ENERGY DEVELOPMENT COUNCIL

Energy Communique

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Editorial

Dear Reader,

Mr. Sujit Acharya
Chairperson

I want to congratulate all Nepali's on the promulgation of a people's constitution after so many decades of tireless striving. The New Nepal of peace, prosperity, equality and stronger national sovereignty envisioned in the constitution challenges all of us now to work towards accomplishing that dream. I also want to state that the Energy Development Council (EDC) in its very brief period of existence has grown to become Nepal's most important energy sector voice. EDC intentionally never organized an official launch of its establishment because we wanted to do this in the New Nepal - which has now arrived. EDC is the key institution of the energy sector in New Nepal – this is all but guaranteed.

While such glad tidings greet all of us, I am also deeply saddened by the unofficial blockade caused by India all along our southern borders. EDC has been constantly telling all that without the development of the energy sector our national sovereignty is at stake. This blockade has proven just that.

I am not sad or angry at India or any foreign country for trying to impose their will on us – that is a natural phenomenon where the strong always try to impose themselves on the perceived weak. But I am sad at how instead of seeking solutions, we Nepali's continue to blame others for our problems. I am sad at the total failure of what is called the Government of Nepal, where people who have been sitting in high ministerial positions are totally bankrupt of ideas to move the nation ahead towards economic and national independence. And I am mostly sad as the bureaucracy of Nepal has driven the country into the bottom rung of nations with their managerial and executional inabilities.

Please ask yourself that had we been riding electric motorcycles, electric cars and electric buses, would the current blockade by India have caused us any major difficulties? Would there be a kilometer long line of people queuing up to fill their petrol tanks? Had we allowed our electricity projects to be developed, would we care about cooking gas shortages – as we would be using induction cooking stoves running on our own domestically generated electricity.

Instead of exempting electric vehicles and electric cooking stoves from any kind of duty or taxes, the finance ministry does exactly the opposite. Instead of building a nationwide electric vehicle charging station network, the finance ministry touts a deal to build a petroleum pipeline to import more petroleum products from India. Instead of waiving off all kinds of taxes on domestically generated electricity, the government of Nepal waived value added tax on kerosene imported from India. The Ministry of Energy on the other hand has failed to do one single thing to improve the energy sector – they tout the signing of the Power Development Agreement with India but fail to recognize it does nothing towards fulfilling domestic energy demand. The current minister of energy is more focused on finding a way to sign US dollar power project agreements that have already proven to empty our national coffers. And then there is the Parliamentary Committee on Natural Resources which has wasted its time in useless debates instead of drafting a much needed Energy Act. It boggles the mind of a common man as to why common sense does not seem to exist in the minds of ministers, secretaries and government officials when it comes to developing this nation.

Nepal can never ever become an economically independent and sovereign nation without developing its economy based on domestic energy infrastructure. This is the bottom line and everybody except the Government of Nepal and Council of Ministers seems to understand this. It is time for a change – so let us now begin a more powerful dialogue to ensure we instill common sense in the mindset of the upcoming first government of New Nepal.

Jai Nepal!

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EDC Activities

Interview with Mr. Milap Bahadur Pande, General Manager of Sanjen Jalvidhyut Company Limited

1. Please tell us about your organization?

Sanjen Jalavidhyut Company Limited (SJCL) is a subsidiary company of Chilime Hydropower Co. Ltd. With equity share of Chilime 38%, Nepal Electricity Authority (NEA) 10% and District Development Committee (DDC) and all 18 Village Development Committees (VDC) of Rasuwa 3%. The company is registered since 2066/8/10 B.S.

2. Can you elaborate on the key current activities or projects that your company is executing?

Presently the company is executing construction of two projects; Sanjen Upper Hydroelectric Project (14.8 MW) & Sanjen Hydroelectric Project (42.5 MW) in a cascade such that the lower project gets water from upper project's tailrace canal, without constructing a separate dam/ river diversion system. Bothe the projects will be completed by 2017.

The headwork is located in an altitude of 2350 m average mean sea level (for comparison higher than Daman Tower). So the climatic condition is challenging associated with freezing temperature in winter (complicated concreting work) and monsoon in rainy season with frequent road blockages.

The real challenge is the access condition about 9 km of access road passes through prominent land slide in Pasang Lamu Highway. The recent April 2015 earthquake and the aftershocks have intensified these challenges; consequently we have to drive the projects in medium pace during monsoon.

And other important part of our projects is the Corporate Social Responsibility (CSR). We have been conducting CSR works from the feasibility phase in the project area. For example; conducting health camps, income generating trainings, and planned resettlement of 18 households affected by project execution, sanitation and water supply. Further priority has been given in local employment, support to schools and community works.

3. What are the major challenges you have been facing during execution of your project?

I have briefed above the major challenges like accessibility, severe climatic condition, and fragile geological condition and of the unpredictable seismic occurrences. In other seasons the road is quite bad for movement of heavy trucks and tippers. Obviously there is risk of injuries while crossing this road section. The recent earthquake has triggered risk in travelling through Khopang Bhir after crossing Trishuli Khola near Dhunche where large rock blocks fall from the stiff cliffs.

4. How do you propose such issues can be resolved?

In coordination with district administrative office & other government agencies and roads department excavators and loaders are kept standby in 8 km long land slide area where it occur every monsoon. The mentioned challenges are being addressed through close monitoring and accordingly take action for preventive measures. Whenever there is access problem we mobilize our own resources like equipment, manpower, material etc. to provide uninterrupted flow of traffic in the project.

5. Can you also suggest the key changes you think will help take the energy sector forward?

As most of us understand that hydropower business is risky combined with multiple uncertainties we must carry out projects feasibility study considering adequately the hydrology, geology and existing infrastructure. The major issues noted in Nepal are availability of power evacuation line to match with the generation.

Other pertinent issues are financing of a project, necessary amendment/deletion of legal provisions like pay for environment, leasing of government land and replace the same near forest area, which is impractical in my opinion. After license period it goes back to government. Multiple windows in place of single one, other issues are unnecessary demand from various stakeholders.

The market price, increase in foreign exchange rate, time taking procedures for permits and approval from various government agencies, reasonable power purchase rate etc. are other that needs way out.

Small and runoff projects upto 50 MW are considered to have less impact on environment compared to its benefit so as a step forward only simplified IEE would be sufficient.

So many issues need to be resolved for hydropower development in Nepal in a real sense.

"Jal Sarokar" in रेडियो अन्नपूर्ण ९४ नेपाल

A weekly interaction radio program named "Jal Sarokar" which is based on general and specific energy issues has been successful in completing its 15th episodes and shall continue. The program is aired in Radio Annapurna Nepal 94 every Monday from 8:15 am to 9:00 am. This month, four episodes covering prominent issues of energy have been carried out by interviewing various energy experts from private, government and relevant organization.

The link of the programs is available at Home Page of EDC website ***www.edcnepal.org/*** or Visit following links:

www.youtube.com/watch?v=LOFx6VWXd50&list=PLl1LTg56W3qHCx0wzoVo6iq9FnmLxttWh&index=12
(In conversation with Mr. Madhav Belbase, Director General, Department of Irrigation)

www.youtube.com/watch?v=WeFbSIKJ27Y&list=PLl1LTg56W3qHCx0wzoVo6iq9FnmLxttWh&index=13
(In conversation with Mr. Madhusudan Adhikari, National Advisor, NRREP, Alternative Energy Promotion Centre)

www.youtube.com/watch?v=U3bGENb_9lA&index=14&list=PLl1LTg56W3qHCx0wzoVo6iq9FnmLxttWh
(In conversation with Mr. Hari Ram Koirala, Former Secretary, Ministry of Energy & Executive Director Nepal Water Supply Corporation)

www.youtube.com/watch?v=3tOFAjRsVf0
(In conversation with Prof. Dr. Amrit Man Nakarmi, Center for Energy Studies, Tribhuvan Universtity)

EDC's public advocacy

EDC 6th publication in The Himalayan Times was released on September 6th, 2015.

Nepal has a growing capacity for in-house manufacture of transformers

The long transportation of huge equipment from outside Nepal has pronounced risks and is time consuming.

Transformers are an essential part of power system, allowing large electrical loads to travel long distances and smaller loads to flow safely into our neighborhoods and homes. Like many utility assets in the post-deregulation era, however, transformers are aging and deteriorating. In many cases, utilities face 'asset walls', which appear when various equipments installed during high-load growth periods in previous decades simultaneously shows rapidly increasing failure rates.

The capital required to replace this vital infrastructure represents a substantial financial burden. Failure to replace old equipment represents several risks, primarily accelerating maintenance costs and increasing loss claims. Power transformers have long been a major underwriting concern. Failure of a single unit can result in widespread loss of service with considerable lost revenue as well as replacement and other collateral costs.

The Nepal Electricity Authority (NEA) has stopped installing new electricity lines to small and medium scale factories for the past couple of months citing shortage of transformers. After a long delay, NEA recently initiated procurement of transformers as its officials were hesitant to place fresh orders after the earlier procurement process fell into controversy. The process of procuring transformers and other auxiliary equipments including, meter boxes, was disrupted for 18 months due to the controversy. Investigations were launched after the previous supplier delivered substandard transformers. Further, investigation shows that the substandard quality of these transformers has created complex problems to the extent that the whole unit requires a replacement. The long transportation of huge equipment from outside Nepal has pronounced risks and is time consuming.

NEA provides transformers to industries requiring power up to 50 kVA. Firms that need power higher than 50 kVA have to manage transformers on their own. At present, the state-owned power monopoly has only used transformers in stock. At present, majority of transformer are imported, however there is a growing in-house manufacturing capacity in Nepal as well. Home grown private companies are providing good quality services and have expanded its reach to sectors like micro hydro and hotel industry.

Provided there be a facility for a detailed test (type test) for transformer in the country, which is apparently not available in Nepal, the issues faced by relying on foreign companies would be drastically reduced. Observable analysis will help to make appropriate decisions timely. Likewise, the Nepali companies would also have healthy competition in the market, because conducting Type-test inside the country would reduce cost for transportation and damage risk. It would also be convenient to test all the new transformers as the validity period expires after five years.

Since transformers play a crucial role in entire power system value chain, NEA and other related government agencies should support and protect Nepalis transformer manufactures. In this context, the government should impose import of transformers from third country, and facilitate production of transformer in the country. The government should also establish type-test and routine-test laboratories to maintain quality of transformers in Nepal itself. This will lessen the hassles that the manufacturers have to bear while taking the transformer to other countries for type-test. To establish these facilities NEA and Nepal Bureau of Standards should play a vital role.

(This article is derived from Himalayan Times Perspective published on August 6th, 2015. Post availabe at: *epaper.thehimalayantimes.com/epaperpdf/692015/692015-md-hr-22.pdf*).

EDC 7th publication in The Himalayan Times was released on October 4th, 2015.

Impact of climate change on energy sector

Nepal cannot afford to delay diversifying its energy portfolio

Both demand and supply should be taken into account when analyzing the impact of climate change particularly on the energy sector. The electricity demand of buyers should be balanced on real-time basis. Climate change affects weather; it will affect consumer demand for electricity, which, in turn, will shape energy supply.

Major weather events are directly related to power disruptions and outages, with damage to utility and customer equipment alike, in addition to economic opportunity costs. Low temperatures can increase icing on overhead power lines and nearby trees. High temperatures cause metal to expand, increasing power-line sag. In the global scenario what is seen is that higher temperatures result in decreased efficiency in combustion turbines that are primarily used to generate electricity.

Nepal is considered one of the 15 countries which is the most vulnerable to the impact of climate change. Hydroelectric plants are highly dependent on predictable runoff patterns. Therefore, increase in climate variability brings change in the frequency and intensity of flooding and droughts affecting the hydroelectric sector. So flood frequency analysis, run off patterns must be studied in the initial stage of the project. Recent events raise serious questions for the country whose economy and energy policy is mainly dependent on hydropower. So to resolve such problems care and attention has to be taken in several things.

3.bp.blogspot.com

The modern plants, many constructed in just the last few years, have been unable to withstand disasters that are not the worst Nepal has been expecting. In coming days new methods and techniques are to be given high priority. Adequate attention to the location of the sites where these plants are being built and factoring in vulnerabilities must be done. The change in landscapes and eco-systems and calamities like landslides and earthquakes is putting our hydro projects at greater risks. As mitigation measure areas prone to landslides are afforested. It is clear that Nepal cannot afford to delay diversifying its energy portfolio and the process must involve devolution of its energy production, distribution to community and municipal levels.

A perennial issue in the energy sector concerns the true cost of electricity. This includes direct and indirect subsidies, and environmental externalities, distorted prices. When true costs are not accurately reflected in price, production, consumption is inefficient. The government should focus more attention on subsidizing the development of clean energy sources, along with research and education in such areas as energy efficiency and 'smart grid' applications. Federal regulators have promoted investment in and modernization of the high-voltage transmission grid, in part to accommodate power generation from renewable resources.

Demand-side policies for the sector are focused on reducing energy load through end-use efficiency (load reduction) as well as shifting load to off-peak periods for more efficient utilization of power plant capacity (thus avoiding or postponing the need for extra capacity to meet peak demand and associated capital and operating costs).

(This article is derived from Himalayan Times Perspective published on October 4th, 2015. Post availabe at: ***thehimalayantimes.com/business/impact-of-climate-change-on-energy-sector/***).

Announcement from TSN Energy (an EDC member organization)

MOU has been signed between TSN Energy and Sino Amigo Corporation, China on 24th August 2015.

TSN energy Pvt. Ltd, Subsidiary of TSN Corporation, Nepal and Sino-Amigo Corporation, China has reached the Memorandum of Understudying (MOU) to implement the business operations in Nepal. On behalf of TSN Corporation, Ms. Riya Thapaliya- Corporate communications and Mr. Pan -Vice President of Sino-Amigo Corporation, have signed on MOU dated on the 24 August 2015.

TSN Energy Pvt. Ltd, having the business interest in Energy & Power, Petrochemicals & Industrial Technology Transfer operating since 2010 in Nepal and Sino-Amigo Corporation, China having the global business reach almost all continent as the manufacturer and exporter of switchgear panels, circuit breakers, power transformers, power distribution systems, conductors & ring main unit manual. TSN will be representing as the official business partner for Nepal in order to develop/improve its supply base for power and electricity products, power distribution systems, switchgear panels, circuit breakers, power transformers.

The MOU will be valid for next 3 consecutive years with the possibility of extension.

"We are fully hopeful that China's technology to Nepal in field of power distribution will improve the quality of energy supply –chain which Nepal has been facing the energy shortfall since long. There should be new power projects developed in great sense to mitigate this current demand, Sino- Amigo solution will be best option for the growth of excellence in business venture too" says Riya Thapaliya, Corporate Communication Officer of TSN Corporation. At the same time, The Vice-president Mr. Pan added that "Our company will be fully devoted to maintain the global standard of power solution, service and quality will be no compromise at all. We will be more than happy to be a part to its solution through the effective distribution of power supply in Nepal as the emerging market."

EDC Facebook friends over five thousand

EDC has been successful in getting over five thousand friends in facebook for instant sharing of council's updates, and shall continue adding more individuals and organizations of energy sector.

You can follow us at our facebook page: ***www.facebook.com/edcnepal.org***

Media Coverage

Is Pancheshwar multipurpose project heading in the right direction?

By Sujata Awale

"PMP is a highly economically viable project which can create a big difference in terms of electricity production, water issues, investment scenario and psychological effect," said Bishal Thapa, Vice Chairman of the Energy Development Council. However, he pointed out, "The project has been talked about since the last two decades but it has not gone smoothly. For the smooth run of the project, political space and backing for implementation is a must. Both countries political leaders should acknowledge this fact about the benefits and put this project on high priority."

Stating that the formation of PDA with a full committee is a good sign, Thapa further said, "Formation of the authority is not the end point for development of the project. From past experience, we have realised that those heading the project had no voice." He stressed that the head of the authority should have the capability to communicate clearly and strategically, be more proactive than passive and reactive.

According to him, Nepal should learn from the past and not repeat the same mistakes.

(This article is derived from The Himalayan Times published on September 13th 2015 and the full article is available at: ***thehimalayantimes.com/nepal/is-pancheshowri-mulitpurpose-project-heading-in-the-right-direction/***)

Guest Corner

The powers that be

By Navin Singh Khadka, BBC journalist

If Nepal does not focus on generating hydroelectricity for energy security even after the ongoing fuel crisis, it never will.

All these years, Nepali leaders across political parties have been arguing that there can be no development works without first completing the political process. If the ongoing blockade at the border is troubling them at all, they must have begun to realize how wrong they were. Countries across the globe require development works to go hand in hand with the political processes; what happens if they do not is something Nepal has the latest on offer.

This article, however, is neither a commentary on the ongoing Tarai protests nor a suggestion that Kathmandu could leverage energy security to ignore the demands of the protesters. The earthquake-disrupted trading routes between Nepal and China are equally good examples of what happens when a nation becomes dependent. These ground realities belie the values of globalization.

Bhutan's ambitions

Meanwhile, another country in the region has demonstrated how a state can take the initiative to reduce dependency and earn international accolades at the same time. Bhutan is aiming to become a world leader in the use of electric vehicles. It has been a year since the Dragon kingdom announced the ambitious goal and about 50 electric vehicles are already plying on its roads. Nearly two dozen more have been ordered.

"Electricity is like oil for us and is the most abundant resource," Bhutanese Prime Minister Tshering Tobgay told the Reuters. "My target for Bhutan is a 70 percent reduction in fossil fuel imports by 2020."

Tall talks? It might have sounded so even when Bhutan talked about exporting hydropower to India and becoming rich. Over the years, it has done what it said and has now raised its game much higher: aspiring to be a world leader in using electric vehicles.

Thimpu did all of this while Nepali leaders just kept selling the dream that the country would become rich by exporting power to India. In reality, the country is actually importing power from its southern neighbor and the load shedding would worsen if it were to not do so.

Politics and development

The fundamental flaw on the part of Nepal has been to see hydropower only as an export product. Water experts have long argued that the electricity which can be produced from the country's massive water resources should first be recognized as a raw material to fuel the country's economy. This would not just include supplying electricity to households and manufacturing industries but also powering the transport industry, agricultural cultivation, and almost every economic and productive activity.

There have been some gimmicks to that end ranging from listing national pride projects to establishing an autonomous body to fast track infrastructure projects, including hydropower plants. Agreements have been signed with foreign companies for the development of lucrative projects like Upper Karnali, Arun III and West Seti. But there has barely been any follow-up to these deals and their updates remain elusive.

Behind all this instances of non-performances are a combination of factors. But the leading cause has been the school of thought that development works can wait until politics is sorted out. Several international development workers have shared with this scribe that all recent Nepali prime ministers told them that development works were simply not their priority at the moment. In an interview I did for the BBC few years ago, a noted development expert and geographer Pitamber Sharma said that he resigned as vice-chairman of the National Planning Commission because the politicians who appointed him simply did not have development on their agenda.

Take one recent example. Amid all that fanfare with slogans like 'build back better' the government announced the post-quake reconstruction program and the donors have already pledged four billion dollars in foreign aid. Yet, even after being shaken by so many aftershocks, the country is yet to bring the Reconstruction Authority into action.

The argument by politicians, once again, is that they were caught up in writing and promulgating the constitution. Now that both the tasks have been completed, has reconstruction received any attention? The answer is a big no.

History has shown that every political turning point for Nepal has marked the beginning of another phase of uncertainty. And that has held development works hostage throughout. Furthermore, as in the past, even as the 'ultimate' political process—has 'ended' it has already given way to another uneasy episode of politics.

Note to self

If there is any lesson is to be learnt from this episode, it is that hydropower development should be the topmost priority now. Once that is achieved, most of the other dependencies will just go away. Turning towards the northern neighbor, as some people to be suggesting, will not provide a long-term solution—although it would be good to have multiple trade routes.

Despite much hope that supplies-laden lorries will descend from China into Nepal via the Rasuwagadi and Tatopani customs points, China Southern Airline has become the first international airline to suspend its flight to Kathmandu citing lack of refueling facility at the Tribhuvan International Airport in the wake of unofficial blockade by India. Even if China may be willing to help all out with the supplies Nepal needs, one should not forget that the trucks and lorries will have to come through Tibet, an extremely sensitive area for Beijing and the place the western world has its eyes well set on. Any small incident there, and the entire area gets closed.

After the April earthquake, climbers have already come back to the Nepali side of the Everest while China has yet to reopen the north climbing route. The lofty talks of becoming a bridge between the world's two fastest emerging economies—China and India—can, therefore, continue. But what the country needs to do on war footing now is to plug itself to the hydropower resource it already has. Only such self-dependence can shield the country from the kind of shock and pain it is currently facing.

(The article is derived from: ***kathmandupost.ekantipur.com/news/2015-10-02/the-powers-that-be.html*** published on October 2nd, 2015)

Welcoming new EDC members

Rara Hydropower Development Company P. Ltd. is a company established in 2008 with primary objective of developing small hydro power projects as Independent Power Producer (IPP) on commercial basis. Currently, the company is involved in Upper Parajuli Khola Hydro Power Project; license 2.15 MW, Dailekh district. The project is under currently under con struction with lending Power Purchase agreement with the NEA signed, Generation License from the Ministry of Energy obtained and lending agency identified at 70% loan / 30% equity.

List of EDC members

S. No.	Name of the Organization	Organization logo
1.	Nepal Electricity Authority	
2.	Alternative Energy Promotion Center	
3.	Chilime Hydropower Company Ltd.	
4.	Madhya Bhotekoshi Jalvidyut Company Ltd.	
5.	Rasuwagadhi Hydropower Company Ltd.	
6.	Sanjen Jalavidhyut Co. Ltd.	

S. No.	Name of the Organization	Organization logo
7.	Butwal Power Company Ltd.	
8.	Hydroelecticity Investment and Development Company Ltd.	
9.	IDS Energy Pvt. Ltd.	
10.	Arun Valley Hydropower Development Co. Ltd	
11.	Dantakali Hydropower Pvt. Ltd.	
12.	Reliable Hydropower Pvt. Ltd.	
13.	Himalayan Infrastructure Fund	
14.	Sanvi Energy Pvt. Ltd.	
15.	Dibyashwari Hydropower Ltd.	
16.	Shiva Shree Hydropower Co. Ltd	
17.	Chhyandi Hydropower Ltd	
18.	Saral Urja Nepal	
19.	Rara Hydropower Development Co. P. Ltd	

S. No	Name of the Organization	Organization logo
20.	Wind Power Nepal	
21.	Gham Power Pvt. Ltd.	
22.	Lotus Energy Pvt. Ltd.	
23.	Sun Farmer Nepal Pvt. Ltd	

S. No.	Name of the Organization	Organization logo
24.	CEDB Hydro Fund	
25.	Nabil Bank Limited	
26.	Clean Energy Development Bank	
27.	Global IME Bank Limited	
28.	Prime Commercial Bank Ltd.	
29.	Century Bank Limited	

S. No.	Name of the Organization	Organization logo
30.	Transweld Pvt. Ltd.	
31.	TSN Energy Pvt. Ltd.	
32.	Waiba Infratech Pvt. Ltd.	
33.	North Hydro & Engineering Pvt. Ltd	
34.	Nepal Hydro & Electric Ltd.	

S.No.	Name of the Organization	Organization logo
35.	Nepal Hydropower Association	
36.	National Association of Community Electricity Users Nepal	

ENERGY DEVELOPMENT COUNCIL

Energy Development Council

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