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RESEARCH ARTICLE

ENERGY POTENTIAL OF CENTRAL ASIAN STATES AND ITS IMPLICATION FOR INDIA

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ABSTRACT

India's economic progress forecasts an increasing demand of energy to retain its momentum. Being in the category of high energy consumer countries with substantial energy deficit, it obviously requires a dependable and durable resource backbone to support it. Among the many options that can be used and relied upon, Central Asian States, seem to have not only proximity advantage but more importantly resource potential to ensure durability in the Indian economic development. This article examines the possibility and appropriateness of central Asian energy resources and market for India. It delves into the potential of energy different sectors of the region in the background of the potential requirement of energy in India. Many recommendations are added to provide inputs for policy formulation in terms of the peripheral and central issues concerning the tapping of this energy option.

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INTRODUCTION

Energy at times is supposed to be basis precondition to economic development. Energy plays a vital role to sustain a long-term economic growth, which in turn enables basic human needs, such as food and shelter. It also improves the political and cultural dimensions of development through enabling the national governments to maintain educational, public health and other civic amenities. Further prosperity that economic development brings in accelerates the demand for more energy inputs. However, this view is combated by many sections of economists on the one hand, economists like mainstream theorist hold that energy or other natural resources play little or no role in promoting economic growth. On the other, resource and ecological economists have criticised this theory on a number of grounds, especially the implications of thermodynamics for economic production and the long-term prospects of the economy. Yet, on the other, we find business and financial economists paying significant attention to the impact of oil and other energy prices on economic activity.

Thus, a fully worked out alternative model of the growth process does not seem to exist. It is here that our empirical work has examined the role of energy in the growth process. However, our considerations are coupled a way around i.e. our major focus is to study the implications of Central Asian energy potential for India. To scrutinize this phenomenon data has been collected from the highly placed sources like World Bank, International Monetary Fund (IMF), Asian Development Bank (ADB), European Bank for Reconstruction and Development (EBRD), United Nations Energy

Information Administration (EIA), Energy Statistics Agency and Energy Balance (AGEB) and *Oil and Gas Journal* (OIL). The data thus collected, was tabulated, analysed and critically scanned to draw the conclusions in consonance with the objectives of the present study.

Energy and Economic Potential in India

The economic development of Indian is very much depending upon the development of energy, the growth of economy ceases an increase in the demand for energy as well. In India, the domestic consumption of energy is more than domestic production. This imbalance in demand and supply creates a problem for the growth of the growing economy. It is well reflected by the fact that India is the world's 11th energy producer, i.e. with only 2.4% of domestic energy production while being the world's sixth largest energy consumer, (3.5%) in the global energy market. seventy percent of the total energy demand is met by domestic production of coal. The remaining 30% is met by the use of petroleum of which 65% is imported. The total energy demand is expected to be double by 2025. The import of petroleum is going to increase to 90% of its total consumption¹. To balance this gap, India has to import cost effective energy products.

In this respect, the energy rich Central Asian States have great significance for India. It is the area where India's foreign policy has the immediate connection with its economic growth plans. Therefore, India has opportunity to look towards CARs, which is best alternative for India given the distance between India and CARs, which is minimal as compared to Gulf countries. If India will avail, this opportunity its transportation

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¹ South Asia Monitor, No. 98, Sept 7, 2006.

cost will decrease. The CARs are considered the next oil and gas frontier, where proven oil reserves are between 15 billion to 31 billion barrels, which accounts for the 2.7% of world reserves. Similarly, proven natural gas reserves are at 230 to 360 trillion cubic feet comprising the 7% of the world reserves. Caspian region alone has huge expected energy potential, but still a considerable part of this potential is unexplored, as offshore oil and gas fields of Guneshli, Chirag and Kyapaz in Azerbaijan are not fully utilized.² Nevertheless, on certain estimations the region potentially holds between 160 billion to 140 billion barrels of oil. There are five main basins of major oil and gas resources, including South Caspian, (extends to several regional countries), North Caspian, North Usturt and Mangyshlak, which are mainly Kazakhstan and Amu-Darya in Uzbekistan.

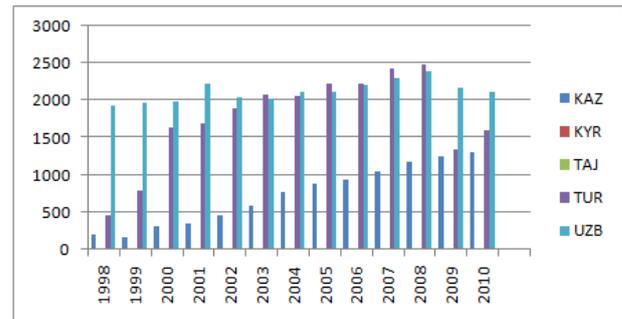
In this backdrop Central Asian countries are developing their energy capacity as more oil, gas and coalfields are extracted. Even there is now an attempt to build up advanced infrastructure and to expand pipeline networks outside the region, and transport facilities. This process will enhance capital inflow in central Asian States and will bring Central Asia on the threshold of exciting energy opportunities. Reserves of hydrocarbon, especially gas are vast. Hydropower capacity and deposits of coal and uranium are additional sources. Besides wind regimes make the region one of the worlds' best in wind power potential. Together, these resources could ensure self-sufficiency and help make the region an important for the Indian economy. Thus these countries have great export energy potential, as Kazakhstan, Turkmenistan, and Uzbekistan are the best reserves of oil, natural gas and coal. Similarly, Kyrgyzstan and Tajikistan hold significant hydropower resources.

Oil Sector

Petroleum is the engine for growth in the CAR'S, particularly for Kazakhstan. Kazakhstan has more than 100 oil-producing fields and is the second largest oil reserves as well as the second largest oil producer among the former Soviet republics after Russia. Kazakhstan's proven oil reserves were estimated at 30 billion barrels by the *Oil and Gas journal* 2010. As shown in fig. 1 production of oil is steadily increasing and the further proper utilization of its major oilfields could double its oil production by 2019³ and help make Kazakhstan one of the world's top 5-oil producers within the next decade. It is expected that the country's main oil reserves are located in its western part where the five largest onshore fields such as Tengiz, Karachaganak, Aktob, Mangistau and Uzan are located. Kazakhstan's oil production in 1998 was 526.90 thousand barrels per day and reached to 1640.21 in 2011. One of the reasons for this increase may have been that Kazakhstan privatized the energy sector with a direct role of foreign firms⁴. Comparatively Uzbekistan, Turkmenistan and Tajikistan chose to maintain state ownership and minimize the role of foreign companies. This split reflects in the fact that Turkmenistan has slipped from being the world's sixth largest

oil producer in 1993 to 12th in 2003, with a mere increase of form 126.17 thousand barrels per day in 1998 to 223.42 in 2011. Although Turkmenistan has, proven oil reserves of roughly 6 million barrels in January 2012 but the poor infrastructure including insufficient domestic and foreign investment, constraints the fuller exploitation of the same. Similarly, Uzbekistan has a highly energy intensive economy, as much of the infrastructure is inefficient and needs upgrading. The country has taken steps to monetize its oil reserves in recent years through partnerships with Russian and Asian firms for oil production.

Figure 1: Oil Production in CAR'S 1998-2011 (thousand barrels per day)



Source: US Energy Information Administration Database

In this backyard, the Indian refinery and construction companies can exploit opportunities. As we know that the rising energy security needs, which is being termed as being second only... to food security⁵, India should not only look at Central Asia but should leave no stone unturned to pursue hard policy for very warm relationship with Central Asian States.

Gas Sector

Natural gas specifically has the very much potential in this region yet waiting for utilization. Natural gas is spread in the whole region, and is expected to have a greater potential than oil. Characteristically Kazakhstan, Turkmenistan, and Uzbekistan are considered among world leaders in natural gas production. For example in January 2010 the *Oil and Gas journal*, estimated Kazakhstan has proven natural gas reserves at 85 trillion cubic feet which as of 2011 is estimated at 100 trillion cubic feet and is primarily located in the Caspian region. Likewise Uzbekistan as per same sources holds an estimated 65 trillion of proven natural gas resources, ranking it the 4th highest in the Eurasia region and 19th in world⁶. Uzbekistan produces natural gas from 52 fields with major deposits accounting for 95% of the countries gas production. These deposits are concentrated on the Uzbek side of the Amu-Darya basin in the Southeastern region and in the Central Ustyurt plateau near the areal sea in the western region of the country. Turkmenistan also has the substantial natural gas reserves, which stands at 100 trillion cubic feet. However, according to the OJG Turkmenistan has proven gas reserves approximately 265 trillion cubic feet as of 2012. It has several of the world's gas fields located in the Amu-Darya basin in the

²Jaffe Amy Myers: Unlocking the Assets: Energy and the Future of Central Asia and Caucasus April 1998.

³ US Energy Information Administration.

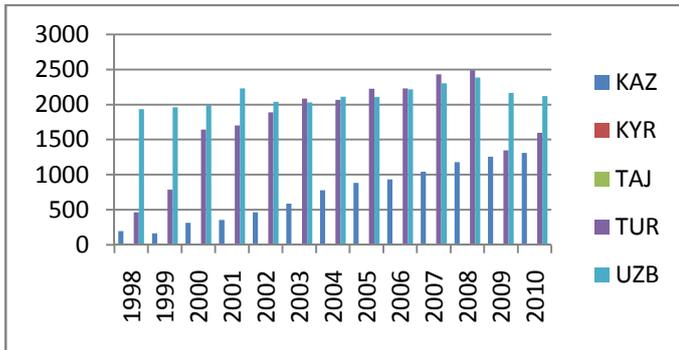
⁴ Pomfret Richard(2006),The Central Asian Economies Since Independence. Princeton University press, UK. P 154.

⁵ Stephen Blank(2005), Central Asia's Energy Game Intensifies, Eurasia Net, sept. 2

⁶ Energy Information Administration.

southeast, the Murgab basin and the south Caspian basin the west

Figure 2: Gas Production in CAR'S 1998-2010 (Billion Cubic Feet)



Source: US Energy Information Administration Database.

However, as per the actual gas production estimates, shown in figure 2 Uzbekistan is the leading country with 2122.82 billion cubic feet as of 2010, showing a considerable amount of increase from the estimates of 1998 which were 1935.3 billion cubic feet. Yet because of several factors such as lack of sufficient foreign investment and inadequate transportation infrastructure have deterred the country from becoming major natural gas exporter. According to estimates from a World Bank commissioned study conducted by the National Oceanic and Atmospheric Administration's (NOAA), Uzbekistan flared an estimated 67 Bcf/y in 2010 and ranks one of the top 20th gas flaring countries. This was primarily due to lack of export pipeline infrastructure. Same has been case with Turkmenistan. Comparatively Kazakhstan is on the verge of being a net gas exporter

Implications for India

All over the world the demand for energy products has increased with the centre of gravity for world consumption countries to shift from OECD to emerging economies especially Asian. So for our discussion and data indicated that in CAR'S there are huge amount of energy reserves, which may prove useful for India. India is regarded as one of the most important growth engines of the world economy. The growth models of India are also positively related with rising demand for energy. The growing energy demand can be met with neighbouring countries that are CAR'S. These republics have strategic dimension to the geopolitics of the whole Asia and very effective for its neighboring countries.

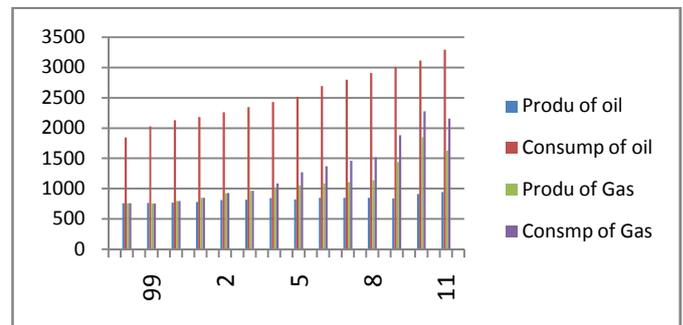
Hydrocarbons constitute 42% of India's commercial energy consumption. According to the vision 2025 document, the share of oil and Gas in the total energy supply will be 45% (oil 25% and gas 20%) by the 2025⁷. In the present scenario the India's energy consumption has changed from traditional or non-commercial (fuel wood, dung and crop residues) to commercial sources (coal, oil and gas),⁸ but the domestic

⁷ S. D. Munni and Girijesh Pant, India's Search for Energy Security (New Delhi. Rupa & Co. 2003) p-14

⁸ Laxmi Vijay, India-Central Asia Relations: Quest for Energy Security, Dialogue, vol-8 No.4

production of these commercial resources are minimal. This is the cause that India is now mostly depending on other countries.

Figure 3: Oil (thousand balers per day) and Gas (billion cubic feet) Production and Consumption in India 1998-2011



Source: US Energy Information Administration.

Energy security is among the biggest challenge for Indian policy makers. The fig. 3 portrays the comparative status of production and consumption of oil and gas in India. The gap between production and consumption of both oil and gas are now increasing, from 760.67 billion cubic feet in 1998 to 942.75 billion cubic feet, and consumption of oil from 1884.37 billion cubic feet to 3292.21 billion cubic feet, same is the case for gas production and consumption. It indicates that India import dependence would continue to rise. Even the prime Minister and leading economist of India Dr Manmohan Singh has declared that "Energy security is the second than food security.

India is trying to explore oil and gas within its own territory, which includes oil discovers in Rajasthan by U. K based Cairn Energy and Gas discovers by India's Reliance industries off the coast of Andhra Pradesh in the Bay of Bengal. India is also trying deepening its energy trade relationship with other countries, such as energy-rich region the Persian Gulf and Central Asia. India wants to develop Turkmenistan-Afghanistan-Pakistan-India (TAPI) and Iran-Afghanistan-Pakistan-India pipeline projects. All these countries realize that these mega projects would make immense commercial sense, and would reduce dependence on the Persian Gulf region. In this context the CAR'S has geo-strategic location, which is favorable for India. It is expected that future energy relation between CAR'S and India is good for prosperous of Indian economy because of huge amount of energy availability in CAR'S. The scope of relation between CAR'S and India is not limited only with energy relation, but there is scope for other goods and services also, which position the relation between India and CAR'S is not as competitive, but complementary.

The present level of trade between CAR'S and India is very low. Since both have a very good trade potential, the trade can be increased to a very high level. There are many areas where they could be engaged in meaningful cooperation. There exists an immense future prospect for India and CAR'S cooperation in banking, construction, information technology, pharmaceuticals etc. Given the vast trade potential, that exists between India and CAR'S. There are many problems, which come in the way of these countries enjoying the benefits

through enhancing international trade such as problem of connectivity between India and CAR'S. The communication links are problematic and at present, the region is connected through air links.⁹ Indian manufacturing and investment companies are apprehensive about entering the new unfamiliar markets of Central Asia. In this connection our suggestions are as follows:

Recommendations

- ❖ The fundamental reforms both in India and CAR'S are needed to build public support for trade liberalization.
- ❖ Easing restriction on visas, specifically, allowing multiple entry visas for businessperson.
- ❖ Allowing branches of Indian and CAR'S banks to operate in the other country.
- ❖ Eliminating double taxation would also boost the attractiveness of cross-border investments.
- ❖ Give each other the status of Most Favoured Nation. This will enhance trade relations.
- ❖ Reducing tariff rates and removing nontariff barriers.
- ❖ Infrastructure in both countries needs to be significantly improved and harmonized.
- ❖ Energy trade should be facilitated. The greatest benefit would occur in the sphere of energy cooperation. To start with, the countries could agree on the gas pipeline. This would assure India of a regular supply of gas, in addition to meeting its own energy needs.
- ❖ The countries should also allow trade in IT sector.
- ❖ Remove obstacles to FDI flows.
- ❖ Apart from the lack of physical infrastructure, there is lack of financial infrastructure and legal infrastructure. Both the facilities are basic for trade relations and in modern economic arrangements are indispensable. Trade without a speedy mechanism of transfer of funds as well as clearing facilities is almost impossible. Similarly, without a formal arrangement of dispute settlement the level of risk or default increase enormously which reduces the incentive to trade.
- ❖ Invest in Transasian corridor and the Great Silk Road.
- ❖ Bilateral agreements.
- ❖ Rebuild Afghanistan's transport network and economy.

On the basis of the above context, it can be summed up that the geopolitics of CAR'S has an important strategic role to play in the future. It is rich in minerals particularly in hydrocarbons. It is expected that the demand for Indian goods and services would increase in CAR'A because of large consumer market. Many factors lead to increase the interest of many countries to play in the Great Game of Central Asia. India as a neighbor of CAR'S has major geostrategic and economic interest in the region. Economic and political stability in CAR'S, Pakistan and Afghanistan seem to be the most crucial factor for the security of India. With well-conceived initiatives, the CAR'S has the potential to alter the nature and character of India's continental trade. The overland connectivity between India and CAR'S will open vast economic opportunities across the Eurasia.

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⁹ Aloke Sen. Strengthening India-Central Asia Cooperation: Especially Economic and Trade Relation. Paper Presented at the India-Central Asia Seminar in New Delhi on September 11-12, 2000.