HYDROPOWER DEVELOPMENT AND CHALLENGES: ROLE OF THE JUDICIARY

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Rivers: Perennial Sources of Energy
The Country: The Political Dimension

Landlocked

Diverse Physical Characteristics

Plains, Siwalik, Middle Mountains, High Mountains and High Himalayas
Status on Hydropower Development

- Potential Hydropower Capacity: 83000 MW
- Techno-economically Feasible: 43000 MW
- Total Installed Capacity: 689 MW
- Per capita consumption: 106 kWh
- Import from India: max 236 MW min 180 MW
- Available energy at present: 716 MW
- Total peak demand in maximum: 1228 MW
- Total deficit in peak hour: 514 MW
- Projected Demand for 2027 in High growth Scenario: less than 7000 MW
PROSPECTS FOR HYDROPOWER DEVELOPMENT

- Energy is the power that drives the country’s economy.
- Nepal has a huge hydropower potential.
- The perennial nature of rivers and the steep gradient topography provide ideal conditions for the development of hydropower.
- Only about 40% of Nepal's population has access to electricity. Electricity demand has been increasing in Nepal by about 7-9% per year.
The present per capita consumption of electricity is only 106 kW/h, which is the lowest one in the South Asian context.

There is a power deficit in the country resulting in daily load shedding (the situation improving in the wet season and becoming bad in the dry season).

Power shortage due to supply-deficit is likely to continue till at least 2016-17.

Most power plants are run-of-river type. Seasonal variation stresses the need for storage projects. There is only one seasonal storage project in the system.
Climate response in the Hydropower Sector

- Nepal is committed to sustainable development, in meeting the needs of the present without compromising the welfare of the future generation;
- Micro-hydropower has the potential to fulfill a large amount of rural demand for energy;
- The development of micro and small hydro is already in line with Nepal’s development priorities;
- It is best used when the larger part is consumed on the spot without the intermediary of electricity generation and transmission.
Challenges for Hydropower Development

- Institutional reform including the restructuring of NEA remained a big challenge;
- Political commitment for reform in the sector is still dubious;
- Needs huge investment, the domestic investment is not sufficient;
- Numerous technical and non-technical risks and barriers do exist while developing hydropower;
- Legal and regulatory regime is yet to be improved according to the existing policy declarations.
Opportunities for Hydropower development

- India has a huge energy demand;
- Nepal’s hydropower potential is largely undeveloped, if purposeful development is made it will be a major producer and exporter;
- It improves international trade balance, job creation and ultimately establish the reliable electrical system;
- It will develop successful trading within the SAARC region;
- Bilateral Power Trade Agreement with India and Framework Agreement on Energy within the SAARC created an environment for regional trade.
Government Policy Directives

• The Government is pursuing hydropower development in Nepal from three different approaches:

  • Firstly, to develop small/micro hydro projects to meet the local demands in remote and isolated regions;
  • Secondly, to develop medium sized power projects to meet the national demand; and
  • Thirdly, large-scale multipurpose projects to meet the regional demand for food, energy and flood control
NEW Policy Initiatives

- Develop cost-effective small and medium hydropower to meet domestic demand at an affordable price.
- Encourage private sector investment in hydropower development and power distribution.
- Provide increased government support to accelerate rural electrification.
- Integrate improved social and environmental mechanisms into hydropower development.
- Encourage power based industries and transportation systems to create markets for large hydropower generation plants.
INSTITUTIONAL REFORMS

- Facilitate the flow of funds from the domestic financial sector to the hydropower sub-sector
- Strengthen present institutional and physical infrastructure for power export.
- Promote hydropower research and development
- Restructure the power utility company
- Establish Power Trading Company
Hydropower in a commercial sense

- Hydro industry in Nepal is in a state of transition;
- It is immature in a commercial sense though it is a mature technology;
- Its development and operation is regarded as public services in general;
- This understanding made every deals disputable;
- No single bilateral agreements or decisions were out of the court and executed smoothly in the past;
- In most occasion development efforts are confined.
Enormity of the Problem

- Power generation is adversely effected by inadequate transmission capacity;
- It is not practically matching to the generation planning and load requirement;
- Power evacuation is turning to be a bigger problem than power generation;
- Some project is running below capacity owning to transmission bottleneck;
- Without serious and timely reforms in transmission sector, the country runs the risk of adverse spiral effect on rest of the power sector.
Role of the Judiciary

- The hydroelectricity was not recognized as a trading commodity;
- Hydropower development and operation is largely recognized as public service;
- The Constitutional provisions were interpreted very conservatively and remained a very torment provisions;
- Rt. Hon’ble Chief Justice Kalyan Shrestha in his reasoned deliberation in the Case of West Seti Hydropower Project recognized hydroelectricity as a tradable commodity;
- This remains historic decision towards reform and it allows to identify other current issues and challenges to develop suitable solutions other than for legal quarrels to continue.
THANK YOU