Representation to the Karnataka Electricity Regulatory Commission challenging the siting of a coal fired thermal power plant (presently 1000 MW) at Chamalapura, Mysore District, Karnataka.

In the matter of

OP 18/07
M/s Mysore Grahakara Parishat, Mysore Vs Principal Secretary to Government of Karnataka and others,

Held per

Section 86(2) of the Indian Electricity Act, 2003

Subject Matter of OP 18/07: Advising the Government of Karnataka in relation to the desirability of establishing 1000 MW coal based power projects at different places in Karnataka, including one at Chamalapura, Mysore District

Written submission made with the permission of the Hon'ble Commission as part of the proceedings of the Public Hearing held by the Commission on March 06, 2008

by

Environment Support Group,
105, East End B Main Road, Jayanagar 9th Block East, Bangalore 560069
Tel: 91-80-22441977/26531339 Fax: 91-80-26534364
Email: esg@esgindia.org/esgindia@gmail.com www.esgindia.org

(The written submission is a follow up to the oral submissions made by Mr. Leo F. Saldanha, Coordinator, Environment Support Group at the aforementioned Public Hearing. Ms. Nandini Chami and Ms. Bhargavi S. Rao of Environment Support Group have helped in preparing this submission.)

Dated: 30 March 2008

Introduction

Environment Support Group is an independent non-profit organisation (NGO), registered as a Trust, with a focus on issues of environmental and social justice. It has represented various public interest causes, and effectively worked with local communities, government agencies, the media and regional and international NGOs in promoting transparent and just environmental decision making. More details of ESG's initiatives are available in the enclosed Profile of ESG, annexed at **Annexure A** and also at www.esgindia.org.

This representation to Karnataka Electricity Regulatory Commission (KERC) is submitted to call attention to the rationale and laws that must guide the siting of thermal power projects. Through this representation we present our argument that rational and legally required site selection processes have not preceded the decision to propose a coal fired Thermal Power Plant at Chamalapura and surrounding villages near Mysore. We believe that the Hon'ble Commission will do the public at large an extraordinary and unprecedented service by critically reviewing the rationale for site selection of the said power plant in exercise of its advisory powers under Section 86(2) of the Indian Electricity Act.

Several issues highlighted in this representation have already been presented to the Hon'ble Commission as part of the deposition by Mr. Leo Saldanha, Coordinator of Environment Support Group at the Public Hearing conducted on March 06, 2008 at the office of the KERC. These and other issues are re-stated in writing and placed before the Hon'ble Commission in deference to the suggestion of the Chairman, KERC (at the public hearing) that Mr. Saldanha submit his deposition in writing before the next hearing. We sincerely thank the Commission for this opportunity.

In summary this representation demonstrates that no supportive conclusion can be drawn on the techno-economic and environmental viability for establishing a coal fired thermal power plant at Chamalapura based on the information currently relied upon by the Government of Karnataka. Extensive references are made to a variety of information accessed by ESG from various Government agencies under the Right to Information Act. These documents form an important basis for this submission.

Chamalapura: A Brief Locational Analysis

Chamalapura is a village in H. D. Kote taluk, about 20 kms.[1] to the south west of Mysore city. It forms the epicenter of a group of villages that are proposed as the site for location of a coal fired thermal power plant, which is currently promoted as involving an installed capacity of 1,000 MW.

Two major National Parks are in close proximity of this site: Rajiv Gandhi National Park at Nagarhole is only about 20 kms. away and Bandipur National Park is approximately 30 kms. from these villages. This region is also wedged between two major rivers, with River

[1] Distances as measured from Google Earth images.

Kabini flowing to the south and the Cauvery to the north. Krishna Raja Sagar Dam, an important drinking water and irrigation dam across the Cauvery is only about 25 kms. away from the proposed site.

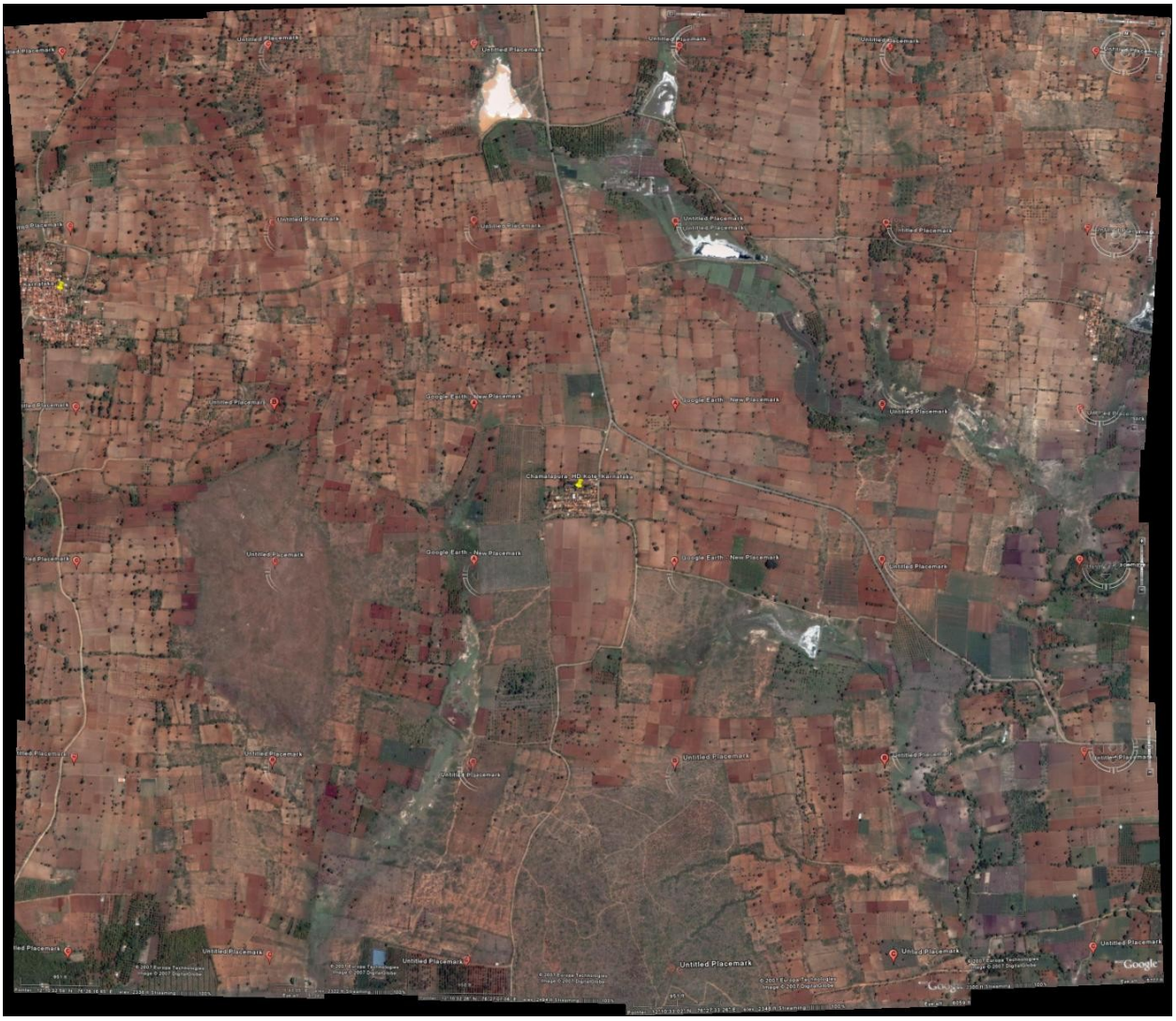
This region also has a wide network of lakes. There are about 80 lakes (perennial and non perennial) lying within an 8 kms. radius of Chamalapura, with about 10 lakes located in the impacted villages.[2]

Newspapers have reported plans for locating a 1000 MW coal fired thermal power plant in villages in and around Chamalapura from early 2007. According to these reports, 3000 acres of land (including forest land with claims of the extent of forest land involved varying between 200- 800 acres) are to be acquired for the plant and its related facilities. About 13 villages with a total population of approximately 13,000 are within this 3,000 acres zone, and this population will be displaced. The indirect impacts due to consequent development, pollution, and diversion of waters are likely to be far higher.

A survey of lands in and around Chamalapura reveals that it is highly cultivated and densely populated. Farmers mainly grow ragi, jola, cotton, mustard and onion. Farmers with access to irrigation pump sets also grow paddy and sugarcane. None of the project-affected villages are covered by canal irrigation. Agriculture thereby is rain fed or based on irrigation from tanks and ground water.

Farmers' testimonials inform us that the ground water table in this region is high, and that there were no serious repercussions on water availability even during the drought years of 2001-03. This has been mainly due to the very high ground water recharge potential due to the nature of the soils, the vegetated landscapes and the rainwater harvesting tanks. This has enabled recharge of subterranean aquifers which benefits farmers immensely in accessing ground water for the summer crop.

[2] Based on the counts made from the topographical maps issued by Survey of India (Map No. 57 D/8) & data from Kyatanahalli Group Gram Panchayat , accessed on the 19 October, 2007



An aerial view of Chamalapura and surrounding villages (Source: Google Earth, 2007)

For a more detailed locational analysis of Chamalapura, see *Locational Analysis of Chamalapura Power Plant* annexed at **Annexure B.**

Power project at Chamalapura initiated without conforming to law

Global advertisements of a Notification for a *Global Invitation for Expression of Interest* in Chamalapura and other thermal power projects in the state were issued by the State Power Procurement Coordination Centre of the Government of Karnataka (SPPCC) on 21 February 2007, vide Ref. No. SPPCC/AEE-6/A-18/2005-06/12240-52, a copy of which is enclosed at **Annexure C**. Subsequently, a *Global Invitation for Request for Qualification* was floated by SPPCC on 08 August 2007, inviting "National and international developers for participation to build, Own, operate and supply power to the extent of at least 85% of the

installed capacity of the power station at the generating switchyard bus bar to the State-owned Distribution Licensees of Karnataka." The projects invited for RFQ were coal fired thermal power stations, each of 1,000 MW installed capacity, at:

1. Jewargi, Gulbarga District, Karnataka
2. Chamalapura, Mysore District, Karnataka

It was claimed in this advertisement that "SPPCC has started development of the projects and in the process, has taken up the following tasks", viz:

1. Site identification and land acquisition required for the projects
2. Environment Clearance and Technical Studies
3. Fuel Linkage with Coal Mine
4. Water Linkage

Summarily it was stated that "(u)pon selection of a successful bidder, the project sites along with the approvals and clearances will be transferred to the company incorporated by the successful bidder for implementing the project, after signing of the Power Purchase Agreement (PPA) and other relevant Project Documents". Such approvals and clearances, which are statutory in nature, and linked directly to the project proponent for compliance, were to be traded to the successful bidder and that the "transfer price shall be indicated in the RFQ". Even though it was also highlighted that the "responsibility of transfer of approvals & clearances to the company incorporated by the Successful Bidder shall rest with the Successful Bidder," the advertisement specified that "SPPCC will assist the successful Bidder in the process of transfer of approval & clearances." In addition bidders were comforted by the assurance that even though the "Bidder shall be responsible for obtaining all the necessary clearance and permits required for completion and operation of the project during the term of the PPA" this would involve such tasks that were "other than the tasks that may be completed by the SPPCC/Procurers (as listed above)".

If we examine the tasks that SPPCC has listed as part of its commitments to ensuring the success of the proposed power projects, it includes commitments that are normally a part of the project developer's responsibilities. These are:

a) "SPPCC proposes to locate the power station at the above mentioned locations. SPPCC has taken up with the Karnataka Industrial Area Development Board (KIADB), Government of Karnataka, for acquisition of the requisite land for the projects."
b) "SPPCC will shortly initiate the process for appointing the independent consultants to advise and assist in obtaining the environment clearance for the projects".
c) "The Water Resource Department, Government of Karnataka, vide GO No. WRD 28 WBM 2006, Bangalore, dated 18th July 2007, has accorded in-Principle approval for the projects for a quantity of 1.56 TMC per year and Consumptive Water Use of 0.039TMC per year, for each project".

As a result most of the rigorous and time consuming tasks involved in setting up a thermal power plant would be absorbed by SPPCC, and at great public expense. The private investor would substantially gain in terms of time and effort saved, as the only tasks remaining would be to bring in the requisite capital and competency for installing and operating the power plant.

There are many obvious illegalities involved in making such commitments. We would like to particularly draw the attention of the Hon'ble Commission to the fact that water and land commitments for the projects have already been made even though it is admitted that no studies whatsoever have preceded such siting decisions. In fact, formal statutory clearances involving independent enquiry and jurisdictions of regulatory agencies in plant siting decisions have not even been initiated as required per law. The whole approach thus far seems to consider such critical decisions as a given considering that SPPCC has claimed it will enlist "independent consultants to advise and assist **in obtaining the environmental clearance for the projects**, as per the requirements laid down by the Ministry of Environment and Forests (MoEF), GOI" (emphasis added).

The intention here is to possibly justify a wrong rather than conduct affairs in a manner as to arrive at a right decision. Many project consultants in the past have produced reports that justify a decision already taken and rarely approach the case with the intention of considering all issues to help in the formation of a rationale for a correct decision to emerge. The resultant risks of such an approach are enormous. A wrong decision on the siting of a coal fired thermal power plant will have irreversible environmental and social consequences in the long term; in the short term it could result in a debilitating impact on the State's exchequer if the private investor claims damages for non-delivery of activities set out against the State in the PPA.

Interestingly, SPPCC has adopted all these roles formally and fully, right from February 2007 when the Global Invitation for Expression of Interest was issued. But this agency was admittedly constituted only on 02 May 2007 as revealed in the RFQ, annexed at **Annexure D!**

The advertisements for Expression of Interest and RFQs have been issued through a massive advertising campaign in India and abroad, which has probably placed a very heavy burden on the state's exchequer. That the agencies concerned have not thought it fit to ensure full compliance with due process of law prior to inviting such bids, especially on matters concerning siting of the plant, exposes them as being cavalier in their approach to the critical question of developing energy infrastructure.

Project initiated without Government clearance

It should be assumed when such a massive advertisement campaign inviting global interests in the project is initiated that the agency concerned has secured the assent of the Government at the highest level. Instead we discover that the in-principle clearance for

the Chamalapura project was given only at the 11th State High Level Clearance Committee (SHLCC) meeting held on the 29th September 2007.

In response to an RTI application, Karnataka Udyog Mitra[3], by its letter dated 12 November 2007 (No. KUM.E9.2469.07-08), annexed at **Annexure E,** has confirmed that:

> "M/s Power Company of Karnataka Ltd, C/o of Karnataka Power Corporation Ltd., KPTCL Building, Kaveri Bhavan, K. G. Road, Bangalore – 560009 a special purpose vehicle formed by the Government of Karnataka has submitted the proposal seeking State High Level Clearance Committee (SHLCC) clearance to establish a "1000 MW Coal based power plant" at Chamalapura, H. D. Kote Taluk, Mysore District."
>
> "The subject was placed in the 11th SHLCC meeting held on 29th September 2007. The Committee has given "in-principle" clearance for the proposal. However, the proceedings of the meeting is yet to be received in this office. Once, the proceedings of the meeting is received in this office, the same will be provided to you for your information."

The said minutes of the SHLCC meeting have not been provided till date. An important point to be noted here is that the in-principle clearance for the Chamalapura Power Project was provided only in September 2007, much after the EOI and RFQ had already been initiated by subsidiary agencies of the State. The Chief Minister of the State of Karnataka, who chairs the SHLCC, along with many of his Cabinet colleagues were thus not privy to the decision on the Chamalapura Power Project, even when the Executive wing of the Government had set the ball rolling in farming out the project to private investors.

As a consequence, the decision to site the power plant at Chamalapura is fraught with major inconsistencies with statutory, policy and procedural requirements.

Questionable commitments of Land and Water in the absence of proper site appraisal

A coal fired thermal power plant makes enormous demands of water and land. Allocation of these resources is a critical question in relation to the siting and operation of a power plant. Such decisions ought to be taken after careful consideration of all factors, and in a manner that is both transparent and technically competent.

In the instant case, allocations of both water and land have been made without in any manner considering the implications of such decisions to forests and wildlife, river ecosystems, and agriculture and drinking water demands.

[3] Karnataka Udyog Mitra was appointed as a nodal agency for the project per the Karnataka Industries Facilitation Act, 2002, which role may have subsequently been handed over to SPPCC per GO No. EN 138 PPC 2006, dated 02 May 2007. The nodal agency is required to provide "*secretarial support to the High Level Committee"* under Section 13 of the Karnataka Industries (Facilitation) Act, 2002

Is there enough water in the Kabini to support a Thermal Power Plant?

On 18 July 2007, the Karnataka Water Resources Department by its GO No WRD 28 WBM 2006 accorded in-principle approval for yearly water usage of 1.56 TMC[4] of which 0.039 TMC would for consumptive use of the proposed Chamalapura power plant (at 1000 MW installed capacity). This water is to be drawn from the Cauvery basin. Apart from Chamalapura, this Government Order also gives in-principle clearance to two other power projects to be located in the Cauvery Basin, taking the total allotment of water for these three power plants to 3.9 TMC. A copy of this GO is enclosed at **Annexure F.**

It may be read from this order that the rationale for making such allocations from the Cauvery Basin is the "opinion of the Water Resources Development Organisation as obtained, regarding allocation of water for the thermal power projects". This 'opinion' is reproduced in the order as follows:

> "The consumptive use of water is to be accounted for within the allocation. Utilisation under each project consists of diversion for irrigation and the evaporation losses. These losses depend on the water spread, which depends upon the water level in the reservoir. In turn water level depends upon the inflows. Drawal for irrigation depends on the rainfall in the catchment. Rainfall is considered uniform throughout the period of simulation. As there is flexibility in the consumptive use, the water requirement of the thermal schemes can be accommodated within the allocation. At this stage no specific allocation can be indicated".

It appears from this 'opinion', drawn entirely from a 'simulation' that is not cited, that the whole basis of allocation is the assumption that "(r)ainfall is considered uniform throughout the period of simulation". Rainfall is highly variable in any region across India. Chamalapura and surrounding villages fall in semi-arid areas and are known for low rainfall conditions and that mainly during the four monsoon months. Such is the water distress in this region that the Karnataka High Power Committee for Redressal of Regional Imbalances[5] has noted with concern that "H. D. Kote taluk was the worst in Mysore district with 12 drought years from the period of 1971-2000 and again in the years 2001-03". Clearly this knowledge seems to have missed the attention of Water Resources Development Organisation in their assessment of water availability for allocation to thermal power plants in Cauvery Basin.

We do not have any document to confirm that the current proposal to locate a power plant at Chamalapura intends to draw water from the Kabini Reservoir. However, it is plausible that Kabini Reservoir is the source of water for the plant if we rely on the No Objection Certificate (NOC) issued on 24 April 1997 by the Karnataka State Pollution Control Board for a coal fired thermal power plant of 500 MW capacity that was to be located at

[4] 1 TMC = One thousand million cubic feet.

[5] Government of Karnataka, 2002: Final Report of the High Power Committee for Redressal of Regional Imbalances, Pg 64.

Chamalapura. In this NOC reference is made that the "applicant shall obtain permission from Department of Irrigation Govt. of Karnataka, to lift the water from Kabini river". A copy of this order is enclosed at **Annexure G** and many other issues relating to this order are dealt with later.

If we assume the water for the current 1,000 MW Chamalapura power plant was indeed to be drawn from Kabini Reservoir, a series of disturbing issues arise. 1.56 TMC is a huge volume of water and can potentially irrigate over 15000 acres of paddy, 3600 acres of sugarcane or 30,000 acres of maize.[6] When supplemented with rainfall and tank irrigation, the area that can be covered with this irrigation water could be far higher. In other words, making a commitment of this amount of water to a power plant would possibly deny a large section of farmers their right to cultivate and thereby their right to livelihood. Considering that such farming families would be outside the directly impacted zone, the actual projections of project-affected families (especially indirectly) will increase substantially.

Keeping such concerns in view, a fundamental question to enquire into is whether there is enough water in the Kabini Reservoir to support the needs of a massive coal fired thermal power plant. To examine this issue, we applied for river flow data of the Kabini River under RTI Act, and obtained a variety of information from the Cauvery Neeravari Nigam Ltd. and the Water Resources Development Organisation (W.R.D.O.). The complete set of information provided by these agencies is annexed at **Annexure H and J.**

Detailed analysis of water flow data in the Kabini, and implications of water allotment to power plant:

In **Graph 1**[7] shown below we show the annual inflows and outflows from the Kabini reservoir for a ten-year period from 1997-98 to 2007-08. A simple average across years reveals that the annual water inflow into the reservoir is 112.37 TMC, and the average water outflow is 74.971 TMC. Going by the average, usage of another 1.56 TMC of water does not seem significant enough to impact water availability to other uses and also for the dead storage required to support forest and river ecosystems and wildlife needs. But averages can be misleading as they do not reveal the differences in the seasonal water flows, nor do they indicate the significant variations of levels of inflow & outflow in drought years. For example, if we look at the years 2002-03 and 2003-04, we see that the annual inflows for these two years are substantially lower consequently affecting the outflows as well.

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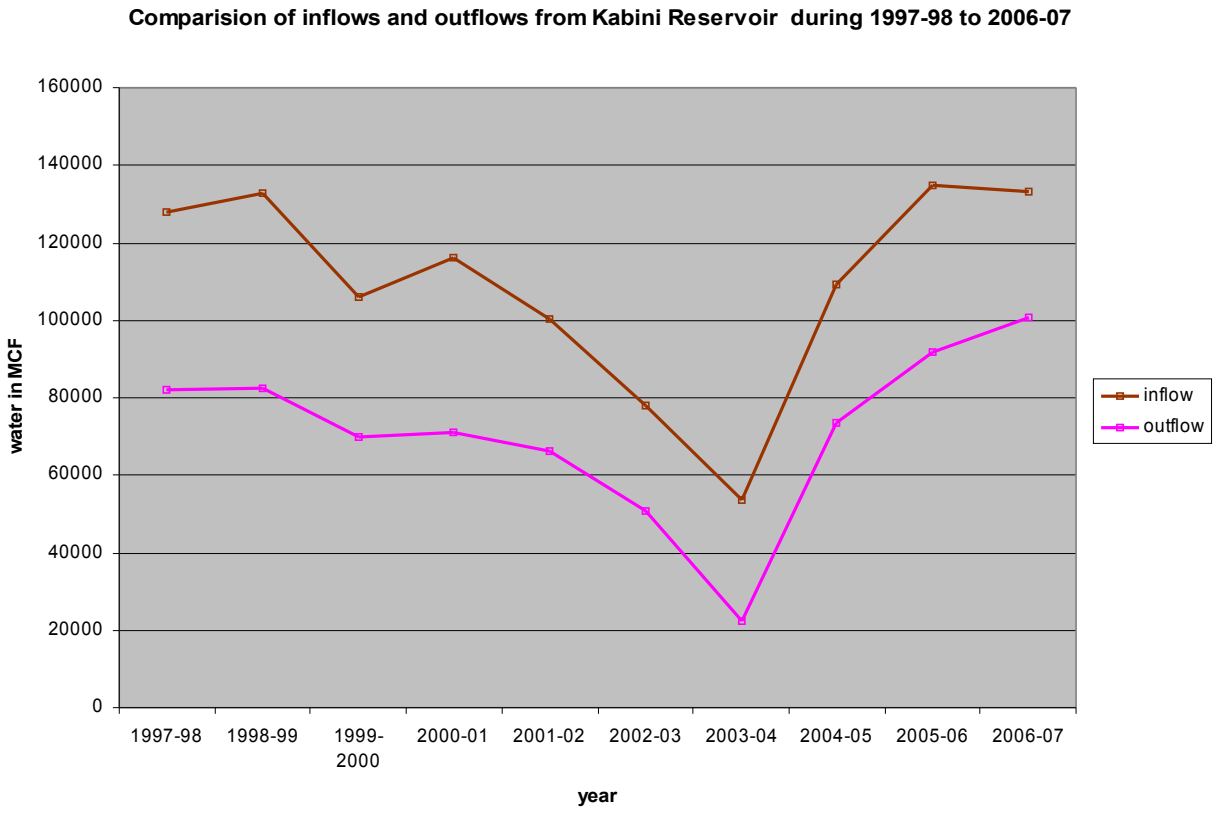
[6] The extent of water consumed by different crops is calculated based on a presentation made by Mr. Er. A Srinivasulu, Andhra Pradesh Water Management Project, and the presentation is accessible online at: http://www.westgodavari.org/Neeru%20Website/Work%20shop%20Slides/Agricultural%20Water%20Management-brief.ppt (last visited on 26 March 2008). We have also relied on various studies by Dr. Malin Falkenmark, and in particular on the analysis in "Linkages Among Water Vapor Flows, Food Production, and Terrestrial Ecosystem Services", Johan Rockström, Line Gordon, Carl Folke, Malin Falkenmark and Maria Engwall, *in Ecology and Society,* Vol. 3, No. 2, Art. 5, 1999 accessible online at: http://www.ecologyandsociety.org/vol3/iss2/art5/#Croplands (last visited on 26 March 2008). See also S. Padmanabhan's article "Ultra Mega Projects may not be a powerful idea" in The Hindu Business Line dated June 21 2006, accessible at: http://www.thehindubusinessline.com/2006/06/21/stories/2006062100391000.htm (last visited on 24 March 2008)

[7] All data pertaining to Kabini Reservoir souced from RTI reply from the office of the Chief Engineer , Karnataka Water Resources Department on the ../03/2007



Another important consideration is to review the seasonal variations in water inflows into the reservoir. **Table 1** reveals the monthly inflows into Kabini Reservoir over the decade. It can be seen from this compilation that even in the 'good years' (with average or high rainfall), the water inflows in the summer months are reduced to a trickle of what they are in the rainy months.

TABLE 1 MONTHLY INFLOW INTO THE KABINI RESERVOIR														
			FROM 1997-98 TO 2007-08 [UPTO SEPTEMBER 2007]											
									[ALL FIGURES IN MCFT]					
SI.NO	YEAR	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	February	MAR	APR	MAY	ANNUAL TOTAL
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	1997-98	5187	44727	44197	10689	6987	6044	3304	1116	1613	1496	1250	1481	128091
2	1998-99	9595	46884	26559	17050	15052	6531	2886	779	1530	1194	1839	2720	132619
3	1999-2000	12899	36143	29834	7308	9522	3668	1591	760	795	954	1333	1037	105844
4	2000-01	15820	24550	31808	16887	9214	5239	3248	953	1544	913	3188	2610	115974
5	2001-02	16417	32451	27120	7214	6934	4309	2214	878	587	435	738	958	100255
6	2002-03	9039	14007	31033	8152	8416	3020	1333	557	445	509	719	859	78089
7	2003-04	6051	14178	14164	5166	4652	2081	992	315	307	260	676	4599	53441
8	2004-05	23734	23204	39469	6804	6199	3896	714	833	741	1068	1367	1182	109211
9	2005-06	7272	50985	33581	18043	8470	4473	2852	984	1006	958	858	5490	134972
10	2006-07	16517	48945	33507	15292	7640	4605	2399	1290	625	423	881	1092	133216
11	2007-08	11325	65840	38961	28303									144429

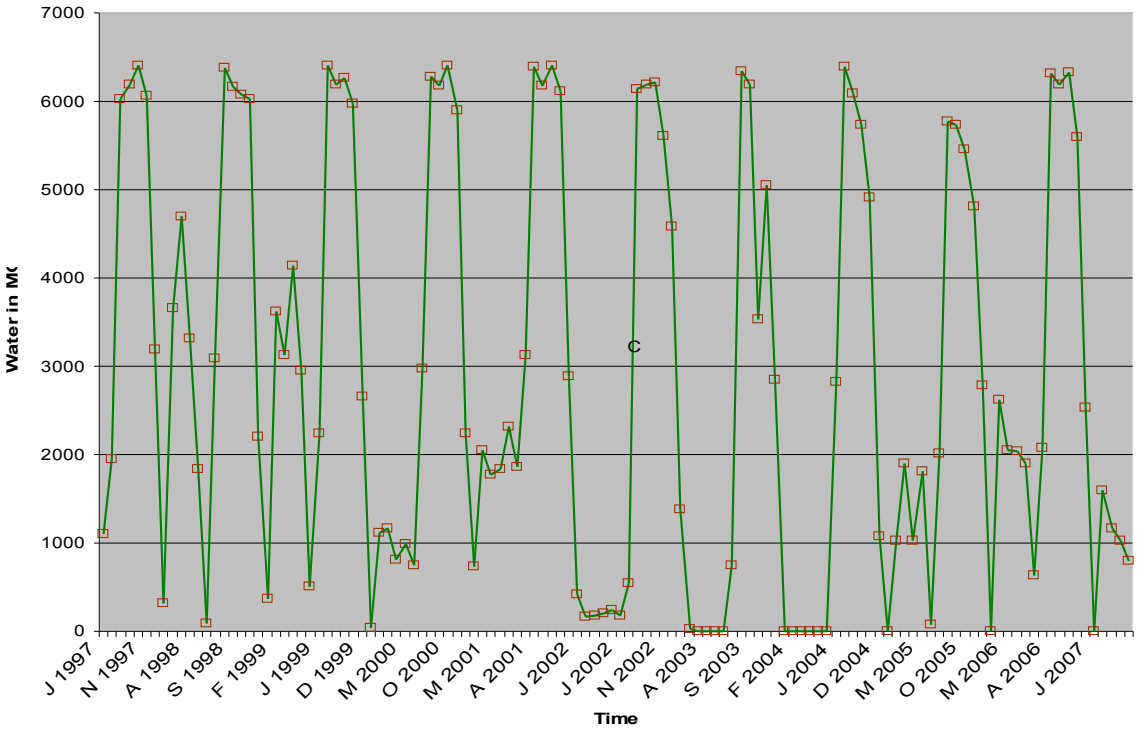
In 1998-99, for instance, the annual inflow was 132,619 MCF[8] (i.e. 132 TMC), which is significantly higher than the decadal average. However, there are significant variations in the monthly inflows. In July 1998, there was an inflow of 46.884 TMC but in January 1999, the monthly inflow was only 0.779 TMC. During February and March months of 1999 it was slightly higher at 1.530 TMC and 1.194 TMC respectively.

The power plant's average monthly requirement of 0.13 TMC may not exert a strain on water availability in the rainy months. But this may not be the case in summer months as meeting the power plant's water demands along with other competing demands, including that of drinking water for all downstream cities, Mysore, Nanjangud and Bangalore included, can prove very difficult.

The water stress scenario becomes clearer when we study the general trend in the water released for canal irrigation from the Kabini reservoir over the past decade. **Graph 2** illustrates the monthly release of water for canal irrigation for the years 1997-98 to 2006-07. It is evident from **Graph 2** that for every year (plotted as June to May) release of water to canals peaks twice- once during the Kharif season and once during the summer. A study of Graph 2 reveals that the peaks corresponding to the summer months have been consistently falling; which means that the release of water from to canals in summer months has been consistently decreasing over the decade. At the beginning of the decade, 4690 MCF of water was released at the peak of the summer; now this has fallen to 2614 MCF. Considering that water for the power plant is more likely to be drawn from the canal releases, rather than releases to the river which provide drinking water demands of downstream cities besides supporting the minimum natural flow of the river, the competing demands of agriculture and power production (especially with potential expansion of capacity) could prove disastrous.

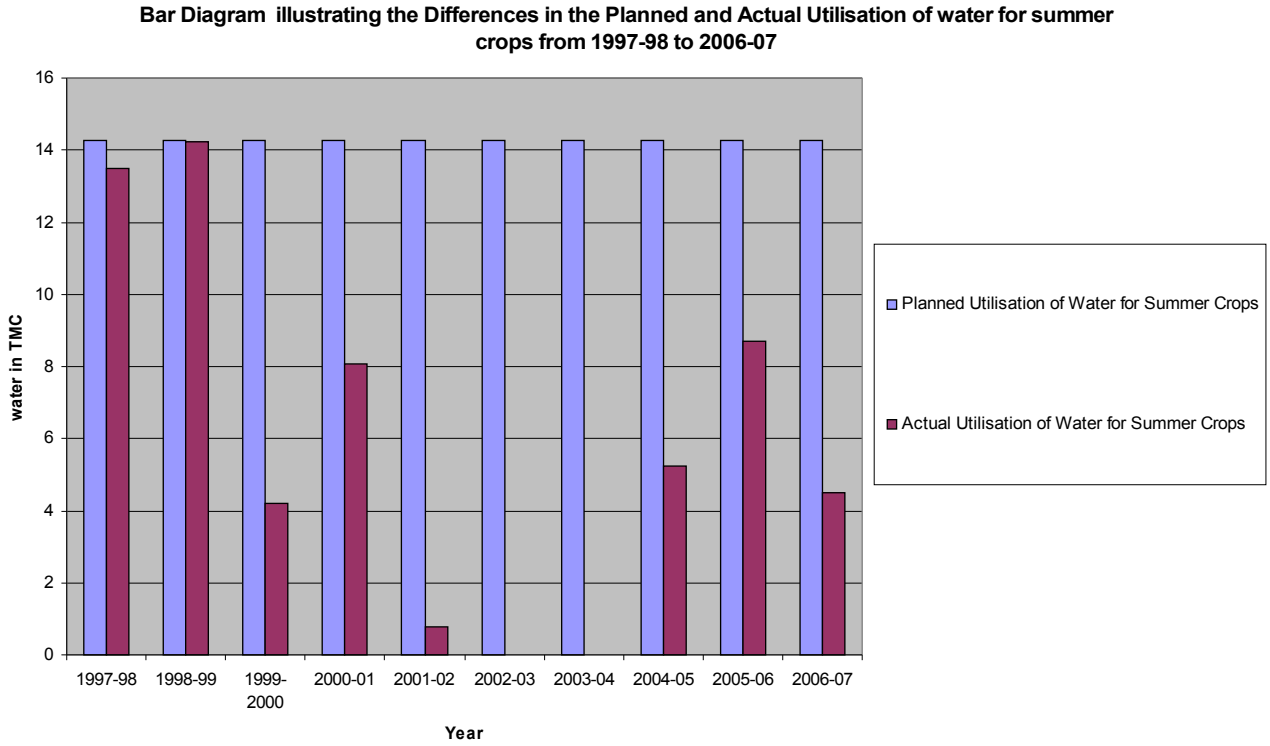
[8] MCF = Million cubic feet.

Graph 2 showing Canal Withdrawals from Kabini from 1997-98 to 2006-07



The Bar Diagram (below) further demonstrates the existing difficulties in meeting the irrigation requirements in the summer months. It clearly reveals that the actual water utilized for irrigation of summer crops has been less than the planned utilization in almost all the years. This trend of deficit is sharpest during the drought years.

The recurrence of a drought in this region is but a natural consequence of the climatic conditions and the agronomic zones in which the proposed site lies. Droughts have visited this region every decade, if not more frequently. Thus, it is an important consideration in the location of a power plant to enquire if it can function at all during such long and dry periods at 85% PLF. Data for the drought years of 2002-03 and 2003-04 reveals that the release of water for canal irrigation during the summer months of January – May is nil even when the planned release for these months during both years was 14.258 TMC. A question that begs to be answered is whether water will be released for the functioning of a power plant, when farmers are denied the same during summer?



Another significant issue to be considered is that power plants add capacity as demand increases, which is more than likely in Karnataka. Expansion of installed capacity is a major component of the business plan and incentive for investors. In addition, many industrial and ancillary units are attracted to a location close to a power plant. Cement factories are more than likely to come up near a coal fired power plant as regulations require use of fly ash in cement production[9]. All these are water intensive units. Therefore, the actual water demand for all these facilities put together can be far higher than what is projected for a 1,000 MW coal fired power plant.

Investors would consider as a specific business risk limitations imposed on expansion of installed capacity especially in the long term. Given particularly that the current proposal is to bid at 85% PLF[10], investors being bound by contractual obligations to produce energy on demand may be constrained from doing so during the low flow months. Farmers in the Mysore region are well networked and organized not to allow the flow of water to their lands to diminish. It is plausible that the demand of the power plant could directly conflict with the water demands of the farmers. This could fuel clearly avoidable social tensions that have the potential of exposing the State on default of contractual obligations. Investors are more likely to press for monetary damages in such situations, and this could

[9] Notification of Union Ministry of Environment and Forests, No. S.O.513(E) dated 03 April 2007, describes the various compliances demanded in use of fly ash in construction activities, responsibilities of Thermal Power Plants to ensure the same and specifications for use of ash-based products and related responsibilities of other agencies, particularly cement factories.

[10] PLF = Plant Load Factor, i.e., the ratio of time that a plant can be relied on to produce energy.

aggravate the economic situation of the state power utilities and consequently of the public exchequer.[11]

Principles of natural justice and law dictates that water must be utilized first for drinking, then agriculture and only the excess can go for industrial use. Reversing this logic because of the influence of a power producer could have devastating social, economic, political and ecological consequences.

The last impact is of particular significance as the Kabini Reservoir is a major source of water for wildlife in the Nagarahole National Park. Dead storage of this reservoir is a critical factor for the survival of wildlife, particularly in the summer months. Any additional stress on the already overstressed water demands from Kabini would only mean that our economic use of water would undermine its ecological value. This is also likely to adversely affect the long term benefits of the massive investments Karnataka Government has made in building ecological tourism infrastructure around the Kabini reservoir.

Retaining dead storage has such profound implications that no competing demand should be allowed to encroach on this ecological requirement of the river. Extraction of water from this dead storage in a crisis situation to support a power plant, which is likely under political pressure, could have devastating consequences on wildlife, the surrounding landscape and most certainly on the tourism potential of the region.

Implications of water allocations decisions in light of Cauvery award:

Tamil Nadu has repeatedly brought up the issue of Karnataka's allocation of Cauvery Basin waters for various uses before the Hon'ble Supreme Court. In its most recent assertion, Tamil Nadu has claimed that the Cauvery Water Tribunal has "rejected various lift irrigation schemes in the Cauvery basin, Karnataka was not entitled to proceed with the construction of said project, which besides being illegal, would be detrimental to the interests of the lower riparian State of Tamil Nadu and the Union Territory of Puducherry".[12] It has also claimed that "Karnataka had been constructing several check dams across Hemavathy, Kabini, Suvarnavathy, apart from taking up minor irrigation works in non-scheduled streams in violation of the award passed by the Tribunal in February, 2007".[13]

Also recently, there have been widespread protests against the Tamil Nadu government's intentions to build a dam to service drinking water needs. The conflict this proposal has induced is so acute that state wide protests and bunds are being organized. Clearly this is

[11] The case of Enron suing the Governments of Maharashtra and India over the Dabhol power plant is fresh in everyone's minds, including the expensive arbitration proceedings that followed in London.

[12] "Karnataka stand on Cauvery award untenable: State", J. Venkatesan, The Hindu, 26 March 2008 accessible online at: http://www.thehindu.com/2008/03/26/stories/2008032653810400.htm (last visited on 26 March 2008).

[13] "Cauvery dispute TN wants SC to restrain K'taka", Deccan Herald, 26 March 2008, accessible online at: http://deccanherald.com/Content/Mar262008/national2008032659520.asp (last visited on 26 March 2008).

another active indication of how critical it is to use the Cauvery's waters transparently and prudently.

In light of such tensions between the riparian states, a decision to allocate about 3.9 TMC of water for power plants could have been taken after carefully considering all issues involved. As the records reveal no such examination has preceded decisions to commit water from Cauvery River basin for intensive, long term and irreversible use by industrial and infrastructure sectors, especially for coal fired thermal power plants.

Land issues:

As in the case of water, the commitment to provide lands for the power plant has also been made without in any manner considering the consequences. In response to an RTI Application, Karnataka Industrial Area Development Board informs in its letter dated 03 December 2007, No. IADB/Allot/AS-3/12175/2007-08, copy of which is enclosed at **Annexure K**, as follows:

> "Director (Procurement), State Power Procurement Coordination Centre [SPPCC] vide their letter dt. 6.6.2007 has informed that the Govt., has approved to establish 1.000 MW Thermal Power Plant in Chamalapura, H.D. Kote Taluk, Mysore District, in 2,000 acres of land and requested the Board for taking action for acquisition of said land, but the KPTCL has so far not furnished the village sy. nos. details of land proposed to be acquired in H.D.Kote Taluk. The Board has requested Director (Procurement), SPPCC vide letter dt. 27.7.2007 to furnish the sy.nos. details etc. But so far the same is not received. Therefore, the Board has not initiated any acquisition of land in H.D.Kote Taluk, as the locations are not yet finalized for the above project. Hence the information requested by you is not available by you is not available with the Board."

From this letter it appears that SPPCC had begun the process of land acquisition even without clearance from SHLCC as is the norm. It seems reasonable to presume therefore that if the agency had conformed with siting requirements as required by State and Central statutory agencies, Chamalapura would not be a candidate for the siting of a coal fired thermal power plant.

Coal fired thermal power plants are considered highly polluting and hazardous facilities with serious long term consequences, and thus listed under the Red Category by the Karnataka State Pollution Control Board (KSPCB). Such facilities, *prima facie*, have to comply with a series of fairly rigorous siting regulations. At the initial process of site selection itself it can be easily studied if a particular site is feasible or not per these standards. A copy of the detailed regulatory and siting standards, as notified by the Dept. of Forests, Ecology and Environment on 18th February 2002, No. FEE 14 ENV 2001 (1), Bangalore, is annexed at **Annexure L**.[14] The Ministry of Environment and Forests also

[14] The categorization and siting standards are also accessible on the KSPCB website at: http://kspcb.kar.nic.in/to_setupnewindustry.htm (last visited on 27 March 2008).

recognizes the highly polluting nature of coal fired thermal power plants and has prescribed Guidelines for Siting Thermal Power Plants in 1987.

TABLE 2: Comparison of Power Plant Siting Guidelines and compliance of Chamalapura site

Guidelines for Siting Thermal Power Plants, 1987 (MoEF)	**Siting Standard (KSPCB and Karnataka Dept of Ecology and Environment)**	**Chamalapura Site**
	"The Karnataka Industrial Area Development Board (KIADB) or any other agency developing industrial area shall obtain Environmental clearance from the Department of Ecology and environment and clearance from the Karnataka State Pollution Control Board before establishing such area."	KIADB has admittedly not obtained any such permission, and yet is willing to initiate land acquisition at the request of SPPCC for the power plant.
Location of Thermal power plants should be avoided within 25 kms of the outer peripheries of national parks and sanctuaries.	Power plants have to be lobated at least 25 kms. from Ecologically and/or otherwise sensitive areas, depending on the geo-climatic conditions with the rider that the requisite distance shall have to be increased by the appropriate agency. Ecologically sensitive areas include National Parks and Sanctuaries and Tribal Settlements	The southern extent of the proposed site around Chamalapura is well within the 20 kms. of Nagarhole National Park. Bandipur National Park is also similarly located closed to Chamalapura. In responses to RTI applications, the Principal Chief Conservator of Forests of the Karnataka Forest Dept.[15] and Conservator of Forests (Mysore Circle) have confirmed that no study whatsoever has been conducted to assess the impact on Nagarahole & Bandipur National Parks.
"No forest or prime agricultural land should be utilized for setting up TPPs or for ash disposal."	"No forest land shall be converted into non-forest activity for the sustenance of the industry."	From most estimates, between 300-800 acres of forest land will have to be diverted to non-forest use at this site. The Chamalapura region has extensively cultivated agricultural lands, as demonstrated in the locational analysis.

[15] Refer Letter from PCCF , Bangalore dated 10/9/2007 annexed at **Annexure M** & letter from CF,Mysore Circle dated 29/8/07 annexed at **Annexure N**

Chamalapura and surrounding villages cannot in any manner comply with the siting standards of Karnataka State, nor does it satisfy the guidelines prescribed by the Ministry of Environment and Forests for the reasons set out in **Table 2**:

In addition, the proposed site cannot meet the strict siting requirements per Sec. 41 A of the Factories Act (1948, as amended in 1987**)**. Per Section 41 A (2) of this Act, an interdisciplinary "Site Appraisal Committee shall examine an application for the establishment of a factory involving hazardous process and make its recommendation to the State Government within a period of ninety days of the receipt of such applications in the prescribed form." Schedule I of this Act defines "Power Generating Industries" as involving hazardous processes, and thus must first get a site approval before proceeding with any other tasks. In the present case, no such process has been initiated by the SPPCC or any other agency to secure such a clearance and thus the proposal fails to comply with the very first step of the statutory site clearance for a power plant. Not only is there not enough water to run this plant here, but the very siting in the proposed land is a patently illegal exercise. It is clear therefore that various state agencies have rushed into a decision to locate a power plant at Chamalapura without in any manner considering even the most fundamental aspects of siting.

Geo-technical and techno-economic studies absent in promoting the proposal:

Standards suggest that a site for a thermal power plant of 500 MW capacity and above should be located on soils that have a minimum bearing capacity of 10 kgf/cm square so that it can withstand the dead load of the plant and the forces transmitted to the foundation by machine operations. In reply to ESG's RTI Application, Power Company of Karnataka Ltd.[16] in its letter dated 4th October, 2007 (No. PCKL/A16/14/CB/2006-07/7423, annexed at **Annexure Q** has confirmed that "Environmental Impact Assessment Studies are yet to be carried out. Tenders have been floated inviting the consultants for carrying out the Environemental Impact Assessment studies, Geo-technical studies and Topographical studies." In the same letter it is also confirmed that the "DPR[17] is not yet prepared".
The absence of geo-technical and environmental impact assessments is sufficient to suggest that no rational considerations have preceded the decision to site a power plant at Chamalapura. In the absence of such studies, it would not make any sense to conduct a techno-economic study, simply because the natural variables essential to define costing and other issues are not available. In the same letter it is also confirmed that "GOI is being approached for allocation of Coal Blocks. Mining and Transportation is to be done by the successful bidder".

The decision to site a power plant at Chamalapura is bereft of any rationale or logic. No geo-technical study. No environmental impact assessment studies. No studies to assess impacts on wildlife corridors and National Parks. No studies to appreciate the impact of

[16] Power Company of Karnataka Ltd. is an undertaking of the Government of Karnataka and replaces the functions of SPPCC.
[17] DPR: Detailed Project Report

water withdrawal from Kabini reservoir on the immediate environs, wildlife and downstream agricultural and urban communities. No assessments of where coal will be sourced. No study of the cost and impact of developing infrastructure for fuel linkage, such as building of railways tracts and coal landing facilities. No assessment of the impact of the power plant in the mining area. And yet, an international bid for the power plant has been issued on the mere assumption that these pre-decision tasks would be undertaken by the "successful bidder".

A project proposal unsupported by adequate studies to determine its feasibility carries a very high risk of jeopardizing the investment made. It is true that in India most power plants have been proposed without rigorously considering any of these issues. As a result, power production is one of the most wasteful, environmentally disastrous and socio-economically divisive forces in India. In most cases laws, standards and regulations have been flouted with impunity. The question is, if this needs to be repeated in the case of Chamalapura as well. The procedural irregularities that we so far describe mirror the earlier history of proposal to locate a power plant at Chamalapura, and the details are recounted below.

Chamalapura project: haunted by procedural irregularities

In 1998, the Union Ministry of Environment & Forests had granted environmental clearance for setting up a 500 MW coal fired thermal power plant at Chamalapura, Mysore District submitted by M/s Mysore Power Generation Private Ltd. Interestingly, the proposal was for a 1000 MW plant and a NOC for that capacity was also issued by the KSPCB. However, MoEF granted environmental clearance only for a 500 MW capacity.

The NOC referred to by the MoEF was issued by KSPCB on 19 March 1996 wherein it accorded *" a provisional site clearance in principle, for locating the thermal power plant of capacity 1000 MW"* to the Chamalapura proposal. (No. KSPCB/MYS/CHAMALA-THERMAL/DEO-6/95-96/1016-19, **Annexure G** referred to earlier). We have sufficient reasons to believe that this NOC is irregular because there are serious discrepancies in the NOC. The 19 March 1996 NOC of KSPCB states that a site clearance is issued for a 500 MW power plant in the subject line, but the main body of the clearance, as stated above, confirms the site clearance is for a 1,000 MW power plant. Since these two statements are inconsistent and that too in the same order, the whole order is to be treated as malafide and set aside.

Social Impacts of the Project:

In order to ascertain the social impacts of the project, Environment Support Group conducted a socio-economic survey between the months of October 2007 and February 2008 of the people living in the villages most likely to be affected by the siting of thermal power plant. As there has been no official confirmation from any government agency of

the villages likely to be affected, we have determined such villages on the basis of their distances from Chamalapura. In the socio-economic survey ESG interviewed 15% of the total number of households in each of the affectd villages.[18]

The survey is being processed, but the preliminary findings are summarised below.

Extent of population affected by the power plant:

We found that by the most conservative estimate, the siting of the power plant would directly impact at least 13,000 people in the villages of Chamalapura, Kyatanahalli, K.G.Pura, Avaragere, Kadasuru, Banavadi, Bachegowdanahalli, Garikekattekaval, S.Kallahalli, Singaramaranahalli , Chunchunahalli, Karigala B, and Maddur . By impact we mean permanent and irreversible loss of agricultural lands, houses and businesses. .

Coping abilities of the project affected people:

These preliminary findings are on the basis of survey data from interviewing 72 households from Chamalapura, Kyatanahalli, K.G.Pura, Kadasuru, Banavadi and Garikekattekaval.

- In these villages, most households own 0-5 acres of lands. A few households own 5-10 acres. It is rare to find a household owning more than 10 acres of land, except in the case of Garikekattekaval where households own coconut farms.
- These villages do not have canal irrigation. Most people do not own pumpsets, and agriculture is mainly rainfed. Main crops grown are ragi, cotton, jola, thoguri, and vegetables. Households owning pumpsets and medium landholdings also grow banana and sugarcane.
- Data from the Village Directory (Census of India), 2001 reveal there is a significant Dalit population in these villages.
- Data from ESG's socio-economic surveys further confirm this. Household surveys in K.G.Pura and Kyatnahalli revealed that most of the Dalit Households in these villages received land titles under Land Reform legislation. In Banavadi, where almost all the households are Dalit , interviews with villagers revealed that the households in Banavadi were awarded titles to the government lands that they had been cultivating, in 1959-60.
- None of the households had an alternate plan for the future if displaced. They almost entirely relied for the future on farming their lands to earn their living, and in addition perceived education of their children as a means of maximizing economic security.
- The project affected people are mainly marginal farmer households. Amongst them most are from the Scheduled Castes and Tribes whose main set of skills is in farming. Displacement would mean loss of their sole productive asset & means of livelihood.

[18] Estimates of the number of households were calculated from 2001 Census of India data & villagers' estimates of population figures.

Population of Scheduled Castes in some affected villages

Village Name	Total Population	SC Population
Bannavadi	486	436
Chamalapura	328	69
Kandegowdanapura	158	97
Kadasur	90	0
Garikekattekaval	113	5
Kyathanahalli	2908	537

(Source: Village Directory (Census of India), 2001)

Appeal to the Karnataka Electricity Regulatory Commission

As established above, the decision to locate a coal fired thermal power station is fraught with a serious of legal impediments and is not based on any techno-economic, environmental and social impact studies. Consequently, the effort of the Power Company of Karnataka Ltd. (previously known as State Power Procurement Coordination Centre) in secuing a private investors for a 1,000 MW coal fired thermal power plant at Chamalapura is inconsitent with law. It appears from evidence sourced from the Government that there is no water available for sustaining such a massive power plant, and its potential expansion. Further, the site proposed is ecologically sensitive and thickly populated. Hon;ble Commission is therefore requested to strongly advise the Karnataka Government to desist from moving ahead with its proposal to locate the power plant at Chamalapura.

For the Environment Support Group:

Leo F. Saldanha
Coordinator
Environment Support Group Bangalore, 30 March 2008