



A. ENVIRONMENT CLEARANCE

■ The installed capacity of thermal power plants (TPPs) in India as of August 2011 stands at 118,409 megawatt (MW) (see Table 1: *Installed capacity of TPPs*). Out of this, coal-based thermal power capacity forms the major chunk – 84 per cent. Gas-based thermal capacity is 15 per cent and diesel is one per cent.

Table 1: Installed capacity of TPPs*

	Installed capacity (in MW)
Coal	99503
Gas	17706
Diesel	1200
Total	118409

*As of August 2011

■ Over the past five years or in the 11th five year plan (FYP) period (till August 2011), 267 TPPs of about 2.1 lakh MW capacity have been granted environment clearance (EC) by the Union Ministry of Environment and Forests (MoEF) (see Table 2: *Year-wise environment clearance given to TPPs during the 11th FYP*). Each in 2007 and in 2010 over 50,000 MW of TPPs were cleared while till August 2011, about 30,000 MW of TPP capacity has been granted EC already. The capacity granted clearance in the 11th FYP alone is 91,500 MW more than the present installed capacity of all TPPs in the country.

Table 2: Year-wise environment clearance given to TPPs during the 11th FYP

	2007	2008	2009	2010	Till Aug 2011	Total
Capacity (in MW)	55724	35558	35176	53598	29864	209919

■ Out of the 267 TPPs granted clearance in the 11th FYP, 200 are coal-based of 1.76 lakh MW installed capacity (see Table 3: *Environment clearance granted to TPPs*). This is almost double the capacity of TPPs installed in the country presently.

■ The maximum thermal power capacity granted EC in the country is in Andhra Pradesh – 17 per cent. This is followed by Maharashtra – 15 per cent, Tamil Nadu – 11 per cent and Chhattisgarh and Gujarat – eight per cent each.

■ At the end of the 10th FYP, the installed capacity of the TPPs in the country was 86,015 MW. The ECs granted to TPPs in the last five years is, therefore, about two and a half times the capacity of TPPs the country has installed in 60 years after independence.

■ During the 10th FYP about 12,114 MW capacity TPPs were installed. So far, during the 11th FYP, only 32,394 MW capacity TPPs have been installed. The annual average installation of TPPs during 11th FYP is, therefore, just about 7,500 MW. However, on an average every year during the 11th FYP, about 45,000 MW capacity TPPs were granted ECs. So, ECs are being granted at a rate which is more than six times the actual installation.

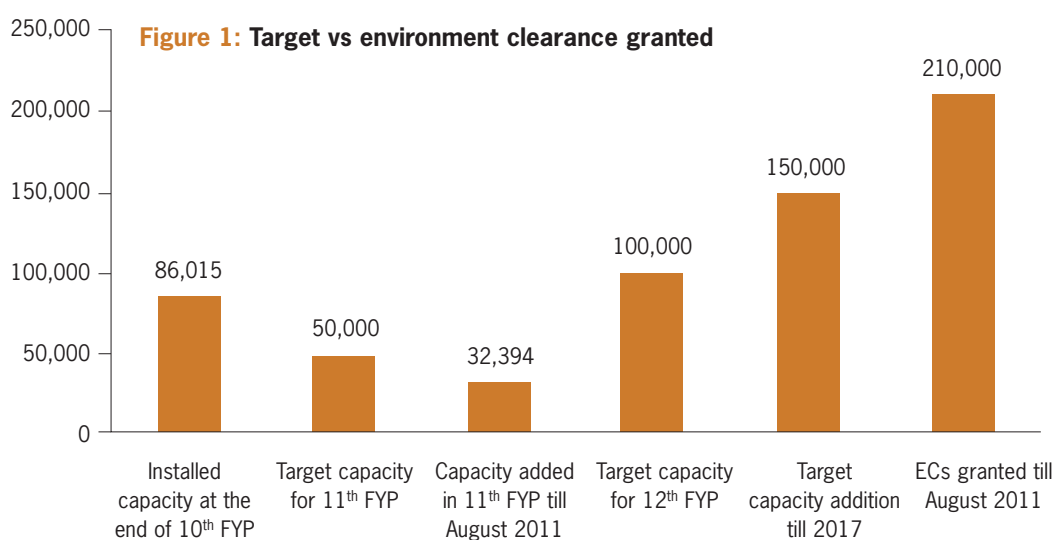
Table 3: Environment clearance granted to TPPs

State	Coal		Gas		Others		Total	
	Number	Capacity (in MW)	Number	Capacity (in MW)	Number	Capacity (in MW)	Number	Capacity (in MW)
Andhra Pradesh	20	24630	9	10303	2	26	31	34959
Maharashtra	23	21025	7	10845	1	15	31	31885
Tamil Nadu	27	22033.5	5	1303.4	5	88	37	23425
Chhattisgarh	22	17363			2	19.5	24	17383
Gujarat	12	11944	8	5132.2	3	100.2	23	17176
Madhya Pradesh	10	12381.5	2	1306			12	13688
Odisha	17	13316.5			1	20	18	13337
Uttar Pradesh	11	11890			1	6	12	11896
Jharkhand	13	9325					13	9325
West Bengal	13	7420	1	20			14	7440
Bihar	4	6330					4	6330
Haryana	3	4020	3	1218.5	1	9	7	5248
Rajasthan	15	5002			3	40	18	5042
Karnataka	5	4320			2	77	7	4397
Punjab	3	3920			2	9	5	3929
Delhi			2	1400			2	1400
Others	2	793	7	2267.4	0	0	9	3059
India total	200	175713.5	44	33795.5	23	409.7	267	209919

*2007-August 2011

■ The projected target for adding thermal power capacity during the 11th FYP is 50,000 MW and 100,000 MW during the 12th FYP (see Figure 1: Target vs environment clearance granted). Thus, till 2017 the government has a target of setting up 150,000 MW thermal power capacity. Till Aug 2011, however, ECs have been granted upto 210,000 MW thermal power capacity – 60,000 MW more than the target set by the government for 2017.

■ Evidently, environment clearance is no impediment to the setting up of thermal power plants in the country. In fact, MoEF has granted ECs to way too many TPPs without considering their cumulative impact on the environment and people.



B. CLEARANCE GRANTED WITHOUT CONSIDERING CUMULATIVE IMPACT

■ Environment clearance is being given in already critically polluted areas without considering the cumulative impact (*see Table 4: Top 10*). Of the top 10 districts where ECs have been granted to coal-based power plants, six were declared critically polluted by MoEF in 2010. ECs have been granted to power and steel plants in Janjgir-Champa (Chhattisgarh) mindlessly and this district will soon join the list of critically polluted areas at this pace.

Table 4: Top 10

Districts	Capacity of coal-based TPP (in MW)	Remark
Nellore	12260	Impact on marine ecology likely
Kutch	10195	Impact on marine ecology likely
Singrauli	10080	Critically polluted area
Cuddalore	8020	Critically polluted area
Nagpur-Chandrapur	7260	Critically polluted area
Janjgir-Champa	6043	Emerging coal-based power and steel industry hub
Angul	5734	Critically polluted area
Nagapattinam	5510	Fishing as the main occupation, the impact of sea discharge will be immense
Jharsuguda	5095	Critically polluted area
Korba	4220	Critically polluted area

■ The freshwater allotted to TPPs, that have got ECs in the last five years, is about 21 million m³ per day (*see Table 5: Water and land requirements*). In other words, about seven billion m³ water per year will be consumed by these TPPs, which is equivalent to the daily domestic water requirement of about one-fifth of India's population.

Table 5: Water and land requirements

Capacity (in MW)	Freshwater allocated (in billion m ³ /year)	Land allocated/acquired (in ha)
209919	6.97	60534

■ No cumulative assessment is done while granting ECs. For instance, in the last five years, 24 TPPs of about 19,500 MW installed capacity have been granted ECs which will withdraw water from the river Mahanadi and some of its tributaries (*see Table 6: Water allocated from Mahanadi*). The total water that will be consumed by these TPPs from Mahanadi is about 1.55 million m³ per day or about 0.51 billion m³ per year.

Table 6: Water allocated from Mahanadi

State	Number of coal-based TPPs	Installed capacity (in MW)	Water allocated (in million m ³ /day)
Chhattisgarh	19	16533	1.31
Odisha	5	2910	0.24
Total	24	19443	1.55

■ ECs are, therefore, being granted without considering the impact of water consumption by power plants on competing users or regions. They are granted based on a water allocation letter from water resources departments of the states. Interestingly, these letters clearly mention that the state governments take no responsibility if allotted water is not available.