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## Guest Editorial



### Realizing Hydropower Development for Energy Security in Nepal

The successful completion of Constituent Assembly election in Nepal resulted more aspiration from the people for long term stability and development initiatives including energy security. The recent 'White Paper' of Ministry of Energy, Water Resources and Irrigation of Nepal declared target for development of hydropower 3,000 MW in 3 years, 5000 MW in 5 years and 15,000 MW in 10 years. However, there is lack of definite action plans and strategy to achieve the targeted goal.

After suffering strenuous load shedding for the whole decade, the energy deficiency is managed with heavy import of nearly up to 500 MW of capacity from India. However, the supply scenario will improved significantly with addition of more than 1000 MW capacity within two years, and another 2000 MW Projects that are under development will also enhance the supply scenario. But, majority of hydropower projects under construction are of run-of-river type, resulting high energy generation in wet season and low generation during the dry season ensuing miss-match between demand and supply scenarios.

Therefore, there is a need to expedite improvement in infrastructure for utilization of energy within domestic market and improvement of cross border transmission line for export of energy. Nepal's power sector is likely to become self-sufficient in terms of power requirement by 2023-24 but challenges ahead to utilize the surplus power during wet season. So, immediate action plans and strategies are required to export this surplus energy. Realizing the fact, the then Ministry of Energy in 2013 proposed for Energy Banking concept with India during JCWR meeting held in Kathmandu, Nepal. This agenda is taking priority from then onward to the recent discussion with high level meeting in India.

Regional Power Trading is the only long term solution for optimizing the use of resources. Power Trade Agreement in 2016 with India and SAARC Framework Agreement concluded in 2014 give some hope for power export to India and Bangladesh. So, immediate solution will be to agree Energy Banking with India for short term and continued discussion with India for no restriction of Independent Power Trading facilitates with India.

The present single buyer model is more suited for the import of power but the cross border trading would be additional opportunities for Nepal both in the short term (real time, day ahead or week ahead basis) as well as medium term (one to three year contracts) which cannot be addressed under the existing institutional framework. Thus, independent Power Trading Company is required to deal with different agencies in India.

Hydropower provides an opportunity to reduce dependency on external energy sources. Despite huge hydro potential, Nepal is still a net importer of electricity to meet shortages. Hence, judicious harnessing of Nepal's hydropower potential is a must for Energy Security (with introduction of storage project) that will helps to improve investment climates, and economic growth as well as substituting the alarming imports of petroleum products.

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