

Integrating Central Asia into the World Economy: The Role of Energy and Transport Infrastructure

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INTRODUCTION: THE IMPERATIVE FOR REGIONAL INTEGRATION

Regional cooperation and integration, particularly in the area of transport and trade, are of major significance for Central Asia and Eurasia. Although Central Asian intraregional trade is still flagging, the development of trade through improved transport infrastructure and trade facilitation on a regional basis is critical so as to permit each Central Asian country adequate access to world markets. Central Asian integration is also in the interest of the region's neighbors, who stand to gain from improved trade and economic links since Central Asia has the potential to develop into a major transit hub for trans-Eurasian trade. The focus of such improved transport and trade facilitation should not be solely on surface transit, but also on air transport. It is estimated that such extra-infrastructure steps could reduce the costs and time of transport across Eurasia in half. While Central Asia has begun to integrate itself into the world economy, there is much more to be done by governments and international organizations.

The political realities on the ground are shaping possibilities for regional integration. Russia and China will be key players, along with Iran. These are the immediate large neighbors and each seeks to play a major role for the Central Asian countries serving as markets, transit corridors, and sources of finance and investment. Afghanistan's ability to pull itself out of civil war and create the foundations for an open, growing economy will also have implications for the development of Central Asian transport corridors and energy sector development.

Although significant obstacles remain to comprehensive political and economic integration within the region, Central Asian integration appears to be proceeding as a matter of reality on the ground.

PANEL 1. INFRASTRUCTURE—MYTHS VS. REALITY

There are good prospects in the short- to medium-term to upgrade regional transport infrastructure with the purpose of facilitating trade and transit. One important recent change is the opening of a bridge between Tajikistan and Afghanistan—the Amu Darya (Panj) bridge—which opened on August 26, 2007 and now allows expanded trade between the two countries. Also the inauguration of the Lianyungang-Moscow 5T Intermodal Train Service inaugurated on October 9, 2007 by the CRCTC offers a 25-day guaranteed transit time. Seamless railway transport from Europe to Asia remains a possible but as yet unrealized goal.

The Central Asia Regional Economic Cooperation (CAREC) Program – a program bringing together eight Central Asian countries and six multilateral institutions, with a secretariat managed by the Asian Development Bank (ADB) – has developed a regional transport strategy which identifies the optimal routes for transport and transit. Although cross-border trade between CAREC members is dominated by rail, road traffic is increasing and has potential for further rapid growth. Most cross-border routes, however, so far have very little traffic due to inadequate border facilities, inefficient border management and hence serious delays. If these obstacles are removed or ameliorated, there is plenty of opportunity for expanded trade. CAREC projections show that its members' aggregate economy (which does not include the whole of China, only the Xinjiang region) could grow by 8.1 percent per year between now and 2018 to reach \$351 billion and that foreign trade could increase by 9.1 percent per year to reach \$222 billion by 2018.

The CAREC transport strategy has identified six transit corridors for priority development based on six criteria: current traffic volume; the prospect for promoting economic growth and future traffic; the ability of the corridor to increase connectivity between major population and economic centers; the potential to reduce delays; the economic and financial sustainability of investments in infrastructure, technology, and management; and the inclusion of at least two CAREC members. The six transit corridors identified by CAREC, which are currently in the strategy implementation phase, include:

1. From Russia through Kazakhstan and Kyrgyzstan to China (Kashi, Kuitun, Urumqi).
2. From Azerbaijan across the Caspian Sea through Turkmenistan, Kazakhstan, and Kyrgyzstan to China (Ulukeqiati, Kashi, Turpan).
3. From Russia through all the Central Asian countries and Afghanistan to Iran (Sarakh, Arababad, Bander-Abbas).
4. From Russia through Mongolia to China (Urumqi, Erenhot).

5. From Pakistan through Afghanistan, Tajikistan, and Kyrgyzstan to China (Ulukeqiati, Kashi, Turpan).
6. From Russia through Afghanistan and all the Central Asian countries except Kyrgyzstan to Iran (Arababad) and Pakistan (Landi Kotal).

Of course, the quality of transport and transit routes through neighboring countries is also critical for Central Asia. Hence, Russia's ambitious plans for developing extensive railway infrastructure in the east are of some significance. Russian authorities recently publicized a plan to invest hundreds of billion dollars by 2030. While this may not be feasible even a program at half that scale would be a significant improvement over the current constrained Russian rail transport sector.

Trade Facilitation

Trade facilitation, however, is necessary to allow advances in infrastructure to translate into gains in transport and trade efficacy. For example, the recently opened Tajik-Afghan bridge (over the river Panj) has suffered from the lack of consistent and reliable customs facilities. More generally, however, most delays at border crossings are not due to customs. On average, customs delays are only 20 to 40 minutes. But requirements of other document processing, unannounced border closings, and insufficient road capacity account for great major delays. On average in the region, exports require a total of 11 documents and 69.5 days and imports require 16 documents and 95.2 days. If these procedures are simplified, it could lead to a 10 percent cut in transit time and increase exports by 4 percent. An increased use of containers would also lead to major savings; transfers of cargo at transshipment points take 8-10 hours by hand, as opposed to only 20 minutes using containers. Finally, there needs to be an increased effort to harmonize the region's road standards to insure road safety—including the safe transportation of legal dangerous goods.

Such facilitation would not hamper the effort to fight drug-trafficking, on the contrary: improved border management will improve both the efficiency of transit as well as the effectiveness of monitoring trade in illicit goods. An example of how the two goals might be attained jointly is the development of sealed cargo containers, which could be loaded and sealed at the point of departure in one country and only opened at arrival in another.

Improvements in transport and trade facilitation require strengthened institutional infrastructure for border management. Hence it will be important to invest also in training and other forms of administrative capacity building.

PANEL 2. INFRASTRUCTURE—MYTHS VS. REALITY (CONTINUED)

Aviation

When the Soviet Union broke up in 1991, it led to the immediate dismantling of the world's hitherto largest civil aviation entity. Aeroflot was at that time much more than an airline, controlling, either directly or indirectly, all of the USSR's airports and service providers, training and administrative infrastructure, with a total staff of 500,000 employees and over 3,000 aircraft. Different countries adjusted differently to the resulting challenge in rebuilding national and international air transport. Two such contrasting examples are Kazakhstan and Tajikistan.

Kazakhstan

Kazakhstan faced a difficult situation. Virtually without warning, the new nation was obliged to confront this and a host of other infrastructure issues.

Today, just 16 years after those events, Kazakhstan is home to a thriving domestic and international civil aviation industry transporting a total of more than 4 million passengers a year across more than 35 domestic and 30 international cities, with an average annual rate since 2001 of over 40 percent. In addition, the country's skies have been successfully exploited as a natural resource, maximizing the benefits of its location by deriving revenues from a large number of international airlines flying the east-west corridor. The capital city, Astana, has a newly built state-of-the-art airport, and the country's other principal gateways, Almaty in the south east, and airports in Atyrau and Aktau in the oil-rich west, are all implementing ambitious expansion plans. The national and state governments are in the midst of an ongoing program to renovate and strengthen all of the country's runways, and the air traffic services provider, Kazaeronavigatsia, is upgrading and streamlining facilities and procedures for flight approaches at all major airports. The national parliament has mandated the implementation of the European Joint Aviation Regulations, or JARs, as the framework for all civil aviation regulation by the end of 2008.

Air Astana has grown from one aircraft at its inception in May 2002 to its current 18, a combination of new and nearly new Boeing, Airbus and Fokker aircraft. The airline has been the fourth fastest growing full service airline in the world over the past 3 years. It operates to JAR/EASA European safety standards and has recently successfully undergone the IATA Operational Safety Audit (IOSA). Since the initial, modest, start-up capital from its two shareholders, the Government of Kazakhstan and BAE Systems PLC, there has been no further capital call and no state subsidies.

The airline employs close to 2,200 people and is a net direct contributor to the state treasury to the amount of just less than \$100 million in corporation taxes over the course of the past 5 years.

Civil aviation in Kazakhstan is developing an enhanced regulatory framework, air transport facilities, passenger and freight traffic, and profitability.

Problems exist. There is difficulty coordinating the Kazakh and the Russian customs regimes. Astana is developing as a transportation hub for transit to China, but much of airfreight trade with western companies like FedEx and Lufthansa, is imports, and cargo for the westbound flights originate east of Kazakhstan.

Tajikistan

In Tajikistan, the situation is drastically different. There exists a very inefficient state-owned national airline that enjoys a near monopoly and is propped up by the state, with foreign equipment rumored first to be assigned to official flights for the Tajik head of state, and used secondarily for commercial transport. The relationship between the national airline and the major airport is a key reform issue, as efficient management would require the separation of airline and airport operations – which is currently not the case. The poor organization of the sector and the weakness of Tajik Airlines are clearly an impediment to Tajik development and regional integration. If competition was introduced to the sector, the currently exorbitant prices and/or hefty subsidies could go down by as much as 50 percent, air traffic would expand dramatically and flights would still be commercially viable.

Telecommunications

Modern telecommunications are critical for long-term development and international competitiveness of a country. Two country cases illustrate the range of experiences.

Kazakhstan

The telecommunications industry is generally performing well in Central Asia, particularly in Kazakhstan where the access to telephone services has rapidly expanded. There are currently only 2.8 million landlines in Kazakhstan, but 10 million mobile cell phone users. By the end of 2007, there was 70 percent penetration of the Kazakhstan cell phone market, up ten percent from the prior year. Most Kazakhs are paying around \$20 per month for service.

Telephone infrastructure is being upgraded. Almaty has reached 3G compatibility, and stations servicing over 1,000 population points have been built. KCell has invested \$200 million into the cell phone network in Kazakhstan and \$1 billion in total investment. It is expanding into other Commonwealth of Independent States (CIS) member countries but its priority remains Kazakhstan.

Afghanistan

President Karzai has stated that mobile telecommunications should be the priority to insure connectivity in the country. Against this backdrop, the Aga Khan Agency for Economic Development (AKFED) has been involved in creating a sustainable Afghani telecommunications enterprise, which provides important local employment and small business opportunities in the markets that it serves. It currently has 1.8 million customers and 200 points of presence in the country, and makes a major contribution to the government's budget. The project has a strong market penetration because they use a prepaid card system.

OPEN PLENARY SESSION—PART 1, THE PERSPECTIVE FROM THE REGION

The issue for Central Asia is now: will Central Asia benefit from the extraordinarily rapid development and integration of the Eurasian super continent, and will it contribute to that integration process by acting as an effective transit hub given its central location? The ADB estimates that \$2-3 billion per year is necessary to upgrade Central Asian regional infrastructure to enable Central Asia to play this role.

Afghanistan

Afghanistan is fortunate in the sense that what it needs for its own national development—infrastructure, roads, highways, power— is also useful for regional integration. So, in this respect, its national economic priorities are complementary to the priorities for regional integration.

With regard to power, for example, Afghanistan faces an energy shortage while Central Asian countries, especially Tajikistan and Kyrgyzstan, are in a position to export power.

In some respects, however, Central Asia's economies are not complementary—a legacy of its time in the Soviet system, which stressed economic ties to the imperial center in Moscow. Yet Afghanistan's participation in the fostering of economic and transit links between Central Asia and South Asia can play a role in Central Asian integration into the world economy and integration on a regional level.

Regional integration, according to the Afghani perspective, should be viewed as a stepping stone to global integration. Although globalization may be the end objective, some regions and countries may not be ready for so drastic a step and require regional integration as a preliminary phase.

Kazakhstan

Although Kazakhstan's landlocked location is often seen as an obstacle to development, the country's authorities believe that its central location at the hub of a dynamic Eurasia represents a great opportunity. Infrastructure development is therefore one of Kazakhstan's top national priorities. WTO membership is also considered a major element in Kazakhstan's integration into the international economy.

Over the past ten years, Kazakhstan has invested \$3 billion into its infrastructure. It has built 4,000 kilometers of new roads and upgraded more than 13,000 kilometers of motorways. Kazakhstan's government plans to invest a further \$30 billion into infrastructure by 2015 with the aim of building 1,600 kilometers of railroad and 50,000 new motorways. The objective is to transform Kazakhstan into a transit hub for all of Europe and Asia.

Telecommunications is another area of priority. The government plans to provide telephone access to all rural settlements with a population of over 50 people in the country by the end of this year. The 200 remaining settlements will be covered by the end of next year. 2 million people in Kazakhstan currently have access to the Internet, and the government expects this number to double by 2010.

In the regional arena, Kazakhstan has plans to build a Kazakhstan-Turkmenistan-Iran railroad, which would originate in the city of Uzen in Kazakhstan and reach Gorgan in Iran. The Kazakh government also supports the idea of an undersea trans-Caspian pipeline. It regards the Trade and Investment Framework Agreement (TIFA) as an instrument to promote further regional economic integration. Kazakhstan has a \$100 million investment fund set up specifically for Kyrgyzstan, which has 80 percent financing from Kazakhstan and the rest from the Kyrgyz private sector. It has also agreed with Tajikistan to establish of a similar fund. Moreover, Kazakhstan is the largest source of foreign investment in Georgia. At the same time, the Central Asian economies are still not sufficiently complementary, and the divergence in economic development presents a challenge to integration.

Tajikistan

For the Tajik authorities regional cooperation is the key to promoting better relations among governments and sustained economic development of the region. Harmonization of customs procedures would not only bolster trade links but also make the Central Asian investment climate more appealing to the international private sector. The development of economic infrastructure will also have a tangible impact upon security by extending benefits to wider groups of the population of countries in the region.

Tajikistan—which is rich in hydroelectric resources with 500 billion kilowatts in energy potential—views the development of its hydroelectric production and the requisite cross-border transmission capacity as a prerequisite to bolster regional integration.

Uzbekistan

The issue of creating a Central Asian transport network which provides access to world markets is a major priority for Uzbekistan, which is doubly landlocked. Uzbekistan has developed a number of infrastructure projects with the aim of bolstering regional economic links, for example the Guzar-Boysun-Kumkurgan highway in the south of the country.

In addition, Uzbekistan regards the development of its oil and gas industry as a means to foster ties with its neighbors through a regional approach toward energy use in Central Asia.

OPEN PLENARY SESSION—PART 2, THE U.S. PERSPECTIVE

The era of the “Great Game” is over. The United States’ interest in Central Asia is to support the sovereignty of Central Asian countries and promote their access to new markets. The countries of Central Asia have moved from being on the periphery of the European sphere to being at the center of a new global architecture. In this sense, Central Asia has taken on a new importance for the United States, which seeks to promote sovereignty, stability, and economic development in the region. In this effort, development should not be viewed as a zero sum game in which one side wins and another loses, but rather as a win-win situation where Central Asian countries develop to the benefit of their neighbors and partners. Connecting Central Asia along all the axes of the compass—north, south, west, and east—is necessary to provide the region with optimal access to markets and thus help boost its prosperity. The issue of human rights and good governance is an important part of the U.S. priorities for the region as well, as it holds that political transparency and openness are crucial to regional integration and development.

Yet regional integration in Central Asia is not only about developing infrastructure—such as power lines and roads—but also fostering institutional cooperation. A key component of this is trade facilitation, which means that governments must tackle petty corruption and disjointed procedures at and behind the borders. For example, in one particular route that stretches from Tajikistan to Russia across all Central Asian countries but Turkmenistan, 35 percent of costs went to unofficial payments and five out of the eight days the trip took were spent waiting at checkpoints. Although there have been some improvements, there is much yet to be done, and the application of international standards to this problem could help reduce unnecessary burdens on cross-border trade.

Kazakhstan has taken great strides in supporting regional integration, promoting economic development through investment in its neighbors' private sectors. It should be seen as a model and its financial resources will be a key part of the regional economic development program.

Kyrgyzstan has moved the fastest toward opening its market and is the only Central Asian WTO member. In order for it to make sure its development is sustainable, it should focus on further reforms so it can take full advantage of its human capital.

Tajikistan is strategically important with regard to its geopolitical position as a neighbor of Afghanistan. The United States is interested in promoting ties between the two countries and has supported recent efforts including the opening of the new bridge connecting them. It also supports efforts to improve Tajikistan's energy sector, including looking at the feasibility of Tajik coal as an energy source.

The opening of Afghanistan is a major development in the process of Central Asian regional integration, allowing Central Asia another vector of transit and trade. However, a great deal of work needs to be done improving security in Afghanistan in order for the country to assume the kind of major role that the United States would like to see it play in facilitating Central Asian integration into the world economy. Encouraging good governance is a major component of the security agenda in Afghanistan.

The U.S. government is also encouraged by recent signs that Turkmenistan is opening itself to the broader international community and exploring its various market options for the export of its natural gas reserves. It supports Turkmen efforts to consider a number of different export routes, including the possibility of a trans-Caspian pipeline.

Uzbekistan, meanwhile, has had a troubled relationship with economic and political reform and could be doing more than presently to address these challenges. The energy sector in Uzbekistan has great potential but it is underdeveloped and requires greater openness and transparency.

Iran may play a large role in the economy of Central Asian countries as a growing partner in trade, but its refusal to play according to the established geopolitical standards for behavior will mean its exclusion from the U.S. government's economic and political calculus in the region.

The U.S. government welcomes a constructive role for China in the region but has concerns about the low-interest loans it is offering in abundance. It hopes that China will play a crucial role in responsible development in Central Asia.

The United States participates in various initiatives to promote regional integration. Its Regional Electricity Market Program aims to help Central Asian countries organize their electricity markets effectively so that energy trade can proceed unimpeded. Its recent successes include bringing Kyrgyzstan access to a regional energy market in Kazakhstan and providing technical assistance and helping to improve transparency in Uzbekistan. In the communications sector, the United States is exploring the possibility of linking up the region's fiber optics and connecting them to the global system by extending them to South Asia.

The main financial instrument for the U.S. to support of Central Asia is the Freedom Support Act, but the resources proffered under this program are declining. Only Kyrgyzstan is at the threshold level for the Millennium Challenge Corporation (MCC). The project of Central Asian regional integration will be a resource-intensive one and therefore the United States should act in concert with a host of international and regional players to come up with a comprehensive plan to appropriate resources for bolstering infrastructure and government capacity. It will be crucial to solicit public-private partnerships in this effort because of the financial resources the private sector can bring to bear on the situation as well as the nature of the necessary reforms in the region, which require an open and competitive market.

PANEL 3—HYDROELECTRIC POWER

Global energy demand is forecasted by the International Energy Agency to increase by fifty percent in the next 25 years. Central Asia has a great deal of potential energy reserves and can significantly contribute to the global energy market. Yet there is a significant price differential across the region and in South Asia with regard to the price per megawatt hour (MWh). For example, in Kazakhstan

it is \$8 to \$30 per MWh, whereas in Pakistan it is \$65 to \$120. Hydroelectric power has the potential to play a major role in the electricity market, particularly in Kyrgyzstan and Tajikistan.

Projects with international financing include a 220 kV transmission line project between Tajikistan (which has a surplus of electricity in the non-winter seasons) and Afghanistan (which is struggling to meet its energy demands), a north-south transmission line in Tajikistan, and the CASA 1000 Transmission Project to allow the export of 1,000 MW to Pakistan from Tajikistan. This latter project would run through Afghanistan. To meet its domestic winter needs, Tajikistan is exploring its coal industry, as its coal is of high average quality (7,000 kcal per kilogram). Initiatives aimed at bolstering domestic hydroelectric energy production include the Roghun Hydroelectric Project, a 3,600 MW storage facility that has attracted a great deal of interest from Russia, Pakistan, the Tajik government, and the World Bank. There are a number of other projects under the CASAREM umbrella in Kyrgyzstan, Tajikistan, Afghanistan, and Pakistan (which have set up a Multi-Country Working Group) with potential financing from the ADB, the World Bank, Russia, China, and Iran.

Risks include the fact that the size of these projects are huge compared to the size of national economies. There is clearly a need for private sector involvement, but there is likely to be limited private interest, due to governance issues, security risks and hence uncertain market prospects.

Kyrgyzstan

Kyrgyzstan has a tremendous amount of potential in the hydroelectric sector, and it is estimated that only 10 percent of this potential is currently utilized. Kyrgyzstan has 18 power plants, 16 of which are hydroelectric. Its current total output is 13-14 billion KWh. Yet significant problems exist with the maintenance and management of the energy sector, including obsolete equipment, payment collection problems, and poor oversight.

There are very good prospects for exponentially increasing the country's hydroelectric output. Constructing a plant on the Naryn River could boost output by 22 billion KW. On the export side, a 1,300-kilometer-long line to transmit 500 KW would cost an estimated \$700 million.

Tajikistan

Tajikistan likewise has enormous untapped hydroelectric potential with the same estimate of 90 percent currently unutilized. The current capacity is 4,090 MW, and plans envision an upgrade of 350-400 MW in the near future. The vast bulk of Tajik energy production is environmentally friendly.

Construction of several plants is ongoing—one of them is a 220 MW project, with \$180 million financing from Iran—and the first line of the initiative is estimated to cost \$800 million. If the aims set forward in the current plans are met, Tajikistan could be in a position to export 5 billion kilowatt hours per year by 2010. Target markets include Kazakhstan, Afghanistan, Iran, and Pakistan. Beyond upgrading capacity, however, high-voltage transmission lines must be constructed for export plans to go forward as desired. This applies not only to cross-border lines but also within Tajikistan, where China has been involved in constructing power lines to service the north of the country.

Low domestic energy prices are an important obstacle to ensuring the sustainability and feasibility of Tajikistan's energy aims. It is estimated that a price of 2.5 cents per kilowatt hour is required to meet development goals, and thus prices must be increased to the level of viability. The government is encouraging an open-door policy on investment in the hopes to attract sufficient attention from the international community towards the viability of Tajikistan's energy sector.

PANEL 4—RENEWABLE AND ALTERNATIVE ENERGY: REGIONAL COOPERATION

Renewable energy in Central Asia is a promising area of development that is intimately tied to issues of regional integration in the political and economic spheres. Energy security itself has a regional dimension, even if specific technical advances in each country may not directly spill over to others. Although there are significant obstacles to the development of truly self-sustaining and viable renewable energy sectors, prospects in hydroelectric power and in other forms of alternative energy are sufficiently bright to warrant further investment and exploration on the part of Central Asian governments and international parties. Promoting energy efficiency and tackling carbon intensity of common industrial and consumer processes are battles that both need to be won. Tariffs and subsidies might be necessary to prove sufficient incentive for investment in more efficient energy usage, as low tariff levels are key to the current inefficiency. Additionally, lessons learned about renewable energy in one Central Asian country should be shared with the others to create common standards and disseminate best practices.

It is important to note that hydroelectric power and other alternative energy sources that can be implemented on a small scale have great potential to extend electricity provision to isolated mountainous areas in Central Asia, where significant populations exist. The Aga Khan Fund for Economic Development (AKFED), for example, is an important public-private partnership in the region and operates PamirEnergy in Tajikistan, a 42 MW hydroelectric project. Tariff subsidies provided by the Tajik and Swiss governments and IDA make the power generated by this plant

affordable to rural populations (28,000 customers). The participation in this small project by the Tajik government suggests that public-private partnerships can work when the project aims are clearly defined and a comprehensive grouping of interested parties can be obtained.

Kazakhstan has significant potential both to reduce its energy costs by making industry and infrastructure more efficient and promoting the development of renewable energy such as wind power. Wind energy potential exists in North Kazakhstan, and a pilot project is being implemented to test the feasibility of wind energy stations there. Increased energy efficiency is a key area for Kazakhstan. A comparison of energy costs incurred in the production of energy-intensive materials such as aluminum and steel in Kazakhstan and the United States demonstrates how much Kazakhstan could save, as it expends several times more than the United States to produce the same output. Also, public buildings, electricity transmission and distribution networks, and urban housing are highly energy inefficient, and significant investment is required in infrastructure to upgrade its efficiency in energy usage. This can be spurred through regulations and standards, economic incentives both punitive and encouraging, and technical assistance and informational campaigns. One possibility is the creation of an agency tasked specifically with energy efficiency and an energy efficiency fund as an economic instrument. The private sector should be harnessed to help create an efficient and more commercially profitable market.

Uzbekistan is unable to meet growing peak demand and resorts to rolling blackouts during the peak load period. Some close to the government estimate that electricity demand may exceed production by 10 percent by 2010. As 84 percent of Uzbekistan's electricity is generated from natural gas, oil, and coal and proven fossil fuel resources could be exhausted within 20-30 years, there is ample room for growth for the renewable energy sector. Pollution is also a concern; carbon dioxide emissions are growing. Several renewable energy projects are underway, including testing the technical and economic feasibility of solar energy, biofuels (which could satisfy over 10 percent of annual energy demand if the full potential was met) including the use of cotton cellulose byproduct as a basis for bioethanol production, and wind energy. The application of these alternative energy projects on a small scale in rural areas, as in Tajikistan and Kyrgyzstan, holds appeal in Uzbekistan, as 60 percent of the country's population is considered rural.

KEYNOTE SPEECH: REGIONAL COOPERATION STRATEGY OF AFGHANISTAN

At the end of 2005, Afghanistan became a member of CAREC—a sign of its commitment to the process of regional integration and developing economic links with Central Asia. It is a partner of the Organization for Security and Cooperation in Europe (OSCE) and a member of the South and Central Asia Trade Forum. Further, it has applied for accession to the WTO. Afghanistan is

committed to a strategy of regional integration because of its unique geopolitical location as a member of Central Asia, South Asia, and the Middle East. It serves as a bridge to the Far East, and therefore Afghanistan is central to the economic growth and prosperity of the surrounding region. Its regional priorities include projects with Tajikistan, revamping trade relations with Pakistan, and exploring possibilities with India. Afghanistan sees Iran as a partner who can play a constructive role in trade relations and infrastructure development, but it wishes to proceed carefully in the context of its strategic partnership with the United States. The infrastructure situation in Afghanistan itself, however, is poor. In order for Afghanistan to develop its potential as a trade facilitator in the region, it must solicit the help of international partners to develop its border regime, roads, and energy sector. It also sees regional integration as bringing with it greater security to the country, spreading economic benefits and connecting different provinces. Expanding the provision of electricity will be very helpful in this regard. But security in Afghanistan is indeed a regional and international problem, as the sources of security problems indeed may not be in Afghanistan itself but in neighboring countries.

Energy-wise, 520 MW is currently available in Afghanistan, although the need is 1,000 MW. This need is projected to grow to 1,600 MW by 2010. Afghanistan seeks to purchase energy from its neighbors, particularly Tajikistan, Uzbekistan, and Turkmenistan, hoping for 250 MW from each of these countries. Tajikistan faces winter shortages and is unreliable in that period; Uzbekistan has technical difficulties and their transmitting substation can only handle 75 MW (although Uzbekistan has agreed to provide 150 MW). No commercially viable agreement has been reached yet. Achieving this aim, through the ongoing negotiation of Power Purchasing Agreements with Central Asian countries, is a top priority for Afghanistan.

In the labor sector, Afghanistan is host to a number of foreign skilled workers, some of whom come from Central Asia. Meanwhile, a far larger number of skilled Afghan workers are abroad—50,000 in Central Asia.

Regional integration is a priority for Afghanistan. To this end, it would like to explore the idea of an investment fund for regional infrastructure that could help develop harmonized, comprehensive initiatives to connect the region.

PANEL 5—OIL AND GAS DEVELOPMENT: OPTIONS AND PROSPECTS

Central Asia has a key role to play in meeting global energy demand growth over the next 20 years due to its location and its resource potential. Yet its oil and gas sectors have been marked by investment constraints, rising costs, and delays. Other challenges include divergent governance

styles, macroeconomic stability and other indicators, the presence of state-driven monopolies, and investor-host government relations (tensions in which can lead to bad outcomes for investors, for example with regard to Sakhalin). Although currently rigidities characterize the Eurasian hydrocarbon market, growing demand in China and India could lead to new levels of competition, rigor, and higher standards in investment and trade in the region. Meanwhile, however, bolstering Central Asian countries' oil and gas industry has the potential, through revenue flows and interconnections, to spur wider economic integration and development.

The Caspian Sea area in particular provides bullish growth in oil production (climbing precipitously since 1997) and complements other sources, providing various options for consumer markets. As far as gas is concerned, Central Asia is becoming a key swing supplier and both Russia and the EU are increasingly reliant upon the region, particularly as Central Asian production is projected to account for a growing share of gas production. To achieve diversity in the gas market, Europe will have to rely on both pipeline and liquefied natural gas (LNG) imports. Turkmenistan in particular, with its large reserves, has the potential to increase the region's natural gas production capacity if reforms progress.

Uzbekistan also has untapped potential. To date, 203 hydrocarbon fields have been discovered in the country—104 gas and gas condensate fields and 99 oil-gas and oil condensate fields. Only 48 percent have been exploited. It is estimated that reserves can meet current production levels for the next 21 years for oil and 30 years for gas. Gas production (55.6 million cubic meters in 2006), however, have been somewhat stagnant over the past three years, although exports are rising. In 2006, it exported 11.8 billion cubic meters, 9 billion of which went to Russia's Gazprom. It expects to export 13 billion cubic meters of natural gas to Russia in 2007. Its gas transportation system, however, which stems 13,000 kilometers, only has a carrying capacity of 55 billion cubic meters. Oil production (5.4 million tons in 2006), meanwhile, is slowly growing even as imports have spiked since 2003, before which Uzbekistan was a net exporter. In 2005, the oil and gas sector accounted for 27.4 percent of GDP, a rise from 22.8 percent in 2004.

Russia may play an obstructionist role in the process of opening and diversifying Central Asian markets, since it would stand to lose its monopoly status and its leverage on the European market. In this context, Kazakhstan and Turkmenistan each face a challenge: for Kazakhstan, how to export additional oil if its production doubles by 2015 as projected; and for Turkmenistan, how to diversify its exports and ensure direct access to consumers other than Russia (and thus a fair price for its natural gas)? Kazakhstan has completed the first stage of its Atasu-Alashankou oil pipeline to China and is expected to expand this route. In addition, the Baku-Tbilisi-Ceyhan pipeline remains a possibility.

Turkmenistan is looking at several options: the trans-Caspian pipeline, the trans-Afghani pipeline, a pipeline through Kazakhstan and Russia, a pipeline to China, and several options with regard to Iran. Yet the unresolved dispute over ownership of the Caspian seabed can effectively block the construction of any pipeline through the Caspian Sea. The October 2007 Caspian summit did not achieve any notable progress in resolving this dispute. A pipeline through Kazakhstan and Russia is challenged by the lack of progress on this possibility to date and the fact that Turkmen gas supplies to Russia (50 billion cubic meters per year) expire at the end of 2009. Meanwhile, Turkmen gas is becoming increasingly expensive for Russia, climbing from \$44 per tcm in 2005 to \$100 per tcm in 2007. The trans-Afghani pipeline concept is plagued with controversy on security and economic grounds. The Iranian vector may be feasible but also faces controversy to the extent that it would invoke U.S. opposition. The Turkmenistan-China pipeline may be the most realistic alternative for Turkmen gas, as it would link closely to upstream production and better avoid troublesome geopolitical controversy. Questions remain in the form of the lack of transparency regarding the Turkmen reserves, the opening of upstream production to foreign investment, and whether Turkmenistan is actually committed to diversification or if it is using this possibility as a bargaining chip to obtain agreement on higher prices from Russia. In sum, China, not Europe, seems to be the net winner in the struggle over diversification from the Russian transit monopoly in the gas market.

PANEL 6—OIL AND GAS DEVELOPMENT: TRANSPARENCY ISSUES

With the influx of resource wealth into the region, a key factor in ensuring good governance, human rights, and expanding government capacity is the fair and transparent distribution of revenue. To this end, it is important to push for legislation that guarantees public exposure for the use of funds obtained from the energy sector. Kazakhstan has made some progress in this regard with the passing of legislation to monitor the use and distribution of funds. Azerbaijan has also achieved some success in this effort.

In many Central Asian countries, however, transparency is severely lacking. This is partly related to the absence of a vibrant civil society. Active engagement by non-governmental organizations, domestic and international, can help to pressure the authorities to improve transparency. There does not seem to be a sufficiently developed “loyal opposition” in the legislative structure to serve as a real counterweight to government mechanisms of hydrocarbon wealth distribution. This issue should remain at the top of the agenda for the region’s international partners, as openness and the battle against corruption are intimately tied to the success of regional integration and economic development. Although transparency is not a panacea for the problems the region faces, it is a necessary step that if not taken will continue to block the region’s economic potential on the world stage.

CONCLUSIONS: THE CHALLENGES THAT LIE AHEAD: WHAT NEXT?

There no longer seems to be discussion of *whether* Central Asia will achieve progress in regional integration and development, but rather *when* it will do so. Central Asia is not only an energy and transit hub, but has high levels of human resources that are waiting to be tapped. Russian and Chinese capital is essential for Central Asian infrastructure development in addition to serving those nations' own interests. CAREC and international financial institutions have a critical role to play as intermediaries.

But success is not preordained. Sometimes the problem is an absence of will to support integration on the part of various governments in the region. Even more serious is the problem of governmental capacity to move toward the introduction of international standards in trade and transport, and capacity varies very dramatically across the region, especially when Afghanistan is included.

The goal of integration also does not always conform to the domestic political agendas of states, either because of opposing popular sentiments, or because powerful political constituents can militate for their own narrow commercial benefit. Sometimes, even, commercial interests masquerade as defenders of geopolitical position.

But although it will not provide a quick fix, efforts to enhance local capacity in the region will work to everyone's advantage, and require the cooperation of foreign companies as well as the various international financial institutions and other international organizations active in the region, as well as concentrated effort by the Central Asian governments and private sectors

There are real consequences in delaying efforts at integration. The development of the economies of the region is already distorted by the difficulties of intraregional and international trade. Options that are closed off cannot necessarily be immediately restored. Future development of these countries will be put at further risk if the pace of integration is not increased.