

India's XIIth Plan (2011/'12 – 2016/'17) on Capacity Addition - 88,500 Megawatt -

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India's Installed Capacity

India's XIIth Five Year Plan¹ (2011/'12 – 2016/'17) is currently ongoing. Depicted below, as of March 2013, is India's total installed capacity of 223,000 MW of which the major component of 130,000 MW (58%) is provided by coal/lignite fired thermal stations. India has vast quantities of Lignite in the central/eastern region and hence her super thermal power plants are all based at the mouth of these mines. Lignite has high ash content and thus environmentally unfriendly. Hydropower at 39,000 MW is the next major component which has dropped to a mere 18% from the once ideal 40%. India does have substantial hydropower potential of about 164,000 MW² mostly in the northern Himalayan ranges. Besides the already commissioned Tehri dam, a series of medium sized hydro plants are already under-construction in the higher reaches of the Ganges river. Plans are afoot to also develop large ones on the Brahmaputra in the north-eastern States. Renewable energy sources claim the third position with 27,000 MW (12%) and the fourth by gas at 20,000 MW (9%). Though nuclear with 4,800 MW (2%) is at the lowly fifth, this is the category that India is making huge investment in the coming decades.

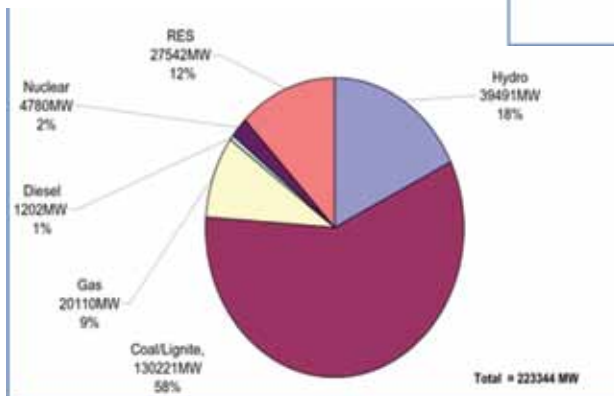


Figure 1: All India Installed Generating Capacity, End of 1st Year of 12th Plan.

Source: *Growth of Electricity Sector in India from 1947-2013*, Central Electricity Authority, Ministry of Power, New Delhi, July 2013

Capacity Addition during India's XIIth Five Year Plan

India's capacity addition during her XIIth Plan period is indicated below. India envisages adding an ambitious 88,500 MW of which 72,300 MW (81.7%)

is thermal, 10,900 MW (12.3%) hydro and 5,300 MW (6.0%) nuclear. In that capacity addition, the lion's share of 46,800 MW (52.8%) is allotted to the private sector. The Centre and the States are allotted a much smaller share of 26,200 MW (29.6%) and 15,500 MW (17.5%) respectively. This indicates that the Government of India has done a complete about-turn in the sector dominated for the last six decades by public sector undertakings. This is attributed to India's 2003 Electricity Act and the due diligence applied by the Central and State Electricity Regulatory Commissions.

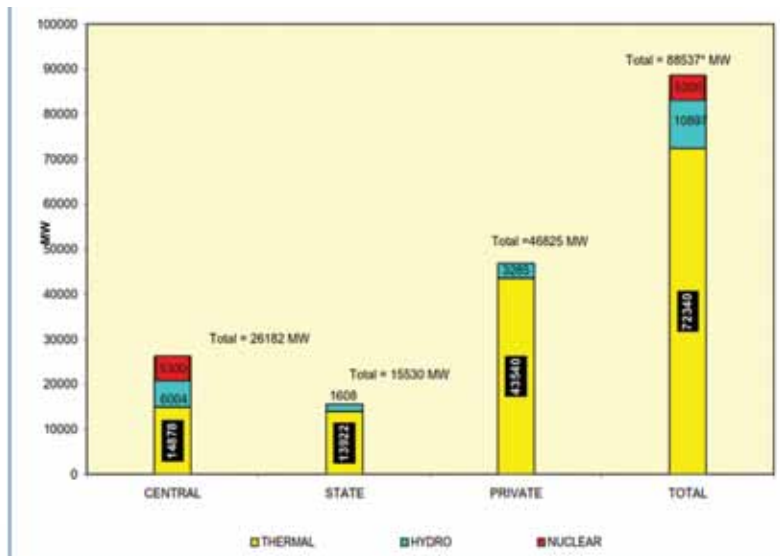


Figure 2: Capacity Addition Programme 12th Plan

Source: *Growth of Electricity Sector in India from 1947-2013*, Central Electricity Authority, Ministry of Power, New Delhi, July 2013

Though the private sector has been given the lion's share in capacity addition, 44,000 MW (93%) of that allocation is for thermal with a tiny 3,300 MW (7%) for hydropower. The private sector's tiny hydro allocation could mean either the IPPs have not yet developed an appetite for the 'hydro/white-gold' or more probable the government is yet not ready to let loose India's 'insatiable market forces' to forage in the still unquiet tribal inhabited northern regions. The role of the giant National Thermal Power Corporation (NTPC) has been watered down. This may not as yet be the case with National Hydro Power Corporation (NHPC). But the message, downsizing of the State's role in power sector, has been definitely aired. Another noteworthy point is the addition of 5,300 MW of nuclear power in five years when it took fifty years of careful nurturing to develop the present tiny capacity of 4,800 MW. Despite the Fukushima/Japan nuclear

plant accident of March 2011, India has an ambitious plan³ to install 63,000 MW of nuclear power plants by 2032. These are expected to be installed mostly in the coal/hydro deficient south. To achieve that target, the Indo-US Nuclear Declaration was signed in 2005 permitting the Nuclear Supply Group cartel in 2008 to do business with India. Agreements have already been signed⁴ with various companies (Avera/France, Westinghouse Electric Company/USA, General Electric Hitachi/USA, Atomstroexport/Russia etc.) to set up nuclear power plants in various parts of India.

Water, Food and Energy or Almighty Energy Alone?

So with India crunching around 100,000 MW every five year, where exactly does Nepal's '42,000 MW of economically exploitable hydropower' fit in the picture? Nepal's recently unveiled 2072/'73 budget states that 'priority would be given to the identification, studies and development of multipurpose and storage hydropower projects.' Among such projects are named: Karnali Chisapani (10,800 MW), Naumure (245 MW), Sunkoshi (1,110 MW), Upper Arun (335 MW), Andhi Khola (303 MW) and Uttar Ganga (300 MW) projects. The budget also named Tamakoshi III (800 MW) and the Marsyangdi (400 MW) for export purposes. It has also been reported⁵ that half of the one billion US\$ credit to Nepal, promised during Prime Minister Narendra Modi's August 2014 visit, has already been earmarked for the 1,200 MW Budhi Gandaki storage project. Are these truly Nepal's priority-need projects? Isn't Nepal, by default, attempting very hard to provide valuable stored water to India⁶ by implementing such large storage and multipurpose projects? Wouldn't these large storage projects submerge vast tracts of fertile valleys and villages of Nepal for the benefit of people across the border? Shouldn't Nepal first give priority to projects that will cater to her own domestic water and energy

needs? There is a dire need for serious vetting and soul searching in a transparent manner on how Nepal should move forward. No doubt, water, food and energy go hand in hand. But the tendency to believe in energy and almighty energy alone, particularly after dispensing with the Water Resources Ministry, has unfortunately become Nepal's 'gyatri mantra'!

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Foot Notes

- 1 Central Electricity Authority, Ministry of Power, New Delhi, July 2013
- 2 Ibid
- 3 See www.npcil.nic.in.
- 4 India has awarded Areva/France the development of the 9,900 MW (6x1,650 MW) nuclear power plant at Jaitapur/Maharashtra, www.npcil.nic.in.
- 5 Kathmandu Post/Money, Everybody Talking about Budhi Gandaki, January 8, 2015; Himalayan Times, Project to Change Livelihood, July 19, 2015
- 6 Nepal's next-door States of UP (199 million), Bihar (104 million) and West Bengal (91 million) together have a staggering population of 394 million (2011 census). Will the Chief Ministers of these three States have energy or water uppermost in their minds? Wouldn't water to grow more food for the teeming hungry millions be their first priority? This, unfortunately, is not the case with Nepal's policy makers!