

# Dams in NE: crux of the problem

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There are over 150 dams proposed to be built in Arunachal Pradesh and they are all 'four-hour power generation' projects, i.e., these projects, mostly through private developers, will operate only for four or five hours in the evening/night during the peak load power demand of maximum tariff to maximize profit in the lean months. Because of this 'greed', practically no water shall be released for 20 hours a day or so from the dams and the downstream ecology of the rivers shall be totally shattered, the livelihood and lifestyle of the riparian people destroyed and huge reservoirs are created literally on the 'heads' of the riparian people. This is a far cry from any sustainable development because we snatch away from the people what they have – a flowing river in the winter that gives them livelihood and a lifestyle, by shutting off the river to a trickle for 20 hours or so when the project is off grid.

The country stands by the mantra of all-round development, but it must be without the destruction of ecology and environment. If development creates cataclysmic effects like in Uttarakhand where such four-hour power generation projects created havoc in June 2013 alongwith other aggravating factors. A Supreme Court panel has recommended scrapping of 23 of the 24 dams in Uttarakhand. Whether these projects will finally be scrapped or not is a different matter, but the signal from the panel is loud and clear – these dams are anti-environment and anti-people. Such catastrophes are a distinct possibility in the proposed Arunachal dams including the Lower Subansiri Hydro-electric

project (LSHEP); but if and when it occurs, it will be in a much greater dimension because of bigger dams and reservoirs. The Technical Expert Committee (TEC) constituted by the Planning Commission expressed concern at the possibility of panic opening of the 1360 million cumec (cubic meter of water per second) LSHEP reservoir which as per the Committee's words, "may be a very remote probability but a possibility, and risk exists."

Apart from the risk of panic opening of the huge reservoir, in the chapter 'Conclusion', the Technical Expert Committee of Thatte and Reddy has commented about the structural safety of LSHEP dam itself.

When the Government's own Technical Expert Committee (TEC) is forced to give comments about the competency of the NHPC Ltd, regarding reservoir management and structural safety of the dam, one cannot ignore such possible seeds of major catastrophes. These warnings are true of all proposed dams of Arunachal. These technical flaws are corroborated by the events of Uttarakhand in June 2013, where most of the hydro power projects were damaged because of poor selection of dam sites, powerhouses and other technical deficiencies. The NHPC opened the sluices of the 280-MW Dhauligang Hydro Electric Project, a few km upstream of the confluence with the Mahakali river, on the night of June 16, 2013 creating the worst ever floods in the

whole basin and the Kedarnath areas, compounded with other aggravating factors, resulting in unprecedented loss of lives and properties. The panic release of the reservoir by the NEEPCO from the Ranganadi Hydro Electric Project, in a sub-basin of Subansiri, on June 14, 2008 created unprecedented floods, death and destruction which event was referred to by the TEC as an example of panic release of reservoir.

The death of the 24 students in excursion due to the sudden release of water from the 128-MW Largi Hydro Electric Project in Beas is very

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fresh in everyone's memory. These tragedies will keep on occurring because the large reservoir of the so-called run-of-the-river (RoR) dams get released often due to panic "dam safety first mode" or due to gross negligence, or incompetence.

Our development mode must be sustainable as per the Government's vision and a developed India needs power 24x7 (not just for four hours). By converting the 'four-hour pseudo RoR generation dams' as proposed in Arunachal Pradesh including the

LSHEP to true RoR dams-cum-weirs, generating power continuously, the ecology of the rivers and the livelihood of the riparian people can be saved. This way, the height of the dam-cum-weirs will reduce greatly. Reservoirs will be smaller. The cost of the projects will come down drastically. One turbine running 24 hours a day is equivalent to six turbines running for four hours in the peak tariff periods in lean months. After the lean months, the number of turbines can run continuously as per river flow. So the generation of power will be more or less the same, but it will be a continuous 24x7 generation.

The peak load shortage of the country has come down to less than 3% in 2013-14 as per records available. The lack of optimum transmission connectivity between various parts of the country is the problem now. The western region has power surplus of 14% while the South has 2% shortage in peak load period. Also, according to the Central Electrical Authority (CEA), the plant load factor of India's thermal

plants is a dismal 66.5% for 2013-14 and needs urgent upgradation of to meet the shortfall.

In this scenario, any justification that hydro power projects, generating power in the four-five hours of peak load period only in the lean months to augment the peak load power shortage, at the cost of total destruction of the ecology surrounding the dams, does not cut any ice. These hydro power projects operate in the peak load period only because of the higher tariff rate for the peak load period.

The NHPC Ltd, the developer of the LSHEP proposes to release six cumec of water only, i.e., no water for 20 hours when the project will be 'off grid', through the dam. Now after eight years of start of the work in 2005, under pressure, the NHPC has started trumpeting that it will keep one turbine running and release 225-250 cumec of water, but will retain the high dam and the huge reservoir. Also, what is not said is that the water will be released from the dam 500 metre, downstream from the power house, thus killing the river for 500 metre. Also, who can guarantee a turbine will run continuously for say 100 years? Any shutdown, for multitude of reasons, will stop the flow to the river as water will get accumulated in the huge reservoir only and flow to the river will stop which will annihilate the Gangetic dolphins, India's National Aquatic Animal, alongwith over 200 varieties of fishes, rare turtles and other biota.

Many people in Assam and Arunachal have now realized that if all these proposed dams are commissioned as per the present RoR schemes, people will be able to cross great rivers like the Lohit, Debang, Siang and Subansiri in the day time on foot! Also, the Brahmaputra in the Dibru-Saikhowa National Park! At night, a frightening transformation will take place, when hundreds of turbines will release water creating a tidal wave of flood that will sweep away, every night, wildlife and humans alike.

Let there be a paradigm shift in approach by the Government as well as the power developers to convert the LSHEP and other proposed dams in Arunachal Pradesh to 24x7 dam-cum-weirs projects.

