

Report by Prayas Energy Group Shows a Huge Capacity of Thermal Power Plants with Environmental Clearances, and those in the Clearance Pipeline.

Prayas calls for Revamping the Clearance process, a Moratorium on New Clearances, and an Improved Coordination Between the Different Agencies Involved.

Massive thermal power capacity (about 200,000 MW) has been granted clearance by the Ministry of Environmental and Forests (MoEF), and another 500,000 MW is in the queue. This adds up to a capacity several times larger than the capacity addition required to meet projected demands even up to year 2032. It indicates a complete disconnect between the Government's actions in the power sector and the actual power needs of the country.

Strikingly, about half of this capacity is concentrated in only 30 districts. The social and environmental impact of projects that have already been cleared is in itself likely to be huge. There also appear to be serious lacunae in coordination among the various agencies involved in planning. With large areas of land being acquired for these projects, and water being allocated for these unnecessary plants, this may turn out to be a land and water grab story.

Prayas calls on the Government to revamp the environmental clearance procedures, to ensure coordination between various agencies, and to reassess the long-term demand for power and measures to meet this demand in an optimal manner, including energy efficiency as well as renewable energy. Till such time as these actions are taken, Prayas calls for a moratorium on granting new environmental clearances, and a reassessment of projects with serious consequences from among those already cleared.

In Detail

Data from the MoEF analysed by the Prayas Energy Group shows that 192,913 MW of coal and gas-based power plants have been accorded environmental clearances. Another 508,907 MW are at various stages in the clearance cycle, that is, they are either Awaiting Environmental Clearance, have Terms of Reference (TOR) Granted, or are Awaiting TOR. Since thermal power plants (TPPs) are rarely denied the environmental clearance. This means that 701,820 MW of thermal plants are in the queue. Coal-based plants account for an overwhelming 84% of these projects in the pipeline.

These proposed projects are more than six times the currently installed thermal capacity (of 113,000 MW) and three times the capacity addition that would be required to meet the projected electricity needs of 2032 (as per the high renewables-high efficiency scenario of Integrated Energy Policy of the Planning Commission).

Strikingly, many of the projects which are in the pipeline are geographically concentrated in a few areas. Only 30 districts (or 4.7% of the total 626 districts in India) have more than half of the proposed plants with their capacity adding up to about 380,000 MW. Several of these favoured districts are adjoining each other, and hence the actual concentration is even higher than that revealed by district-wise figures.

In 2009, the MoEF identified some areas in the country as Critically Polluted. A total capacity of 88,000 MW among the proposed projects is located within the same districts as eight of these critically polluted areas.

While the state and central sectors have a large share in existing TPPs (at 82%), the situation is quite the opposite for proposed plants. The private sector accounts for 73% of the projects in the pipeline. Only 10 private corporate groups are proposing projects worth 160,000 MW.

The coal projects have severe social and environmental impacts. Major pollutants from these plants include sulphur dioxide, mercury and ash. The MoEF has not mandated sulphur removal equipment except for a handful of plants. There are no ambient air quality standards for mercury, nor any limits on mercury emissions from power plants. The MoEF now requires 100% utilisation of coal ash within four years of plant commissioning, but the capacity to do so remains doubtful, and the monitoring weak. Meanwhile, ash disposal in ash-ponds or dumps continues to pose health hazard for local communities.

It is argued that most plants in the pipeline may never get clearance, as the MoEF has made coal linkage (or captive mine) as a prerequisite environmental clearance. The MoEF also requires projects to show water allocation and land availability before a project is cleared. This means that there is a virtual scramble for getting land and water by these projects in clearance pipeline adding up to a capacity of 500,000 MW.

Most of the capacity in the pipeline is coal-based, and a large proportion of it relies on domestic coal. There are indications that to meet the MoEF condition of showing the coal linkage, scarce domestic coal is allocated to too many plants, which spreads this resource thin, creating uncertainty for all. Some companies are also showing imported coal as the fuel source to circumvent the MoEF requirement. However, the use of imported coal in a plant located far away from the port is unlikely to materialise due to the high cost of imported coal.

Thus, scarce land and water is being allocated to projects that are not required or may not come up at all. Possibly, the situation with respect to coal allocation is also similar. Thus, power plants may become a means of grabbing scarce resources.

The coal plants which consume about 4 litres of water per kWh of generation need massive quantities of water, a resource crucial for local populations. A river basin may have enough water, but may be under immense stress in the area where the TPP is located. The geographical concentration of plants can further aggravate the problem. Moreover, the availability of water varies through the year, and it may be particularly difficult to provide water to TPPs in the summer months. Most macro level water balances of river basins do not account for the needs of local communities or of the ecology. This report estimates that the consumptive water needs of the plants with Environmental Clearance Granted will themselves be close to 4.6 billion cubic meters per year. In these circumstances, several water conflicts appear to be in the making.

Crucially, land for TPPs is invariably acquired compulsorily by governments by using the Land Acquisition Act (LAA), which allows forcible acquisition for a 'public purpose'. Given that the thermal capacity in pipeline is far in excess of the national requirement, it is clear that many of these plants will not serve a public purpose. Hence, the use of the LAA to acquire land for such TPPs may not be justified. This is all the more unjust, as the current Land Acquisition Act has no provision for returning the land to the original owner, even when the project does not materialise.

With the delicensing of thermal power generation, it is now assumed that the market will weed out excess and inefficient capacity. However, key inputs like coal, gas, land and water

are allotted on the basis of non-market criteria, usually with huge concessions and subsidies. These inputs involve critical common property resources and have significant externalities. A market-based weeding out process will be littered with incomplete projects, financial investments locked in, stranded assets of transmission facilities, and extensive and unnecessarily displacement. The costs of such weeding out will be borne to a significant extent by the common people, the country and the environment, while project promoters will reap potentially huge profits. Thus, it would be a mistake to assume that the market will play the arbitrator. Instead, it would be important to step in with purposive and deliberate interventions.

The Prayas report therefore recommends a moratorium on any further environmental clearances to thermal plants. Further, it also recommends that from the 200,000 MW that have already been cleared, projects with very high social and environmental impacts, projects that do not have broad local acceptance, and projects leading to sub-optimal use of transmission, fuel, land and water, should be put on hold. It also calls for simultaneously initiating a fully transparent deliberative process to (a) completely revamp the environmental clearance procedures, so as to minimise social and environmental impacts of power projects, and mandate prior regional carrying capacity studies to decide on the extent of projects in an area, (b) ensure a coordinated approach of different agencies for optimising fuel, land and water allocations for different projects and (c) reassess the long term demand for power, and measures to meet this demand in an optimal manner, including energy efficiency as well as renewable energy, so as to improve energy security and minimise the social and environmental damage due to power sector development.

Prayas energy Group (www.prayas-pune.org/peg)

Thermal Power Plants on The Anvil: Implications And Need For Rationalisation

A report by Prayas Energy Group, Pune

28 September 2011 New Delhi 110003

The report presentation was followed by a Panel Discussion: The Panel was Chaired by Shri T. L. Sankar, Energy Expert and former Principle ASCI and included Shri Ajay Shankar, former Secretary Department of Industrial Policy & Promotion, and Ms Kanchi Kohli, environmental policy analyst and member of Kalpavriksh Environmental Action Group.

Report Available at <http://www.prayas-pune.org/peg/publications/item/164-thermal-power-plants-on-the-anvil-implications-and-need-for-rationalisation.html>