**MONGOLIAN ENERGY SECTOR DEVELOPMENT AND ITS FUTURE TRENDS, AND LONG TERM FEATURE OF REGIONAL COOPERATION IN ENERGY SECTOR**

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**Mongolian Energy Sector Development**

Parliament of Mongolia and Government defined the short and long term strategies of the Mongolian Energy Sector Development like as “Program of Unified Power Systems of Mongolia”, “National Renewable Energy Program”, “100,000 Solar home Program” as well as  “Comprehensive National Development Strategy (NDS) of Mongolia” and Government programs, which are including future trends of development.

In the energy sector development policy papers, there are planned that Mongolian power system will be consisted of Central, Western and Eastern region and Altai-Uliastai energy systems as well as Dalanzadgad power plant and power systems in Gobi, which will be interconnected each other in 2040 with high voltage transmission power lines, and there will be supplied own electricity demand from large scale thermal power plants based Tavantolgoi, ShiveeOvoo, Baganuur, Khushuut, NuurstHotgor, Aduunchuluun and Mogoingolcoal mines and hydro power plants on Egiin, Orkhon and Selenge rivers and will be utilized solar and wind power sources and will have capacities to export electricity to neighboring countries.

The recent years achievements and results are exposed fulfillment and successful implementation of those policies and goals.

I would like to state that the issues to build larger scale power plants in Western, Central and Gobi region were decided favorably, which were planned “Program of Unified Power Systems of Mongolia” which had been postponed due to financial and economical gape of the country.

For example, Government has made a decision to build a new thermal power plant with the installed of capacity 450MW in Ulaanbaatar under the PPP schemes and supported by National Security Council. SPC has announced a two-step international open tender to select owner of concessions, tender evaluation is in the final stage of selection and the power plant will be commenced in 2015 according to the plan. Therefore, it has been issued to construct power plants in Buuruljuut, Tsaidamnuur, and Chandganatalin Central region and each power plant will have a capacity of 600 MW and will build with private investment.

In Western region, the Taishir hydro power plant has commenced in September, 2011 and it was issued a license to the company, which is owning license of Khushuut coal mine, to construct thermal power plant with the capacity of 12 MW based on its coal reserve.

According to the Government resolution, New Asia Mining LLC was selected owner of concession to build thermal power plant with a installed capacity of 60MW in Telmen based on the Mogoingolcoal mine and the company is operating to complete the power plant in 2013.

It was announced an international open tender to select owner of concession for the extension of the Choibalsan Power Plant with a capacity of 100 MW in Eastern region under PPP schemes and owner will be selected in near future.

The Government has issued resolutions to build power plants in Tavantolgoi and Oyutolgoi in Gobi region, it was increased the installed capacity of the Dalanzadgad Power Plant with 3MW, and constructed and commenced a new thermal power plant with the installed capacity of 18 MW in UkhaaKhudag under private financing. There are constructing 220 kV high voltage electric transmission line between Mandalgobi and Tavantolgoi and 110 kV transmission line between Tavantolgoi and Dalanzadgad to resolve power supply for Gobi mining area and to improve electric supply in the region.

I would like reiterate again that the Energy sector development was evaluated in my speech on the last year’s International Conference “Mongolian Power – 2011” that larger power generation facilities, and major high voltage transmission lines were constructed newly to cover increasing demand of energy between 2011 and 2016, which was a start of establishment of new era for development of unified power system. It was proven our previous forecast with the achievements of energy sector in 2011 with that it will be a new era of energy sector, which is going to be in a new stage of technological development with advanced, efficient and environmentally friendly generation facilities under new techniques and technologies.

Economic capability of energy sector was improved and investment amount was increased thanks to the measures taken by the Government. For example, accumulated debts in the sector and liabilities of the state owned companies in many years is decreased with the allocated cross-sectoral subsidies from the state budget, increase of energy prices and tariffs, and with realization of the planned actions of implementation plan for 72th resolution of Mongolian Parliament. Total debts from Power Plants to coal mines were reached 19.45 billion tugrug in 2006 and it was 4.85 billion tugrug in 2011 which was decreased over 5 times in this period.

Further, it is planned to complete debts between coal mines and power plants in 2012. With the improvement of economic and financial capacity in the energy sector, interest of involvement and investment from the private sector is increasing. We are going to have the policy to support above mentioned actions.

**Legal framework of energy sector will increase involvement of private sector and establish favorable condition of investment**

It was a significant base of change the Mongolian Energy Sector legal framework as Energy Law of Mongolia was approved firstly in 2001. In other words, ratification of this law was a substantial step of energy sector into market economy.

According to the Energy Law enacted 2001, it was regulated that energy prices and tariffs should be identified based only recent years expenditure of power production.

The difference between previous Energy Law and the Energy Law Amendment which was elaborated by our Ministry and ratified 09 December 2011, is a new regulation of energy prices and tariffs which will consists of expenditures of power production and plus investment return with required profit.

One of the changes in the Law, fuel supply amount, price and tariffs for electricity and heating production will be regulated long term and energy prices and tariffs were indexed.

All of those actions are increasing private sector participation into energy sector and giving more opportunity of investments and business which can be actually developed in the sector according to the market mechanism. Energy sector development will be enhanced with the raised business interest, and increased participation of private sector into energy sector.

The Concession Law of Mongolia approved by the Parliament in 2010 has created legal possibilities to increase the private sector’s participation into the state property dominated energy sector, to expand and promote the collaboration of public and private partnership, to give the state and local properties to the investors according to concession agreements.

Moreover, we consider that the Concession Law is becoming the main driver in finding the necessary funding for the implementation of development goals and planning that are reflected in the energy sector policy documents out of the local private sector and foreign fund resources.

Therefore, it is possible to conclude that the newly approved Concession Law of Mongolia and the amendment made to the existing Energy Law of Mongolia actually driving the development of the sector in creating the investment environment that meets with the international standards, in introducing and localizing new technique and technologies, in getting local and foreign investments into the energy sector, and in increasing the private sector’s participation into the energy sector. Thus, creating the main condition for the transition of the energy sector into the market oriented economic relation.

**Stable energy supply, Mongolia’s participation in the regional energy integration**

The main core issue of any sustainable energy system is the issue of primary energy resources or the fuel reserve. Thus, the fuel reserve and the expense for its extraction should be taken into account with a high priority in considering a sustainable energy supply issue. In Mongolian case, if the current energy consumption rate is compared to the absolute reserve of the primary energy resource, the reserve of conventional fuel – the coal is relatively high. The geological reserve of coal in Mongolia is about 175 billion tons and it was determined that the number is expected to grow in the future. About 9.8 billion tons of coal reserve has been confirmed through preliminary and detailed geological investigation and study. There are totally 300 coal deposits that belong to 15 basins within the territory of Mongolia. Mongolia ranks at 15th place in the world by its coal reserve. The value of coal-originated natural gas or methane gas emerges from coal seams is assumed to have a reserve of 5-10 trillion cubic meters. Mongolia has a future to become the country which extracts the natural gas by determining the reserve for the production of methane gas coming out of the coal deposit seams. Besides, it has already become clear that Mongolia is rich in having wealthy resources of crude oil, uranium, and oil shale.

Although, the available conventional primary energy resource of our country is sufficient to enable a sustainable energy supply system over a long period, there is need to consider carefully the world’s concern and tendency towards to the environmental and ecological negative impact of the conventional energy system. Taking into consideration of the regional energy supply and the renewable energy resources it is necessary to diversify primary energy resources properly in a balanced way by utilizing various energy resources through increasing the share of renewable energy in the total energy production and improving the efficient use of energy.

There is a common understanding that it is cheap to save energy at the end users rather than to generate more energy. Based on this principle, our Ministry has developed a draft of Energy Conservation Law of Mongolia and is ready to be submitted to the Cabinet meeting.

The Renewable Energy Law of Mongolia and the National Renewable Energy Program have been approved by the Parliament which came into force and many actions have been taken. In accordance with the law and program we are planning to generate 20% of the total energy by renewable energy sources (generators) in 2020.

The goals that were put in the energy sector’s policy documents to create an independent and reliable energy supply systems that operates with high efficiency and low loss have been achieving as mentioned before. The next goal is to locate the power plants within the territory of Mongolia appropriately and to export energy abroad.

In the frame of this goal, construction licenses were granted to the aforementioned thermal power plants. Besides, we are trying to implement a project to construct a large-scale thermal power plant based on the Choir-Nyalga coal deposit for exporting to electricity that will be generated by the power plant to China. Mongolia has a rich coal resources that in order to utilize the natural wealth efficiently it is better to generate the value added product electricity by environmentally friendly technology and to export with the purpose to cover the part of the regional energy demand.

Mongolia is rich with renewable energy resources that initiatives to establish large-sized renewable energy power plants in the Gobi desert region together with a Super-Grid which as the capability to transfer considerable power to the North-Eastern-Asian countries have been made recently.

We consider that it will affect to the energy supply and its security in the North-Eastern-Asia through combination of Mongolian abundant renewable energy resources with the high technologies of developed countries in this region. Thus, it is a regionally useful and economically beneficial initiative that can be realized to establishing a sustainable energy supply system in the region.

Although, Governments of countries significantly influence in this collaboration it is important to have the private sector participation, support and promotion of international development and financial organizations for implementation of this initiative. Particularly, our country is working to develop the regional energy cooperation in the frame of the activities of the Central Asian Economic Cooperation Organization, Tumen-Gol Initiative, and inter-governmental mechanism of governments of North-Eastern-Asian countries which are aiming to cooperate in the energy supply issue.