

India's economic liberalization plunges electric power industry into darkness

by Ramtanu Maitra and Susan Maitra

While the government of Prime Minister P.V. Narasimha Rao is busy fending off the onslaught unleashed by the opposition in Parliament, accusing the government of protecting the culprits behind a multimillion-dollar securities scam, there is increasing awareness, mostly outside of the government, that the much-touted economic reforms which have made India a salacious market for the cash-hungry money-players like George Soros, may quietly sink into a dark oblivion necessitated by the growing shortage of electrical power.

The facts and figures dribbling out through various articles in the press indicate that there exists a huge discrepancy between what the government is promising to be the total installed power generation capacity by the end of the Eighth Plan (1996-97), and what the capacity will actually be. The country's power sector is in a state of paralysis. While the government glibly talks about private participation in power generation, new projects are not being taken up, the state electricity boards remain bankrupted with little future ahead of them, and power equipment companies are sitting with no orders to fill.

Earlier demand projections showed that by the end of the Eighth Plan, an additional 38,000 megawatts of electrical power capacity would be required to meet the shortfall. While the Department of Power has claimed that it would raise internal resources for 28,000 MW, the government would like the remaining 10,000 MW of capacity to be installed by the private sector—domestic and foreign. It was later estimated that internal investments in power generation would not exceed 16,000 MW and that the private sector contribution would be less than 7,000 MW. In other words, the shortfall will be close to 15,000 MW.

Another version was presented recently by the former chairman of the Central Electricity Authority, S.N. Roy, which suggests that the planners have now drastically pruned the *target* of additional installed capacity to only 20,000 MW during the Eighth Plan, which is even lower than the actual achievements in the Seventh Plan. Incredibly, this is being done at a time when the power shortage is growing and the industrial growth rate remains minuscule compared to what is required. If industry shows the prospect of a much faster growth rate, there is little doubt that the power shortage will keep it under control and the planners will once again prove the theory that demand is nothing more than what they choose

to supply. According to Roy, if in fact 20,000 MW of new capacity is added by the end of the Eighth Plan, the installed capacity may go up to 89,000 MW, which corresponds to a gross peak capability of about 53,000 MW at 60% availability. The system demand, on the other hand, Roy points out, as per projections of the Central Electricity Authority for 1996-97, is estimated at 80,000 MW, leading to a shortage of 27,000 MW, or 33% of the peak demand.

Reform or irrationality?

Among the buzzwords to be heard around the corridors of power, *privatization* and *foreign investment in the power sector* rank high. Whether the buzzing will bring a significant amount of investment into the power sector is a moot point, but what is evident, is that it could, and possibly will, kill off two important segments of India's power sector. First is the power equipment sector. The spate of privatization proposals has strangled the state electricity boards. Both private and foreign investors are tied up with foreign suppliers, as easier credit and hard currency repayments make this a more attractive proposition. At the same time, the government has drastically reduced tariffs on project machinery and is guaranteeing returns and rates based on a cost-plus basis. Under the circumstances, it would be a miracle if any investor chose to invest in the expansion of domestic power equipment capacity in the near future. Meanwhile, lacking fresh orders, the existing power equipment manufacturers will stagnate further and approach technological obsolescence at a rapid pace.

The second victim of the present path of "liberalization" is the nuclear industry. Since it is argued that liberalization is the panacea to solve India's foreign exchange problems and its technological backwardness, and that it will also provide a solid foundation to India's agro-industrial economy, one might expect the government to give a real boost to an industry in which India is already at par with the rest of the world technologically. Wrong—if the experience of the Indian nuclear industry is any indication, that is.

The Indian nuclear industry is more than 95% self-sufficient, and yet the nuclear power sector is slowly fading from the thoughts of policymakers as a means to solve India's massive shortage of electrical power. Instead, foreign companies, whose expertise lies in building coal-based power

stations, are being given sops to come to India. Of course, they will be importing equipment from abroad to build "their" plants, while the Indian nuclear industry sits around getting rusty. As former Atomic Energy Commission (AEC) Chairman M.R. Srinivasan said, unless timely new initiatives are taken, as we approach the year 2000, nuclear power may turn out to be a technology that promised much, but delivered little.

Cuts in the nuclear industry

It is important not only to note how little the nuclear industry has delivered—a fact which is openly touted by the anti-nuclear lobby—but why this is so. In the mid-1980s, when promises were made at the highest level to usher in a technologically advanced India by the year 2000, the Atomic Energy Commission had promised that 10,000 MW of nuclear-based electrical power would be made available to the power-starved nation. That promise would have situated nuclear power as a modest yet critical contributor to India's electrical power supply, about 10% of the total. Compared to this, France gets almost 75% of its electricity from nuclear power; even in the United States, where nuclear power has been pushed to the back burner by the environmentalists, nuclear still supplies almost 20% of total power. In Japan it is 26%.

But India's "ambitious" program was quickly choked off, and by 1991, the AEC had brought down the target to 5,000 MW by the year 2000. This was at a time when the gap between the daily requirement of power and the power made available to industry, agriculture, commercial facilities, and domestic households was widening rapidly, and even the capital city of Delhi was undergoing massive power cuts on a daily basis throughout the summer. The planners and mandarins in the Finance Ministry, acting as cost accountant *babus*, provided the justification for such scaling down of the program.

With the drumbeat of economic liberalization beginning in 1991-92, it was repeatedly stated that the success of such a reform process depends heavily on the smooth functioning of the infrastructure sectors, of which power is a major one. But words are apparently cheap. And now, as Dr. Srinivasan pointed out in an article in August 1993, the current pace of activities in the field of nuclear power plant construction indicates clearly that unless a massive injection of funds is given, "we may end up with a target of some 3,000 MW only" by the year 2000. As yet no such "massive injection of funds" appears to be forthcoming.

It is a national tragedy that almost four decades after the nuclear program had begun and after the Indian nuclear scientists and engineers had mastered all the nitty-gritty of this advanced technology, and pioneered the use of uranium-233 as fissile material, a gang of money-managers, under the pretext of economic reform, has been given the authority to kill off this vital industry.

Program under attack

Meanwhile, the stagnating and basically ignored nuclear technology of India has come under attack from abroad. Following an unscientific program broadcast by CBS in the United States, in which a gaggle of anti-nuclear mouthpieces accused India of running a shoddy nuclear power program, the guru of the environmentalist organizations, the WorldWatch Institute, based in Washington, D.C., has come out with a study titled "Empowering Development: The New Energy Equation." In India and other developing countries, WorldWatch states, nuclear power has fallen short of its promise to supply cheap electricity, just as it has elsewhere in the industrialized countries. The Indian program, along with the programs in Argentina and Brazil, has also been accused of being "over-budgeted, behind schedule, and plagued by technical problems." What is unfortunate, is that the WorldWatch study reads exactly like the excuses put forward by the Indian mandarins in order to justify the cut in budget allocations to the nuclear industry.

In addition to the CBS show and the WorldWatch study, the Indian media raised the alarm when in spring 1993 it was reported that the turbogenerator at the Narora Atomic Power Station was devastated by a fire. The concern for safety on the part of the Department of Atomic Energy (DAE) was questioned in major news dailies, in the same tones of the ax-grinding WorldWatch Institute.

In May 1994, it was reported that a huge slab of concrete, part of the inner-containment dome, weighing 130 tons, had come crashing down at Unit 1 of the Kaiga Atomic Power Station, a nuclear power project under construction. Although no one was killed in the accident, the DAE was put on the spot, and one anti-nuclear scribe asserted demonically, "Kaiga highlights the sinister possibility of the containment dome causing rather than containing a nuclear accident"—an absurd statement, obviously made to denigrate the design of the plant and generate fear.

What is evident from the recent developments is that the nuclear power program and nuclear industry in India have been targeted from inside and outside. The geopolitical reason for this is the fact that India has not signed the Nuclear Non-Proliferation Treaty (NPT) and remains, with China, the only developing nation that has mastered the entire nuclear fuel cycle.

More worrisome is the tendency toward national suicide evident in the Indian government's own policies. The fact is that on the pretext of "resource crunch," the nuclear program has been shunted aside since 1990. It is amazing that the program, which is the lifeline of India's future survival, is not only ignored by the government, but, in fact, is being choked of funds by the government itself. No foreign hand has been necessary. All this is being done when the people in India are facing daily power cuts and tension is developing among various productive sectors for lack of access to power.