Dufour/Jonathan Gaventa, 'Europe's Declining Gas Demand'. Trends and Facts on European Gas Demand Consumption', E3G, June 2015 and Tim Boersma/Tatiana Mitrova/Geert Greving/Anna Galkina, 'Business as Usual. European Gas Market Functioning in Times of Turmoil and Increasing Import Dependence', Energy Security Initiative, Brookings, Policy Brief 14-05, Washington D.C., October 2014.
- [269] See European Commission, 'Energy Markets in the European Union in 2011', Brussels 2011, p. 7 ([http://ec.europa.eu/energy/gas\\_electricity/doc/20121217\\_energy\\_market\\_2011\\_lr\\_en.pdf](http://ec.europa.eu/energy/gas_electricity/doc/20121217_energy_market_2011_lr_en.pdf)).
- [270] See Jason Torquato/Tom Hoskyns, 'Europe in Need of Regulatory Overhaul – Statoil, RWE', [www.interfaxenergy.com](http://www.interfaxenergy.com), NGD, 12 March 2013, p. 2.
- [271] See European Commission, 'European Energy Security Strategy'. Communication from the Commission to the European Parliament and the Council. SWD(2014) 330 final, Brussels, 28 May COM(2014) 330 Final.
- [272] See F.Umbach, 'EU Can Beat Russia's Threat of New Gas Supply Cuts', GIS, 16 June 2014, and *idem*, 'Europe Faces Change and Competition on Global LNG Markets', GIS, 2 May 2014.
- [273] See 'European LNG Imports to Double by 2020', [www.interfaxenergy.com](http://www.interfaxenergy.com), NGD, 15 June 2015, p. 5.
- [274] See again European Commission, 'The State of the Energy Union'.
- [275] See European Council, 'Presidency Conclusions'. 7224/1/07 REV 1, CONCL 1, Brussels, 8-9 March 2007.
- [276] See 'EU Energy Consumption Returns to 1990s Level', Interfax-Natural Gas Daily, 11 February 2015, p. 8.
- [277] See EurActiv, 'EU Energy Consumption Level Falls to 20-Year Low', 10 February 2015 and Eurostat, 'Energy Savings Statistics. Data from February 2015', Statistics explained, Brussels, 10 February 2015 and 'EU Energy Consumption Returns to 1990s Level', Interfax-Natural Gas Daily, 11 February 2015, p. 8.
- [278] France and 13 other EU member states are significantly behind their interim national 2012 targets for RES, while Italy and Germany being ahead of their national targets. See European Commission, 'Progress Towards Completing the Internal Energy Market. Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, COM(2014) 634 final, Brussels, 13 October 2014 and Andreas Walstad, 'IEA Chief Questions EC's Global Ambition on Renewables', [www.interfaxenergy.com](http://www.interfaxenergy.com)-NGD/Energy Policy Weekly, 4 December 2014, E1.
- [279] See EurActiv, 'Europe's Renewable Energy Deployment 'Sub-Optimal', Report Says', 21 January 2015.
- [280] See F.Umbach, 'EU's New Climate-Change Targets Will Drive Industry Towards US and China', GIS, 10 February 2014.
- [281] See Arthur Neslen, 'EU Leaders Agree to Cut Greenhouse Gas Emissions by 40 per cent by 2030', The Guardian, 24 October 2014; Andreas Walstad, 'EU's 'Soft Target' on Energy Savings Is Blow for Brussels', [www.interfaxenergy.com](http://www.interfaxenergy.com), EPW, 30 October 2014, E.2, 'EU Leaders Adopt 'Flexible' Energy and Climate Targets for 2030', EurActive, 24 October 2014; James Kanter, 'E.U. Greenhouse Gas Deal Falls Short of Expectations', NYT, 24 October 2014; Christian Oliver/Peter Spiegel, 'EU Agrees Target to Cut Gas Emissions', FT, 24 October 2014; and Sonya von Renssen, 'The EU's Great 2030 Energy and Climate Compromise', Energy Post, 24 October 2014.
- [282] See A.Botzki, 'World Leaders Play Carbon Poker', [www.interfaxenergy.com](http://www.interfaxenergy.com), NGD, 23 October 2014.
- [283] See Christian Oliver/Jeevan Vasagar, 'Germany Backs EU Energy Target to Ease Dependence on Russia', FT, 16 June 2014.
- [284] See Eurostat DS-018995, 15 January 2014.
- [285] See also IEA, 'WEO 2014', p. 83.
- [286] See also Institut der deutschen Wirtschaft, 'Die Zukunft der Industrie in Deutschland und Europa'. IW-Analysen 88 – Forschungsberichte aus dem IW, Köln 2013 und BDI, 'Positionspapier Förderung von unkonventionellem Erdgas im Industrieland Deutschland', Berlin, March 2013.
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- [289] See Daniel Wetzel, 'Ökostrom allein rettet das Weltklima nicht', Die Welt, 30 November 2015, p. 9.
- [290] See also Agora Energiewende, 'The Energiewende in the Power Sector: State of Affairs 2014', Berlin, 7 January 2014; 'Renewables Dominate German Energy Mix', Eur Activ, 8 January 2015 and Jeevan Vasagar, 'Renewables Take Top Spot in Germany's Power Supply Stakes', FT, 7 January 2015.
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Blueprint for the World?', Berlin, January 2015 (<http://www.weltenergieerat.de/wp-content/uploads/2014/02/Energiewende-Survey-English-fin al.pdf>)

[298] See Dalga Khatinoglu, 'Potential Routes for Delivering Turkmen Gas to EU', [www.naturalgaseurope.com](http://www.naturalgaseurope.com), 4 May 2015; Marat Gurt, 'EU Wants to Revive Gas Pipeline Project from Turkmenistan', Reuters, 25 March 2015; 'Yildiz: We Want Turkmen Gas to Reach Europe through Turkey', Anadolu Agency, 1 May 2015.

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[300] Huseyn Hasanov, 'Turkmenistan Preparing for Supply of Energy Resources to Europe', Trend, 13 May 2015.

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[302] See Catherine A. Fritzpatrick, 'Could There be a 'Central Asian Nabucco'?', [www.naturalgaseurope.com](http://www.naturalgaseurope.com), 10 November 2014.

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[304] See C.A.Fitzpatrick, 'Is the Trans-Caspian Pipeline Feasible Again?', [www.naturalgasasia.com](http://www.naturalgasasia.com), 23 February 2015.

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[310] See also John C. K. Daly, 'Turkmenistan Complains Gazprom not Paying its Bills', Jamestown-EDM, Vol. 12, Issue: 132, 15 July 2015; 'Russia's Gazprom 'Unstable Partner' Says Turkmen Official', AFP, 17 February 2015; Alexey Novikov/Joshua Posaner, 'Turkmenistan Accuses Gazprom of Underpayment', [www.interfaxenergy.com](http://www.interfaxenergy.com)-NGD, 13 July 2015, p. 6; Aygun Badalova, 'Other Reasons for Gazprom not Paying Debts to Turkmenistan, Experts Says', Trend, 14 July 2015 and Huseyn Hasanov, 'Gazprom's Debt to Turkmenistan for Gas Supplies Undermines Image of Russia's Monopoly', *ibid.*, 9 July 2015.

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[321] See 'How Turkmenistan Can Alter the Russia-West Standoff', Stratfor.com, 25 June 2015.

[322] See 'Turkmenistan-China Pipeline Capacity Will Reach 55 Bcm this Year', [www.naturalgasasia.com](http://www.naturalgasasia.com), 8 May 2015.

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[341] See also Emin Emrah Danis, 'The Future of the Azerbaijan-Turkmenistan-Turkey Energy Cooperation', Hazar ([www.hazar.org](http://www.hazar.org)), 25 June 2014.

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- [344] See again chapters 2.2. and 5.2. of this study.
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