

Source: The Himalayan Times; 27 March 2016

## **Why we need an independent Electricity Regulatory Commission hydro highlight**

*COMMISSION SHOULD FUNCTION IN AN INDEPENDENT MANNER AND NOT AS AN ARM OF THE GOVERNMENT*



*Pradeep Gangol Kathmandu*

The Electricity Regulatory Commission is needed for adequate and effective regulation of an electricity market, ensuring supply reliability, continuous investments, reasonable pricing and proper market behaviour. In a country like Nepal, where competition is minimal, the regulator's role is to provide an oversight that would ensure that consumers receive reliable and safe supply of electricity at reasonable prices, while balancing the investors' interest.

Though the government, realising the importance of an independent electricity regulatory board drafted the Nepal Electricity Regulatory Commission (NERC) Act as early as in 2004, it is still in parliament, waiting for approval and enactment. The bill to establish an electricity regulatory board is pending since 2007.

**NEPAL ELECTRICITY REGULATORY COMMISSION** The proposed Commission, NERC, is intended to be established with the purpose of making electricity generation, transmission, distribution and trading simple, regular, well managed and transparent and balance demand and supply of electricity to regulate electricity tariff, to protect the right and interest of consumers, to make the market of electricity competitive and to make electricity service reliable, easily accessible, qualitative and secured.

The proposed function of the commission is to monitor and maintain the quality and security standard of the national grid system, formulate necessary policy and work plan for making generation, transmission, distribution and supply of electricity reliable and effective, to approve the grid codes, distribution codes or any other relevant documents and review regularly the existing supply and demand to achieve balance between the two.

The commission's other functions include fixing wholesale tariff rate of electricity, consumer tariff, buying and selling rate of electricity, wheeling charge for transmission and distribution of electricity, providing consent to the power purchase agreements, to end monopoly in the power market and make it competitive. **INDEPENDENT FUNCTIONING** A commission should be independent of political and industry influence. The fact that regulatory commissions must function in an independent manner and not as an arm of the government, is acquiring general acceptance.

The overriding concern that is still prevailing in the Indian power sector, for example, is government dominance over the regulatory commission.

However this does not imply a hands-off attitude to be adopted by the government.

The relationship between the government and the regulator needs to be one of mutual and constructive support in advancing public interest. A regulatory commission plays a unique role in balancing the competing interests of the utility, the financial community, the customers and government.

It also plays an advisory role to advise the government on the removal of institutional barriers to bridge the demand supply gap and help create enabling policy environment for foreign direct investment in electricity sector.

**TARIFF SETTING ROLE** The tariff setting role of the commission is very important.

Tariffs must be set at rates high enough to maintain financial and operational health of the utility, attract private investment, meet growing energy demand and minimise outages et cetera . Yet consumer tariff must be low enough to ensure continued economic growth and productivity and protect the interests of low income populations.

Therefore, in order to make a competitive, transparent, and consumer- friendly environment, to create a level playing field for all the players, state or private alike in the power sector, an independent NERC is considered as the need of the hour for regulating the power sector.

It is obvious that investment by government alone is not sufficient in Nepal to end the energy crisis, and therefore promotion of the private sector in hydropower development is a must.

The enactment of NERC Act and subsequent establishment of NERC will give a strong signal that Nepal is mature enough to welcome private sector in hydropower development.

**COMMISSION SHOULD FUNCTION IN AN INDEPENDENT MANNER AND NOT AS AN ARM OF THE GOVERNMENT** The author is a freelance engineer, with interests in energy, environment and economic development. He can be contacted through [prdppl@gmail.com](mailto:prdppl@gmail.com) The enactment of NERC Act and subsequent establishment of NERC will give a strong signal that Nepal is mature enough to welcome private sector in hydropower development [nepaleconomicforum.org](http://nepaleconomicforum.org) Why we need an independent Electricity Regulatory Commission hydro highlight

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## **Govt's focus on addressing energy crisis, enhancing connectivity: PM**

Nepal has to grow at the rate of 7 to 8 percent annually not only to graduate to the league of developing countries by 2022 but also to graduate to medium income country by 2030 from the current low-income country status, according to economists.

Speaking at a daylong seminar on 'Envisioning Nepal 2030' organized by National Planning Commission (NPC) and Asian Development Bank (ADB) in Kathmandu on Monday, they also stressed the need to focus on key competitive and comparative advantage sectors for structural transformation and acceleration of economic growth.

Addressing the seminar, Prime Minister K P Sharma Oli said that Nepal needed a long-term strategic development plans and policies to graduate to the status of a developing country from the current LDC status.

Stressing on implementation of those mechanisms to achieve Sustainable Development Goals (SDGs) by 2030, he said that the country has to double annual investment, and build essential infrastructures like strategic road and railway networks, communication, and electricity. "We have shifted our attention and efforts and are gearing toward economic development and prosperity after promulgation of the new constitution" he said, adding that Nepal's unique geographical locations, abundant natural resources, biodiversity and landscapes that widen connectivity across the borders toward a self-reliant economy has been able to reduce poverty, achieve most of the Millennium Development Goals (MDGs) and make significant social development particularly in health and education.

After the promulgation of constitution, the main task before Nepal is to empower the people through implementation of economic and social agenda enshrined in the constitution, he said, adding that it would only be possible through structural transformation of existing economic and social institutions, production relations, and social values."

"However, focus must be on addressing the crippling energy crises that hold key to unleash rapid growth of many industries, as well as on connectivity to reach all Nepali villages within the country, and the vast markets of the neighboring countries", Oli added.

The seminar provided a platform for all stakeholders to contribute and work for climate change, sustainable development activities and renewable energy resources.

Speaking at the seminar, ADB Vice President Wencai Zhang hailed Nepal's intent to graduate from LDC status by 2022, and become a middle income country by 2030, while achieving the sustainable development goals. However, this calls for a credible vision and a strategy to achieve it by setting out policies, prioritizing public expenditure and investments to build physical and human capital, improving governance and the business environment, building a competitive industrial base and enhancing regional cooperation and integration, he said.

Welcoming the guests, Yub Raj Khatiwada, vice chairman of the National Planning Commission, said that Nepal needs higher economic growth to reduce poverty by 2030. "We have to learn how to accelerate the growth from our neighbors," he said, adding that the government will formulate Development Strategy 2030 by incorporating inputs from the seminar.

At the program, participants and panelists suggested to the government to chalk out a national development strategy on the basis of Nepal's competitive and comparative advantages. They also said that Nepal has been trapped in poverty due to lack of diversification from subsistence agriculture to commercialization. "The government should provide first movers incentive to encourage entrepreneurs to venture in new areas that can provide impetus to economic growth and create employment," they suggested.

On the occasion, Minister for Finance Bishnu Poudel accepted that the government has a challenge to develop sufficient infrastructures that could propel economic growth.

Source: The Kathmandu Post; 30 March 2016

## **Devolving power**

*Govt needs to incentivise people for 'generating' electricity rather than giving subsidies for 'acquiring' the systems*

***Bibek Raj Kandel***

Roof top solar system, a dominant rural commodity in Nepal, which caters to the lighting needs of over 600,000 off-grid rural households in the country, is now slowly gaining new admirers in the urban centres as well. With the recent government's decisions and declarations to increase its solar spending to appease urban consumers amid the severe power shortages in the country, a new debate has emerged on how the government regulations, policies and expenditures could be best employed for the growth of solar rooftop systems.

### **Different views**

In Nepal, two schools of thoughts primarily dominate the rooftop solar market today. First, the government should boost the total solar energy demand through promotional activities and subsidy packages. This 'Keynesianism' has stimulated the growth of renewable infrastructures providing lighting and cooking needs through various green technologies in the far-flung rural hills and plains of the country for over a decade. Alongside, another school of thought is rapidly emerging and gaining supporters. It argues that the government should provide rooftop solar owners an opportunity to sell surplus energy to the Nepal Electricity Authority's (NEA) electrical grid.

As households and businesses in urban centres are already investing large sums in alternative energy facilities to cope with the routine power cuts, proponents of the second school of thought argue that both the awareness and the willingness to pay for the rooftop systems are sufficiently high. Besides, prices of solar or photovoltaic cells, which convert sunlight directly into electricity, are falling globally. With the technological advancements, best available and efficient systems are entering the market every next day. A recent study conducted by researchers at the Oxford University has shown that the cost of a watt of solar capacity has reduced from \$256 in 1956 to about \$0.82 in 2013—a drop in price by a factor of 2330.

Since 1980, costs of photovoltaic modules have decreased at an average rate of about 10 percent annually. In such a context, where the solar cost is decreasing every year, a corresponding decrease in the government's spending in subsidising solar systems should be the logical next step.

The government tried stimulus subsidy spending on urban rooftop solar system last year, which failed badly particularly because it did not fully comprehend the need and behavioural aspects of urban consumers. Out of 25,000 systems targeted for the selected 14 municipalities across the country, there were only six cases of adoption. Its rigid delivery mechanism and stringent paper requirements for a small amount of subsidy support were mostly believed to have deterred the urban consumers. Nevertheless, the cases of adoption have leaped this year with already over 600 installations under the government's new subsidised solar credit schemes along with some subsidy top-up for selected system sizes. However, major critics of the subsidy-led growth model

argue that too much of government subsidy is only crowding out competent firms and blocking the market-led solar energy service innovations and growth. It means that the government should let the consumers decide their own preference and choices and let the buyers and sellers transact freely. So what then could be the government's role in spurring the growth of the solar market in Nepal?

### **Connecting to the grid**

Like in many western countries including Germany, governments play a powerful role in designing policy structures to influence the energy choices of the consumers as well as to stimulate the private sector to invest in the sector. As Nepal is struggling to meet its electricity needs through the existing hydropower generation, growth measures like Feed-in Tariffs (FiT), net metering and production tax credits can act as positive stimulus to pave ways to connect renewables to the electrical grid. However, the first step in this direction would be that the government sets the minimum share of electricity from designated renewable energy sources in the country's utility grid and paves ways to connect them.

Given the blackouts for over a decade, every little contribution to the electrical grid makes a difference. To some extent, the current load shedding can be argued to be a result of NEA's reluctance to devise appropriate feed in tariff measures for other renewables besides hydropower. The NEA has the sole monopoly in the electrical grid from licensing to procuring and transmitting to distributing electricity in the country. Its long-time denial to adopt renewables other than hydropower in the electrical grid has actually slowed the progress of private-led growth of solar energy technologies. The NEA argues that FiT for any form of generations cannot exceed its 'avoided cost'—the maximum cost the utility would have to pay 'per unit of electricity' if self produced or borrowed from a third party. This, in the NEA's case, is estimated at Rs9.6 which it pays to India as per the agreement set by the Indo-Nepal Power Exchange Committee. The question remains, would this considerably low 'avoided cost' be able to attract private-sector investment in technologies like solar and wind?

Nevertheless, from the point of view of utility, one might also question the economic sense in purchasing electricity generated from renewables by paying a price higher than the estimated 'avoided cost'. Surely, one should consider science and economics rather than mere activism and enthusiasm to decide on any choice of technology. But if that 'avoided cost' is again viewed from the state's macro perspective rather than from the perspective of utility alone, the total installed captive capacity of diesel generators owned by households and businesses in Kathmandu Valley is believed to have generated a power output of 200 to 300 MW. So far, energy decision-makers tend to mistakenly avoid this cost, considering the fact that these generators entirely rely on diesel imports from India. Should the state not be taking into account this cost of imports while figuring out the appropriate FiTs for rooftop systems and for other renewables? It is vital that the policy makers take bigger and bolder steps towards attracting private sector investments in renewables by guaranteeing a price slightly higher than the traditional 'avoided cost' for electricity generation until the adequate low-cost hydro generation could fully meet the demand at home. By choosing to incentivise consumers for 'generating' electricity rather than subsidising the consumers for merely 'acquiring' the systems, the government can have better control over its spending.

*Kandel is a national advisor at Alternative Energy Promotion Centre; views expressed here are personal*

Source: The Kathmandu Post; 30 March 2016

## **West Seti development ‘in limbo’**

***BIBEK SUBEDI***

Uncertainty looms large over the development of the 750MW West Seti Hydropower Project, as the Nepal Electricity Authority (NEA) has failed to assure China Three Gorges Corporation (CTGC) about the market once the project starts generating power, a sub-committee under the Parliamentary Agriculture and Water Resource Committee (AWRC) has said.

A recent field study by a team of lawmakers under CPN-UML leader Nirmal Prakash Subedi said that the CTGC has sought to ensure the market size for the power to be produced by the national pride project.

“Neither NEA has signed power purchase agreement (PPA) nor there is guarantee of power export to India,” reads the report. “This has left the project’s development in uncertainty.”

A senior NEA official admitted that the finding of the parliamentary sub-committee report is “close to reality” and the authority is working to address those issues. “We are not clear about the actual electricity demand in the country,” said NEA Managing Director Mukesh Raj Kafle. As the sole power purchaser in the country, the NEA is wary about possible losses due to surplus electricity.

However, the government sources say that the 750 MW project is being developed taking into account the domestic power demand. “The unavailability of market for the energy wouldn’t be an issue as domestic demand is increasing by the year,” a source said. Last month, the government had declared energy emergency, unveiling plans to boost electricity generation to 10,000MW in the next 10 years.

“The government has forecast domestic energy demand will reach about 6,000MW by 2030,” said Radhes Pant, chief executive of the Investment Board Nepal (IBN). “So, the suggestions that the country lacks market for more power are baseless.”

On the PPA, Pant said that it is ‘too early’ to discuss on it. “First of all, a joint venture (JV) agreement between NEA and CTGC needs to be signed. That agreement will be followed by a financial closure and a project development agreement (PDA),” he continued. “Only on the basis of financial closure and PDA can we estimate the project’s cost more accurately, which will pave the way for the PPA.”

But the NEA said it is having difficulty in taking a decision on PPA of the West Seti as it does not have guidelines to sign a PPA for a storage-type hydel project. Almost all of Nepal’s hydropower projects are run-of-the-river type. However, Kafle said that working on to finalize a PPA template for storage project very soon.

“In general cost of storage type project is higher than run-of-the-river type but once the template for storage project comes out it will help us to sign PPA,” he said.

Source: The Kathmandu Post; 31 March 2016

## **Tanahu Hydro Project fails to attract bidders**

*Prequalification of contractors*

**BIBEK SUBEDI**

Tanahu Hydropower Project has failed to attract a single bidder for prequalification of contractors, forcing it to extend the deadline by 19 days.

The original deadline for applying for prequalification expired on Wednesday, and it has now been extended until April 17.

The 140MW storage-type project will be built on the Seti River in Tanahu district.

“About two dozen contractors from various countries participated in the pre-bidding discussion, but none of them applied for prequalification,” said Sunil Kumar Dhungel, managing director of Tanahu Hydropower Limited (THL), a subsidiary of Nepal Electricity Authority (NEA). THL had issued a notice on February 14 for prequalification.

Dhungel said most of contractors who participated in the pre-bidding process requested for an extension of the deadline, citing the need for further study of the project.

The company had issued the notice for prequalification under two packages—detail design and construction head works and detail design and construction of waterway, powerhouse and related equipment.

According to the THL notice, applicants will be prequalified on the basis of their ability to meet financial qualifying criteria and technical experience criteria. “Only the firms registered in eligible countries of the Asian Development Bank (ADB) or member states of the European Union are invited to apply for the prequalification of the first package,” read the THL notice. Under the second package, the prequalification would be conducted on the basis of procedures in accordance with applicable guidelines for procurement under the Japanese Official Development Assistance Loans.

The project will be one of Nepal’s biggest storage-type projects with an estimated average annual energy generation of 587.7 GWh for the first 10 years and 489.9 GWh from the 11th year. The project is designed for peaking up to six hours in dry season.

The project is being co-funded by Asian Development Bank (ADB), Japan International Cooperation Agency (Jica) and European Investment Bank (EIB).

A loan \$150 million agreement was signed with ADB on February 21, 2013. A similar agreement for \$183 million loan was signed with Jica on March 13, 2013, and the agreement with the European Investment Bank (EIB) was signed on May 7, 2013 for \$70 million, which further increased to \$85 million. Funds from the government and NEA will be used for the preparation of preconstruction infrastructures.

The project is estimated to cost \$505 million and the Nepal government will invest \$71 million. According to NEA officials, design preparation and construction of a bridge has begun at the project site. The environmental impact assessment was done in 2009.

As per the project’s estimated cost, it will need to sign a power purchase agreement with NEA at Rs7 per unit. The government has said it will extend credit to NEA at an interest rate not higher than what the donors charge.

However, the government will charge NEA one percent of the loan amount as processing and guarantee fees. NEA will have to bear the risk of exchange rate fluctuation.

Source: The Kathmandu Post; 1 April 2016

## **Ministry preparing action plan to end energy crisis**

The Ministry of Energy is drafting an action plan to end the energy crisis on the basis of the recently launched National Energy Crisis Reduction and Electricity Development Decade master plan.

Deputy Prime Minister and Minister for Energy Top Bahadur Rayamajhi on Thursday said the action plan would incorporate the structural reform of various government bodies and authorities besides the formation of separate entities. “This will open the doors to hydropower development,” he said, addressing the National Seminar on Energy Economics of Nepal organized by the Society of Economic Journalists Nepal.

Rayamajhi said the government was considering all possible alternatives to generate more power, but hydroelectricity would be at the top of the agenda. “The government will initiate the process to speed up the construction of a few large hydropower projects that have been stalled due to various problems within a few weeks.”

Chairman of the parliamentary Committee on Energy and Agriculture Gagan Thapa said that the panel would try its best to address the regulatory bottlenecks under its jurisdiction.

Rabindra Adhikari, chairman of the parliamentary Development Committee, criticized the Nepal Electricity Authority (NEA) calling it one of the “major obstacles” to developing hydroelectricity.

“NEA officials fear that if the supply of hydropower surpasses demand, it will incur heavy losses and become ruined,” he said. “The government must come up with a plan to make NEA officials feel secure.” Various participants at the seminar highlighted the need for an up-to-date energy policy to solve the severe energy crisis. Sher Singh Bhat, deputy managing director of the NEA, said that the country needed a new electricity act. “The new law should include the formation of a central planning authority to forecast energy demand besides preparing a long-term supply plan for at least 25 years,” he added.

The master plan endorsed by the government in mid-February aims to add another 839 MW to the national grid during the dry season next year. The country’s power output currently stands at 780 MW which drops to 300 MW during the dry season. Similarly, the plan envisages generating 1,339 MW during the wet season in the second year.

The plan is based on generating an additional 400 MW from run-of-the-river projects, importing 92 MW from India and producing 200 MW through solar and wind power plants and 930 MW from Kulekhani 1 and Kulekhani 2 reservoir projects.

As per the plan, 100 MW of electricity will be generated in the first year by harnessing solar and wind power, and the capacity will be doubled in the next year. As of now, no proper feasibility studies have been done for big-scale wind energy projects, and the country lacks policy and regulatory frameworks.