# ***geopolitical shifts: in Central Asia - Energy Independance or Energy Security, whant is the next?***

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**Overview**

This paper reviews the current energy sector position and prospects of five Central Asian States (CAS) with particular emphasis on newly re-creation of geopolitics in energy of Uzbekistan, and re-integration of Tajikistan, and Turkmenistan as a part of CA Energy System, It is also noting the current degree of energy trade with Kyrgyz Republic and Kazakhstan and as well as overview of inter- dependence between the states related to energy resources within the region. The final paragraphs of the paper placed the five Central Asian States within the wider context of the geopolitics of Euro-Asian energy market and the opportunities offered by new pipeline/ transmission line projects to provide links with Europe and through Afghanistan to Iran and to Pakistan and India on one side as well as discussed about possibilities to extend the export of energy /natural gas to China.

**Geopolitical shifts in Energy of Central Asia: Current situation of Central Asian United Energy System and Market Players**

Following the break- up of Soviet Era in 1991, newly independent states and their Governments found itself faced with many intractable economics problems. Subsidies from Central Government - Russia and neighboring relation had been withdrawn; capital inflow had been virtually hailed and current income from cross- border trade declined sharply, especially last decade. Lack of continuing investment to electricity sector and markets led to declining industrial output and high domestic inflation bring subject of “energy” to the first line. Twenty finve years after the end of the Soviet era, the Central Asian electrical power system is now at a very critical stage regarding cooperation between the countries and the technical conditions of generation and transmission equipment as well as the distribution systems. However, Uzbekistan during the last year show dramatically changes in geopolitical content. The leaser of countries, the President Mr. Mirziyaev geopolitical shift change the picture of region and re new idea of re- integration and open doors for investment, and re interconnection with all CAS.

 During Soviet era the electrical power system was designed without consideration of national boarders and the energy resources in the whole region where shared between the countries. However, Since 1991 up to fall 2017, the generation and transmission planning of the individual countries in Central Asia is focusing on energy independence from neighboring countries. Turkmenistan and Tajikistan are no longer connected to the Central Asian Power System (CAPS), and only Kazakhstan, the Kyrgyz Republic, and Uzbekistan continue interconnected operation of their electrical power systems. In Northern Kazakhstan, CAPS is connected to Russia energy system. **However, Energy Security is not equal to Energy Independence** and stable operation of the electrical system is becoming increasingly difficult because of the violation of agreed generation dispatch, especially in the winter. The main reason is a severe power shortage in the winter. This is causing the interruption of synchronous operation, partial blackout, and frequent load shedding.

**This article overviewing the fundamental study of regional energy system grows and supports to realize the main risks from the view of new geopolitics as well as of synchronize the regional re-integration with economic growth of each country within the region .**

#### Methods

The Author as a regional senior economist was part of the team of consultants which was to develop a number of studies and particular with focus of the last month panel discussion at the Central Asian Regional Security Conference, in Almaty is being sponsored by the George C. Marshall Center for Security Studies. According to the conference goals, the team of experts discussed the developed and forecasts of load and demand for the Uzbekistan & Tajikistan and the southern part of Kazakhstan &Kyrgyz Republic that is connected to CAPS and scenario of re-connection of Turkmenistan. Author present the new view to the “energy security issue“ based her model parameter estimates on a simplified econometric modeling approach and forecasted from 2018 to 2025. This approach has been selected owing to a lack of data for meaningful econometric analysis. However, it has been applied by various studies in a similar way before, but this is the first time it has been done for the Central Asian Power energy system. Data for annual electricity consumption in CAPS between 1993 and 2017 has been provided by the “Energy” CDC in Tashkent. Other available data was cumulate from the information provided by national experts for each country.

#### Results

Author found that the energy trade in Central Asia States is hampered by a number of factors that include technical, institutional and commercial components. A prime obstacle is the fact that for virtually all governments in the region, with their background in the FSU, “self-sufficiency” has been an economic policy goal and most of the countries of the region have had programs of import substitution. This policy has been extended mainly to electricity. The effect is that some states are generating electricity using high value fossil fuels rather than importing electricity from neighboring countries with surplus electricity generated from renewable resources. Given the chronic need for development of sufficient capacity an integrated, and well-functioning Central Asian power grid, the contribution of this paper is more than valuable, especially from economic point of view.

The five Central Asian States of Kazakhstan, Kyrgyz Republic, Tajikistan, Turkmenistan and Uzbekistan have a total population of some 57 million. They cover an area of 4.35 million square km, of which more than 60% is accounted for by Kazakhstan. They are characterized by their landlocked location, and Uzbekistan is one of the two double landlocked countries worldwide. This makes access to and from international markets quite difficult for the CAS countries, and also constitutes a hindrance to the enhanced export of primary energy sources to Europe or East and South Asia. Trade within the region, including energy trade, is also hampered by a number of other factors, although the fact that the countries are richly endowed with different types of energy resources is, in general, a positive stimulus to regional trade.

According author’s last study gross electricity consumption or “electricity sent out to the grid is expected to increase in Central Asia from 95,748 GWh to 162,644 GWh between 2016 and 2031 in the base case scenario. This is an increase of 66%, or 2.6% per annum, on average over the period. The forecasting exercise also develops low and high scenario cases. The low scenario is based on lower future growth rates and lower income elasticity, whereas the high scenario assumes higher economic growth rates, higher income elasticities, and in some cases, a deferred tariff adjustment process. Total gross consumption is expected to reach 208,976 GWh in the high scenario and 124,039 GWh in the low scenario in 2031. The development and growth of the peak load is marginally different from development of gross consumption due to minor modifications of the load actor in various countries. Analysis shows that expected development of peak load in the region from 2016 to 2031 requires an increase a sector capacity from 17,537 MW to 29,557 in 2031(in the base scenario), which will increase consumption for 69% or 2.6% per annum; and in the low scenario, peak load is expected to reach 22,573 MW in 2031, while in the high scenario it would reach 37,963 MW. Additionally Uzbekistan, Turkmenistan and Tajikistan are increasing their exports of electricity to Afghanistan and observing diversification of energy market.

#### Conclusions

The leaders of the states in deferent manners and time frame targeted the new economic policy and diversities of export. The leader start to be agreed that “Energy Independence” is not Energy Security in the Case of the Central Asian Electrical Power System The main part of newly targeted goals was continuing self-sufficient in energy like Turkmenistan governments, lead or finding new energy for supply future, like Uzbekistan & Kazakhstan government. At the same time energy sector by itself could or better say should bring investment to the countries like Tajikistan and Kyrgyz Republic. The location of region gives a coordinating role in wider region and as key stepping - stone between Europe, China, and Asian. What is real price of opening -up process and where are the ring - line between opportunity, investment and national energy security? **What is the main risk for the region? What is the Price for balancing between resource management and countries energy security?**

The Central Asian States are fossil fuel rich countries, which have been successful in implementing an export-led growth strategy for their economic development based on these natural resources. Among them, Kazakhstan has been the most successful with its vast oil resources and early recognition that foreign investment and know-how are a necessity to exploit the resources as well as to find and capture new markets. Turkmenistan has also been successful in capturing some of the CIS markets. However, hydro-rich Kyrgyz Republic and Tajikistan, despite having the hydro potential and being able to export hydroelectricity, face their own problems in implanting growth strategies into the regional energy market, and in attracting new external investment sources. Uzbekistan during the long time shows dramatically independency in the meaning of CAPS interconnection, which brings the new player in the regional contest like Iran- Turkmenistan interconnection and Turkmenistan- Uzbekistan –Kazakhstan China via Gas pipeline. Additional to all, the new inter-regional shits starts to be more realistic then before, and two big inter-regional projects TATU 2 and CASA 1000 has a real chance to change the map of geopolitics within the next few year.

#### References

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