Power Finance

Financial Institutions In India's Hydropower Sector

A Report by Peter Bosshard

Published by

South Asia Network on Dams, Rivers and People

Urgewald

International Rivers Network

Acknowledgments

Even if I eventually wrote the manuscript, this report is a joint effort in many ways. Himanshu Thakkar (South Asia Network on Dams, Rivers and People) originally encouraged me to write the report, and sent me information, advice and feedback on a daily basis. Himanshu and I attended most interviews with financial institutions as a team. I greatly profited from SANDRP's rich and meticulous archives. And during my stay in Delhi, I also enjoyed the warm hospitality of Himanshu, Kakoli, and Hriday.

Heffa Schuecking (Urgewald) was an early source of encouragement and support, too. During my stay in Sassenberg, I also enjoyed the hospitality of Heffa and her colleagues.

Patrick McCully (International Rivers Network) supported this research project with loyal trust, and with meticulous reviews. Chitaroopa Palit and Alok Agarwal (Narmada Bachao Andolan), Girish Sant and Shantanu Dixit (Prayas Energy Group), and Shripad Dharmadhikary (Manthan Adhyayan Kendra) provided much valuable advice throughout the project. Julie Tanner (National Wildlife Federation), Navroz Dubash (World Resources Institute), Kay Treakle and her colleagues (Bank Information Center), Ikuko Matsumoto (Friends of the Earth/Japan), Swathi Seshadri (Manthan Adhyayan Kendra), Bipin Chandra and Ganesh Gaud (SANDRP), Pervin Jehangir and Shashi Mehta also provided useful information and support. Evelyn Underwood helped prepare the table on hydropower projects in the annex. Christoph Meienberg (Berne Declaration) and Astrid Meier provided technical support. Gila Neta (International Rivers Network) saw the manuscript through the production process.

Many representatives of financial institutions and other experts took the time to share information and discuss issues regarding power finance when I visited India. In Mumbai, I had the chance to meet with P.H. Ravikumar, Vishakha Mulye, and Partha Dey (all ICICI), Anirudha Barwe, Mahendra Shah, Sadashiv Rao, and Khorezad Dordi (all IDFC), Sucheta Dalal, Pradyumna Kaul, and Abhay Mehta. In Delhi, Himanshu Thakkar and I met with Peter Pattison (ADB), Rama Krishna Chavali (IFCI), Kazuto Tsuji and Jun Yotsu (JBIC), T.N. Gopalakrishna, R.N. Misra, and R.K. Taneja (all NHPC), Satnam Singh (PFC), Massimo Baggi (Swiss embassy and board, IDFC), Edwin Lim, Kari Nyman, Priya Basu, and Rajesh Sinha (all World Bank), Kavaljit Singh, and Shekhar Singh.

Yolanda Banks (EDC), Vincent Gouarne, Kari Nyman and Mohinder Gulati (all World Bank), James Mahoney (US Exim Bank), Joseph O'Keefe (IFC), Dieter Schulze-Vornhagen (KfW), Christine Wallich (ADB) and Thomas Wohlwill (Hermes) took the time to respond to detailed questions in writing.

I very much appreciate the professional values of the people who made efforts to share information and opinions with us even if they knew that the concerns expressed by NGOs would not make the funding of power projects easier. I am also thankful to the various people who shared information with us under the condition of remaining anonymous.

Finally, I am thankful to the Charles Stewart Mott Foundation and the Grassroots Foundation. Together with other funders, the C.S. Mott Foundation has consistently supported the Berne Declaration's work on financial institutions and sustainable energy development for many years, and has thus allowed me to gain experience on these issues. The Grassroots Foundation and the C.S. Mott Foundation have also made this research project possible due to grants made through Urgewald and IRN.

As always, the responsibility for all errors rests with the author.

Zurich, January 2002
Peter Bosshard

Exchange rates

(as of 31 January, 2002):

1 US dollar = Rs. 48.424

Rs. 100 = 2.065 US dollars

As a matter of practice, financial values in domestic currency are expressed in rupees in this report. Financial values in foreign currency are expressed in dollars, or in other respective currencies.

Fiscal year

India's fiscal year (FY) is from 1 April until 31 March.

Power Finance:
Financial Institutions In India's Hydropower Sector
Published by South Asia Network on Dams, Rivers and People (SANDRP), Urgewald, and International Rivers Network (IRN), March 2002

ISBN 0-9718858-0-X

SANDRP; 53B, AD block, Shalimar Bagh; Delhi 110 088, India;
phone: +91 11 747 9916; e-mail: cwaterp@vsnl.com

Urgewald; Von-Galen Str. 2; 48336 Sassenberg, Germany;
phone: +49 2583 1031; fax: +49 2583 4220;
e-mail: urgewald@urgewald.de, www.urgewald.de

IRN; 1847 Berkeley Way; Berkeley, CA 94703, USA;
phone: +1 510 848 1155; fax: +1 510 848 1008;
e-mail: irn@irn.org, www.irn.org

Design by: Jeanette Madden
Printing by: Krishna Copy Center

Printed in the United States of America using recycled paper

TABLE OF CONTENTS

ACRONYMS

ADB	Asian Development Bank
AP	Andhra Pradesh
Ar P	Arunachal Pradesh
BBMB	Bhakra Beas Management Board
BITS	Swedish Agency for International Technical and Economic Cooperation
BJP	Bharatiya Janta Party
CAO	Compliance Advisor/Ombudsman
CBI	Central Bureau of Investigation
CDC	Commonwealth Development Corporation
CEA	Central Electricity Authority
CIDA	Canadian International Development Agency
CRISIL	Credit Rating Information Services of India
CVC	Central Vigilance Committee
DANIDA	Danish International Development Agency
DFI	Development finance institution
DFID	Department for International Development
DM	Deutschmark
DPC	Dabhol Power Corporation
DSM	Demand side management
DVC	Damodar Valley Corporation
ECA	Export credit agency
ECGD	Export Credit Guarantee Department
EDC	Export Development Corporation
EKN	Exportkreditnaemnden
FY	Fiscal year
GIC	General Insurance Corporation of India
GIEK	Norwegian Institute for Export Credits
HEP	Hydro-electric power project
HP	Himachal Pradesh
HUDCO	Housing and Urban Development Corporation
ICICI	Industrial Credit and Investment Corporation of India
ICOLD	International Commission on Large Dams
IDBI	Industrial Development Bank of India
IDFC	Infrastructure Development Finance Corporation
IFC	International Finance Corporation
IFCI	Industrial Finance Corporation of India
IFI	International financial institution
IL&FS	Infrastructure Leasing & Financial Services Ltd.
IMF	International Monetary Fund
IPP	Independent power producer
IREDA	Indian Renewable Energy Development Agency
ISO	International Standard Organization
J&K	Jammu & Kashmir
JBIC	Japan Bank of International Cooperation
JEXIM	Japan Export Import Bank
KCCB	Kangra Central Cooperative Bank
KfW	Kreditanstalt fuer Wiederaufbau
kWh	Kilowatt hour
LIC	Life Insurance Corporation of India
LNG	Liquefied natural gas
LoC	Line of credit
MDB	Multilateral development bank
MIGA	Multilateral Investment Guarantee Agency

MoEF	Ministry of Environment and Forests
MoU	Memorandum of Understanding
MP	Madhya Pradesh
MPEB	Madhya Pradesh Electricity Board
MPSIDC	Madhya Pradesh State Industrial Development Corporation
MSEB	Maharashtra State Electricity Board
MW	Megawatt
N&A	Nicobar & Andaman Islands
NBA	Narmada Bachao Andolan
NEEPCO	North Eastern Electric Power Corporation
NEXI	Nippon Export and Credit Insurance
NGO	Non-governmental organization
NHPC	National Hydroelectric Power Corporation
NIB	Nordic Investment Bank
NJPC	Nathpa Jhakri Power Corporation
NPA	Non-performing asset
NPC	Nuclear Power Corporation Ltd.
NRI	Non-resident Indian
NTPC	National Thermal Power Corporation
OECF	Overseas Economic Cooperation Fund
OFAP	Operational Financial Action Plan
PFC	Power Finance Corporation
PPA	Power purchase agreement
PSB	Public sector bank
PSS	Pumped storage scheme
RBI	Reserve Bank of India
Ren.	Renovation
SANDRP	South Asia Network on Dams, Rivers and People
SBI	State Bank of India
SEB	State electricity board
SIDA	Swedish International Development Agency
SMHPCL	Shree Maheshwar Hydel Power Corporation Ltd.
T&D	Transmission & distribution
TEC	Tata Electric Companies
THDC	Tehri Hydro Development Corporation
U/C	Under construction
U/O	Under operation
UP	Uttar Pradesh
USAID	United States Agency for International Development
UTI	Unit Trust of India

PART 1

INTRODUCTION AND OVERVIEW

1.1. THE START OF A NEW DEBATE?

In ancient Greece, a nine-headed snake called Hydra lived in the marshes of Lerna. She was the daughter of a giant and a nymph, and the sister of Sphynx, Cerberos, and Chimaera. Again and again, Hydra ravaged the fields, destroyed the crops and devoured the cattle of the local farmers. At last, King Eurystheus asked the Greek hero Herakles to bring Hydra's reign of terror to an end. A horrible battle unfolded in the marshes of Lerna. Every time Herakles cut off one of the serpent's heads, two new ones grew from the ghastly body. In the end, of course, the courage of the hero prevailed over the serpent's evil blood.

Hydra power?

The farmers of the fertile Nimad region in India's Narmada valley are not concerned about mythical snakes and other beasts. Their economic and social livelihood is threatened by a string of hydropower projects on the Narmada river. The Maheshwar dam, on which construction has already started, would (if completed) displace and negatively impact 50,000 people from 61 villages. Other dams would have social and environmental impacts on an even more devastating scale.

The communities of the Nimad region have opposed the Maheshwar dam and other projects for many years. Supported by movements and non-governmental organizations, they have taken on banks, export credit agencies, and large corporations. Yet like in the battle of Lerna, every time a funder or contractor withdrew from the project, new investors and equipment suppliers appeared on the scene.

So far, contractors Bechtel, PacGen, Siemens and Ogden, power utilities Bayernwerk and VEW, and financial institutions Hermes, COSEC and Hypovereinsbank have withdrawn from the Maheshwar project, or have refused to get involved in it. In their stead, a series of Indian development finance institutions, banks and companies stepped in to fill the gap and fund the project. "Lending by Indian banks and institutions is at the heart of all mega independent power and greenfield projects," an Indian journalist comments on the Maheshwar experience.[1]

Intermediary lending

Several international financial institutions have withdrawn from lending for the dams on the Narmada river directly. As the NGOs and movements involved in the Maheshwar struggle found out, the same institutions may still support the projects indirectly. To mention a few examples:

- The World Bank was forced to withdraw from the Sardar Sarovar project in the Narmada valley in March 1993, and has stopped funding individual power projects in India altogether. Yet the Bank still approved support for India's Power Finance Corporation (PFC), which is the most important funder of the Maheshwar dam.

- The Asian Development Bank has never directly funded any hydropower projects in India. "MDBs, including ourselves, are almost 'gun-shy' of dams now," says one ADB official: "The risks are great, the visibility is high, and the vulnerability is a constant concern."[2] In spite of such concerns, ADB funds the state power utility which facilitates the Maheshwar project. It also finances hydropower projects through its loans to other financial institutions.

- Through some strange karma, Herakles' brother Hermes in the 20th century was reincarnated in Germany's official export credit agency. After serious consideration, Hermes decided not to get involved in the Maheshwar project. Still, German government agencies support financial institu-

tions in India which in turn fund several hydropower projects, including Maheshwar.

- Hypovereinsbank, a commercial German bank, also planned to extend a loan to the sponsors of the Maheshwar project. After a strong NGO campaign, it decided not to do so. The bank does however participate in three general purpose loans for Indian institutions which in turn fund Maheshwar.

A global trend

The Maheshwar experience illustrates an international trend. Many countries, including India, have liberalized their economic policies since the 1980s or 1990s. Governments are successively withdrawing from funding infrastructure, including power projects. They instead look towards private investors and financial institutions to mobilize resources for these sectors.

Globally, multilateral and bilateral financial institutions have steadily reduced their direct funding for new hydropower projects. Commercial banks are becoming wary of the risks of such projects too. Even export credit agencies have begun to take their responsibilities – and possibly, the risks to their reputation – more seriously when considering controversial infrastructure projects. At the same time, official funders increasingly lend support to intermediary financial institutions, or extend program loans to public utilities which promote hydropower projects.

As a consequence, the financial flows for infrastructure, and for hydropower and other energy projects more particularly, have turned into a maze. An attempt to illustrate all financial flows in India's power sector resulted in a chart with 17 groups of funders and power operators, and almost 90 types of financial flows between them. Many international and domestic financial institutions interact, using a variety of different financial instruments, and in many cases lending through intermediaries rather than directly. It has becomes unclear to what extent such resources are public or private, and who is responsible for how they are invested. (A simplified chart illustrating the financial flows into India's power sector is now found in Annex 2.)

The financial flows for hydropower projects have turned into a maze. Many international and domestic financial institutions interact, using a variety of different financial instruments, and in many cases lending through intermediaries rather than directly.

In some cases, this fuzziness is clearly intentional, for example when commercial banks funded the giant Three Gorges dam on China's Yangtze river through a state development bank rather than directly. In other cases, the blurring of responsibilities is probably a welcome by-product of a trend which exists for other reasons.

The questions on the table

This report tries to shed some light on the fuzziness of intermediary lending. It addresses the following questions:

- Which domestic institutions fund power, and particularly hydropower projects in India, either directly or indirectly? Where do they mobilize resources? What are the emerging trends, and what are the prolems? Which policies do such financial institutions apply, and how can NGOs and social movements influence them?

- What is the role of international financial institutions within this picture? How do they work with domestic financial institutions and power utilities? Which policies do they apply when they fund projects through financial intermediaries? To what extent are they still accountable for the impacts on the ground when they invest funds through other institutions? And again, how can NGO networks influence the policies and decisions of international financial institutions when it comes to intermediary lending? These questions are relevant not only for India's power sector, but for international infrastructure funding more generally.

In a first part, this report provides some background on India's power and financial sectors, and illustrates the issues at stake with two prominent examples of power projects in India. The second part presents the main institutions which are involved in funding and promoting infrastructure, and particularly hydropower projects in India. A third part examines the role of international financial institutions in working with these agencies. The concluding chapter summarizes the main evidence and arguments of the report, and presents some thoughts for further action.

Invitation to a debate

The publishers and the author of this book have been involved in many international campaigns on financial institutions and power projects. It is not the purpose of this report however to look at the economic, environmental, social and political impacts of hydropower projects in depth. The report does not take a position on specific projects either, except in the case of a few illustrative examples. The focus on hydropower is explained by the mandate of the publishing organisations, and does not imply any comment on, or preference for, thermal power projects.

In the same vein, the report does not attempt to put forward a comprehensive list of recommendations for policy change. It rather tries to present facts and opinions as a starting point for a wider debate, in India and internationally. Hopefully, an agenda for specific policy changes will emerge from such a debate.

In this sense, the report is an invitation to social movements and NGOs, financial institutions and banks, government officials and politicians, planners and academics, the media and other interested citizens to participate in this debate.

1.2. THE MAHESHWAR EXPERIENCE

The Maheshwar Hydro-Electric Project is part of the highly controversial Narmada Valley Development Project. Intermittently under construction near Mandleshwar in Madhya Pradesh (MP), it is supposed to produce power with a capacity of 400 MW. The Maheshwar HEP is one of the earliest independent power producers (or IPPs) in India. In 1993, the state sector project was privatised and awarded to the Shree Maheshwar Hydel Power Corporation Ltd. (SMHPCL). This corporation was set up by the S. Kumars Group, a textile company with no previous experience in the power sector. The Maheshwar project exemplifies the lack of social responsibility, financial prudence and democratic accountability in India's power and financial sectors.

The Maheshwar experience exemplifies the problems of social responsibility, financial prudence and democratic accountability in India's power and financial sectors.

The problems of the Maheshwar project

The main problems of the Maheshwar HEP are:

- The project will displace, or otherwise negatively impact, more than 50,000 people from 61 villages. The government of Madhya Pradesh has admitted that there is no land available for rehabilitating the affected people.

- The Maheshwar HEP is justified as being a peaking power project. Yet with an installed capacity of 400 MW, it will have a firm power production of only 92 MW initially (and 49 MW finally). During the non-monsoon months, the project will produce electricity for a maximum of two hours per day.

- At approximately Rs. 5.82/kWh on average and Rs. 7.82/kWh for peaking power, electricity from Maheshwar would be exceptionally expensive. This problem is compounded by the fact that the depreciation rate of the rupee against the dollar has been strongly underestimated in the project calculations. In comparison, India's Power Minister and the National Thermal Power Corporation had offered Madhya Pradesh power for Rs. 2/kWh at various instances, and without building any new capacity.

- The MP State Electricity Board has promised to provide escrow cover to the Maheshwar HEP. (Through so-called escrow accounts, power suppliers get privileged access to the revenues of the state electricity boards.) The government of Madhya Pradesh is prepared to provide a guarantee for Maheshwar's escrow account. Authoritative sources such as the rating agency CRISIL argue that the SEB does not have sufficient financial capacity to provide escrow accounts, so that the financial burden might indeed end up with the state. The MPEB has only promised to provide escrow cover once the project reaches financial closure. So creditors which invest in the Mahehswar HEP at this point also face evident financial risks.

Opposition against the Maheshwar dam

The Narmada Bachao Andolan (NBA) and the inhabitants of the affected area have opposed the Maheshwar HEP for many years. After the affected people occupied the project site several times, the government of Madhya Pradesh agreed to set up a Task Force to review the project in January 1998. In October of that year, the Task Force, which consisted of senior government officials and NBA representatives, recommended that the cost-benefit analysis be reviewed, and that project-related work be stopped in the meantime. The government disregarded these recommendations, and work continued. Due to the resistance by the affected people, only a minor portion of the project has been constructed to date.

Since 1998, the struggle against the Maheshwar HEP has gained wide support from social movements, trade unions and political parties from Madhya Pradesh and all over India. Internationally, Urgewald, the International Rivers Network and other NGOs persuaded a variety of foreign lenders and investors not to support the project. Since late 2000, the NBA has increasingly focused its attention on Indian financial institutions which have committed support to the Maheshwar HEP. On behalf of the Andolan, Supreme Court lawyer Prashant Bhushan served such institutions a legal notice for "complete and flagrant violations of public interest" in May 2001.

Foreign funders and contractors

Since 1997, a series of international equipment suppliers, power utilities, banks and export credit agencies have become involved in the Maheshwar HEP. After they were persuaded of the problems and the public opposition against the dam, all of them withdrew their support. In 1997, Bechtel Enterprises from the US linked up and then withdrew from the project. PacGen, another US power company, followed and dropped out in 1998. Bayernwerk and VEW, two power utilities from Germany, agreed to pick up 49% of the project's equity, and withdrew in April 1999. Ogden, another power company from the US, filled the gap – and withdrew in turn in December 2000.

According to information received from the Asian Development Bank, the Industrial Finance Corporation of India (IFCI) submitted the Maheshwar HEP to ADB for funding under the Private Sector Infrastructure Facility which the Bank had approved in November 1996. When ADB raised the issue of resettlement, the proponents did not pursue the proposal further. ADB may however end up financing the Maheshwar HEP indirectly, through its loans to the Madhya Pradesh Electricity Board (MPEB) and the Power Finance Corporation (see chapter 3.3.).

International equipment suppliers faced similar problems. Siemens had received contracts worth $134.2 million for electro-mechanical equipment. ABB received contracts worth $55.7 million for hydro-mechanical supplies. Both contracts were contingent on the companies organizing respective foreign currency funding. When the German Government refused to provide export credit guarantees for Maheshwar through its official agency, Hermes, Siemens had to withdraw its application for a guarantee in August 2000. A few months later, the Portuguese export credit agency COSEC also refused to guarantee ABB/Alstom's contracts for the project. As a consequence, loans from Hypovereinbank, which had been tied to the export guarantees, also fell through. The withdrawal of the contractors was particularly serious since they had also committed 21% of the project's equity. So by 2001, at least ten foreign partners had abandoned the project, and SMHPCL was left without any foreign contractors or investors.

The role of Indian financial institutions

The Maheshwar HEP received the required techno-economic clearance from the Central Electricity Authority for a cost of Rs. 15.69 billion. According to the reappraisal document prepared by IFCI in March 2000, the cost had by then increased to Rs. 22.54 billion. Of the total cost, 30% (or Rs. 6.76 billion) is to be raised as equity, and 70% (or Rs. 15.78 billion), as debt.

In October 1991, the Ministry of Power ruled that "to ensure that the investor brings in additionality of resources to the power sector, not less than 60% of the total outlay for the Project must come from sources other than Indian financial institutions."[3] The Ministry qualified this rule in October 1998, but still stressed "the need of maximising financing from external sources."[4] In the case of Maheshwar, no foreign funding has so far been secured. In spite of the massive financial risks of the project, Indian financial institutions have not hesitated to fill the gap. At the time of writing, the funding situation is as follows:

Equity:
The S. Kumars Group as the project sponsor has committed 20% of the equity (or Rs. 1.364 billion). The Industrial Development Bank of India (IDBI), the Life Insurance Corporation (LIC) and the General Insurance Corporation of India (GIC) have agreed to take over the 15% share which was dropped by Siemens in 2000. IDBI may have felt compelled to take an equity stake in order to rescue a loan which it had prematurely disbursed for the project. The Indian heavy electrical company BHEL, which stepped in as an equipment supplier after Siemens dropped out, expressed an interest in contributing another Rs. 600-700 million.

This leaves SMHPCL with an equity gap of about 60%. It now appears that the government might partially bail out the supposedly private project. According to the NBA, the Madhya Pradesh government in December 2001 decided to turn debt of Rs. 260 million, which the company had owed MPEB since it took over the project in 1993, into share capital.

Rupee loans:
The lenders' consortium is coordinated by IFCI. Rupee loans have so far been committed by IDBI and PFC (1 billion each), IFCI and the State Bank of India (500 million each), and the Dena Bank and Punjab National Bank (250 million each). The S. Kumars Group also received Rs. 450 million in so-called inter-corporate deposits from the Madhya Pradesh State Industrial Development Corporation (MPSIDC).

Two Indian financial institutions, the Infrastructure Development Finance Corporation (IDFC) and the Industrial Credit and Investment Corporation of India (ICICI), declined to lend to the Maheshwar HEP.

Foreign currency loans:
On top of its rupee loan, the Power Finance Corporation had originally committed a foreign currency loan of $53 million for the Maheshwar HEP. After the foreign funding fell through, it chipped in another loan of $132.6 million. The State Bank of India (Frankfurt) committed a further $22 million, and the Bank of India, $12 million. The Unit Trust of India (UTI) is being discussed as the source of another loan of $46.28 million to make up for the shortfall caused by the withdrawal of foreign export credits.

Premature disbursals

In its re-appraisal report of March 2001, IFCI proposed a series of preconditions for the disbursal of loans to the Maheshwar HEP. These conditions included the following:[5]

- SMHPCL needs to obtain the necessary clearance for the revised project cost, and needs to obtain financial closure by tying up the entire lending for the project.
- SMHPCL needs to enter into a shareholding agreement with the strategic investor at this time, Ogden.
- The National Hydroelectric Power Corporation, the lenders' engineer, needs to submit its report on the project.
- SMHPCL needs to enter into an escrow agreement with MPEB.
- SMHPCL needs to return capital advances of Rs. 1,064 million which it had given to other companies of the S. Kumars Group which were not related to the project.

So far, none of these conditions have been fulfilled. One of the S. Kumars companies for which funds from the Maheshwar HEP were fraudulently transferred has in the meantime gone bankrupt. Rather than signing an agreement, the strategic investor, Ogden, has withdrawn from the project. Given the risks of the venture, the lenders took comfort in the fact that SMHPCL had contracted the services of Harza International, an established US engineering company. Harza has now also withdrawn from the Maheshwar HEP.

In spite of these glaring shortcomings, IDBI and PFC have disbursed considerable amounts of funds to the Maheshwar HEP. According to internal sources, the Power Finance Corporation has already disbursed Rs. 1 billion. In a short period, SMHPCL has defaulted on interest payments to PFC of Rs. 260 million, and has become the Corporation's third largest defaulter. It seems that SMHPCL has never paid any interest on its loans.

In 2001, the S. Kumars Group also defaulted on payments of Rs. 190 million of the Rs. 450 million inter-corporate deposits which the Madhya Pradesh State Industrial Development Corporation had extended. MPSIDC in turn pursued to recover the defaulted sum from the properties of the Maheshwar project.

Other forces at work?

"The irony is that the private sector was brought into the power sector because there was a paucity of funds with the government," Olga Tellis comments on the Maheshwar experience in *Asian Age*. "And now a whopping 1,577 crores [Rs. 15.77 billion] is going from public funds."[6] As Prashant Bhushan concluded in his legal notice to PFC, "there is no

doubt that the investment in Maheshwar will become converted into a non-performing asset."

In the case of Maheshwar, Indian financial institutions are bending all rules to invest in a project which is clearly not an economic proposition. "The moot questions is," columnist Sucheta Dalal concludes, "are Indian [financial institutions] incapable of proper project appraisal, or are there other forces at work behind their support to Maheshwar?"[7]

Which future for the Maheshwar project?

In late 2001, IDBI stopped loan disbursements to the Maheshwar HEP and agreed to review the project. In December 2001, an anonymous source within the Power Finance Corporation made it very clear that "PFC has lost faith in the S. Kumars Group." Since they have already disbursed large amounts of money, the lenders cannot however afford to let the unviable project sink. PFC would like the National Hydroelectric Power Corporation (NHPC) to take over the private venture. LIC, another creditor, has formally approached NHPC in this regard. NHPC has already taken over two other controversial dams on the Narmada river in a joint-venture with MPEB.

Being the lenders' engineer, NHPC is familiar with the problems of the Maheshwar HEP. An anonymous source at the Corporation clarifies that NHPC is not interested in taking over the sinking ship. "We would first be concerned about our own well-being," he says. Yogendra Prasad, NHPC's ambitious chairman, seems to be less doubtful. If asked to do so, NHPC would "complete the project in two-and-a-half years," Prasad commented in early 2002.[8]

> *"The moot questions is, are Indian financial institutions incapable of proper project appraisal, or are there other forces at work behind their support to Maheshwar?"*
>
> **Sucheta Dalal, columnist, June 2001**

NHPC might indeed be sufficiently ambitious – or indebted to LIC, its most important creditor – to bail out the Maheshwar project. Or the well-connected owners of the S. Kumars Group may try to muster sufficient political support at the central or the state level to force the MP government or NHPC to bail them out. Otherwise, the lenders may well end up having to count their losses and drop the Maheshwar project.

1.3. AN INTRODUCTION INTO INDIA'S POWER SECTOR

India's power sector has been in constant crisis for more than ten years. Since the early 1990s, the sector has undergone sweeping reforms. But fundamental issues – such as corruption, theft and the inefficient use of power – have not been addressed, and the problems of unreliable supply and lacking access to electricity for large numbers of people remain unresolved. Hydropower projects are an important element in the government's future strategy to close the country's power gap – even if they have so far failed to deliver on their promises.

> *"India's power sector is a leaking bucket; the holes deliberately crafted and the leaks carefully collected as economic rents by various stakeholders that control the system. (...) Most initiatives in the power sector are nothing but ways of pouring more water into the bucket so that the consistency and quantity of leaks are assured."*
>
> **Deepak Parekh, IDFC, 2001**

Some basic data on India's power sector

Between independence and May 2001, India's power generating capacity grew from 1,362 MW to 101,866 MW. As of May 2001, thermal capacity stood at 72,464 MW, hydropower at 25,202 MW, nuclear capacity at 2,860 MW, and wind energy at 1,340 MW.

The increase in production since independence has not been able to keep up with demand. India has a power shortage of about 8% on average, and about 11% at peaking time. The production, transmission and consumption of power in India are very inefficient. Transmission and distribution losses are estimated at 21.4% by the government, and at 30-40% by independent observers.[9] A large part of these losses are referred to as "non-technical," which is a euphemism for theft.

In 1999, 30% of the electricity produced was consumed by the agricultural sector, 16% by domestic users, and 38%, by industry. Consumption is heavily subsidized in the agricultural and domestic sectors. According to the WCD's India country study, electricity in 1999 was produced at Rs. 1.86/kWh. In the same year, agricultural consumers paid an average rate of Rs. 0.21, domestic consumers, of Rs. 0.91, and industry, of more than Rs. 3.50 in most states. For FY 2000/01, the Power Ministry indicates an average cost of power of Rs. 3.04/kWh, and an average tariff of Rs. 2.12/kWh. Power subsidies for farmers are an important political issue. The subsidies have greatly increased the deficits of the power utilities. They have also helped to deplete groundwater, by encouraging unrestrained use of electric pumpsets by farmers.

Hydropower in India

According to India's Central Electricity Authority (CEA), India has a hypothetical hydropower potential of 148,700 MW. Actual capacity stood at 508 MW at independence, and at 25,202 MW in May 2001. At times, hydro had a share of more than 50% both in generating capacity and actual generation. This has since gone down to less than 25%. As India's main problem is a lack in peaking power, the authorities would like to increase the hydro share within the power mix to 40%.

India's Northern region accounts for 36% of existing hydropower capacity, and the Southern region, for 34%. Expansion is primarily planned in the North-Eastern region (the Brahmaputra-Barak basin, with 48% of the country's hypothetical hydropower potential), and the Northern region (the Ganga basin, with 36% of the undeveloped potential). Of the 98 projects which CEA identified as the first priority for further development in 2001, 52 are located in the Brahmaputra and 20 in the Ganga basin.

According to the Central Water Commission and based on the generally accepted ICOLD definition, 4,291 large dams were in place or under construction in India in 1994. Almost three-quarters of them were situated in Maharashtra, Madhya Pradesh and Gujarat. According to a rough estimate in the India country study for the World Commission on Dams, large dams have submerged a land area of about 37,500 square kilometers in India, and have displaced at least 56 million people.[10] Adivasi people and members of the lower castes make up a highly disproportionate percentage of those displaced by dams.

Dams in India primarily serve irrigation purposes. Only 4.2% of the country's large dams are hydropower projects.[11] Yet hydropower often accounts for the largest dam projects. (See Annex 1 for a list of all hydropower projects mentioned in this report.)

The planning of hydropower projects

Under India's constitution, the central government and states share responsibility for the provision of infrastructure services, including electricity. Power projects are thus developed both by the states and the central government. All projects of more than Rs. 10 billion require a techno-economic clearance by the Central Electricity Authority to go ahead. Projects also need to be cleared by the Public Investment Board, and by the Ministry of Environment and Forests (MoEF). Often, environmental and forestry clearances are only given with conditions attached, but the MoEF in practice has no authority to ensure compliance with its conditions.

The states have considerable authority in India, but most revenues accrue at the central level. The central government redistributes parts of the tax revenue to the states through grants – in the form of direct attributions (40%) or through the Planning Commission, which defines the country's annual and five-year development plans (60%). All project expenditure in India is approved by the Planning Commission. Based on the requests from the various authorities on the central and state levels, the Commission prepares notional five-year plans, and operational annual plans for the respective budgetary appropriations. On the state level, the body approves investment programs, and leaves it to the state authorities to invest the respective resources in specific projects.

The Planning Commission prepares appraisals of the various sectors and projects as a basis of its decision-making. According to inside sources, the Commission's appraisal process is quite objective and comprehensive, but the actual sanctioning of financial resources is politicised. Often, the Planning Commission stipulates conditions for the release of resources for certain projects, but then does not monitor compliance.

Historically, most power plants in India were developed by the state electricity boards (SEBs). Some projects were developed by multipurpose development agencies or by smaller utilities serving certain municipalities. In the 1970s, the central government also started to create national institutions to promote power generation in India. These institutions primarily included the National Thermal Power Corporation (NTPC), the National Hydroelectric Power Corporation (NHPC, see chapter 2.1.), and the Nuclear Power Corporation (NPC). Other agencies were created to develop particular hydropower schemes for example in the North East.

The central government hoped that efficiently run central institutions would set a model of how to best develop power projects in India. The central institutions were also mandated to implement projects in unstable areas (such as Jammu & Kashmir or the North Eastern states), and projects which were politically important (such as the Tehri, Nathpa Jhakri or Indira Sagar hydropower projects). In 1986, the government also created the Power Finance Corporation (PFC, see chapter 2.2.) as a means to channel government funds into the power sector.

The entry of the IPPs

By the early 1990s, India's power sector was solidly on the wrong path. Bureaucratic incentives, budgetary mechanisms, support from multilateral and bilateral institutions, and the spoils of corruption and political control all favoured the rapid expansion of generating capacity. At the same time, energy consumption in the country was wasteful. The maintenance and modernization of power plants, transmission and distribution were neglected. Bill collection by the SEBs was low, and a large part of the electricity produced was simply stolen. Theft, inefficiencies and power subsidies caused the SEBs to run up large deficits.

Compared with setting up new capacity, fighting the theft of power by industrial and middle class consumers was not politically attractive. Expenditure for the maintenance of power facilities could not be recovered from the central government's plan resources, and demand side management programs did not deliver financial or political spoils. As analysts from the energy research NGO Prayas point out, India's power sector had been "hijacked" by a small group of politicians, bureaucrats and consumers that "exploited the sector to further their narrow individual goals at the cost of the long-term health of the sector and that of the larger public interest."[12]

While the financial problems of India's power sector escalated, the country also faced a severe balance-of-payments crisis in 1991. The government set on a course of fundamentally liberalizing the economy, and, as the researchers Navroz Dubash and Sudhir Chella Rajan observe, "the power sector was chosen to be at the forefront of the new liberalizing India."[13] Private companies were allowed to develop and operate power plants and to sell their power to the SEBs. Independent power producers (IPPs) were offered concessions such as full foreign ownership, guaranteed minimum profits before tax of 16%, tax holidays, and long-term power purchase agreements. Before 1995, the investors did not have to go through a process of competitive bidding. When the projects still failed to reach financial closure, the central government even offered counter-guarantees and a so-called fast-track status to eight particularly favoured projects.

The government's rules and incentives were clearly targeted at foreign private investors. Domestic financial institutions were not supposed to provide more than 40% of a project's cost. The response from foreign investors was overwhelming. Especially after Enron's high-profile Dabhol project had been offered extravagant concessions, the country was swamped with investment proposals. By the end of 1994, the SEBs had signed 243 Memoranda of Understanding (MoUs) for a capacity addition of 90,000 MW – or 90 MW for every working day.[14] In the process, all principles of rational power sector planning and financial prudence went overboard. No demand forecasts, options assessments or least-cost plans were carried out. Anybody who was bold enough to impress or bribe the authorities seemed to have a good chance of bagging an MoU.

A few brief examples may give an impression of the IPP frenzy which the unregulated privatisation of India's power sector created in the early 1990s. In the case of the Spectrum power project, the owner of a Rs. 20 million vermicelli company was able to take over a 200 MW, Rs. 4 billion power project from NTPC's pipeline in 1992. Considerable funds were siphoned off, the cost of the project went up to Rs. 11 billion, and all funds were either lent or guaranteed by Indian financial institutions. Also in 1992, Cogentrix Energy – a company with an equity capital of a meagre Rs. 4.5 million – managed to get an MoU for a 1,000 MW coal-fired power plant in Karnataka, and a power purchase agreement worth Rs. 20 billion a year. The project has meanwhile been cancelled.[15] The experience with the Dabhol power project is presented in chapter 1.5. In all three cases, there is strong evidence of corruption.

While the pipeline of IPPs was swelling, the financial situation of the SEBs continued to deteriorate. The utilities were not in a position to buy the expensive power which most private projects were going to produce. Even when securities in the form of so-called escrow accounts or state guarantees were offered, they could in many cases not be considered reliable. Under these circumstances, most IPPs did not commit sufficient equity capital, and did not reach financial closure. By 2001, only 3,200 MW of private capacity were under operation, or 3% of that envisaged under the MoUs signed by 1994.

Expanding electricity generation by inviting IPPs seemed to provide an easy way around tackling the politically difficult problems of power subsidies and theft. As it turned out, most of the private projects never materialized. Still, the Memoranda of Understanding locked the state utilities into a long pipeline of projects based not on rational energy planning, but on free-market dogmas and corruption. As Navroz Dubash and Sudhir Chella Rajan comment, the IPP approach produced a "wasted decade" for India's power policy.[16]

The restructuring of the power sector

The role of the states in the power sector was strengthened after 1991, but their financial situation deteriorated further. Bill collection by state utilities continued to be low, and many well-paying industrial consumers started to develop their own captive plants, in order to avoid the high industrial tariffs of the SEBs. Many state governments were no longer able to cover the deficits of their electricity boards. The next phase of India's power sector reform was not initiated by the country's own power apparatus, but by the World Bank.

In India, the World Bank had traditionally financed many thermal and hydro power projects both of the central government institutions and the states. After 1991, it encouraged the opening of the power sector for IPPs. It offered assistance to rationalize the negotiations with private investors, and abstained from supporting the corrupt Dabhol project on economic grounds. The Bank, however, failed to ever publicly criticize the irrational course of Indian power sector privatisation.

After 1992, the World Bank stopped funding further generating plants and closed several ongoing projects. The financial institution decided that henceforth, it would only support restructuring programmes in the power sector. Based on the experience in Great Britain, the Bank put forward a comprehensive package of reforms. According to its new policy, the SEBs should be unbundled into separate generation, transmission and distribution corporations. The whole sector should be opened for private investment, and distribution should be fully privatised. Power subsidies should be reduced, tariff setting should be shielded from political influence, and delegated to newly created state electricity regulatory commissions. The Asian Development Bank and bilateral donors soon adopted this model. In 1996, Orissa was the first state to embark on a power restructuring programme under World Bank conditionality. Other states, including Haryana, Andhra, Madhya and Uttar Pradesh, Gujarat, Rajasthan and Karnataka, followed suit.

The central government by and large embraced the World Bank's approach. It stipulated that all states should set up independent regulatory commissions, that agricultural tariffs should be increased, and that SEBs should achieve a minimal rate of return of 3%. The Power Finance Corporation started to provide funds to reforming states at favourable conditions, and totally halted funding for projects in some non-reforming states.

Six years into the restructuring of Orissa's power sector, it is time to take stock. The World Bank believes that while mistakes have been made, the model is a "tremendous success" in that it has created a general consensus about the necessary reforms within the country's power apparatus. Looking at the realities on the ground, Prof. Amulya Reddy, one of India's leading power experts, believes that the Orissa model is a "debacle." To borrow from Prof. Reddy's critique, "transmission and distribution losses have not been brought down; theft has not been reduced; costs have not been contained; performance has not improved; the private distribution companies have not shown superior management skills; they have not been more successful than their predecessor public-sector organisations in collecting revenues; they have defaulted in their payments to the grid" and "above all, rural electrification has been the worst casualty of reform."[17]

For Power Minister Suresh Prabhu, the restructuring program in Orissa is "not a success or a failure," but "a test case about what needs to be done." According to the Minister, mistakes were made because the necessary "spadework" had not been done. In the future, the emphasis should not simply rest on privatising public utilities, but on increasing their transparency and accountability.[18] (See below, and see chapter 3.1. for a further critique of the World Bank's role in India's power sector reform.)

Funding power projects in India

At present, power projects (including hydropower schemes) in India are supposed to be funded from the following sources:

- Through NHPC and other central utilities, the government provides the equity capital of central sector power projects. The government also offers a range of other incentives to promote the development of power projects (see below).

- State governments and utilities contribute the equity capital of state sector projects. They conclude power purchase agreements with IPPs, and offer escrow accounts and other guarantees as securities.

- Investors from India and abroad are supposed to provide the equity of private sector projects. In central, state sector or private projects, equity usually needs to cover 30% of project costs.

- Once the equity has been secured, PFC and Indian development finance institutions extend rupee loans for the debt-financing of central, state sector and private power projects. Increasingly, Indian commercial banks and other financial institutions also provide debt funding to power utilities and individual projects. Domestic lenders usually cover about 40% of the project cost. In some cases, they also extend foreign currency loans.

- Export credit agencies, some bilateral institutions and numerous international commercial banks extend loans (or guarantees) to cover the foreign currency debt of power projects, which usually amounts to about 30% of project cost.

Apart from direct funding, the central government has started to offer a series of incentives to encourage the development of power projects:

- The government exempts bonds for the infrastructure sector, particularly PFC bonds, from taxes.

- In 1995, the government granted tax holidays of ten years and an exemption from import tariffs for so-called mega-projects of more than 1,000 MW (in the thermal sector) or 500 MW (in the hydro sector). It also extended guarantees to seven private hydropower projects.

- In 1997, the government started to provide an interest subsidy of 4% for PFC loans for priority projects (including the completion of power projects, missing transmission links etc.) under the Accelerated Generation & Supply Programme. The Power Ministry believes that this programme has been effective in helping states to complete projects, and would like it to be funded also under the Tenth Plan.

- Under the Accelerated Power Development Programme, the government contributes grants and loans for the renovation and modernization of existing power plants and distribution networks.

- Host state governments receive a free share of 12% of the power produced by central hydropower projects in their territory.

Financial institutions stand ready to extend loans, and the government is prepared to sweeten investments with a variety of incentives. In spite of this, investment is not forthcoming. The main reason is the bankrupt status of many state electricity boards. Most state utilities are not able to commit the equity capital of new power projects, or to reliably guarantee the purchase of power from private projects. As long as equity capital does not come forward, lenders will usually not disburse their loans. "Today there is no dearth of funds," says Deepak Parekh, chair of the Infrastructure Development Finance Corporation. "We lack bankable projects."[19]

Adding to the financial problems of the system, many state utilities default on their payments to the central power institutions. By 2001, the outstanding dues of the SEBs to central power utilities such as NTPC, NHPC, Power Grid Corporation, coal suppliers etc. amounted to Rs. 415 billion. The huge arrears weaken the financial state of the main developers of power projects. Running up arrears also allows the state governments to avoid politically more difficult choices like tackling the theft of power.

Since the mid-1990s, India's development financial institutions have rapidly increased their loan commitments for infrastructure and particularly power projects. Yet for financial, bureaucratic and technical reasons, many power projects do not move ahead. As a consequence, financial institutions have committed expensive long-term funds, but are not able to actually invest them. Since the end of 2000, funders have grown increasingly wary of power projects. In December 2001, a group of financial institutions decided to review their commitments to 19 power projects, after they had already suspended financial assistance to 14 other projects. The list of projects under review include three hydropower projects Baghliar (450 MW, Jammu & Kashmir), Maheshwar (400 MW, Madhya Pradesh), and Vishnuprayag (400 MW, Uttaranchal).

Hydropower in trouble

During the Ninth Plan period (1997-2002), Plan contributions to the power sector were reduced, as much of the investment in new projects was expected to come from the private sector. Yet the numerous risks and high up-front costs of hydropower projects meant that private investors shied away from hydropower projects – and those who intended to invest, often did not succeed in implementing their projects. So since the early 1990s, the construction of new hydropower capacity has slumped. The Ninth Plan's target for new hydropower capacity was 9,818 MW. If the tentative programme for FY 2001/02 materializes, only 4,968 MW of new capacity will come onstream: 790 MW from central projects (compared with a target of 3,455 MW); 4,092 MW from state projects (target 5,808 MW); and a mere 86 MW from private projects (target 555 MW).[20]

Many power projects do not go ahead because their prospective customers – the SEBs – are bankrupt. Unlike thermal power plants, hydro schemes face serious geological, hydrological and social prob-

lems. The long delays in developing hydropower projects cannot therefore simply be explained away by the financial problems of the sector. (See the brief overview of the projects in NHPC's pipeline in chapter 2.1.) In April 2001, the Parliamentary Standing Committee on Energy commented in a critique of India's hydropower development "that huge time and cost over run of power projects have become a routine affair and the Plan targets for the year have never been achieved in respect of majority of the projects under implementation."[21]

> "There is no point investing in generation if the power does not reach the consumer."
>
> **Bernard Pasquier, International Finance Corporation, December 2000**

The hopes of India's hydropower industry presently rest on Malana, a private hydropower scheme of 86 MW in Himachal Pradesh. After a power purchase agreement with the state had not come through in several years, the private developer decided to turn the project into a captive plant for a spinning and weaving plant in Rajasthan. Once the financial problems were resolved, construction was completed in 2001 within less than three years. The developers explain their rapid progress by having tightly controlled the contractors, and claim they have amicably resolved all resettlement problems, and have employed a large number of local workers.[22] Even this supposed model project had to pay a fine of Rs. 12 million for having illegally cleared 61 hectares of forest. The Indian developers and their Canadian consultant have meanwhile created a new consultancy service, and already advise about 14 other hydropower projects in India.

Current initiatives in the power sector

Consumers, parliamentarians, trade unions and popular movements still resist the privatisation of state power utilities and the sharp increase in power tariffs under the restructuring model of the international financial institutions. With some modifications, there is however a general consensus in support of this model within the country's power sector apparatus. A new Electricity Bill pending in Parliament will, if passed, further simplify the clearance process for generation projects. The Bill will allow producers open access to transmission and distribution networks, will make it mandatory for states to set up independent Electricity Regulatory Commissions, and will discourage cross-subsidies in tariffs.

Some relevant trends in India's power sector policies are:

Increase in resource allocations:
Since private investment for power projects has not materialized in sizable amounts, the Planning Commission is expected to increase the share of the power sector in its allocations under the Tenth Plan (2002-2007). Even under the present Ninth Plan, allocations for the sector in the annual budgets have markedly increased from 1998 (7.2% of total allocations) to 2000 (12.8%).

The increase in public resources for the power sector will not only come from the budget. Part of it will also be mobilized from the market through public institutions, including the planned new India Power Fund (see chapter 2.2.).

Strengthened focus on distribution and theft:
The glaring problems of theft and ineffective distribution have gained prominence in the policy debates within India's power establishment and the World Bank. "There is no point investing in generation if the power does not reach the consumer," IFC's Bernard Pasquier commented in December 2000.[23] "Unless we fix distribution, no other problem in the power sector can be solved," Power Minister Suresh Prabhu said in September 2001. "If we fix distribution, there is nothing else we need to do."[24]

Theft of power is currently estimated at Rs. 210 billion per year. A variety of measures to improve metering and accounting at the level of the distribution circles are supposed to strengthen control and accountability, and to bring down the "non-technical losses." Annual Plan allocations for the Accelerated Power Development Programme, which covers distribution projects, have increased from Rs. 10 to 15 billion, and the Power Minister has appealed for a further increase to Rs. 50 billion under the Tenth Plan.

Strengthened focus on hydropower:
The long-term goal of the government is to increase the share of hydropower capacity within the country's overall power mix from the present 25% to 40%. After hydropower has taken a further slump in the era of IPPs, its share within the future Plan allocations for the power sector will probably increase.

According to media reports, the Ministry of Power is considering levying a cess of 5 paisa on every kWh of power generated by the central power utilities to be paid into a new Hydro Development Fund.

In November 2001, Suresh Prabhu announced that the government would publish guidelines of a National Hydro Power Policy within two months. The Minister said these guidelines would "detail the ecological and societal issues to be addressed while coming up with hydro power projects," since "we also have to ensure ecological security, apart from energy security."[25]

Encouraged by the experience of the Malana project, some voices call for a focus on small and medium-sized hydropower schemes. According to the head of the Malana power company, projects of less than 500 MW should be allowed to go forward without competitive bidding, while the number of large-scale projects should be limited.[26] The Indian industry journal, Power Line, also argues that "smaller hydro projects are eminently do-able while big hydel projects present innumerable hurdles."[27] However, since mega power projects offer major political and financial spoils, an official focus on smaller hydro projects would come as a surprise.

> *"Nowhere in the world has any country achieved self-sufficiency in power through private money. (…) We cannot dump the state electricity boards now just because it is the age of privatisation. What is wrong is that there is no auditing there, no transparency, and they are not functioning the way they are required to."*
>
> **Suresh Prabhu, Power Minister, January 2002**

Stronger role for central power utilities:
Development finance institutions have become wary of power projects, and of hydropower schemes more particularly. "Bitter experiences with the Shree Maheshwar and Sardar Sarovar projects have made the lenders overly cautious," regrets *Power Line*.[28] Financial institutions and other actors thus argue that the central hydropower institutions and particularly NHPC should have a stronger role in developing or completing hydropower projects. These agencies were after all created to rescue ailing projects. According to one idea, institutions like NHPC could guide new projects through their technical and economic clearance processes, and then hand them over to private developers. Already, the Ministry of Power has strongly increased the budget allocations for NHPC and other central hydropower developers for FY 2001/02.

The overall strategy:
In January 2002, Power Minister Suresh Prabhu outlined his overall strategy for tackling the problems of the power sector in a two-part interview with *Business Line*. Looking back at the 1990s, the Minister stressed that the aim should not be "to get more Fortune 500 companies to start visiting India more often," but "to bring commercial viability to the power sector, improve quality, reduce tariffs, improve availability and improve accessibility as 80,000 villages do not have electricity." According to Prabhu, the main problem is not that the utilities are under state control. "Nowhere in the world has any country achieved self-sufficiency in power through private money," he says, and "we cannot dump the SEBs now just because this is the age of privatisation." The main problem is the lack of accounting and transparency in the system, which results in theft and inefficiency.

As indicated above, the new strategy attempts to tackle theft and inefficiency on the distribution level, and its pivot is the distribution feeder. Technical measures such as a switch to high voltage transmission and remote metering, energy accounting, and incentive measures should help to localize losses, "nail responsibility" and reduce theft. If losses can be checked, the power tariffs can be reduced, the quality of supply can be improved and eventually, the "ability of the institutions to add capacity" will be expanded.[29]

Open questions and limitations

Since the early 1990s, Dabhol has been widely propagated as a model of the new era of private power projects. Maheshwar has been upheld as the model of private hydropower, and Orissa, as the model of power sector restructuring programs. In the meantime, these model projects and programs have all failed. Given this history, it is surprising to see that the country's power sector strategies of the 1990s have never been evaluated in a comprehensive way, and that since the adoption of the World Bank model, official power sector policy has been restricted to incremental changes and patchwork solutions. The reasons why hydropower projects, and the central hydropower developers more particular-

ly, have failed in the past have for example never been analysed. India, incidentally, is one of the few countries which is fundamentally opposed to considering the conclusions of the independent evaluation by the World Commission on Dams.

Suresh Prabhu's strategy is more consistent than what other Power Ministers or financial institutions have proposed since the early 1990s. It is not primarily based on foreign capital or imported ideologies, but on the experiences of the Indian power sector. Several problems persist. Checking theft and corruption will not simply take technical innovation, but public involvement and political change. This has so far not happened.

In the same vein, the Power Minister has so far not clarified how he intends to deal with the large, wasteful generation projects which are in the pipeline of public and private developers but do not fit into a rational sector strategy. He has not come out on the guidelines of the WCD yet, or on projects such as Mahewshwar and Nathpa Jhakri. In the case of the Tehri dam, Suresh Prabhu has rather made it clear that he is not prepared to tinker with a project which is corrupt and destructive, but enjoys the support of the Prime Minister. Given this record, confidence is limited that once the creation of capacity picks up again, a new generation of projects will be more economic and less destructive than what India has experienced so far.

Finally, the huge potential for efficiency improvements in the way power is produced and consumed is not an essential part of the new strategy. Programs to improve demand-side management and the performance of existing power plants are still neglected within budgetary allocations. Experts estimate that the energy intensity of India's economy is about 50% higher than the world average (which has a big potential for efficiency gains in itself). As Prof. Amulya Reddy points out, "compared to increasing capacity by building new power plants, energy conservation measures provide the quickest way out of a supply-demand gap."[30] They would offer large economic gains, and would also be more compatible with a democratic and equitable society.

1.4. *AN INTRODUCTION INTO INDIA'S FINANCIAL SECTOR*

The state has traditionally played an active role in regulating and directing financial institutions in India. This has allowed the promotion of social goals within the financial sector, but has also given vested interests a prominent place. Since 1991, the financial sector has been gradually liberalized, and the government is slowly withdrawing from it as an active player. Liberalization presents new challenges for the financial institutions, and for attempts to make these institutions more accountable.

The spectre of financial institutions

Most Indian financial institutions were either created by the government, or were nationalized between the 1950s and 1970s. Broadly, the country's financial sector consists of the following groups of institutions:

Commercial banks:
India's commercial banks mobilize short-term deposits from retail savers, and focus on meeting the short-term financial needs of industry, trade and agriculture. About 40% of bank deposits are invested in government debt, which restricts lending to the other sectors. Among the commercial banks, the following subgroups can be distinguished:

- Public sector banks: With more than 60,000 branches and about four-fifths of total deposits and bank credit, the government-owned public sector banks are the largest category in the Indian banking system. They consist of the State Bank of India and its associate banks, 19 nationalized banks, and 196 regional rural banks. (See chapters 2.7. and 2.8.)

- Private sector banks: After most banks were nationalized in 1969, some private banks continued to exist, and a few more were created after 1993. The 23 private sector banks operate a network of some 5,000 branches, and account for about one-eighth of aggregate deposits and bank credit.

- Foreign banks: Some foreign banks have operated in India for decades, and others were allowed to enter as part of the liberalization process. In 2001, 42 foreign banks accounted for 5% of aggregate deposits and 8% of bank credit.

Development finance and other financial institutions:
Development finance and similar institutions provide a channel for the flow of long-terms funds from the public and from government to industry and infrastructure. The following groups can be distinguished:

- Development finance institutions (or All-India development banks): The so-called DFIs were created by the government to provide long-term loans, equity investment and other forms of funding to industry and the infrastructure sectors. They have so far not been allowed to accept short-term deposits from household savers. (See chapter 2).

- Investment institutions: The Unit Trust of India (UTI, a mutual fund), the Life Insurance Corporation of India (LIC) and the General Insurance Corporation of India (GIC) also provide long-term funding to industry. Until recently, they enjoyed monopolies in their respective business sectors. (See chapter 2.8.)

- Specialized financial institutions: Institutions like PFC, IDFC and others were created to provide long term funding for specific sectors such as electricity generation or transport. (See chapters 2.2. and 2.6.)

- Other financial institutions: This sub-sector includes co-operative banks, non-bank finance companies and state-level financial institutions. Except for institutions such as housing finance companies or mutual funds, they do not play a role in funding infrastructure projects.

Political influence

Traditionally, the Indian government has influenced financial institutions both through direct ownership and through regulation. More than 90% of the banking sector is under state control, and the government appoints the top management of all state-controlled institutions. It also exercises influence on "significant corporate actions" even when it is a minority shareholder, as ICICI points out in its 2001 annual report.[31]

Until the early 1990s, the government used to regulate all aspects of banking, including the setting up or closing of branch offices, the level of interest rates, and the mobilization of foreign capital. An important policy tool is the system of so-called directed lending. The Reserve Bank of India requires all commercial banks in India to lend 40% of their credit to priority sectors such as agriculture, small-scale industry, small businesses and export companies. Loans to the priority sectors are subsidized, and as a consequence must be sanctioned by the government. In a less direct manner, the government influences lending policies through tax concessions, for example for infrastructure bonds.

The government's active role in the financial sector has allowed large parts of the population and disadvantaged sectors access to credit and investment which would not be served if banking were left to the market. One illustration of this is that half of India's 66,000 bank branch offices today are in rural areas.

India's society, however, also pays a high price for the politicisation of the financial sector. The appointment of top management, for example, is often based more on bureaucratic criteria than on competence. And the collusion of vested interests from the state and the private sectors has often forced financial institutions to fund projects which were not economic, and which did not serve the public good. This assertion will be elaborated in the following chapters.

Credit culture and portfolio quality

India's financial institutions have traditionally suffered from a high degree of so-called non-performing assets (NPAs). During the late 1990s, the problems escalated. After the government opened most industrial sectors to competition from the world market, many companies ran into problems. As a consequence, bank clients particularly in the textile, iron and steel, food and chemical sectors were no longer able to service their debts. In March 2001, the country's public sector banks had a staggering Rs. 644 billion of non-performing assets on their books. The NPAs of the development finance institutions amounted to another 153 billion. (According to current RBI guidelines, assets are classified as non-performing if interest is overdue for more than 180 days, and/or if principal is overdue for more than 365 days.)

The government influences the operations of financial institutions through a variety of means. When perceived as necessary, it supports them through the infusion of new capital. This dependency upon the state does not encourage a risk-conscious credit culture within financial institutions. "The Indian banks' credit risk management practices remain largely deficient," the rating agency Moody's remarked in September 2000. And further: "During the long period of nationalisation and before the introduction of asset classification and provisioning norms, bank management had little incentive to focus on asset quality."[32]

This traditional explanation for the high degree of non-performing assets does not tell the full story. The problems of India's financial institution cannot primarily be explained by incompetence. In fact, the staff of banks and DFIs are generally considered to be highly professional. In spite of their professionalism, a variety of factors both on the borrowers' and the lenders' side allow vested interests to socialize private risks and losses in the form of NPAs.

A report of the Reserve Bank of India concluded in 1999 that borrowers often divert loans into new projects or affiliated companies.[33] The original project or company suffers, and the debt is not serviced or repaid. Financial institutions are active accomplices in this game. They have repeatedly approved large loans for companies even when the respective borrowers had stopped servicing their existing debt. Financial columnist Sucheta Dalal has documented this practice for steel companies like Essar. One company of the Essar group defaulted on its loans even while it was still making profits. Financial institutions declared the company a wilful defaulter in February 2001. But this did not prevent them from approving a new loan of Rs. 25 billion to the same company for a refinery project.[34] In the case of the Spectrum power project mentioned in chapter 1.3, the corrupt developer defaulted on the loans from IDBI and other Indian institutions, but the creditors did not take any action.

Negligent and irresponsible loan approvals are encouraged by various factors. In some cases, corruption in the form of bribes or other benefits helps to overrule professional prudence. Since 1990, the Central Vigilance Committee has launched 65 criminal proceedings against members of the staff or management of public sector banks.[35] In other cases, politically influential companies can use their clout to pressurize managers into approving a particular loan, for example by threatening to get them fired if they resist. Politicians or government bureaucrats can directly use their influence to make sure that a project which is important to them gets funded. ("Some of these people have long hands, and you will always listen to your owner," remarks one manager of a financial institution in a personal conversation.) Finally, prudent bank staff can also be overruled by factors such as institutional ego, prestige, and the ambitions of senior management.

As a consequence of negligent lending, the capital adequacy of many financial institutions fell dangerously in recent years. By the end of FY 2000/01, 21.0% of all assets of IFCI for example were non-performing, and the institution had a capital adequacy ratio of only 6.2%. In line with international standards, RBI requires financial institutions to reach a minimal capital adequacy of 9%, and of 10% from 2002 onwards. The government has repeatedly had to rescue financial institutions when mounting NPAs threatened their capital base. Until March 1999, the state had spent Rs. 205 billion on bailing out public sector banks. In 2000, it had to spend a further billions of rupees on an investment fund of UTI, which had incurred huge losses due to fraudulent practices of its management. And in 2001, a new series of mega-bailouts for ailing financial institutions was in the pipeline (see chapter 2).

Given the background of negligent (and sometimes criminal) collusion between powerful companies and financial institutions, the bailouts constitute a large-scale socialization of private risks and losses. Like the power sector, the Indian financial sector involves huge transfers of wealth from society at large to a privileged elite. Strangely enough, the Indian public has so far not discussed the political implications of the regular bailouts of financial institutions.

Like the power sector, the Indian financial sector involves huge transfers of wealth from society at large to a privileged elite. Strangely enough, the Indian public has so far not discussed the political implications of the regular bailouts of financial institutions.

With the liberalization of the financial sector, the government is gradually reducing its support for financial institutions. It has announced that after a series of recapitalisations which are currently being prepared, the financial institutions will have to fend for themselves. Whether this indeed happens remains to be seen. Rating agencies still believe that India's public sector banks and development finance institutions enjoy an implicit guarantee from the state.

Lacking checks and balances

The Central Vigilance Committee (CVC) is in charge of investigating cases of corruption in state institutions, including the public financial institutions. The Reserve Bank of India (RBI), which is also the monetary authority of the country, regulates and supervises the financial sector. The RBI issues guidelines on aspects such as sectoral exposure, non-performing assets etc., and is supposed to monitor their implementation.

S.S. Tarapore, a former deputy governor of RBI, is highly critical of the institution he once served. "We lived in an innocent world," Tarapore says, "where we believed that regulation was so rigorous that banks dared not violate the regulatory framework and thus, supervision was redundant." As a consequence of the traditional focus on regulation, "the practice of supervision being a step child continues even today."[36] Sucheta Dalal points out that RBI sometimes issues forceful inspection reports on particular financial institutions, but is very weak on follow-up action. The Reserve Bank's record is "pathetically poor," the columnist says. "Rather than merely writing letters of displeasure to bank chairmen, a decisive small fine which is publicised would ensure that banks do not violate the regulatory framework," suggests Tarapore.[37]

Many observers agree that the Indian media – with some notable exceptions – do not effectively monitor the activities of financial institutions. The country's rating agencies are no effective check against politicised business practices either. All major rating agencies are affiliated with financial institutions. They sell advisory services to corporate clients, and can thus face conflicts of interest when they rate companies. In the case of Dabhol, for example, the

country's most respected rating agency, CRISIL, agreed to prepare a report which disregarded all the untenable assumptions on which the financial calculations for the project were based.[38]

The liberalization of the financial sector

Partly on its own initiative, partly under guidance from international financial institutions, the Indian government has liberalized the financial sector since 1991. It allowed new private banks and insurance companies to enter the market. Most interest rates were deregulated, and so were foreign exchange operations. Directed credit, which had benefited agriculture and small-scale industry, was scaled down. Banks were allowed to open or close branches. A private capital market was created. Banks and development finance institutions were allowed to raise private equity capital. The government announced it would stop bailing out financial institutions in times of crisis. In December 2000 a bill was tabled in parliament which would reduce government ownership in public sector banks to 33%.

> *"We lived in an innocent world, where we believed that regulation was so rigorous that banks dared not violate the regulatory framework and thus, supervision was redundant."*
>
> ***S.S. Tarapore, ex-deputy governor, Reserve Bank of India, October 2001***

The policies of liberalization have blurred the distinctions between different groups of financial institutions, and have increased competition between these groups. Life insurers and commercial banks take up long-term project finance, and development finance institutions enter the life insurance or consumer credit markets. Liberalization has put the DFIs under particular stress. They struggle with problems of portfolio quality, and are required to strengthen their capital base. They face competition from commercial banks and insurance companies which have started to provide long-term loans. These competitors have cheaper access to funds in the form of household savings, and put pressure on the margins and profit rates of the development finance institutions.

The prospect of so-called disintermediation adds to the problems of the DFIs. With the strengthening of capital markets, the most creditworthy companies and institutions can raise equity or place bonds on the market directly, and do no longer need to take up expensive loans from financial institutions. The DFIs and other lenders are thus losing their most attractive customers, and are left with the medium or lower rated projects, companies and institutions – including those in the power sector.

Which way out for development finance institutions?

Development finance institutions use a variety of strategies to respond to the pressures of liberalization and added competition. They have increased project financing for private infrastructure in order to move away from the suffering industrial sectors. Some financial institutions have started new business activities, including advisory services, mutual funds or insurance companies. They have raised equity from private shareholders to make up for the dwindling government support for their capital base. And they consider turning themselves into universal banks, so that in the future they can also mobilize cheap, private short-term deposits.

In April 2001 the Reserve Bank of India requested the development finance institutions to prepare plans for their transition to universal banks. As universal banks, the DFIs will have to further increase the provisions against their assets, in order to provide more security to private savers. At the same time, they will have to follow the rules on directed lending to the so-called priority sectors. Lending to agriculture and the social sectors could thus to some extent crowd out other sectors, including power projects. The official Udesh Kohli committee recommended in January 2002 that infrastructure should in this case also be considered a priority sector.

As the financial sector is being liberalized, it becomes more difficult for the state to pursue positive developmental goals through direct control or the regulation of financial institutions. On the other hand, in a corrupted system liberalization also offers perspectives for progressive action. Market forces can be used to discourage the funding of uneconomic projects, which benefit vested interests but not the retail customers, the majority of shareholders, or society at large. Especially in the case of hydropower projects, economic rationality can support environmental and social concerns. For such new checks and balances to work, the financial sys-

tem needs to be made accountable and transparent. Civil society movements need to understand the mechanisms of capital markets, consumers need to recognize their rights and interests in the financial sector, and independent media and rating agencies need to monitor the sector in a rigorous and unbiased manner.

So far, such a process does not seem to have taken place. RBI's former deputy governor S.S. Tarapore points out that the supervision of India's financial sector is still marked by "traditional norms of unanimity and opaqueness."[39] The established interest groups have so far managed to allow and promote a process of liberalization only where it suits their own interests.

During Asia's financial crisis of 1997/98, India profited from not having been more strongly integrated into the international capital markets. The liberalization of the financial sector attracted a large amount of foreign portfolio investment in recent years. Such investment is volatile. It has helped to ease India's foreign currency situation since 2000. It will also make the country more susceptible to future crises in the international financial system.

1.5. THE DABHOL EXPERIENCE

The Dabhol power plant in Maharashtra is the largest foreign investment in India. It once stood for the promises of economic liberalization and private foreign investment. Today it more appropriately symbolizes the opportunities which privatisation offers for corruption and private enrichment. The Dabhol project illustrates the lack of due diligence which Indian and international financial institutions apply when they appraise projects.

The Dabhol project once stood for the promises of economic liberalization and private foreign investment. Today it more appropriately symbolizes the opportunities which privatisation offers for corruption and private enrichment.

The project

Dabhol is a liquefied natural gas power plant in Maharashtra's Ratnagiri district, about 300 km south of Mumbai. The project consists of two phases. Phase I has a capacity of 740 MW. Phase II will have a capacity of 1,444 MW, and will add a liquefied natural gas terminal to the complex. Dabhol is one of eight fast-track power projects which were started with great fanfare when India's electricity sector was opened up for private investment in 1991. It is also the first foreign investment to have benefited from an Indian government guarantee.

The funders

The Dabhol Power Corporation (DPC) is a joint venture of the US power and construction companies Enron (65% of the equity), General Electric (10%), and Bechtel (10%), with the Maharashtra State Electricity Board holding 15% of the share capital. The equity for the whole project amounts to $887 million. More than 20 international banks participated in the lending, with ANZ Investment Bank and Citicorp International being the Lead Arrangers. The loans amounted to $643 million for phase I, and $1,444 million for phase II. The US Exim Bank, the Japan Export Import Bank, Belgium's Office National Ducroire and the US Overseas Private Investment Corporation provided official export credits and guarantees, or investment guarantees.

Indian financial institutions counter-guaranteed the foreign loans and guarantees for phases I and II to the tune of $1,102 million. The respective guarantees came from IDBI ($483 million), ICICI ($275 million), the State Bank of India ($224 million), IFCI ($99 million), and the Canara Bank ($21 million). On top of this, the Indian financial institutions provided rupee loans of $192 million equivalent, and non-convertible debentures of $235 million.

The Indian government provided the foreign investors and lenders (but not the Indian financial institutions) with a counter-guarantee for phase I of the project. This guarantee did not only cover the loans extended, but all future payments to DPC under the power purchase agreement.

The opposition against the project

Right from the start, the project was opposed by the affected people, by Indian power sector experts and by a growing popular movement. The main reasons for this resistance were:

Haste and lack of transparency:
On 20 June, 1993, the Maharashtra SEB signed a memorandum of understanding for the Dabhol plant with a delegation from Enron and General Electric. The signing occurred three days after the team had arrived in India, without any competitive bidding, and for a contract which during its lifetime would commit India to pay about $35 billion.[40] This undue haste continued throughout the history of

the project. In February 1995, Maharasthra's Congress government finalized the power purchase agreement with Enron – after it had lost the elections and just before a new BJP/Shiv Sena government took office. As the new government later declared in court, this "unholy haste (…) was clearly in order to reap the benefit" of the bribes which Enron spent on the project.[41] In the same vein, a short-lived BJP central government ratified the counter-guarantee for the Dabhol project on its last day in office in May 1996.

"From the very beginning," writes researcher Abhay Mehta, "Enron's attitude was one of arrogance and an open disdain for the law."[42] The company requested and got exemptions from most laws applicable for power projects in India. The power purchase agreement – which defined the obligations of Maharashtra and the Indian government – was kept secret (but later leaked to the public). As the head of the MSEB wrote to the Indian government in 1992, "public and judicial scrutiny of business policy and decisions (…) will not be acceptable by a company like DPC."[43]

Corruption:
In January 1995, Linda Powers, vice president for global finance at Enron, volunteered in a hearing in the US House of Representatives that in the case of the Dabhol project, "our company spent an enormous amount of its own money – approximately $20 million – on [the] education and project development process alone, not including any project costs."[44] Indeed, IDBI in its appraisal report noted that "the promoters have included a development fee of US $27 million in the project cost."[45] DPC later claimed that this fee covered engineering, legal, administrative and travel costs. The appraisal report clarifies that all these costs were however covered separately by "preliminary expenses" of Rs. 672 million.

The Maharashtran government confirmed in the Mumbai High Court in September 1995 that the power purchase agreement was procured "by fraud and misrepresentation."[46] The court directed DPC to place on record audited accounts of the $20 million which the company had spent on educating Indian officials. DPC never followed this order.

In December 2001, in a strange afterthought of history, 29 executives of Enron were charged in the US with pocketing a full $1.1 billion in insider trades. "There was fraud at the top, fraud by the board," said one of the lawyers for a plaintiff. "It's worse than any civil fraud case we've ever seen."[47]

Not economic and not needed:
Depending on various assumptions, the annual return on equity of the investors in Dabhol can be estimated at 32-40% before taxes. Sales taxes and duties were waived, and DPC also received concessions on income taxes. Even before the full cost of Dabhol became apparent, the Central Electricity Authority in 1993 calculated the reasonable cost of a combined cycle power plant to be between Rs. 18.1 and 19.1 million/MW, and the cost of Dabhol, to be Rs. 44.9 million/MW.[48] By all accounts, Enron's project did not make economic sense.

In March 1993, the Ministry of Finance asked the World Bank to consider funding Dabhol, and the Bank duly analysed the economics of the project. Its conclusion was unambiguous. In its response to the Finance Ministry, the World Bank pointed out that the project was "not part of the least Cost sequence for Maharashtra power development," that it would "place a heavy financial burden on the MSEB," and that "prices for industrial consumers would at the minimum have to be doubled in nominal terms to recover the cost of LNG power." The project as it was then formulated was "not economically viable," the Bank concluded.[49]

In its analysis, the World Bank also found that "the project would add more capacity than needed," and "would displace lower cost coal-fired generation in off-peak periods."[50] A few months later, the CEA calculated that MSEB would need to back down 408 MW of capacity producing power at 50-80 paisa/kWh in order to buy power from Dabhol at Rs. 3.47/kWh.[51] In spite of all this evidence, DPC managed to procure the power purchase agreement on the terms that it wanted. The PPA included a so-called take-or-pay clause, according to which Maharashtra's SEB was forced to pay for Dabhol's power even if the electricity was not needed.

The project takes its course

Enron resorted to violence against protestors, and directly paid the police to suppress popular resistance. Amnesty International in 1997 found evidence of harassment, arbitrary arrest, preventive detention and ill-treatment by the company.[52]

In 1995, the nationalist BJP and Shiv Sena parties won the state elections in Maharashtra on an anti-

Dabhol platform. In early August 1995, the new government cancelled the project. As BJP leader L.K. Advani announced in a public statement, the decision to scrap Dabhol was "a political decision against the political corruption" and "a protest against the Swiss bank account culture of Bofors and the suitcase practices of Bombay brokers, which have brought Indian politics disrepute."[53]

Soon enough, the cancellation only proved to be another twist of the "Swiss bank account culture" by the new government. On 3 November, 1995, a delegation of Enron met with Shiv Sena leader Bal Thackeray in Mumbai. Five days later, the government constituted a committee to renegotiate the project with DPC. On 19 November, the committee concluded its "renegotiations" and submitted its report. The Dabhol project was approved on terms which were even more unfavourable for India than under the original agreement.

"The entry of Enron, on the terms that it received, led to the breakdown of nearly all systems across the board. All sorts of companies, both local and obscure ones from the USA in particular, jumped into the arena."

Abhay Mehta, researcher, 2000

As was elaborated in chapter 1.3, the Enron deal had serious side effects on the Indian power sector. Comments researcher Abhay Mehta: "The entry of Enron, on the terms that it received, led to the breakdown of nearly all systems across the board. All sorts of companies, both local and obscure ones from the USA in particular, jumped into the arena."[54] In Andhra Pradesh alone, the government signed 64 memoranda of understanding for new power plants in a single day.

The system collapses

Phase I of the project started commercial operation in May 1999. Just as independent observers had warned, the power from Dabhol turned out to be excessively expensive. Instead of less than Rs. 2/kWh as originally promised, it amounted to about Rs. 7.80/kWh. The Maharashtra Electricity Regulatory Commission ordered MSEB to buy electricity from the cheapest possible source. But even as Dabhol produced at only 40% of its capacity, the SEB was forced to pay the DPC a capital servicing cost of Rs. 950 million each month.

In December 2000, the electricity board stopped payments for the power from Dabhol. Four months later, DPC stopped paying the contractors of the second phase, and so construction on this nearly completed power plant came to a halt. In August 2001, DPC defaulted on its interest payments to foreign lenders, and one month later, on its payments to the Indian creditors.

Just as it had done when the project was temporarily cancelled in 1995, Enron put the Indian authorities under strong pressure. "Our experience would indicate that contracts (...) are broken by Indian governmental authorities whenever and as often as they prove inconvenient or burdensome," the company's chairman Ken Lay argued in a letter to India's Prime Minister.[55] And US Assistant Secretary of State Christina Rocca told the Confederation of Indian Industries in July 2001: "From an American perspective, as I am sure you have all heard before, many of India's problems [regarding the investment climate] can be summed up in the five-letter word Enron."[56] Meanwhile, the project sponsors were trying to sell their investment in Dabhol to the government, the financial institutions, or to other companies.

The foreign lenders to DPC are protected by Indian guarantees. They would like the project to be terminated, and have threatened to invoke the guarantees. The Indian financial institutions enjoy no such comfort and want the project to survive. They have threatened that they would stop issuing further counter-guarantees for foreign loans if the Dabhol guarantee were indeed invoked. In September 2001, IDBI called for a massive capital infusion of Rs. 25 billion from the Indian government to prepare for this case. Whether or not the counter-guarantee is indeed called in is ultimately a political question.

The findings of the Godbole Committee

In February 2001, the Maharashtra government created a committee under Mhadav Godbole, an ex-chairman of MSEB, in order to look into the decision-making process for the Dabhol project. In April 2001, the Godbole Committee came out with a scathing critique of the project and the process on which it was based. Some of its findings were:

- Instead of exclusively negotiating with one company, the government should have opted for a competitive bidding process.

- Neither phases of the project were appropriately designed or least-cost.

- The calculation of demand for the power produced was "based on extremely over-optimistic assumptions."

- The calculation of the power tariff was "at best, another example of systemic failure and at worst something much more worrisome."[57]

The Committee concluded that Dabhol constituted an "inexcusable failure of governance," and that the decision-making process had been "neither reasonable nor rational." All assumptions for both phases were "in each and every instance (...) untenable."[58] Two of the five committee members, including the chair, saw indications for a "concerted effort to exercise undue influence at every stage of this project," and recommended the establishment of a formal Commission of Inquiry.[59] The whole committee recommended that the power purchase agreement be restructured and the power tariff reduced.

The role of the financial institutions

Independent analysts from the Prayas energy group had shown Dabhol's lack of economic and financial viability years before the plant was built. The World Bank declined to fund the project because its analysis clearly showed that it was not economically viable. Yet a host of foreign and Indian financial institutions still did not hesitate to provide loans and counter-guarantees for the project.

The Godbole Committee found that "the financial institutions showed poor judgment and lack of due diligence in accepting these projections without demur." And: "The decision of the financial institutions to fund this project seems to have been based primarily on escrow account given by MSEB, guarantee by the state government and the counter guarantee by the central government (for Phase I), rather than an independent and meticulous appraisal of the project."[60]

After the project collapsed, representatives of IDBI claimed that the financial institutions had been forced to approve the project, and should not be blamed for it. So who shares the responsibility for the decisions of financial institutions which, in the form of expensive power and bailouts for investors and lenders, will cost the Indian public billions of rupees?

Certainly, Enron knew how to use the instruments of US diplomacy to promote its interests. The company lavishly funded both the Republican and the Democratic Parties in the US throughout its history. Frank Wisner, the long-time ambassador of the US to India, joined Enron the day after he completed his assignment in Delhi. Thomas McLarty, an ex-fundraiser for the Democratic Party and Bill Clinton's chief of staff, personally ensured that the President was aware of Enron's interests in Maharashtra.[61] In India, forces within the Finance Ministry and in other institutions meanwhile made sure that all rules were bent so that Enron could bag an excessively favourable contract, as Abhay Mehta's vivid account of the Dabhol saga documents.

At the same time, the Indian financial institutions were clearly aware of the problems of the project, but did not ring any alarm bells. On 10 May 1994, IDBI's advisory committee met in Mumbai to discuss the proposed loan to DPC. The members of the committee pointed out that many items in the project budget were "on the high side," were "not a practice in India," and had "no justification."[62] IDBI could have leaked this information to the public, as financial institutions in India often do when they do not want to fund a particular venture. Yet the institution chose to ignore the critical voices, and went ahead to fund the project.

Before the loans turned sour, IDBI was paid well for its commitment. As the appraisal report documents, the institution was able to charge an interest rate of 17.5% for its loan, an upfront fee of 1.05% for its arranging role, and a commission of 2.4% for the guarantee which it extended. It is easy to imagine that the management of financial institutions may also have profited from the "educational expenses" which Enron lavished on the project.

After the World Bank declined to fund Dabhol, the government of Maharashtra in a note to the central government expressed a concern that the "comments may create a problem for the developers to raise commercial and institutional borrowings."[63] As it turned out, the note overestimated the appraisal capacity or the integrity of the international financial institutions. A group of prominent commercial banks and official export credit agencies did not hesitate to fund a project which obviously made no economic sense. They are equal partners in the

"poor judgment" and "lack of due diligence" which the Godbole Committee denoted for the Indian financial institutions.

A symbol of globalisation

On 2 December, 2001, Enron – the "world's leading company" as it had called itself – filed for bankruptcy procedures in the United States. The event was symbolic. Enron "espoused competition, the free market, world trade, globalisation and deregulation," as the *Guardian* wrote in an epitaph on the company.[64] Or, as the *Bloomberg* wire service put it, "Enron was the perfect expression of the global era and the neoliberal, West-knows-best thinking underlying it."[65]

The cynical arrogance with which Enron showered the Indian public and the world at large may be best captured in Linda Powers' statement in the US parliament. In the Congressional hearing of January 1995, Enron's Vice President said the following on the Dabhol project: "Working through this process has given the Indian authorities a real and concrete understanding of sound project lending practices. (…) Through our project, [Indian financial institutions] have developed a thorough understanding of project finance, international lending practices, project credit and security requirements, and the like – something that no amount of technical assistance could have achieved as effectively as a real live project."[66]

The sad truth is that Western governments and the international financial press throughout the process supported the view that the Dabhol project symbolized the benefits of globalisation. Comments journalist Patrick Smith: "Developing nations such as India have a long way to go, but genuine transparency in matters of policy and commercial conduct will prove of vital advantage to them once they achieve it. With emissaries such as Enron, the advanced industrial nations have nothing to teach them on the subject."[67]

Notes

1 Sucheta Dalal in rediff.com, 20 June 2001.

2 Preben Nielsen as quoted in World Commission on Dams, Third WCD Forum Meeting, Cape Town, 2001, p. 64.

3 *Gazette of India* No. 237, New Delhi, 22 October 1991, as quoted in Prashant Bhushan, Legal Notice to PFC, 10 May 2001, p. 4.

4 Quoted in Prashant Bhushan, ibid., p. 4.

5 IFCI Limited, Re-Appraisal Note on the Project of Shree Maheshwar Hydel Power Corporation Ltd., pp. 35ff., 42.

6 *Asian Age,* 27 June 2001.

7 Rediff.com, 20 June 2001.

8 As quoted in *Business Standard,* 1 January 2002.

9 R. Rangachari, N. Sengupta, R.R. Iyer, P. Banerjee and S. Singh, Large Dams: *India's Experience,* a WCD Case Study prepared for the World Commission on Dams, Cape Town, 2000, p. 175.

10 *Ibid.,* p. 116.

11 *Ibid.,* Annex, p. 67.

12 Shantanu Dixit, Girish Sant, Subodh Wagle, 'Regulation in the WB-Orissa Model: Cure Worse Than Disease,' *Economic and Political Weekly,* 25 April 1998, p. 2.

13 Navroz K. Dubash and Sudhir Chella Rajan, *Power Politics: The Process of Power Sector Reform in India,* Draft, 3 August 2001, p. 7.

14 Figures from Prayas/Public Sector International, *India Power Sector Reform Update,* Issue 1, October 2001, p. 6.

15 For an account of the Cogentrix project see Abhay Mehta, *Power Play: A Study of the Enron Project,* Orient Longman, Hyderabad, 2000, pp. 127ff..

16 Dubash and Rajan, *Power Politics,* p. 15.

17 Amulya Reddy, 'Need for Rethink of Karnataka Power Reforms,' *Deccan Herald,* 4/5 January 2002.

18 See interview with Suresh Prabhu, *Business Line,* 23 January 2002.

19 Quoted in IDFC, *Annual Report 2001,* p. 7.

20 Central Electricity Authority, 'Hydro Capacity Addition during 9th Plan – Overall Scenario.'

21 Lok Sabha Secretariat, Standing Committee on Energy, 'Report on Demands for Grants (2001-2002),' Ministry of Power, April 2001, paragraph 2.167.

22 See Shubhra Wadhawan, 'Going Onstream,' *Power Line,* March 2001.

23 *Power Line,* December 2000.

24 *Power Line,* September 2001.

25 *Deccan Herald,* 5 November 2001.

26 See Awadh Giri, 'Escalating Cost of Electricity,' *Power Line,* May 2001.

27 *Power Line,* September 2001.

28 *Power Line,* January 2001.

29 All quotes from interview with Suresh Prabhu, *Business Line,* 22 January and 23 January 2002.

30 Amulya Reddy, 'Need for Rethink of Karnataka Power Reforms,' *Deccan Herald,* 4/5 January 2002.

31 United States Securities and Exchange Commission, Form 20-F, Annual Report 2001, ICICI Limited, p. 19.

32 Moody's Investors Service, 'India Banking System Outlook,' September 2000.

33 See *Indian Express,* 31 July 2001; *Indian Express,* 28 November 2001.

34 See Sucheta Dalal, 'FIs should desist from making counter-offers,' *Indian Express,* 10 June 2001.

35 See www.bankersindia.com or G.H. Deolalkar, *The Indian Banking Sector: On the Road to Progress,* undated, p. 97.

36 S.S. Tarapore, 'Supervision is where the action really is,' *Financial Express,* 10 October 2001.

37 Quoted from *ibid.*

38 See *The Hindu,* 21 June 2001.

39 S.S. Tarapore, 'RBI cautiously opens up on its working,' *Financial Express,* 12 September 2001.

40 See Abhya Mehta, *Power Play: A Study of the Enron Project,* Orient Longman, Hyderabad, 2000, pp. 20ff.

41 Civil Suit No. 3392 of 1995, filed by the State of Maharashtra Versus DPC and the MSEB in the High Court of Judicature at Bombay, p. 5.

42 Mehta, *Power Play,* p. 34.

43As quoted in *ibid.,* p. 34

44 Testimony by Linda F. Powers before the Committee on Appropriations, Subcommittee on Foreign Operations, U.S. House of Representatives, 31 January 1995, p. 470.

45 IDBI Appraisal Report, p. 31.

46 Civil Suit No. 3392 of 1995, p. 15.

47 Attorney Bill Lerach quoted in *Economic Times,* 9 December 2001.

48 See Mehta, *Power Play,* p. 52.

49 Heinz Vergin, Director, India Country Department, World Bank, letter to Mr. M.S. Ahluwalia, Secretary, Department of Economic Affairs, Ministry of Finance, 30 April 1993.

50 Quoted from *ibid.*

[51] See Mehta, *Power Play,* p. 60.

[52] The Amnesty International report is reproduced in Mehta, *Power Play,* pp. 192ff.

[53] As quoted in Mehta, *Power Politics,* p. 221.

[54] Mehta, *Power Politics,* p. 127.

[55] As quoted in the *Wall Street Journal,* 20 September 2001.

[56] As quoted in *Times of India,* 25 July 2001.

[57] Quotes from the Report of the Energy Review Committee, April 2001, chapters 6.3.2.1 and 6.4.

[58] Quotes from the Report of the Energy Review Committee, introduction to chapter 6 and chapter 6.4.4.

[59] Quoted from the Report of the Energy Review Committee, introduction to chapter 6.

[60] Quotes from the Report of the Energy Review Committee, chapter 6.3.3.

[61] See Abhay Mehta's account of research by *Time* magazine in *Power Play,* pp. 144ff.

[62] See the summary record of the meeting in IDBI's Appraisal Report, Annexure XXVI.

[63] As quoted in Mehta, *Power Politics,* p. 45.

[64] John Vidal, 'A giant bully,' *Guardian,* 30 November 2001.

[65] Patrick Smith, 'There's an Eyeful for India in Enron,' *Bloomberg,* 14 November 2001.

[66] Testimony by Linda F. Powers, pp. 470.

[67] Patrick Smith, *Bloomberg.*

PART 2

INDIAN FINANCIAL INSTITUTIONS IN THE HYDROPOWER SECTOR

2.1. THE NATIONAL HYDROELECTRIC POWER CORPORATION

The National Hydroelectric Power Corporation is the largest central government institution which develops and operates hydropower projects. Like other central institutions, it focuses on projects which are difficult to develop, or politically sensitive. Although NHPC's past record is not impressive, the difficulties of implementing private or state-level hydro projects indicate the institution may play a more active role in the future.

NHPC invests the funds, which it raises directly, and is thus not a typical financial intermediary.

NHPC is the largest central government institution which develops and operates hydropower projects. Given its grand mandate, the Corporation's portfolio is very modest.

Ownership

India's central government has created several institutions to promote hydropower projects which are located in sensitive areas, or which are difficult to develop for other reasons. NHPC was set up in 1975 to take over three projects which had run into problems, the Salal I, Baira Siul and Loktak I hydropower schemes. Beyond these specific projects, NHPC's mandate is to develop India's hydropower potential in general. The government also hoped that a well-managed central institution could serve as a model and catalyst in the sector. The Corporation's portfolio is concentrated in Jammu & Kashmir, Himachal Pradesh, Uttaranchal, Sikkim and Manipur. It also includes projects in Nepal and Bhutan.

NHPC is a public limited company. After a series of capital increases, it presently has a share capital of Rs. 70 billion, which is exclusively held by the Indian government.

The largest share of electricity in India is produced by thermal power plants, and NHPC has been called "the poor cousin of the more high-profile NTPC."[1]

In late 1999, India's then power minister P.R. Kumaramangalam launched an idea to merge, or sell off the National Hydroelectric to the National Thermal Power Corporation. The plan was strongly opposed by NHPC, and soon scrapped.

Activities

NHPC develops hydropower projects from their conception to commissioning, and then operates them. By 2001, NHPC owned and operated nine hydropower projects, and sold power to 20 states. Its operational portfolio consists of the following plants:

- Chamera I (540 MW, Himachal Pradesh);
- Uri I (480 MW, Jammu & Kashmir);
- Salal I (345 MW, Jammu & Kashmir);
- Salal II (345 MW, Jammu & Kashmir);
- Baira Siul (180 MW, Himachal Pradesh);
- Tanakpur (120 MW, Uttaranchal);
- Loktak I (105 MW, Manipur);
- Rangit (60 MW, Sikkim); and
- Kalpong (5 MW, Andaman & Nicobar Islands).

Given its wide-ranging mandate, NHPC's portfolio is modest. (It is actually smaller than the portfolio of one of the other central government institutions discussed below.) The Corporation operates a combined capacity of 2,180 MW, of which only 80 MW were brought onstream since 1996. In its long-term

development plan for 1985-2000, NHPC had envisaged building a total capacity of 7,945 MW by the end of the century.

Since 1998, NHPC has included the development of wind and tidal power in its objectives. It is currently exploring the installation of a pilot geo-thermal power plant in Chattisgarh. NHPC is also part of a committee formed by the Power Ministry in July 1999 to explore the feasibility of a huge 900 MW tidal power project in the Gulf of Kutch. NHPC's main focus, however, continues to be on big hydro projects, and the Corporation clearly is not very committed to non-conventional energy sources. NHPC shelved a wind project in Tamil Nadu in 2001, much to the regret of the Parliamentary Standing Committee on Energy.[2]

NHPC also provides engineering services to other project sponsors. It serves as the lenders' engineer for IFCI on Maheshwar, and for ICICI on the Baspa II HEP. The Corporation recently signed a Memorandum of Understanding with Harza Engineering Company from the US to jointly provide consulting services in India and abroad.

Hydropower projects in the pipeline

Compared with its modest existing portfolio, NHPC's expansion plans are highly ambitious. The Corporation presently has the following projects under construction:

- Teesta V (510 MW, Sikkim);
- Dulhasti (390 MW, Jammu & Kashmir);
- Chamera II (300 MW, Himachal Pradesh);
- Dhauliganga (280 MW, Uttaranchal);
- Loktak Downstream (90 MW, Manipur); and
- Kurichu (60 MW, Bhutan);

Preliminary work has started on the following projects:

- Subansiri (Lower) (2000 MW, Arunachal Pradesh);
- Parbati II (800 MW, Himachal Pradesh);
- Koel Karo (710 MW, Jharkhand – see below); and
- Kishenganga (330 MW, Jammu & Kashmir).

A large number of projects are at various stages of preparation in NHPC's pipeline. They include

- Siang (Upper, Middle and Lower) (11,000, 700 and 1,700 MW, Arunachal Pradesh);
- Subansiri (Upper and Middle) (2,500 and 2,000 MW, Arunachal Pradesh);
- Parbati I and III (750 and 501 MW, Himachal Pradesh);
- Bursur (1,020 MW, Jammu & Kashmir);
- Pakal Dul (1,000 MW, Jammu & Kashmir);
- Upper Krishna I-IV (810 MW, Karnataka);
- Uri II (280 MW, Jammu & Kashmir);
- Chamera III (231 MW, Himachal Pradesh);
- Teesta Low Dam III and IV (100 and 132 MW, West Bengal); and
- Sewa II (120 MW, Jammu & Kashmir).

NHPC presented 12 projects for joint-ventures with international investors at an international conference in Delhi in February 2002. The road show included the six large projects in the Siang and Subansiri basins, Chamera III and Parbati III in Himachal Pradesh, and Uri II, Pakal Dul, Bursar and Sewa II in Jammu & Kashmir.

NHPC has entered into joint ventures with state utilities to promote projects which are facing problems finding financing. In 2000, NHPC formed a joint-venture with the government of Madhya Pradesh called the Narmada Hydro Electric Development Corporation. This vehicle is supposed to develop

- the Indira Sagar project (1,000 MW) and
- the Omkareshwar project (520 MW).

Like Sardar Sarovar and Maheshwar, Indira Sagar and Omkareshwar are part of the huge dam-building program on the Narmada river. Indira Sagar, which was originally funded by the World Bank, would alone submerge 254 villages.

In a joint venture with the West Bengal state utility, NHPC plans to build the following two pumped storage projects:

- Purulia (900 MW); and
- Turga (600 MW).

Problem projects

NHPC is confronted with the technical and financial problems typical for large hydropower schemes. Projects such as Baira Siul, Loktak I, Chamera I and Dulhasti have experienced serious geological problems. Salal I, Tanakpur and Dulhasti suffer from poor contractor performance, and have required design changes. Dulhasti and Loktak Downstream are being stalled by the activities of militants.

NHPC officials claim that Dhauliganga is being constructed on time, and that Chamera II, Kurichu and Kalpong were and are ahead of schedule. Yet many if not most NHPC projects suffer from massive time and cost overruns. Loktak I was delayed by more than nine years; Baira Siul suffered time overruns of almost six years; Rangit, of more than four years; and Tanakpur, of more than three years. Dhauliganga, which is now being quoted as a positive case, was in fact delayed by more than six years because the required land could not be acquired. Dulhasti has turned into a permanent headache for NHPC, with prospective power prices having reached a towering Rs. 11/kWh.[3] Salal I and Chamera I have also experienced time and cost overruns.

Most NHPC projects are situated in the valleys and foothills of the Himalayas. Dams and reservoirs in this area often face difficult geological problems, but do not normally displace as many people as projects elsewhere. NHPC officials claim that most of the Corporation's projects have so far been run-of-the river (although they appear to use a very loose definition of the term). Even so, resettlement is creating problems. In December 1999, people affected by the Chamera I project went on an 18-day hunger strike, protesting against the lack of compensation for their losses.

The one project which NHPC is supposed to develop outside the Northern and North-Eastern regions is Koel Karo in Jharkhand. Here, the Corporation has encountered strong resistance from the affected population. The Koel Karo reservoir would submerge 264 square kilometres of land and 256 villages, and would affect an estimated 20,000 families. Local opposition has forced the project to be put on hold since 1982. Its cost has meanwhile exploded from an original Rs. 3.9 billion to a staggering Rs. 236.8 billion (in nominal terms). The cost of its electricity is tentatively set at Rs. 7.13/kWh, and several state governments have already refused to buy the expensive power. In February 2001, the police killed ten peaceful protesters. In December 2001, NHPC announced that it would withdraw from Koel Karo unless the Jharkhand government authorizes the execution of the project and signs the power purchase agreement before the end of March 2002.[4]

NHPC's finances

Equity capital:
NHPC pays only a nominal dividend on the equity capital which the government holds. It receives considerable, and increasing, grant support from the Ministry of Power for tasks such as the investigation of new projects. The Corporation derives its main income from the sale of electricity and from consultancy services. Its main clients, the state electricity boards, are in bad financial shape however, and regularly default on their payments. By the end of FY 2000/01, NHPC had outstanding dues of Rs. 26.2 billion. And of the Rs. 19.1 billion which it did receive in payments, one third was in the form of bonds.

NHPC has to put up 30% of the cost of every project which it develops as share capital. It cannot generate this equity from the limited revenues of its own projects. So in order for the Corporation to expand its portfolio, the government needs to regularly increase its share capital. In FY 2000/01, NHPC's equity reached Rs. 70 billion.

Domestic debt:
NHPC finances 70% of the cost of its projects through debt. These loans had originally come from the central government. Since the mid-1980s, however, the Corporation has raised debt through commercial loans and bonds, both in the form of private placements and public issues. By the end of FY 2000/01, NHPC's domestic debt consisted of Rs. 32.7 billion in loans from Indian financial institutions (including ICICI, LIC, IDBI, and SBI), Rs. 4.4 billion in loans from the government, and Rs. 5.3 billion in bonds.

NHPC also managed to arrange lines of credit (LoCs) from Indian financial institutions. ICICI approved an LoC of Rs. 15 billion in 1998, and (according to media reports) is likely to sanction another line of Rs. 10 billion. LIC approved an LoC of Rs. 25 billion for the Corporation in FY 2000/01. ICICI agreed to fund the Teesta V and Parbati II projects under its line of credit. LIC's credit can be used without the individual projects being sanctioned by the creditor.

Through the Narmada Hydro Electric Development Corporation, NHPC is also trying to raise funds from PFC for the Indira Sagar and Omkareshwar projects.

Since NHPC has problems recovering dues from its clients, and since progress on projects is slow, the Corporation may in the coming years experience problems servicing the debt which it has taken on for its previous and ongoing investments.[5]

Foreign private debt:
In some cases, NHPC attempts to tap the international capital markets to fund its projects. At the time of writing, the Corporation was tendering a loan of $350 million for its overall program. ANZ, Sumitomo and Natwest were among the banks making presentations for this loan. NHPC is also tendering on the international markets contracts and financial packages for the Teesta V project (Rs. 26 billion) and the Kishenganga HEP ($1 billion). In May 2001, its director of finance claimed that the Corporation had been offered $300 million by German bank BHF, $500 million by Société Générale, and $150 million jointly by Deutsche Bank and Crédit Lyonnais.

Reports about foreign funding cannot necessarily be taken at face value. In February 2001, the Power Ministry announced in India's parliament that "a German bank for export credit" had offered NHPC a line of credit of $399 million.[6] This funding never materialized, and both German export credit agencies have denied making any such offer.

Foreign official debt:
NHPC has attracted funds from official export credit agencies and – until recent years – bilateral donors for its projects. Sweden's SIDA and EKN and Great Britain's ODA funded the Uri project. Canada's EDC and CIDA funded Chamera I, and EDC is financing Chamera II. The French COFACE funded the Dulhasti project, which due to massive time and cost overruns resulted in a diplomatic scuffle between India and France. Japan's JBIC is supporting the Dhauliganga project. And the Nippon Export and Credit Insurance NEXI considers reinsuring loans for stages II and IV of the Teesta project (1,200 and 495 MW, Sikkim). (See chapters 3.4 and 3.5.)

Indian government bodies have on several occasions tried to mobilize World Bank support for NHPC. In November 1998, the government of Himachal Pradesh announced that it intended to raise a Bank loan for NHPC's Parbati project. At the end of 2000, India's Power Ministry announced that it would request $1.3 billion from the World Bank, of which $100 million would be earmarked for NHPC. Part of this loan was supposed to fund the preliminary investigation of projects in the Dehang and Subansiri basins.

The World Bank has not heeded requests for support for NHPC, and neither have other multilateral development banks come forward. Since NTPC, the Corporation's rich cousin in the thermal sector, was for a long time the world's largest recipient of World Bank funds, this lack of support is somewhat surprising especially for the 1980s and early 1990s. The World Bank has since made it clear that it will no longer support power generation projects in India. NHPC representatives put on a brave face when reacting to this lack of support. "Except for Koyna, the World Bank has never completed a hydropower project in India," says one official. "Where ever they came in, they left."

Institutional culture

NHPC is still a fully-owned government enterprise, and as such is obviously susceptible to guidance from the political authorities. The Corporation appraises prospective projects on technical, environmental and financial grounds. Although it is the largest central institution in India's hydropower sector, it does not carry out any comprehensive assessment of power generation. NHPC officials explain this lack of perspective by referring to the fact that water is a state matter in India.

NHPC's management was happy to share information about its operations for this research project, and its officials expressed strong convictions regarding their mandate. At the same time, official NHPC publications exude a certain bureaucratic flavour and grandiloquence.

Asked about NHPC's performance in June 2000, Rajendra Singh, the chief managing director of NTPC, commented as follows: "There are cultural issues. We have been pursuing a culture of performance. A culture of a commercial house. A culture of delivering. I don't want to comment more than that on what others are doing."[7] The strong rivalry between NHPC and NTPC is obviously reflected in this statement. Already in 1994, India's Comptroller and Auditor General had criticized NHPC for being overstaffed and not deploying its surplus manpower.

Environmental concerns

NHPC, which is predominantly a developer and not a financial institution, has some very general environmental management principles. The Corporation is committed to complying with legal environmental requirements, and says it "leaves no stone unturned to achieve sustainable development."[8] It has an environment core group and carries out environmental impact assessments, public hearings, catchment area treatment measures, and compensatory afforestation programs for its projects as it is legally required. Officials confirm that when developing a project, NHPC is "concerned with the environment from day one." In early 2000, NHPC's chief managing director Yogendra Prasad announced that the Corporation planned to certify its operations according to the ISO 14,000 standards for environmental management systems.

NHPC's head has repeatedly criticized India's licensing systems, and particularly the MoEF, for being too cumbersome in clearing the construction of hydropower projects. "The clearance system continues to be a major culprit in the development of the hydroelectric power sector in the country," Yogendra Prasad said in early 2002.[9] Prasad is also known as a staunch opponent of the recommendations which the independent World Commission on Dams published in November 2000.

In January 2000, Yogendra Prasad commented about the environmental movement: "The most tiring and trying ordeal awaiting NHPC would be to meet the challenges of anti-development anachronistic obscurantism obstructing the attempts to reap benefits from bounties of Nature and to keep the poor tribals always in loin cloths, fig leaves and bare tops. NHPC is endowed with talented enthusiasts to counter the anti-hydro lobby with an arsenal of appropriate compensating actions and convincing answers."[10]

"The most tiring and trying ordeal awaiting NHPC will be to meet the challenges of anti-development anachronistic obscurantism obstructing the attempts to reap benefits from bounties of Nature and to keep the poor tribals always in loin cloths, fig leaves and bare tops."

Yogendra Prasad, NHPC, January 2000

In practice, NHPC does not seem to follow any social or environmental policy principles of its own, but promotes the implementation of projects whenever the country's legal or political framework allow. In the case of Koel Karo, NHPC is pushing for the speedy implementation of a project which is strongly opposed by the affected Adivasi communities (or the "poor tribals," as Prasad calls them). The Chamera I project has contributed to deforestation and other environmental problems, and has even been criticized on ecological grounds by CIDA, one of its funders.[11] According to its funder SIDA, the Uri I dam will seriously impact fisheries in the Jhelum river.[12] In May 1999, 10 square kilometres of the Great Himalayan National Park – part of an important endemic bird area – had to be denotified for the construction of the Parbati project. In November 2001, the Ministry of Environment and Forests withdrew the site clearance for NHPC's Subansiri (Lower) project since the reservoir would submerge 42 hectares of a wildlife sanctuary.

Other central hydropower institutions

As elaborated in chapter 1.2, the government created three further institutions - the North Eastern Electric Power Corporation, the Tehri Hydro Development Corporation, and the Nathpa Jhakri Power Corporation - to develop and operate central hydropower projects. These institutions have been mandated to develop the following projects:

NEEPCO:

- Ranganadi (405 MW, Arunachal Pradesh, under construction);
- Tuirial (60 MW, Mizoram, under construction);
- Lower Kopili (150 MW, Assam);

- Kopili II (25 MW, Assam);
- Tuivai (210 MW, Mizoram);
- Doyang (75 MW, Nagaland);
- Tipaimukh (1,500 MW, Manipur);
- Kameng (600 MW, Arunachal Pradesh); and
- Ranganadi II (160 MW, Arunachal Pradesh).

THDC:
- Tehri I (1,000 MW, Uttaranchal, under construction);
- Tehri II (1,000 MW, Uttaranchal); and
- Koteshwar (400 MW, Uttar Pradesh).

Since the 1970s, the Tehri project has gained notoriety for its high seismic risks, its disregard for the fate of more than 100,000 affected people, and for its corruption.

NJPC:
- Nathpa Jhakri (1,000 MW, Himachal Pradesh, see below); and
- Rampur (535 MW, Himachal Pradesh).

Multipurpose institutions:
The central government created two institutions for the integrated management of river basins which operate hydropower projects. The Damodar Valley Corporation (DVC) was created in 1948 based upon the model of the Tennessee Valley Authority in the US. The DVC manages a large flood control, irrigation, water supply and power generation scheme in West Bengal and Jharkhand, and operates the following hydropower projects in Jharkhand state:

- Panchet (80 MW);
- Maithon (60 MW); and
- Tilaiya (4 MW).

The DVC also intends to build the 340 MW Balpahari multipurpose project, of which 320 MW would be operated as a pumped storage scheme.

The Bhakra Beas Management Board (BBMB) was created in 1966. It manages the supply of water from the Sutlej and Ravi-Beas rivers to the Punjab, Haryana, Rajasthan and Delhi, and operates the following hydropower schemes:

- Bhakra Right Bank (760 MW);
- Bhakra Left Bank (540 MW);
- Ganguwal (84 MW);
- Kotla (82 MW);
- Dehar (990 MW); and
- Pong (360 MW).

All of these projects are located in Himachal Pradesh. With a combined capacity of 2,827 MW, the BBMB today still has a larger hydropower portfolio than the ambitious NHPC.

NTPC:
To complicate matters further, the National Thermal Power Corporation is also entering the hydropower market. In 2000, NTPC signed a Memorandum of Understanding with the government of Himachal Pradesh to develop the Koldam HEP (800 MW). Since 1998, NTPC has proposed entering a joint venture with the Uttar Pradesh SEB to develop the ailing Lakhwar Vyasi, Srinagar and Maneri Bhali II HEPs, and had offered the Power Ministry to take over the Nathpa Jhakri project. These advances were not met with success.

Nathpa Jhakri – a "first-rate scandal"

Nathpa Jhakri is one of the most prominent recipients of official funding in India's power sector – and a project which exemplifies many of the serious problems of large dams. The World Bank approved a loan of $485 million for the project in February 1989. Further funding came from Germany's KfW, Britain's ECGD (guaranteeing a Barclay's Bank loan), Norway's Eksportfinans, and the Swiss Bank Corporation (now, part of UBS).

Construction began in 1993, and was supposed to be completed in 1998. The original design of the project was faulty. The planned dam height soon had to be reduced, in order to avoid the reservoir submerging the headrace tunnel of an existing dam. Due to the change in design, production of peaking power will be reduced to 1.5 hours per day. During dam construction, fly-ash was used instead of cement, resulting in the project being investigated for

corruption by the Central Bureau of Investigation. In July 2000, the construction site was affected by serious flooding. And in 2001, the MoEF twice suspended work at the site for "serious and continuous violations of both the Forest Conservation Act and the Environment Act."[13] Completion is now planned for 2004, and project cost has meanwhile increased from Rs.16 to 100 billion (in nominal terms).

After it had extended the original closing date by four years, the World Bank in December 2001 announced it would close its loan in March 2002, and would cancel the undisbursed portion. Yogendra Prasad, who heads not only NHPC but also NJPC, announced that the funding gap could be filled with a loan from PFC, and also from the line of credit which LIC had extended to NHPC.

"As far as mega hydroelectric projects are concerned, words like 'tomorrow' are just not applicable," *The Tribune* of Chandigarh editorialised after the World Bank announced its decision. "One has to think in terms of eternity." For the editor, the time and cost overruns constituted "a first-rate scandal." "However, since such 'minor troubles' are encountered at almost every project, no heads ever turn, let alone roll."[14]

"As far as mega hydroelectric projects are concerned, words like 'tomorrow' are just not applicable. One has to think in terms of eternity."

The Tribune, 21 December 2001

Perspectives

There is a strong consensus within India's power sector apparatus that the share of hydropower within the country's hydro-thermal mix needs to be increased in the future. Since the private sector will not take care of this, budgetary contributions from the central government for hydropower projects can be expected to increase further. NHPC and the other central hydropower developers are the obvious targets for such support.

Apart from promoting new projects, central institutions have a long history of taking over failed state-sector projects. This is what NHPC and THDC were originally created for. More recently, NHPC has entered into joint ventures with state governments to develop difficult projects in Madhya Pradesh and West Bengal. One can well imagine that such support will increasingly be called for when other projects run into trouble. After the World Bank cancelled its loan, the government of Himachal Pradesh requested that NHPC take over the Nathpa Jhakri HEP. And LIC – which, apart from the government, is NHPC's most important creditor – has asked the Corporation to salvage the Maheshwar hydroelectric project. As was elaborated in chapter 1.2, insiders within NHPC have in this case anonymously expressed strong reservations about rescuing an unviable project, while chairperson Yogendra Prasad has been more positive in public.

2.2. THE POWER FINANCE CORPORATION

The Power Finance Corporation is India's primary institution for funding power generation, transmission and distribution projects. While other financial institutions are about to reduce their exposure to the power sector, PFC may well play an even more prominent role in the future. It is also an important intermediary for government programs in the power sector, and for financial transfers from foreign funders.

The Power Finance Corporation is India's primary institution for funding power generation, transmission and distribution projects. While other financial institutions are about to reduce their exposure to the power sector, PFC may well play an even more prominent role in the future.

Ownership

PFC was set up in 1986 and is wholly owned by the Indian government. In case its share capital needs to be increased, the Corporation envisages diversifying its equity base by bringing in institutional investors. Unlike most other financial institutions, PFC is not administered by the Ministry of Finance, but by the Ministry of Power.

Activities

The Power Finance Corporation is the primary institution of the Indian government for funding generation, transmission and distribution projects of the state electricity boards and other institutions in the power sector. PFC finances all kind of projects except for small hydro projects and rural electrification. (Hydro projects of up to 25 MW are funded by India's Rural Electrification Corporation. As the list below indicates, there are exceptions to this rule.) PFC also provides technical assistance and advisory services to its clients.

PFC has a relatively small workforce and low overhead costs. Being a governmental institution, it is able to access capital at low cost from the Indian government, from private, bilateral and multilateral sources. The Corporation can therefore offer financing for power projects at lower rates than other financial institutions in India.

Like international financial institutions, PFC has started to attach a policy conditionality to its loans. Borrowers need to carry out so-called Operational Financial Action Plans (OFAPs) as a precondition for taking up loans. States which restructure their power sectors receive funds at lower rates, while states which have not initiated any such reforms have lost their access to PFC funds. According to the Corporation's own counting, thirteen states have so far committed to restructuring their power sectors under its initiative, and at the end of FY 2000/01, 26 institutions were carrying out OFAPs.

In the form of interest subsidies and outright grants, PFC disburses the funds which the Ministry of Power has approved under various incentive programs such as the Accelerated Generation and Supply Program, or the Accelerated Power Development Program (AGSP and APDP, see chapter 1.3.). In late 2001, the Ministry of Power discussed the creation of a new Development Finance Corporation to fund distribution projects under the APDP. The plan would add to the multiplicity of institutions, and indicates doubts within the government about the capacity of the PFC to effectively promote reforms in the states.

The Corporation has also been mandated to draw up plans for creating a new India Power Fund of $1 billion. According to current plans, PFC will con-

tribute seed capital of $50 million, and the rest is to be mobilized from bonds for non-resident Indians and from institutions such as IDBI, GIC, LIC, the World Bank, and ADB. The Fund will be administered by PFC, and will consist of three windows for the provision of equity, domestic and external debt. PFC has proposed that contributions to the Fund receive tax concessions.[15]

PFC provides up to 40% of the total cost of thermal power projects, up to 50% of the cost of medium and large hydropower projects, and up to 60% of the cost of small hydropower plants. The Corporation does not have targets for the regional distribution or the thermal-hydro mix of its projects. Almost all of its clients are SEBs and other state utilities. In order to diversify its risks, PFC also lends to private power projects, including IPPs in the hydropower sector. In an effort to further widen its portfolio, it also plans to fund suppliers to power projects and facilities related to power plants such as LNG terminals in future.

PFC does not take up equity in the projects it funds. When the Dabhol project came up in the mid-1990s, PFC's mandate did not yet include lending to private sector projects. This restriction, and not financial prudence, saved it from major financial loss and embarrassment.

PFC's disbursements have grown rapidly, from Rs. 7.9 billion in FY 1994/95 to Rs. 32.3 billion in FY 2000/01. In FY 2001/02, the Corporation expects them to reach Rs. 40 billion. By the end of FY 2000/01, PFC had approved 1,163 loans and three guarantees for a total amount of Rs. 334.9 billion. Thermal projects (including upgrading and modernization) accounted for 47% of approvals and 44% of disbursements, transmission and distribution projects for 28 and 32% respectively, and hydro projects, for 18% of approvals and 14% of disbursements. Loans and guarantees for private projects accounted for Rs. 56.8 billion.

PFC also offers consultancy services, and acts as a lenders' engineer for various power projects, including hydropower schemes such as Nathpa Jhakri (a project which it also funds).

Hydropower projects

By the end of FY 2000/01, PFC had approved 78 loans and guarantees for hydropower projects. Approvals amounted to Rs. 51.6 billion, and disbursements to Rs. 25.3 billion. The hydro projects funded by PFC include the following:

- Nathpa Jhakri (1,500 MW, Himachal Pradesh, see chapter 2.1.);
- Upper Indravati (600 MW, Orissa, like Nathpa Jhakri partly funded by the World Bank);
- Baghliar (450 MW, Jammu & Kashmir);
- Maheshwar (400 MW, Madhya Pradesh);
- Vishnuprayag (400 MW, Uttaranchal);
- Dulhasti (390 MW, Jammu & Kashmir);
- Srinagar (330 MW, Uttaranchal);
- Maneri Bhali II (304 MW, Uttar Pradesh);
- Baspa II (300 MW, Himachal Pradesh);
- Almatti (297 MW, Karnataka);
- Larji (126 MW, Himachal Pradesh);
- Balimela (phases 7 and 8, 120 MW, Orissa);
- Malana (86 MW, Himachal Pradesh);
- Ghanvi (22 MW, Himachal Pradesh); and
- the Western Yamuna Canal II project (14 MW, Haryana).

Funding for the following hydropower projects (probably among others) is currently under consideration by PFC:

- Indira Sagar (1,000 MW, Madhya Pradesh);
- Omkareshwar (520 MW, Madhya Pradesh); and
- Priyadarshini Jurala (239 MW, Andhra Pradesh).

Sources of funding

PFC extends both rupee and foreign currency loans, and thus needs to raise funds on the domestic and international capital markets. Its share of foreign currency borrowing increased from 22.9% in FY 1992/93 to 28.5% in the 1998-2000 period. Being a governmental organization, PFC enjoys good rat-

ings in India and internationally. As the industry journal *Power Line* points out, "raising funds is obviously not a constraint for PFC."[16] The Corporation mobilizes resources from the following sources:

Domestic sources of funding:
The government supports PFC's resource mobilization in that the Corporation is attributed a large (if decreasing) share of tax-free bonds on the Indian capital market. In FY 1997/98-1999/00, the latter borrowed 51.5% of its domestic resources through rupee bonds, 32.2% through loans from the Indian government, and 16.3% through loans from Indian banks and other investors.

Many of PFC's creditors are public sector banks. In December 2000, the Corporation agreed with the State Bank of India to take up a loan of Rs.5 billion from the so-called Millenium Deposits programme, a large NRI bond. In 2000 and 2001, PFC also received large lines of credits from LIC (amounting to a total of Rs. 30 billion) and ICICI (with a total of Rs 25 billion).

Multilateral sources of foreign support:
PFC is in a healthy financial state, and it focuses its lending on states which are committed to restructuring their power sectors. This makes PFC an attractive partner for multilateral and bilateral development agencies which aim to fund power projects in India. The Corporation has received support from the following public financial institutions:

- In January 1992, the World Bank approved a loan of $265 million to strengthen the institutional capacities of PFC and to fund a slice of its investment program. The subprojects consisted almost exclusively of transmission and distribution projects. The World Bank approved each individual subproject, and in some cases declined approval because of insufficient policy reforms in specific states.

- In March 1992, ADB approved a loan of $250 million for PFC. This loan, too, was used predominantly for subprojects to upgrade transmission and distribution systems. Both the World Bank and the ADB projects were targeted at reform-minded states.

- In 1993, PFC received $20 million in technical assistance from the World Bank. The purpose was to educate state authorities about how to negotiate with IPPs, including how to introduce competitive bidding procedures.

Both the ADB and World Bank loans were closed with 21-25% of the approved amounts remaining undisbursed. The World Bank attributed this to an unexpected depreciation of the rupee, and the non-funding of individual subprojects. Still the Power Ministry reprimanded PFC for the incomplete use which it had made of the foreign funds. Of the $20 million technical assistance loan, only $1.2 million were disbursed. In this case, PFC was even criticized by India's Comptroller and Auditor General for having taken up a loan without first identifying the demand for it. The responsibility for this is of course shared by the World Bank.

As will be elaborated below, ADB's ex-post assessment of its PFC project is quite critical. In spite of this, the Bank intends to approve a new $250 million loan for PFC by the end of March 2002. The project has been pre-appraised, but not yet appraised. In January 2002, PFC announced that a large part of the funds would be used to finance projects involving the renovation and modernisation of power plants.

PFC has repeatedly expressed its interest in arranging a further $500 million loan from the World Bank. In November 2000, Power Minister Suresh Prabhu even announced that India would channel all future support from the Bank for SEBs through PFC. The World Bank does not believe that it can successfully promote a restructuring of state power sectors through this institution however, and intends to focus its future projects in India's power sector on a few reform-oriented states directly (see below and chapter 3.1.). "Just as earlier conditioned Bank assistance to SEBs failed to improve the SEB's operational and financial performance, Bank lending through PFC did not result in sustainable improvements and commercialisation of the SEB's operations," the Bank concludes in an internal document.[17]

Since interest rates in India are presently quite low, PFC decided to prepay the outstanding amounts of the 1992 ADB and World Bank loans in October 2001.

Bilateral sources of foreign support:
PFC has received support from a series of bilateral donors, and also works with export credit agencies to finance particular projects.

- Bilateral donors: In September 1993, Britain's DFID approved a loan of $23.5 million for PFC for the renovation of the Hirakud HEP in Orissa (stages I and II). In June 1995, Germany's KfW

approved a mixed credit of DM 46.5 million for PFC for the rehabilitation of the Koyna HEP in Maharashtra (stages I and II). The Corporation intends to spend the balance of the credit on the rehabilitation of the Hirakud HEP, but according to KfW, this has not yet been approved. USAID contributed $14 million in technical assistance to the World Bank's 1992 PFC loan.

- Export credit agencies: In June 2001, PFC arranged a line of credit of $75 million with Canada's export credit agency EDC. In February 2000, the Corporation signed a Memorandum of Understanding with the US Exim Bank regarding the exchange of information on power projects. In February 2001, PFC and the Japanese Study Group on Electric Power Development for India agreed to elaborate a master plan for the development of hydropower projects of up to 5,000 MW, with a perspective of Japan financing the respective projects.

In January 2002, PFC announced it had in principle agreed to take up lines of credit from a series of export credit and bilateral agencies. According to the media report, the US Exim Bank had agreed to an LoC of $500 million to support transmission and distribution projects and the environmental upgrading of thermal power plants. KfW and EDC were to extend lines of credit of $100 and $75 million respectively for the renovation and modernization of power plants, and a similar LoC from JBIC of $100 million – or, according to other sources, of $250 million – was also being finalized.

Private sources of foreign currency:
PFC is an attractive borrower on the international capital markets. It has a strong capital base and is profitable. Apart from central utilities, the Corporation is the only Indian borrower which is fully owned by the government, so it is considered a "quasi-sovereign risk."[18] So far, PFC has arranged the following bonds and loans on the international capital markets:

- In January 1997, PFC signed a five-year $75 million loan which was arranged by a variety of European and Japanese banks.

- In July 1997, the Corporation issued twelve-year Euronotes of $100 million.

- In July 1997, PFC received a DM 100 million credit for the import of German goods from Deutsche Industriebank.

- In July 1998, PFC signed a seven-year $100 million loan with Australia's ANZ Investment Bank as the lead arranger, and Bank of India as one of the arrangers.

- In August 1999, PFC issued seven-year floating rate notes of $100 million.

- According to media reports, ANZ Investment Bank, Credit Suisse First Boston, Lehman Brothers and Holland's ABN Amro Bank agreed to lead-arrange a $150 million loan for PFC in July 2000. According to PFC's annual report 2000/01, the loan amounted to $100 million, and was used to prepay the more expensive loan of 1998.

- In January 2001, PFC floated the idea of raising no less than $5 billion in bonds for a Special Power Fund for the reform of the Indian power sector. This idea had been encouraged by the big success of the Millenium Deposits programme which the State Bank of India had floated in the NRI community in fall 2000 (see chapter 3.6.). In a smaller format, it may be implemented through the planned India Power Fund (see above).

- In November 2001, PFC received two interest rate swaps to the tune of $50 million in total from Crédit Lyonnais.

- In December 2001, PFC invited banks to make presentations for a new $50 million loan. PFC also plans to take up a ¥10 billion loan. Due to the steady depreciation of the yen, the Corporation postponed this issue in January 2002.

For several projects - including the Larji, Srinagar and Almatti HEPs - PFC is trying to arrange syndicated loans on the international capital markets.

Portfolio quality and internal culture

"PFC has so much money that it is called the mini World Bank," a PFC official reports proudly. The World Bank is more circumspect. "We hoped that PFC would become a mini World Bank," says one of its representatives. Bank officials believe that PFC has set a model for financial discipline, but that it has not managed to effectively push for a restructuring of the state power utilities it lends to. When the Maharashtran authorities appointed the Corporation as a consultant for its power sector reform, the World Bank's India coordinator even

quipped that this was "like blind people trying to guide blind people."[19]

PFC plays a central role as a funder of state electricity boards and other power utilities. The respective clients have a strong interest in servicing their debts to the Corporation. The Indian government further grants PFC direct access to the appropriations for SEBs under the central Plan if the respective electricity boards default on their payments to the Corporation. With such incentives, it is no surprise that PFC can boast a recovery rate on its loans of 99.5% – an extraordinarily high score in India's ailing power sector.

PFC claims to adhere to strict lending criteria, including a minimum financial or economic rate of return of 12%, and compliance with environmental guidelines, standards and conditions.[20] In practice, the Corporation does not seem to live up to these principles. Most of its lending is still to public institutions, in which case it can rely on strong guarantees and securities. In practice, PFC primarily appraises projects regarding the ability of the developers to repay. It does not have an environmental policy, but delegates environmental concerns to the government's MoEF, which is utterly powerless in enforcing most of its policies and conditions. One of the rare loans which the Corporation has so far cancelled was for NHPC's Rangit HEP – because Sikkim could not provide reliable escrow cover.

In its Implementation Completion Report, the World Bank believes that PFC's compliance with internal guidelines is "generally satisfactory," with a few exceptions such as exceeding the exposure limits to important borrowers.[21] The ADB points out that PFC does not evaluate projects ex-post. The completion report for the ADB project concludes that the Corporation "should apply more due diligence in evaluating loan proposals" and "strictly enforce its policies on exposure limits."[22]

So while PFC enjoys a high recovery rate, many of the hydropower projects it funds are financial disasters. Nathpa Jhakri, Dulhasti, Maneri Bhali and Baghliar are just a few examples of projects which have run up massive time and cost overruns. Upper Krishna is considered "an extraordinary failure" by the World Bank's evaluation department (see chapter 3.1.). Yet when the World Bank announced the closure of its loan for the Nathpa Jhakri project in December 2001, the developer could quickly announce that PFC would provide additional lending to make up the gap (see chapter 2.1.).

Both ADB and the World Bank say that "PFC's portfolio quality (...) continues to be a matter of concern." Using a broader set of criteria which include standards of financial auditing and reporting, the two Banks only rate 17.2% of PFC's portfolio as normal at the end of 1998. If the guidelines of the Reserve Bank of India were applied, the World Bank points out, PFC's non-performing assets would amount to 20.3%.[23]

> "PFC's portfolio quality continues to be a matter of concern."
>
> **The World Bank, May 1999**

PFC has reasons to be more prudent in the case of IPPs, where loans must be repaid on the basis of a project's financial viability (and, it is true, public guarantees for project revenues). Yet the Maheshwar HEP indicates that PFC's lending policies can be extremely careless even in the case of IPPs. The Corporation pledged a long-term loan of Rs. 1 billion, and two foreign currency loans of $179 million and $53 million to this project. With a total commitment of Rs. 11.08 billion, PFC is by far the most important creditor of the project developer. The Narmada Bachao Andolan points out that the Corporation's commitments thus exceeded internal norms, and has served PFC a legal notice for the violation of the public interest. As was elaborated in chapter 1.2, PFC has already disbursed a considerable amount of its loans for the Mahehswar HEP, even when the conditions for disbursement have clearly not been fulfilled.

PFC is wholly owned by the Indian government. As far as politically sensitive and well-connected projects (such as Nathpa Jhakri and Maheshwar) are concerned, PFC has no choice but to follow government instructions. "Some of these developers have long hands," comments one anonymous source from within PFC, "and you will always listen to your owner." An external observer comments that PFC is actually an attractive institution for political power brokers because its lending decisions can be more easily influenced than the deliberations of the Planning Commission.

Perspectives

Given its central role within the country's power sector, PFC will remain an important channel for

funding power projects in India. Even if support from multilateral development banks may decrease, the Corporation, as a quasi-sovereign risk, is still in a strong position to borrow on the international capital markets. And with many hydropower projects facing problems of time and cost overruns, other financial institutions may prefer to lend via PFC, which has a strong clout as a creditor, rather than to fund such projects directly. The large lines of credit which LIC and ICICI recently extended to PFC might be early examples of such a trend.

Overall, funding thermal power plants will continue to be PFC's main business. The future role of hydropower within PFC's portfolio will depend on the power policies of the Indian government.

2.3. ICICI

The Industrial Credit and Investment Corporation of India is, according to one observer, "the most assertive of the Indian banks."[24] ICICI has become India's largest development finance institution, and a market leader in project finance. In recent years, it moved rapidly into new business areas. ICICI is involved in many hydropower projects, and is an important funding partner of international financial institutions.

Ownership

ICICI was created in 1955. Unlike the other DFIs, it was incorporated as a company with limited liability and had private sector shareholders right from the beginning. In 1998, ICICI failed to attract sufficient interest for a large increase of its share capital in India. Boldly, the Corporation decided to list its shares on the New York Stock Exchange – the first Indian company (and only the second Asian bank) to do so. Its share issue of $275 million was oversubscribed six-fold.

At the end of FY 2000/01, ownership of ICICI was spread widely. Institutions under government control such as LIC or GIC held 33.6% of the shares. Other Indian investors, including individuals and companies, held 18.5%. Foreign investors, including non-resident Indians, held 47.8%. Individual foreign investors do not have voting rights however. In total, ICICI has more than 550,000 shareholders.

Activities

In recent years, ICICI has pursued a strategy of rapid expansion. Since 1992, its loan approvals have grown 14-fold, and have overtaken those of IDBI. They reached Rs. 560.9 billion in 2001, with disbursements totalling Rs. 319.7 billion. At the end of FY 2000/01, ICICI's portfolio was still dominated by the manufacturing industry, with iron and steel topping the sectoral list with 11.4%.

For several years, the Corporation has diversified into other sectors and lending activities in order to spread its risks. In the period FY 1996/97-2000/01, infrastructure project finance accounted for 19.4% of cumulative approvals. Since many projects have run into problems and disbursement is lagging, infrastructure still only made up 13.5% of ICICI's portfolio at the end of FY 2000/01. So-called corporate lending (short and medium term balance-sheet lending to all sectors) increased from 9.1% of the portfolio in 1997 to 39.8% at the end of FY 2000/01.

ICICI considers itself the market leader in project finance, and is the lead arranger or project adviser in most of the deals in which it is involved. In FY 2000/01, project finance (not only in the infrastructure, but also the manufacturing and oil and gas sectors) accounted for 57% of the Corporation's portfolio, and contributed 87% of its net income. This indicates that project finance, especially when it involves deal-making tasks, is a very attractive sector for financial institutions.

During the 1990s, ICICI moved aggressively into new business activities. It created a housing finance institution, a life insurance, a consumer credit and a retail bank, a venture capital and an asset management company, and the rating agency, CRISIL. The Corporation is also active in the business of policy advice, and acts as a consultant for example on power purchase agreements and on the power restructuring programs of state governments.

ICICI's longer-term strategy is to turn into a universal bank by merging with ICICI Bank, in which it holds 46% equity. In January 2002, the shareholders of ICICI and ICICI Bank agreed to the merger. The new structure still needs to be approved by RBI.

Hydropower projects

Like the other DFIs, ICICI has moved more strongly into the power sector with the appearance of private infrastructure projects. In FY 1998/99-2000/01, power projects accounted for an average of 13.3% of all approvals, with disbursements lagging markedly behind. In 2001, ICICI was involved in the following hydropower projects:

- Vishnuprayag (400 MW, Uttaranchal, with ICICI as lead arranger);
- Baspa II (300 MW, Himachal Pradesh, with ICICI as lead arranger);
- Baghliar (450 MW, Jammu & Kashmir);
- Srinagar (330 MW, Uttaranchal); and
- Malana (86 MW, Himachal Pradesh).

During the 1990s, ICICI moved aggressively into new business activities. The Corporation considers itself the market leader in project finance, and is the lead arranger or project adviser in most of the deals it is involved in.

In 1998, ICICI also extended a line of credit of Rs. 15 billion to NHPC. Under this arrangement, the financial institution agreed to fund

- Teesta V (510 MW, Sikkim); and
- Parbati II (800 MW, Himachal Pradesh).

NHPC is also interested in funding the Lower Subansiri HEP (2,000 MW, Arunachal Pradesh) under ICICI's line of credit. Finally, the private developers of the Malana HEP have approached ICICI and other institutions for the funding of the Allain Duhangan HEP (192 MW, Himachal Pradesh). The respective loans are still under consideration.

ICICI is India's only major development finance institution which declined to fund the Maheshwar HEP. As part of its consulting services, the Corporation advises the Sardar Sarovar Narmada Nigam on the involvement of the private sector in the Sardar Sarovar dam scheme.

Like other funders, ICICI is experiencing problems with its hydropower portfolio. After being delayed for several years, the private Malana project was implemented smoothly. All other projects suffer from time and/or cost overruns. According to media reports, ICICI agreed to provide funding for the Vishnuprayag HEP only under pressure from the Power Ministry's Crisis Resolution Group. Vishnuprayag and Baghliar are two of three hydropower projects among the 19 IPPs which financial institutions agreed to review in December 2001 due to their failure to make progress. (The third is Maheshwar.)

The Baspa HEP is also creating problems. According to one observer, ICICI disbursed its loan for this project prematurely. When the project was subsequently affected by time and cost overruns due to flooding, the Corporation was forced to chip in equity in order to rescue its loan exposure. ICICI funded its loan for either the Vishnuprayag or the Baspa project under ADB's Private Sector Infrastructure Facility.

The 27.5% share in the Baspa HEP is ICICI's first equity participation in a hydropower project. According to the *Economic Times,* an unnamed company executive maintained that "hydro power projects are the only projects in the power sector which are getting implemented and their economic viability factor is also satisfactory."[25] This explanation may be interpreted as wishful thinking, meant to cover up forced participation in an ailing project.

In spite of these problems, a senior company representative says that ICICI has "a positive outlook on hydropower," and a long-term commitment to the power sector. Unlike other financial institutions, and at least officially, the Corporation has so far not put a brake on its lending for electricity generation. Time will tell whether it will indeed continue to lend directly for new projects, or whether it will increasingly lend through other institutions such as NHPC.

Sources of funds

Like other financial institutions, ICICI extends rupee and foreign currency loans, and needs to raise capital internally and externally. In FY 2000/01, 83% of its assets and liabilities were denominated in rupees.

Domestic sources:
Like other financial institutions, ICICI had cheap access to domestic funds until 1993 through concessional bonds from RBI, the so-called Statutory Liquidity Ratio bonds. After this avenue was closed, ICICI had to diversify its funding sources, and now borrows from various institutional and individual investors in India. At the end of FY 2000/01, pension funds (with 22.6% of all outstanding borrowing), banks (16.7%) and retail investors (15.3%) were its most important creditors. In order to reach out to retail investors, ICICI offered seven bond issues for Rs. 29 billion in FY 2000/01 alone. The Corporation has about 3.5 million individual bond holders.

"ICICI has a positive outlook on hydropower. "

Senior ICICI official, December 2001

Foreign commercial sources:
At the end of FY 2000/01, 77.6% of ICICI's foreign currency borrowing was made up of commercial, and 22.4% of public borrowing. The Corporation took up its first syndicated loan in 1973. More recently, ICICI took up a loan of $200 million syndicated by the Australian bank ANZ in May 1998. The original amount of $120 million had been oversubscribed. In FY 2000/01, ICICI took up another syndicated loan of $100 million, the lead arranger of which could not be identified.

As the over-subscription of the 1998 loan and the share issue in New York suggests, ICICI could certainly raise more debt on the international capital markets if it wished to do so. Given the low interest rates in India, the demand of its corporate clients for foreign currency borrowing is currently limited. Also, the rating of ICICI (as of other Indian financial institutions) on the international capital markets is closely linked to India's sovereign rating (see chapter 3.6.). In January 2002, the Corporation was the first Indian financial institution to be rated higher than the country ceiling by the rating agency Moody's. ICICI officials believe that once the Corporation is analysed on its own merits, its ratings will further improve and consequently, the cost of lending will be reduced.

Foreign public sources:
Loans and credits from multilateral and bilateral financial institutions are cheaper and have a longer maturity than commercial loans. ICICI has close relations with multilateral and bilateral funders, and raises funds from them for a variety of project types and sectors. Currently ICICI is involved in the following MDB projects:

- ADB's Private Sector Infrastructure Facility. ICICI received one half of this $300 million facility which ADB approved in November 1996. The loan is to be lent on to private infrastructure projects.

- IFC's TCW/ICICI India Private Equity Fund, a $125 million venture capital fund. IFC approved its contribution of $10 million in equity capital in August 1997.

- IFC's ICICI Guarantee Facility, a scheme which will partly guarantee ICICI loans to private sector clients and projects. IFC approved an exposure of up to $40 million in May 2001, but as of December 2001, the contract with ICICI had not yet been signed.

- ICICI was supposed to be one of the executing agencies of a new Private Sector Infrastructure Facility at the State Level which ADB approved in December 2001. At the last moment, ICICI decided not to avail of its $100 million loan component, and the Facility was reduced from $300 to $200 million. ICICI has not responded to an inquiry as to why it withdrew from the ADB project.

- In January 2002, IFC's board was supposed to approve a contribution of $15 million for the creation of a new financial instrument by ICICI, which is intended to encourage the trading of corporate bonds in India.

(For further information on these projects, see chapters 3.2. and 3.3.)

ICICI also has bilateral lines of credit from Germany's KfW, Japan's JBIC, Britain's Commonwealth Development Corporation and Overseas Development Administration (since transformed into the Department for International Development), and from export credit agencies.

Quality of assets

Given its high professional reputation, ICICI can afford to be selective when extending credit. In FY 2000/01, the debtors of 92% of its loan approvals had an A credit rating. At the end of the same year, only 5.2% of ICICI's assets were non-performing, and its capital adequacy ratio was a high 14.6%.

ICICI enjoys the most comfortable non-performing assets and capital adequacy rates among all Indian development finance institutions. The good rates should however be put into the context of a rapid expansion strategy. A large share of ICICI's lending has not yet reached the maturity were loans could turn into NPAs, so the portfolio might actually be riskier than pure numbers indicate.

Internal culture

Throughout its history, ICICI has acted more like a private bank than the other DFIs. Since it was incorporated and is not a government subsidiary, the Corporation can afford to pay the highest salaries in the sector and to attract some of the best talents. The author of an IFC publication calls ICICI "a world-class bank."[26] And the Corporation's Managing Director considers his institution to be "the most exciting financial services company in India."[27] The massive over-subscription of a loan and a share offering in New York demonstrates that investors share this confidence. It may be an expression of this business-minded culture that ICICI refrained from getting involved in the Maheshwar HEP.

ICICI also symbolizes the risks of an aggressive, profit-oriented business culture. Unlike other DFIs, the Corporation offers high bonuses to its top-management which are linked to short-term profits. This encourages an aggressive pursuit of new business opportunities, and particularly of risky deals which offer up-front fees. By providing guarantees for foreign currency loans to questionable projects, ICICI managers could for example make short-term profits – even if the projects soon turned out to be unviable and the guarantees were invoked.

ICICI is still close to the government, and is not free from political influence. As the Corporation remarks in its annual report for US investors, the Indian government has the "ability to exercise influence" through the state-controlled shareholders, including on "significant corporate actions."[28] The quest for rapid expansion and the close relationship with government may explain why ICICI got involved in Dabhol and other doubtful projects.

In its annual report, ICICI emphasizes "the importance for ensuring fairness, transparency, accountability and responsibility to all stakeholders."[29] Compared with other financial institutions, the Corporation has a good record in terms of transparency. Yet while ICICI tries to measure up to international standards in financial matters, it does not have any binding, codified policies on social or environmental impacts. And overall, its portfolio in the power sector does not suggest any particular attention to social or environmental concerns. Among all Indian DFIs, ICICI is probably the institution which is most concerned about its public reputation. So NGOs and social movements should test the Corporation's rhetorical commitment to fairness and accountability in the case of specific projects.

2.4. IDBI

Along with PFC and ICICI, the Industrial Development Bank of India is one of the most important financial institutions in India's power sector. IDBI has been struggling with problems of asset quality since the mid-1990s. It recently announced a reconsideration of its large involvement in power projects.

Ownership

IDBI was created in 1964 – decades after IFCI and ICICI – as a subsidiary of the Reserve Bank of India. In 1995, the institution made its first public offering in equity shares. By the end of FY 2000/01, the share of the government in its equity had decreased to 58.5%. The public – including more than 300,000 individual shareholders – held 15.0%, and other institutions such as LIC, most of the rest. NRIs held 0.9% of the shares.

While ICICI has ventured into completely new business areas such as consumer finance, IDBI mainly diversifies its activities within the infrastructure sector.

Activities

For several decades, IDBI was India's largest development finance institution. It has recently been overtaken in this role by ICICI. In FY 2000/01, IDBI's approvals reached a volume of Rs. 287.1 billion, twice as much as in 1997.

IDBI's traditional role was to extend long-term loans to industry. By the end of FY 2000/01, industrial sectors accounted for more than 75% of its outstanding commitments, with iron and steel topping the list with a share of 13.3%. Given the financial problems of its traditional clients, IDBI, like other financial institutions, tried to diversify its business during the 1990s. Project finance, underwriting and direct equity investments in infrastructure projects (power and telecoms) gained in importance. Like its main competitor ICICI, IDBI regularly (lead-)arranges financing packages for such projects, at times also on the international capital markets. The institution, for example, arranged the domestic debt packages and provided guarantees for both phases of the Dabhol thermal power plant in Maharashtra.

While ICICI has ventured into completely new business areas such as consumer finance, IDBI mainly diversifies its activities within the infrastructure sector. It chairs the Standing Coordination Committee of financial institutions on large projects, which was created in August 1999. IDBI is also the financial agent for the World Bank in a series of environmental protection schemes in India.

In October 2001, IDBI's board agreed on a strategy to turn the institution into a universal bank. The preferred option will be a reverse merger with a commercial bank from the private or public sector.

Hydropower projects

Unlike ICICI and IFCI, IDBI has been a primary source of funding for power projects for many years. In 1985-1994, such projects already accounted for 11.4% of the institution's disbursements. IDBI's power portfolio grew rapidly in line with the general trend for project financing in the sector. In FY 2000/01, electricity generation made up 21.4% of IBDI's approvals, more than any other sector. At the end of FY 2000/01, power represented 10.9% of IDBI's outstanding commitments, making it the institution's second-most important sector.

IDBI has extended loans to the following private hydropower projects:

- Baghliar (450 MW, Jammu & Kashmir, with IDBI being the lead arranger);
- Maheshwar (400 MW, Madhya Pradesh);
- Vishnuprayag (400 MW, Uttaranchal); and
- Srinagar (300 MW, Uttar Pradesh).

Sources of funding

IDBI extends loans and other assistance in rupees and in foreign currency, and thus needs to raise capital both on the domestic and external markets. At the end of FY 2000/01, 86.3% of all borrowings were in rupees. IDBI is a pioneer in issuing bonds in India, and raises a large portion of its domestic borrowing through a variety of bond instruments.

IDBI borrows foreign currency resources on the international capital markets, or from export credit agencies. In January 1995, the institution received an overseas investment loan of $300 million from Japan's JEXIM Bank. It raised $100 million in a floating rate note issue in May 2000, and $100 million in a syndicated loan mainly from Japanese banks in January 2001. During FY 2000/01, IDBI also signed a Memorandum of Understanding with the US Exim Bank for setting up a so-called Master Guarantee Agreement of $150 million. This would make the handling of US export credits for projects in India easier, yet all projects would still need to be approved by Exim Bank. So far, no projects have materialized under the MoU with Exim Bank.

During the 1970s, IDBI received a series of loans from the World Bank. Since then, it has not been an active funding partner of international financial institutions. Recently, IDBI received $100 million under a new Private Infrastructure Facility at the State Level which ADB approved in December 2001 (see chapter 3.3.).

Quality of assets

Due to economic liberalization, many of IDBI's traditional industrial clients encountered increasing difficulties during the 1990s. Imprudent lending by the financial institution added to the problem. IDBI's non-performing assets grew, and its capital adequacy ratio dropped. At the end of FY 2000/01, the institution's non-performing assets amounted to 14.8%. As the Reserve Bank of India found out, IDBI had only set aside 23% of this amount in provisions, instead of 40-50% as required.

IDBI's NPAs are concentrated in the iron and steel, and textile sectors. Within electricity generation, many projects are still young or have not yet reached the stage of disbursement. So at the end of FY 2000/01, IDBI's power portfolio had a low share of NPAs of only 2.6%. Yet during the same year, the power sector accounted for more than 80% of the increase in NPAs in IDBI's books.

IDBI has a strong capitalization, and so high NPAs have until recently not posed an immediate threat to its financial health. With the risk looming that foreign lenders might invoke IDBI's guarantee for the Dabhol project, the situation has deteriorated sharply. In December 2001, the institution had to call for a huge bailout package from the government in order to shore up its capital adequacy (see below).

Internal culture

IDBI tends to be more cautious in its overall business strategy than its expansionist competitor, ICICI. Yet the investment in dubious IPPs indicates that IDBI's high rate of non-performing assets cannot simply be explained by the problems of industrial clients. IDBI was instrumental in arranging the domestic debt for both phases of the Dabhol project. In doing so, the institution acted against the better judgment of the World Bank and its own advisory committee. The Godbole Committee confirmed that the financial package for Dabhol had been arranged without due diligence.

When Dabhol ran into trouble, IDBI had an exposure to the project in guarantees and long-term loans of no less than Rs. 21.58 billion. Leading representatives later claimed that the institution had been forced to engage in Dabhol, and should not be blamed. Yet as columnist Sucheta Dalal observes, neither IDBI nor any other funders have ever tried to make public their supposed concerns over the power plant.

IDBI is also heavily exposed to the Maheshwar HEP. The institution has committed a loan of Rs. 1 billion, and equity of Rs. 500 million. Although the conditions put forward in IFCI's appraisal report have not yet been met, IDBI has already disbursed

part of the loan. After the Narmada Bachao Andolan took this matter up with top management, the institution agreed to reconsider its involvement in the project. With Maheshwar, Baghliar and Vishnuprayag, IDBI is involved in all three hydropower projects which financial institutions decided to review in December 2001 due to their failure to move forward.

Unlike all other development finance institutions, IDBI did not agree to a personal meeting in the context of this research project.

Perspectives

In September 2001, IDBI's new chairman P.P. Vora announced that he was going to focus on reducing the non-performing assets, and on improving the transparency of his institution. Electricity generation was conspicuously absent among the focal sectors of the new chair. One month later, IDBI and other financial institutions announced that they would not fund new power projects, and would cancel some of their loans for projects which were not moving ahead. Specifically, IDBI announced that it would review its approvals for seven power projects (which included, as the only hydropower project, Maheshwar). An IDBI official justified this new "cautious approach" by referring to the institution's large exposure in the Dabhol project.[30]

After the review had been completed, IDBI announced in January 2002 that it would only start disbursement for approved projects if escrow cover was in place. If IDBI sticks to this principle it could mean an end to its funding of further power projects. As a consequence of a stronger emphasis on prudence, approvals for project finance fell by 44% in the first nine months of FY 2001/02, and disbursements by 31%.

Even if IDBI can improve its prudence on the lending side, it will urgently need to strengthen its capital base. According to media reports, the institution is attempting to increase its capital by selling a 20% share to Muscat Bank. And in December 2001, IDBI called for an infusion of no less than Rs. 56 billion from the government. Rs. 15 billion are required to write off bad loans, and the same amount to increase provisioning for NPAs. A further Rs. 22 billion are needed to buy back expensive bonds which IDBI had earlier issued. The rest was supposed to fund IDBI's contribution to a bailout package for IFCI, in which IBDI is the largest shareholder.

2.5. IFCI

The Industrial Finance Corporation of India is the oldest but smallest development finance institution in India. Until recently, it focused its activities almost exclusively on long-term project financing, and has run into severe asset quality problems. For the time being, IFCI is not in a position to finance any further major power projects.

Ownership

IFCI was created in 1948 as India's first development finance institution. Its business policies were closely coordinated with the development policies of the government which owned it. The Corporation is the only major DFI which has its headquarters in Delhi.

IFCI was listed on the stock exchange in 1993, when a minority of its shares were offered to the public. In March 2001, 31.7% of the shares were held by IDBI. 22.0 % were held by government-owned insurance and investment companies, 9.2%, by public sector banks, and 26.1%, by the general public.

Activities

In FY 2000/01, IFCI's new approvals reached Rs. 18.6 billion. This was only 4.1% of the total lending of the three Indian DFIs (ICICI, IDBI, and IFCI). This compares with IFCI's share of 12.5% of combined development finance institution lending in 1999 and shows the relative decline of IFCI. At the end of FY 2000/01, the iron and steel sector accounted for 19.6% of IFCI's portfolio; the textile industry, 11.4%; and power generation, 8.3%. If guarantees are included, the power sector accounted for 14.1% of the portfolio.

In response to the economic problems of the 1990s, most Indian DFIs have diversified their business activities. IFCI has however remained a single-product company, in that long-term project finance makes up 94% of its portfolio. This strategy proved to be extremely risky, and in FY 2000/01 IFCI booked a loss of Rs. 2.7 billion. Income is still on a downward trend, and losses increased in the first nine months of FY 2001/02. The company's ratings are in steady fall, and IFCI faces an uncertain future (see below).

Hydropower projects

Most of IFCI's involvement in power generation is within the thermal sector. The Corporation extended guarantees of $99 million for the Dabhol project. Hydropower projects account for less than 1% of its portfolio, and IFCI has not sanctioned any new such projects since 1998.

IFCI is involved in the following hydropower projects:

- Maheshwar (400 MW, Madhya Pradesh);
- Baspa II (300 MW, Himachal Pradesh); and
- Malana (86 MW, Himachal Pradesh).

IFCI is also funding several small hydro projects in Karnataka.

The Corporation acted as the lead arranger for all three hydroelectric IPPs which it funds, although in the case of Baspa II, it was later replaced in this function by ICICI. Both Baspa and Maheshwar face large time and cost overruns. Having been the lead arranger, IFCI shares a responsibility for these problems. Unlike IDBI, IFCI is not formally reviewing its involvement in Maheshwar. A representative of the institution believes that the government of Madhya Pradesh should step in with equity to salvage the project.

In October 2000, IFCI decided not to provide any further lending to power projects. Although its ex-

posure in the sector was less than 15% (the maximum exposure which RBI allows for financial institutions in any sector), the Corporation decided to forego further lending due to risk considerations. In FY 2000/01, power generation still accounted for 27.4% of IFCI's disbursements, but only 0.9% of new approvals.

The moratorium for new lending does not seem to be absolute. IFCI is currently considering funding the private Allain Duhangan HEP (192 MW, Himachal Pradesh). The Corporation would also consider additional support for small hydro schemes.

> "IFCI adopts a flexible and pragmatic approach in applying the norms on project financing, where-ever a justification exists."
>
> **IFCI Lending Policies**

Sources of funds

IFCI raises its domestic resources through bonds and similar instruments on India's capital market. It only places its bonds privately. Foreign currency loans amounted to only 7.8% of IFCI's total lending (or Rs. 1.46 billion) in FY 2000/01, and to 13.5% (Rs. or 58.54 billion) in cumulative terms.

Unlike ICICI, IFCI has never received support from the World Bank or IFC. The Corporation was appropriated $100 million of a $300 million Private Sector Infrastructure Facility by the Asian Development Bank in 1996. ADB has to sanction the individual subprojects funded under this Facility, and has so far approved five IFCI loans for a total of $62 million, including for the Baspa II or Vishnuprayag HEPs, and for Malana (see chapter 3.3.). IFCI has also received a loan from Germany's bilateral financing agency KfW.

Other than ADB and KfW, no official sources of foreign currency funding for IFCI are documented. The so-called Basu committee suggested in February 2001 that international financial institutions like ADB or IFC be invited to become strategic investors in the Corporation. This has so far not happened. IFCI is not included among the recipients of a new loan for Indian financial institutions which was recently approved by the Asian Development Bank.

IFCI taps international capital markets to a limited extent. In FY 2000/01, it raised $20 million from Dubai's Mashreq Bank. The loan has a maturity of only three years, and does not appear to be suitable for onlending to long-term infrastructure projects. According to media reports, IFCI has earlier taken up foreign currency loans of $450 million. The loans become due in 2001 and 2002, and the Corporation has already defaulted on some of the repayment obligations.[31]

Quality of assets

Among all Indian DFIs, IFCI has the highest share of non-performing assets in its books. At the end of FY 2000/01, its NPA ratio stood at 21.0%. At the same time, the Corporation's capital adequacy ratio fell to a thin 6.2%, considerably less than the minimal threshold of 9% required by RBI. According to media reports, the Reserve Bank concluded in its inspection report for FY 1999/00 that IFCI had underreported the real amount of NPAs by around 10%

Internal culture

IFCI explains the low quality of its assets by the fact that it is a single-product institution in a risky market. This does not tell the full story. IFCI appears to be a rather bureaucratic institution which has not developed a risk-based credit culture. In its official announcements, the Corporation says it "adopts a flexible and pragmatic approach in applying the norms [on project financing], where-ever a justification exists."[32]

In August 2001, IFCI's management had to admit that it had "exceeded the prudential norms in case of a few group companies and individual borrowers."[33] Specific cases of such imprudent lending were brought forward, interestingly, by the institution's employees' association. The association indicated cases of several steel companies which IFCI had funded much beyond its exposure limits. In the case of the Usha Group's Malvika Steel Ltd., IFCI had approved new loans to the tune of Rs. 3.2 billion even though the company had already defaulted on interest payments to the Corporation of Rs. 1 billion.[34]

External observers support the view of a lax business culture. The Basu Committee, which the government instituted in 2000 in order to analyse IFCI's problems and formulate a strategy to overcome them, pointed out in its report: "Despite corporatisation in 1993, changes in its shareholding

pattern and induction of non-government directors in its boards, the organisation still functions more or less like a government owned entity."[35] The Committee recommended that IFCI "first build up a strong market-oriented business culture."[36] In its supervision report, RBI also criticized IFCI's weak appraisal and monitoring system. In August 2001, the rating agency Moody's even referred to the financial and governance problems of IFCI (and UTI) as a reason for its decision to downgrade India's country rating.

Like other development finance institutions, IFCI does not have social or environmental policies which guide its lending. The institution delegates the responsibility for the respective impacts of its projects to the sponsors and the government authorities.

Perspectives

In February 2001, the Basu Committee proposed far-reaching changes for IFCI. As mentioned above, it suggested that institutions like ADB or IFC be invited to take up equity (and in fact, take over IDBI's share in the Corporation). According to media reports, IFCI discussed approaching ADB, Great Britain's CDC or Germany's KfW as strategic partners in December 2001.

The Basu Committee also recommended that IFCI reduce the share of project finance from 94% to 50-60% of its total lending, that the Corporation diversify into short-term and fee-based lending activities, that it focus foreign-currency lending on export-oriented companies, and that the Indian government inject new capital to the tune of Rs. 4 billion in order to put the institution's capital adequacy ratio on a more sustainable basis. As a response to the report, IFCI's management decided to reduce project finance to 50% of all lending immediately.

To resolve the legacy of earlier mistakes, the Indian government in August 2001 put forward a bail-out package of Rs. 10 billion for IFCI. The government will itself provide Rs. 4 billion in the form of 20-year bonds, and the shareholders will have to contribute 6 billion. The Finance Minister announced that this would be the last bailout package for the Corporation. By the end of 2001, IDBI and LIC had in principle agreed to their contribution, while SBI had yet not taken a decision on the bail-out.

The government also seems to be floating the idea of merging IFCI with another financial institution. According to media reports, IDBI is strongly opposed to a merger with its weaker competitor.

2.6. IDFC

The Infrastructure Development Finance Corporation was created in 1997, with a mandate to promote private participation in the infrastructure sector by developing creative financing models. "Our primary role is not to provide funds, but to conceive ideas," says one IDFC representative. So far, IDFC has only been partially able to fulfil this mandate.

Ownership

In 1996, the government-appointed Rakesh Mohan Committee proposed a sweeping series of liberalizations in order to promote infrastructure development in India. As one consequence, the government, with support from foreign funders, created IDFC in 1997 in order to provide additional financing particularly for private infrastructure projects. Indian institutions control 60% of IDFC's share capital, with the government holding 20%, RBI 15%, ICICI and SBI 6% each, IDBI 5%, and UTI, HDFC and IFCI a total of 8%. 40% is held by foreign institutions. ADB, IFC and Britain's Commonwealth Development Corporation hold 6.1% each, and Switzerland's State Secretariat for Economic Affairs, 3.8%. The rest is held by various banks and other private institutions.

IFC has one seat on IDFC's board. After considerable debate, the board decided to grant this foreign minority shareholder a veto right. As will be elaborated below, this had considerable consequences in at least one important case. In spite of the foreign veto position, IDFC seems to have close links to India's Finance Ministry. Rakesh Mohan plays an influential role both as IDFC's vice chairman and as an advisor to the Finance Minister.

Activities

The new institution has had a slow start. By the end of FY 2001, IDFC had approved loans of Rs. 63.1 billion for 60 projects. Of this amount it had disbursed Rs. 17.8 billion for 27 projects. In FY 2001, the loan approvals of the Corporation reached Rs. 24.7 billion, and were thus slightly higher than IFCI's. At the same time, they amounted to less than 9% of IDBI's new allocations, and less than 5% of ICICI's approvals.

> "Our primary role is not to provide funds, but to conceive ideas."
>
> **Senior IDFC official, December 2001**

Until 2001, the power sector was the focus of IDFC's activities. The Corporation started its business by providing guarantees for two private thermal power plants, and has so far approved loans of Rs. 36.6 billion for 30 power projects. Most of these projects are thermal power stations, such as Samayanallur (Tamil Nadu), Mangalore and Raichur (both in Karnataka). IDFC also considered extending a loan of Rs. 3 billion for phase II of the Dabhol power plant. The approval of the project was only prevented by IFC's veto power. The World Bank institution opposed the loan – not for economic reasons, but because of the unresolved resettlement problems. "The NGOs saved us from a major embarrassment," remarks one IDFC representative in hindsight.

IDFC is focusing its activities on states which have begun liberalization, such as Karnataka and Uttaranchal. It is also looking for new mechanisms to speed up the slow movement of power and other infrastructure projects. In 2000, it arranged a loan for the expansion of the Raichur thermal power plant in Karnataka not in exchange for escrow cover, but for a commitment of the state government towards restructuring the power sector. In December 2000, the government failed to fulfil its first agreed condition, the unbundling of distribution from the state-owned transmission corporation.

IDFC's annual report for 2001 contains a remarkably clear assessment of the country's power sector. "India's power sector," it points out, "is a leaking bucket; the holes deliberately crafted and the leaks carefully collected as economic rents by various stakeholders that control the system. (...) Most initiatives in the power sector (IPPs and Mega Power Projects) are nothing but ways of pouring more water into the bucket so that the consistency and quantity of leaks are assured."[37] Given this analysis, it is surprising to find that at the end of FY 2001, half of IDFC's portfolio was in power generation. Only one out of every six rupees which the Corporation approved for the power sector has so far been disbursed. (In the non-power sectors, almost one out of two rupees has been disbursed.) IDFC representatives argue, not quite convincingly, that many power projects were approved in FYs 1998 and 1999, and that the problems of the sector were not as apparent then as they are now.

During the last two years, IDFC has increasingly shifted its focus from electricity generation to the telecom and transport sectors. In May 2001, it cancelled ten IPPs, and decided to switch from funding 500-800 MW projects to non-conventional and cogeneration projects in the 5-40 MW range.

Given the wide gap between approvals and disbursements, IDFC has parked parts of its capital in investment funds and bonds. With an amount of Rs. 9 billion, these investments were at the end of FY 2001 almost as large as IDFC's loan portfolio. Bonds of power sector institutions – PFC, NTPC and even the Nuclear Power Corporation – accounted for Rs. 738 million or 8% of the investment. On paper, IFC has a strict environmental policy covering the financial intermediaries it invests in, and so it is surprising to see IDFC's resources being invested in a nuclear power utility.

IDFC also provides input into many policy formulation processes at the centre and the state level.

Hydropower projects

Within its focus on electricity generation, IDFC has so far approved loans for the following two hydropower projects:

- Vishnuprayag (400 MW, Uttaranchal); and
- Srinagar (330 MW, Uttar Pradesh).

Both the Vishnuprayag and Srinagar projects are IPPs. In the case of Srinagar, the Corporation stepped in when the project was privatised after the World Bank stopped its support for UPSEB due to time and cost overruns. In the case of Vishnuprayag, the cost has (in nominal terms) increased no less than 20-fold since its inception.

IDFC also approved a loan for Tata Hydro Electric Power Supply Company, now part of Tata Electric Companies (TEC). TEC services the Mumbai area, and operates three hydropower projects in Maharashtra, viz. the Bhira (150 MW), Bhivpuri (72 MW) and Khopoli (72 MW) HEPs. IDFC's loan was presumably used to fund the replacement of a unit of the Khopoli HEP.

IDFC was also approached to provide funding for the Maheshwar HEP, but management declined to do so. This is encouraging. At the same time, one is left to wonder why a supposedly innovative institution chose to finance the Vishnuprayag HEP. After long delays, this project only moved forward under pressure from the Indian government, and is presently being reviewed by financial institutions. If built, it will produce expensive power, and will have negative impacts on the Valley of Flowers, an area with many endangered plants. Vishnuprayag is being promoted by Jai Prakash Ltd., a company with a long record of political patronage, corruption, and anti-union violence. IDFC representatives argue in defence that projects are often presented to the Corporation at a late stage, when their design cannot be changed. IDFC does however have the choice of not supporting a project.

Given the problems of India's energy sector, there is a need to develop innovative projects to increase energy efficiency and other demand-side management measures. IDFC has so far not taken up such projects. It is generally interested in funding small hydro projects, but will find it difficult to appraise them in an affordable manner.

Sources of funds

Apart from its share capital, IDFC has raised all its resources from bonds sold in India's capital market. The institutions which created IDFC intended the Corporation also to tap international capital markets. Given its backers, IDFC could certainly raise foreign currency funds on the capital markets, but has so far not done so. Since interest rates are

presently low in India, its officials say that there is no demand for foreign currency loans.

According to media reports, the World Bank at some point considered routing future support for the power sector through IDFC rather than through PFC. Both the World Bank and IDFC say that they have not discussed this.

Asset Quality

By the end of 2001, IDFC did not have any non-performing assets. This can be attributed to the young age of the Corporation's portfolio, and to the discipline of not disbursing loans for questionable projects even if they were approved. IDFC was sufficiently prudent not to support the Dabhol and the Maheshwar projects. It does have other power projects of dubious value in its portfolio however.

IDFC is probably India's only financial institution which has some kind of environmental policy. In an environmental management statement, it commits to "identifying and addressing all short, medium and long-term environmental risks associated with its activities through environmental management, management of its project portfolio as well as through policy initiatives."[38] No explanation is given as what this might mean on the project level. The experience of this research project suggests that IDFC functions in an unbureaucratic fashion, and is open to discussing NGO concerns.

Perspectives

The Indian government has many ways to force financial institutions into funding projects which represent important vested interests or are in some other form politically sensitive. The rejection of a loan for Dabhol indicates that IFC's veto power shields IDFC from such political arm-twisting. The Corporation has so far also shown prudence by not pursuing a more rapid expansion than it can digest.

One observer (and competitor) from a rival financial institution goes as far as to say that "IDFC does not fund anything." On the downside, the Corporation has so far not made use of its privileged situation by supporting truly innovative energy projects.

While IDFC seems to be shielded from political pressure, it will at some point be under commercial pressure to expand its operations more rapidly. In FY 2001, the Corporation for the first time paid dividends, of an amount of 7%. This is less than commercial investors like ICICI or SBI pay for the capital which they have invested in IDFC. The new institution cannot afford to count on its investments in bonds and mutual funds for its revenues, but needs to develop an active portfolio of productive investments. It will be a major challenge for the Corporation to fulfil this task while at the same time strengthening its innovative capacities.

IDFC has so far not made use of its privileged situation by supporting truly innovative energy projects.

IDFC's Chief Executive Officer Nasser Munjee presented a longer-term strategy for his institution in a major interview in the *Business Standard* of 22 February 2002. According to Munjee, IDFC will continue to create frameworks for privatising and commercialising India's infrastructure. The Corporation will draw on experiences with privatisation in Great Britain in particular, and plans to move into new sectors such as tourism, health and education. "Once the framework is well-understood", the CEO hopes, "I get the projects."

Unlike the traditional development finance institutions, IDFC will continue not to provide the capital for infrastructure schemes, but to "take a project, make it bankable and take it to the market." The Corporation will pursue a strategy of merchant and investment banking, and Nasser Munjee hopes that in five years from now, it will "harness a lot of international capital." The risk is that rather than creating truly new ideas for India's infrastructure needs, IDFC's CEO may bank on models which are losing their credibility internationally.

2.7. THE STATE BANK OF INDIA

The State Bank of India is the largest commercial bank in the country. Since the financial sector has been liberalized, it has started to engage in long-term project finance in the infrastructure sector. With its worldwide branch network, SBI has a strong capacity to raise foreign currency funds.

Ownership

After independence, state control over the banking sector was seen as essential. The State Bank of India was created in 1955 by the government in order particularly to speed up the process of monetising India's rural economy. Even as a public sector bank, SBI always had private minority shareholders. At the end of FY 2000/01, the bank had 737,000 shareholders. The Reserve Bank of India held 59.7% of the equity, Indian financial institutions and companies, 19,1%, foreign financial institutions and NRIs, 18.3%, and others (including individuals in India), 2.8%. SBI is associated with seven regional State Banks.

As part of its diversification drive, SBI has created several affiliate institutions. The Asian Development Bank holds a share of 13.8% in the capital of SBI's investment bank, SBI Capital Markets.

Activities

The traditional role of commercial banks in India is to mobilize short-term deposits, and to meet the short-term financial needs of industry, trade and agriculture (and to cover government debt). With 9,000 branches and total (domestic) deposits of Rs. 2,438 billion at the end of FY 2000/01, SBI is in a strong position to mobilize household savings in India. The bank also maintains 52 offices in 31 foreign countries, and thus caters to the financial needs of the NRI community. The large branch network is expensive though, and observers consider SBI to be "overstaffed."[39]

In the era of liberalization, SBI is trying to optimise its large outreach by turning into a universal bank. In a drive to diversify its business, SBI has created an investment bank (organizing divestments and public offerings, mergers and acquisitions etc.), a merchant bank, a fund management company (offering 19 domestic mutual funds and one offshore fund), a life insurance company, a rating agency and other new business units. Within the power sector, SBI has played an advisory role on the proposed merger of NHPC with NTPC, and in assessing the escrow capacities of state electricity boards for IPPs. The bank is also a major shareholder in other financial institutions such as IFCI and IDFC.

In the era of liberalization, SBI tries to optimise its large outreach by turning into a universal bank. The State Bank has ventured into long-term infrastructure financing, and particularly project finance in recent years.

SBI has ventured into long-term infrastructure financing, and particularly project finance in recent years. By the end of FY 2000/01, the bank had approved loans of Rs. 185.6 billion for 112 infrastructure projects, of which Rs. 79.8 billion for 43 projects was in the form of project finance. At this point, infrastructure project finance accounted for only 7% of SBI's total loan portfolio, but almost equalled ICICI's project finance portfolio for infrastructure. SBI's rapid foray into long-term financing has resulted in a maturity mismatch. According to recent media reports, the bank has approved loans with a maturity of more than five years to the tune of Rs. 126 billion, but can only match this commitment with deposits and other borrowing of an equal maturity of Rs. 54 billion.[40]

Hydropower projects

As part of its project finance activities, SBI approved loans for several hydropower plants, including the following projects:

- Baghliar (450 MW, Jammu & Kashmir);
- Maheshwar (400 MW, Madhya Pradesh);
- Baspa II (300 MW, Himachal Pradesh); and
- Chamera II (300 MW, Himachal Pradesh).

The bank has also extended funds for financial institutions and operators in the power sector. In May 1997, it provided a foreign currency loan of $25 million to the Orissa Hydropower Corporation. In December 1998, it participated in a syndicated loan of $100 million for PFC. And in December 2000, SBI was announced to be the lead manager for a syndicated loan of ¥7.5 billion for the Power Finance Corporation (which at the time of writing had however not yet materialized).

Sources of funding

Since SBI is a commercial bank, its primary source of funding are retail deposits. In order to raise funds for longer-term lending, it also regularly issues bonds.

SBI is able to mobilize foreign currency funds through its international branch network. Its 52 overseas offices hold deposits of $1.702 billion. Given its strong position within the NRI community, SBI has also raised large amounts of foreign currency through bond issues and similar instruments when India faced balance of payment problems. In 1998, it raised $4.2 billion through the Resurgent India Bond, and in 2000, $5.5 billion through the Millenium Deposits Programme (see chapter 3.6.).

In the case of the Resurgent India Bond, SBI set up a chain of brokers, including banks and other entities, to market the instrument in the United States. This indicates that selling the NRI bonds must offer attractive commissions to the State Bank. In the case of the Resurgent India Bond, an aggressive marketing campaign included road shows in NRI centres, television and newspaper advertisements, and mass mailings and unsolicited phone calls to about 100,000 non-resident Indians in the US alone.[41]

While the bulk of the large NRI bonds which SBI administers are meant to strengthen the foreign currency reserves of the Reserve Bank of India, SBI retains some of the funds raised. In the case of the 1998 Resurgent India Bond, the bank intended to use about $1 billion for its own infrastructure lending and for onlending to other institutions involved in project finance. According to media reports, the rest was destined to go into RBI's reserves.[42] SBI used proceeds from the Millenium Deposits Programme to extend a loan of Rs. 5 billion to PFC.

Its strong international position enables SBI to extend foreign currency loans or bonds directly from its foreign deposits, and to arrange international loan syndications. The bank provided a loan to the Maheshwar HEP from its Frankfurt branch. Its participation in the 1998 loan to PFC was raised through SBI European Ltd. (in London), and the loan to the Orissa Hydropower Corporation, through SBI's Manama office. One may assume that the yen loan to PFC will be raised from the deposits of the bank's Japan office.

SBI also offers its services as a conduit for official export credits. In September 2000, the US Exim Bank signed a Memorandum of Understanding with the State Bank for the provision of export credits of $500 million. In addition, many ECAs accept SBI guarantees as the host country counter-guarantee which they request as a security for their own funding. In its 2001 annual report, the bank claims that "most export credit agencies of the world prefer guarantees from the SBI in case of an Indian client or project."

Asset quality

At the end of FY 2000/01, the share of SBI's assets which was non-performing was 6.0%, and the bank's capital adequacy ratio stood at 12.8%. While SBI's NPA rate is considerably lower than those of development finance institutions, this is probably explained by the fact that commercial banks are less engaged in long-term lending than DFIs. SBI's asset quality broadly corresponds with other commercial banks in India (which had an average NPA rate of 6.7% at the end of FY 2000/01).

Internal culture

G.H. Deolalkar, formerly a managing director of SBI, claims that the partly private ownership of the bank was a positive factor in that SBI "benefited from the systems of checks and balances, disclosure disciplines, and dividend expectations of shareholders."[43] And an independent observer comments that since liberalization started, SBI has so far been fortunate in that the bank had a string of cautious, prudent chairmen.

A financial analyst points out that the skills of commercial banks in India "have traditionally been strongest in the appraisal of short-term working capital lines, and we expect it will take time for systems to be developed to effectively analyse project finance risks."[44] This may well be true for SBI also. Like some of the DFIs, SBI has played a prominent role in financing the economically disastrous Dabhol and Maheshwar power projects.

SBI was one of the very few financial institutions which refused to meet with the Narmada Bachao Andolan in order to discuss the Maheshwar project. The bank did not agree to a meeting to discuss this research project either.

2.8. OTHER FINANCIAL INSTITUTIONS AND INSTRUMENTS

The liberalization of India's financial sector has blurred the distinctions between the different roles of financial institutions. While SBI has taken up project finance, other commercial banks and investment institutions provide a growing amount of funds to power sector institutions such as NHPC and the state utilities.

LIC

The Life Insurance Corporation of India is India's traditional life insurer. As a nationalized company, it for a long time enjoyed a monopoly in this business sector. At the end of FY 2000/01, LIC had about 100 million customers, more than 2,000 branch offices, and funds of Rs. 1,950 billion. In terms of the size of its funds, the insurer is second only to SBI in India. LIC intends to increase its funds by 18% in FY 2001/02. This rapid expansion may reflect the westernisation of Indian society, in that social security is more and more delegated from the family or the state to commercial insurers.

Insurance companies – and particularly life insurers – manage funds on very long terms. They are therefore well placed to invest in infrastructure projects. LIC plans to invest one fourth of its available funds in infrastructure in 2001/02.

Insurance companies – and particularly life insurers – manage funds on very long terms. They are therefore well placed to invest in infrastructure projects. LIC has been active in this sector for more than 40 years. In 2001, its investments in infrastructure amounted to Rs. 286 billion (or 14.7% of its total funds). Rs. 102 billion were invested in the power sector. A new law of March 2000 stipulates that insurance companies must invest 15% of their funds in the infrastructure and social sectors. According to *Power Line,* LIC plans to invest one quarter of its available infrastructure funds in FY 2001/02.[45]

Within the power sector, LIC has traditionally taken up bonds from, and extended loans to, the state electricity boards and central institutions such as NTPC, NHPC, PFC, REC, NPC, and the Power Grid Corporation. In March 2001, LIC's outstanding loans to NHPC amounted to Rs. 4 billion, and to PFC, to Rs. 3 billion. While this already made the insurer one of the largest creditors of these institutions, the Corporation has rapidly increased its engagement in recent months. For example, LIC has offered a line of credit of Rs. 25 billion to NHPC for projects under the Tenth Plan. According to media reports, the Corporation also extended a new loan of Rs. 5 billion to PFC, and is discussing to increase this by a further Rs. 12.5 billion. This rapid expansion confirms the stated interest of LIC to strengthen its involvement in the infrastructure sector.

NHPC intends to invest the funds under LIC's line of credit, and a similar line from ICICI, in the Teesta V, Parbati and Subansiri Lower HEPs (see chapter 2.1.). While ICICI sanctions the individual projects funded under its line of credit, LIC has not required a right to do so. DFIs like ICICI are used to appraising individual investment projects, but LIC is not, and this may explain why the insurer has delegated the authority to approve funds for specific projects to NHPC. When the World Bank decided it would close its loan for the Nathpa Jhakri project in December 2001, Yogendra Prasad, the head of both NJPC and NHPC, immediately informed the public that LIC's LoC to NHPC could be redirected to fill the gap at the Nathpa Jhakri Power Corporation.

As of now, development finance institutions do not perceive LIC as a competitor. Yet, the insurer started to fund individual projects in the power sector in 1994, with a loan to the GVK Jegurupadu project, a combined cycle IPP. LIC has funded several other thermal power projects since then. It also approved loans for the Maheshwar HEP and, according to

media reports, the Baghliar HEP in Jammu & Kashmir. Both projects have experienced major problems, and LIC has asked NHPC to replace the private sponsor of the Maheshwar HEP (see chapter 1.2.).

LIC is an important investor in other financial institutions. At the end of FY 2000/01, it held 12.3% of the shares of ICICI, and 5.1% of the shares of IDBI. It is also a major shareholder in IFCI (where insurance companies collectively held 17.5% of the equity in 2001).

LIC also does business with the NRI community. In FY 2000/01, only 1% of the Corporation's revenues came from outside India. LIC intends to rapidly increase this share, and to earn 5% of its revenue from international business activities within five years. Since housing or the social sectors do not require foreign currency funding, it is likely that a major part of the respective revenue will be invested in infrastructure.

Due to their extensive branch network, the major nationalized banks have access to large funds at low cost. Now that the legal restrictions have been eased, many of them would also like to invest funds in long-term lending at higher rates.

Other investment institutions

The General Insurance Corporation of India (GIC) and the Unit Trust of India (UTI, an investment fund) are the other state-owned investment institutions in India. They have so far not become as active in the power sector as LIC, possibly because their funds do not have the same extended maturity as the funds of a life insurer.

UTI is a creditor to NHPC, with a loan amounting to Rs. 500 million at the end of FY 2000/01. The Trust is also in a good position to place bonds, which are often acquired by provident or pension funds. In 2000, UTI privately placed a Rs. 1 billion bond of the Nuclear Power Corporation, and in 2001, so-called non-convertible debentures of PFC to the tune of Rs. 4 billion.

UTI and GIC have invested funds in a few hydropower projects. GIC agreed to take up equity in the Maheshwar HEP. UTI approved a loan for the Baspa II HEP, and is being discussed as the source of a foreign currency loan for the Maheshwar HEP. In January 2002, the government's Udesh Kohli Committee on the funding needs of power projects proposed that LIC, GIC and UTI invest more funds in the power sector to make up for the growing restraint of development finance institutions.

To a limited extent, housing finance institutions have also become engaged in India's power sector. The Housing Development Finance Corporation (HDFC), a traditional funding partner of IFC, approved a loan of Rs. 1 billion for the Chamera II HEP, and has also lent to NHPC (with an outstanding loan amount of only Rs. 52 million at the end of FY 2000/01). The Housing and Urban Development Corporation (HUDCO) considered extending a loan for the Maheshwar project, but eventually did not do so.

Commercial banks

Commercial banks have traditionally mobilized India's household savings, and have met the short-term financial needs of industry, trade and agriculture. In March 2001, 296 commercial banks held Rs. 9,500 billion in deposits, and had a combined network of 65,900 branches all over the country. The SBI group alone accounted for 24% of total deposits, and one fifth of the branches. 19 nationalized banks, which were taken over by the state in 1969 and 1980, accounted for 54% of the deposits and half of the branch network. (Regional rural banks, private banks, foreign banks and cooperative banks accounted for the rest.)

Due to their extensive branch network, the major nationalized banks have access to large funds at low cost. Now that legal restrictions have been eased, many of them would also like to invest funds in long-term lending at higher rates. The nationalized banks have however not yet developed the capacities to appraise projects, and have only limited access to foreign currency funds. For these reasons, and unlike SBI, they have so far only taken up a small number of hydropower projects. The following projects have managed to attract funds from nationalized banks:

- Baghliar (450 MW, Jammu & Kashmir), with a loan from the Jammu & Kashmir Bank;
- Maheshwar (400 MW, Madhya Pradesh), with rupee loans from the Dena Bank and the Punjab National Bank (Rs. 250 million each), and a

foreign currency loan from the Bank of India ($12 million);

- Baspa II (300 MW, Himachal Pradesh), with loans from the Central Bank of India (at least Rs. 500 million), the State Bank of Patiala and the State Bank of Indore (with at least Rs. 250 million each);
- Chamera II (300 MW, Himachal Pradesh), with loans from the Punjab National Bank (Rs. 1.5 billion), the Central Bank of India, the Bank of India, and Punjab & Sind Bank (Rs. 1 billion each);
- Malana (86 MW, Himachal Pradesh), with the Bank of Baroda, the Oriental Bank of Commerce, the Punjab & Sind Bank and the State Bank of Patiala contributing a total of Rs. 750 million in loans; and
- Daulasidh (80 MW, Himachal Pradesh), with the Kangra Central Cooperative Bank offering a loan of Rs. 1 billion.

In cases such as Baghliar or Daulasidh, the banks from the respective states may well have offered funding under pressure from their state governments.

While project finance remains the realm of the development finance institutions, PFC and SBI, other commercial banks have become major lenders to central power sector institutions such as PFC, NHPC, and NTPC. At the end of FY 2000/01, eight nationalized banks had loans of Rs. 8.5 billion outstanding at PFC. This amounted to 25% of the rupee loan debt of PFC. At the same time, seven nationalized banks and one private bank held Rs. 7.7 billion in outstanding loans at NHPC, or 35% of the institution's rupee loan debt. Even without SBI, the commercial banks were thus the most important group of lenders to PFC and NHPC. As was described above, they have since been overtaken in this role by LIC.

The following nationalized banks have so far become particularly active in India's hydropower sector:

- the Punjab National Bank (with loans to PFC, Chamera II, and Maheshwar);
- the Oriental Bank of Commerce (with loans to NHPC and PFC, and for Malana);
- the Canara Bank (with large loans to NHPC and PFC);
- the Bank of India (with loans for Chamera II and Maheshwar);
- the Jammu & Kashmir Bank (with loans to PFC and for Baghliar); and
- the Corporation Bank (with loans to NHPC and PFC).

The Canara Bank recently decided to greatly increase its exposure in the infrastructure sector, hoping to reap higher interest rates. The bank plans to approve Rs. 18 billion in loans for the power sector in FY 2001/02. Of this, Rs. 15 billion should go into private, and Rs. 3 billion into state sector projects. The Canara Bank has already extended several loans for thermal power plants since 1996. It also approved a guarantee of $21 million for the Dabhol project, which did not turn out to be a particularly profitable investment.[46]

Bonds of power sector institutions

For many years, central power utilities and state electricity boards have taken up debt in the form of bonds. The use of this instrument has markedly increased in recent years. According to *Power Line,* power sector institutions issued bonds for a total of Rs. 60 billion in FY 2000/01.[47] Major issuers included NTPC, NHPC, NPC, the Power Grid Corporation and PFC, but also the power utilities of states like Andhra Pradesh, Maharashtra, and Rajasthan. At the end of FY 2000/01, 51% of PFC's domestic debt and 17% of NHPC's domestic debt consisted of bonds.

Debtors have a choice of issuing bonds publicly, or placing them privately. If they opt for public issues, they enjoy lower interest costs, but have to disclose more information, and must get the respective instruments rated. In spite of higher interest rates, most power utilities in India prefer to go the private placement route.

Given their precarious financial health, the state power utilities use most of the funds raised by bond issues for current expenditures, and not for productive investments. The only exceptions which could be identified in 2001 were the Gujarat SEB, which issued bonds for the financial closure of a thermal power plant, and the Kerala SEB, which issued

bonds for the expansion of its transmission and distribution network. Earlier, the Sardar Sarovar Narmada Nigam Ltd. had issued bonds of at least Rs. 2.815 billion for the Sardar Sarovar project under guarantees from the government of Gujarat.

Many state governments are encouraging their power utilities to take up debt, and guarantee the respective bonds, because they are no longer able to balance the budget deficits of their utilities. Carrying government guarantees, such bonds are considered to be risk-free by RBI. The respective investors do not need to make expensive provisions for them, and so the bonds help financial institutions to maintain better capital adequacy ratios. It is mainly cooperative banks and provident funds which invest in state government bonds in India.

As *Power Line* elaborates, the bonds of the state power utilities in reality still carry considerable risks. Since the instruments are not invested productively, the utilities – and the respective state governments – will find it difficult to repay them once the mounting number of bonds matures. And with escrow cover and other securities stretched thinner and thinner, investors may not find much comfort in state guarantees. Given this risk, the large financial institutions avoid buying bonds from state power utilities. Institutions like ICICI and SBI still play an active role in arranging the public issues and private placement of the utility bonds.

Even if state power utilities increasingly turn to bond issues, the risk is small that such instruments will fund uneconomic or destructive projects. Within the financial system at large, bonds present a problem, and as one observer says, it may be "just a long wait for the financial bubble to burst."[48]

Notes

1 *Economic Times,* 3 August 2001.

2 Lok Sabha, Standing Committee on Energy, 'Report on Demands for Grants (2001-2002),' Ministry of Power, April 2001, paragraph 2.6.

3 According to *Indian Express,* 25 April 2001.

4 Data on Koel Karo from *Frontline,* 16 March 2001; *Indian Express,* 15 December 2001; *Times of India,* 20 July 2001; *Hindustan Times,* 25 December 2001; Standing Committee on Energy, April 2001, paragraph 2.151-2.153.

5 See Curt Voxby, India Uri Hydroelectric Power Project, Monitoring Summary Report, February 1998, p. 25.

6 *Business Line,* 23 February 2001.

7 *Power Line,* June 2000.

8 NHPC Website, Environment Management.

9 *Business Standard*, 1 January 2002.

10 Yogendra Prasad, 'The Future of Hydro Power is Bright,' *Indian Express,* 1 January 2000.

11 See The Working Group on the Export Development Corporation, Reckless Lending, May 2001, Volume II, pp. 7f.

12 See Lynnart Nyman (ed.), *River Jhelum, Kashmir Valley: Impacts on the Aquatic Environment,* 1999.

13 *The Tribune,* 20 December 2001.

14 *The Tribune,* 21 December 2001.

15 According to *Hindustan Times,* 21 November 2001, and *Business Line,* 31 December 2001.

16 *Power Line,* July 2001.

17 World Bank, Implementation Completion Report, India Power Utilities Efficiency Improvement Project, May 20, 1999, p. 3.

18 ING Barings, Corporate Debt Research, Power Finance Corporation, 4 September 2000, p. 60.

19 *The Tribune,* 23 June 2000.

20 See Lending Criteria on PFC's website.

21 World Bank, Implementation Completion Report, pp. iii, 21.

22 Asian Development Bank, Project Completion Report on the Power Efficiency (Sector) Project in India, August 2001, pp. 16f.

23 Asian Development Bank, Project Completion Report, p. 11, and World Bank, Implementation Completion Report, p. 28.

24 International Projects 500, Local Banks – India.

25 Quoted in *Economic Times,* 26 September 2001.

26 Rob Wright, *On the Edge: Driving into Daring Deals.*

27 ICICI, 46th annual report and accounts, 2000-2001, p. 8.

28 United States Securities and Exchange Commission, Form 20-F, Annual Report 2001, ICICI Limited, p. 19.

29 ICICI, 46th annual report and accounts, p. 21.

30 *Times of India,* 17 October 2001.

31 See, e.g., *Business Line,* 2 August 2001.

32 Quoted from IFCI's website on Lending Policies.

33 IFCI, Note – in Clarification, 31 August 2001.

34 See *Indian Express,* 19 December 2001.

35 Basu report quoted in *Indian Express,* 7 February 2001.

36 Basu report quoted in IFCI's annual report for 2001, p. 12.

37 IDFC, Fourth Annual Report 2000-2001, p. 4.

38 IDFC, Environmental Management.

39 Jan Peter Wogart, 'Industrial and Financial Restructuring of India's Development Finance Institutions,' IFC-Asia Department Economic Paper No. 9, July 1999, p. 5.

40 Figures according to *The Hindu,* 29 November 2001.

41 See U.S. Securities and Exchange Commission, Securities Act of 1933, Release No. 8036/November 19, 2001, pp. 3, 5.

42 According to *Financial Times,* 26 August 1998.

43 G.H. Deolalkar, The Indian Banking Sector, p. 101.

44 Merrill Lynch, Asian Fixed Income Monthly, IDBI, 3 January 1997, p. 39.

45 See Shubhra Wadhawan, Life Insurance Corporation, *Power Line,* June 2001.

46 See Sonali Dutta, 'Canara Bank,' *Power Line,* April 2001.

47 See Sunil Puri, 'Tapping the Bond Market,' *Power Line,* February 2001.

48 *Ibid.*

PART 3

INTERNATIONAL FINANCIAL INSTITUTIONS AND HYDROPOWER IN INDIA

3.1. THE WORLD BANK

The World Bank is an important source of foreign capital for India, particularly in the power sector. It plays a crucial role by shaping the restructuring of the sector on the state level through its program loans. The Bank no longer funds specific power generation projects in India, which is a major break from the past. Unlike its sibling IFC, it does not plan to provide further funds to financial intermediary institutions either.

Overall relations with India

Between 1950 and 2000, the World Bank approved $53.8 billion for 412 projects in India. In February 2001, its country portfolio consisted of 73 projects and a committed amount of $12.1 billion. The World Bank is India's most important source of foreign capital, and projects in India in turn constitute the Bank's largest portfolio.

The World Bank plays a crucial role by shaping the restructuring of the power sector on the state level through its program loans. It does not finance specific power generation projects anymore in India.

As a reaction to India's nuclear tests, the World Bank sharply reduced loan approvals between May 1998 and April 2000. During the current country assistance strategy period (2002-2004), the Bank plans to lend about $3 billion a year to India. The government had proposed yearly borrowings of $4 billion.

The first strategic principle of the World Bank's India strategy is selectivity. The Bank will no longer fund projects in sectors such as thermal power, telecommunications and ports where private investment can be facilitated through the private sector arms of the Bank Group, the International Finance Corporation (IFC) and the Multilateral Investment Guarantee Agency (MIGA). At the central level, it will only support projects in a small number of sectors – including highways and combating infectious diseases, but not power (or railroads). The Bank will concentrate the bulk of its funding on states which support its reform agenda, and which are relatively poor. At the same time, it argues that rather than funding, "in some of the poorest but non-reforming states, policy dialogue and capacity building may well be the most effective interventions."[1]

After a break of almost seven years, the World Bank in April 2000 approved a structural adjustment program in India (for the state of Uttar Pradesh). The current country assistance strategy sets aside about one quarter of all resources for India for structural adjustment operations. The institution is aware that "even if the reform programs continue, there may be political opposition to the Bank's involvement."[2]

The World Bank acknowledges that compliance with social and environmental safeguard policies is "a critical, and often controversial, issue in India."[3] Destructive Bank projects have triggered massive public opposition in India and abroad. The implementation of safeguard policies is at the same time "contentious" within agencies such as NTPC.[4] When the Bank reviewed the effectiveness of its own environmental impact assessments in India from 1991 to 1997, it claims it found overall improvements, but also continuing weaknesses regarding "identification of issues and scoping, analysis of alternatives, prediction and assessment of impacts and public involvement and consultation."[5]

The Bank's legacy in the power sector

For a long time, the power sector was the World Bank's top priority in India. From 1986 to 1990, the sector accounted for 28% of all commitments. As an internal evaluation points out for the period until 1993, "Bank energy sector lending largely followed the government's lead, focusing on expanding productive capacity through large-scale projects, imple-

mented by central or state monopolies."[6] The main recipients of this lending were NTPC and, since the 1980s, the state electricity boards.

From 1980 onwards, the World Bank funded ten hydropower schemes in India, either as stand-alone projects or as parts of larger power sector loans. The following projects were funded on a stand-alone basis:

- Upper Indravati (600 MW, Orissa) with a $324 million loan in 1983;
- Indira Sarovar (500 MW, Madhya Pradesh, better known as Indira Sagar) with a $300 million loan in 1984;
- Sardar Sarovar (1,450 MW, Gujarat, primarily an irrigation project) with loans of $450 million in 1985; and
- Nathpa Jhakri (1,500 MW, Himachal Pradesh) with a $485 million loan in 1989.

> *"Bank energy sector lending largely followed the government's lead, focusing on expanding productive capacity through large-scale projects, implemented by central or state monopolies."*
>
> **The World Bank, June 2001**

During the same period, the Bank funded several hydropower schemes as the principal components of larger projects, which included other elements such as the construction of transmission lines or the rehabilitation of thermal power plants. The following projects were funded in this way:

- Lower Periyar (180 MW) as part of the $176 million Kerala power project in 1985;
- Kalinadi River (270 MW) as part of the $330 million Karnataka power project in 1987;
- Gerusoppa (240 MW) as part of the $260 million second Karnataka power project in 1988;
- Srinagar (330 MW) as part of the $350 million Uttar Pradesh power project in 1988;
- Koyna IV (1,000 MW) as part of the $400 million Maharashtra power project in 1989; and
- a 150 MW pumped storage unit at the existing Bhira hydropower project in Maharashtra as part of the $98 million Private Power Utilities (TEC) project in 1990.

The Srinagar HEP, now in the new state of Uttaranchal, was privatised when the World Bank closed the project. The Bank also approved several single-purpose irrigation dam projects, including Upper Krishna II (Karnataka) in 1989. Transmission lines related to hydropower schemes were funded under the Bank's transmission projects (see below).

The World Bank classified all but one of the hydropower projects listed above in the environmental category "C," suggesting that environmental impacts were negligible and no environmental impact assessments were needed. The one exception was the Private Power Utilities project which was approved last in 1990, and was categorized as "B." Interestingly, all package loans which included hydropower schemes were approved during the final weeks of the respective financial years. During these so-called "bunching seasons," the Bank's operational departments need to rapidly allocate their remaining budgets. Possibly, package loans serve the purpose of appropriating money quickly well.

Many of the World Bank's dam projects in India have created huge social, environmental and economic problems. The fundamental problems of the Sardar Sarovar project on the Narmada river triggered a massive campaign by social movements and NGOs in India and internationally. The Nathpa Jhakri project also turned into a long-term headache, and with its flawed design cast serious doubts on the Bank's capacity to appraise the technical viability of projects. (See chapter 2.1.) For economic, social and environmental reasons, Upper Krishna II is considered "an extraordinary failure" by the Bank's own Operations Evaluation Department.[7]

In funding large hydropower and – at times equally destructive – thermal power projects, the World Bank uncritically followed the lead of India's power sector bureaucracy. The WCD country study on India states that "the primary responsibility of making choices in favour of large dams as against other indigenous water resource development techniques, lies with the Indian planners and designers," and not the World Bank.[8] At the same time, the WCD's final report stresses that multilateral and bilateral financial institutions "have played a key strategic role in spreading the technology to developing countries, lending legitimacy to emerging dam projects,

and fostering the technological and human resources required to build and maintain dams."[9] In cases such as Sardar Sarovar, the hasty involvement of the Bank certainly helped to overrule the concerns of India's environment ministry.

An internal evaluation of the World Bank's energy portfolio in India recommends that "for environmentally sensitive energy projects, the Bank should continue to review the performance of the state environmental institutions until the loan is repaid."[10] Bank officials maintain that they do monitor closed projects such as Sardar Sarovar and Upper Indravati as long as the respective loans have not been repaid. The Bank has however so far not heeded the call of social movements like the Narmada Bachao Andolan to accept its responsibility and address the problems of these projects in public.

The Bank's new power sector strategy

After an international NGO campaign and a squabble with the Indian government, the World Bank was forced to withdraw from the Sardar Sarovar project in March 1993. At the same time, the Bank realized that its support for individual power plants was not improving India's inefficient power system, and particularly the performance of the state electricity boards. So between 1992 and 1995, the Bank cancelled over $2 billion in non-performing power sector loans to India.

During the same period, the World Bank declined getting involved in the Dabhol power plant. Its analysis clearly showed that the project was not economically viable (see chapter 1.5.). In his account of the Dabhol saga, Abhay Mehta notes that the Bank's analysis "was and is to date, the most coherent critique of the project and its consequences."[11] In a letter to the Ministry of Finance, however, World Bank director Heinz Vergin pointed out "that the bank strongly supports your government's private power initiatives and is keen to consider other private power project proposals, including a reshaped Dabhol project."[12]

In June 1993, a few weeks after this letter was written, the World Bank approved the Private Power Development Technical Assistance Project. The purpose was to advise the Indian authorities on how best to negotiate contracts for private power projects, and to introduce competitive bidding for the selection of project sponsors. Demand for the assistance offered was weak, and the project was cancelled after four years, with only $1.2 million of the $20 million loan disbursed. "Most IPPs did not take off," says a power sector specialist of the Bank in hindsight, "which for India was a good outcome." At the height of the IPP frenzy, however, the Bank had not expressed any such critique.

As the World Bank ceased to support individual power generation projects in India, it decided to focus its lending exclusively on programs to restructure the power sector on the state level. In 1996, a power sector reform program in Orissa became the first test case and model of this new type of lending. Modelled after the privatisation of the power sector in Great Britain, the program consisted of the following measures:

- Unbundling of power generation, transmission and distribution;
- privatisation of power distribution;
- private participation in generation and transmission;
- creation of an autonomous electricity regulatory commission;
- increase of electricity tariffs for agricultural and domestic consumers, and thus reduction in cross-subsidization.

Observers believe that the World Bank consciously chose the small, poor and powerless state of Orissa to first implement this new approach, so that delays and political compromises could be avoided. Except for Orissa, the Bank did not fund any other power projects in India between 1993 and 1998. Since 1998, the states of Haryana, Andhra Pradesh, Uttar Pradesh, Rajasthan and Karnataka have followed the path of the Orissa model and received World Bank support. In all affected states, the reform programs evoked strong public protests. In Hyderabad, Andhra Pradesh, three people were killed in August 2000 at a protest rally against the Bank-sponsored restructuring program. In 2001, the Bank cancelled the Haryana program because the government was not prepared to privatise power distribution. The Orissa government instituted an official committee to evaluate the impacts of the power restructuring program, which submitted a critical report in October 2001.

Power sector reforms – five years after

The empirical evidence collected and the recommendations published by the World Commission on Dams indicate that the planning process for water and energy projects must be made fundamentally more democratic and accountable to achieve the goals of social equity and environmental sustainability. The work of energy experts like the Prayas group confirms this view for India. Prayas and other analysts have documented how the lack of transparency and accountability has allowed vested interests to "hijack" the country's power sector.

The World Bank's restructuring policies in India have not helped to democratise power sector policies. The Bank's model has created regulatory commissions which are independent from the state governments. Yet their enormous authority is not matched by mandatory mechanisms for ensuring transparency and accountability. According to Prayas, this "enormous authority without corresponding accountability is a sure recipe for disaster."[13]

The World Bank's recognition that the fundamental problem of India's power sector was not simply a gap in generation was positive. Yet in its zeal to privatise distribution and raise electricity tariffs, the Bank neglected other structural measures needed to rationalize the sector and to check the powers of vested interests. It did not deal with the problems of power theft and corruption, did not promote a comprehensive assessment of all available options, and particularly neglected the potential of demand side management (DSM). DSM measures were included in the Orissa program, but as the researchers Navroz Dubash and Sudhir Chella Rajan observe, were only supported half-heartedly at best.[14]

The newly created electricity regulatory commissions have no mandate to promote developmental goals such as rural electrification. The World Bank argues that increasing electricity tariffs frees up budgetary resources to promote such goals, or for other developmental purposes such as health or education. While this is theoretically true, no mechanisms are in place to ensure that such transfers of resources indeed take place, and that the potential savings will not again be pocketed by vested interests.

> *"The World Bank model involves major surgery with little record of proven success particularly under shortage conditions."*
>
> **Prof. Amulya Reddy, January 2002**

As was elaborated in chapter 1.3., Prof. Amulya Reddy believes that on the ground, the reforms in Orissa have "failed in many ways." The World Bank model "involves major surgery with little record of proven success particularly under shortage conditions," the power sector expert points out. "Despite this, the World Bank approach is being forced on the various states in India. The objections and opposition are being steam-rolled and brushed aside with the leverage of conditionalities imposed by the lending agencies."[15]

Overall, World Bank country director Edwin Lim believes that the reform programs have resulted in "tremendous progress" within a complex sector.[16] Within India's power sector apparatus there is today a general consensus on the need for reform. The privatisation of distribution has become national policy, and numerous independent electricity regulatory commissions are being set up. At the same time, the Bank's country director says that "we certainly recognize that we have made a lot of mistakes in the past." Particularly, the Bank now emphasizes the need to combat theft and corruption within the power sector, and agrees that "privatisation by itself is not enough as we have seen in Orissa."[17] The Bank's country assistance strategy further admits that power reforms may "require much longer than the Bank had earlier anticipated."[18]

In spite of the questionable success of the Indian model, the restriction of support to reform-oriented states is becoming World Bank policy elsewhere. In a sector evaluation report, the Bank's Operations Evaluation Department calls the Indian reform approach "a best practice model that should be emulated throughout the Bank's energy sector portfolio."[19] Another report suggests that "perhaps the most effective, cross-cutting reform [to reduce poverty in India] would be cuts in the explicit and implicit subsidies together with privatisation in power."[20]

The volume of Bank lending decreased as a consequence of the new power sector strategy. After 1998, the institution suspended most new energy lending as part of the international sanctions against India. In the 1996-2000 period, power only ranked fifth among the Bank's lending sectors in the country, with 10% of new commitments – down from 28% ten years earlier. This trend reflects a worldwide shift away from the power sector by the World Bank.

Support for institutions in the central power sector

Even when the World Bank phased out support for NTPC and for specific power plant projects, it still extended funds for central institutions in India's power sector, primarily PFC and the Power Grid Corporation.

Support for transmission projects:
In June 1990, March 1993 and March 2001, the World Bank approved three projects designed to strengthen India's regional transmission systems and assist the creation of a functional national grid. The loans amounted to $485 million, $350 million and $450 million respectively. All of them included investments in the coordination and control of regional transmission systems, and were thus aimed at making the management of India's power system more efficient.

The projects of 1990 and 1993 also funded the construction of transmission lines to evacuate power from new power plants. The 1990 project financed the transmission of power from various hydropower schemes in Jammu & Kashmir, and from the Nathpa Jhakri project in Himachal Pradesh. The 1993 project funded a number of transmission lines from NTPC thermal power plants. These subprojects should have been appraised as elements of the respective generation projects, rather than as improvements of the country's transmission system. The 2001 Powergrid project exclusively comprised investments to facilitate the management and interconnection of transmission in various regions.

Support for PFC:
In January 1992, the Bank approved the Power Utilities Efficiency Improvement Project, a loan of $265 million for the Power Finance Corporation. The loan financed 52 subprojects in three reform-minded states, primarily in transmission and urban distribution. The project was closed in 1998, with $57 million remaining undisbursed.

The Power Finance Corporation has made it clear that it wants further support from the World Bank. According to India's Power Ministry, PFC is exploring a further World Bank project of $500 million. And in November 2000, Power Minister Suresh Prabhu announced that India would soon request World Bank assistance of up to $4 billion for the power sector. "All the funding would be channelised through Power Finance Corporation," the Minister added.[21]

In January 2001 the industry journal, India Poweronline, reasoned that for the World Bank, PFC was too lax in supporting states which do not restructure their power sectors, and that the Bank was considering turning to the IDFC for future support for power sector reforms. The project pipeline in the World Bank's country assistance strategy does not foresee any support for PFC or for IDFC during the 2002-2004 period (nor for any other central power sector institution).

World Bank officials confirm that in the coming years, the institution wants to be directly involved in the power sector reforms which it supports on the state level, rather than routing support through intermediaries like PFC. A power sector specialist of the Bank elaborates that PFC is "financially well disciplined," but has not been able effectively to promote a restructuring process in the states to which it lends.

Support for renewable energy:
In December 1992 and June 2000, the Bank approved projects of $190 million and $130 million respectively for the promotion of private renewable energy resources in India. The second project included support for small and micro hydro projects on canals etc., for wind farms, for efficiency increases and demand-side management programs.

Projects in the Bank's lending pipeline:
The Bank's country assistance strategy for 2002-2004 focuses exclusively on sector restructuring programs in Andhra Pradesh (two projects totalling $500 million), Uttar Pradesh (two projects totalling $400 million), and Rajasthan (one new project of $200 million).[22] Funds will be extended in so-called adaptable program loans, which consist of small tranches closely linked to the implementation of specific policy conditions. The loans will cover adjustment costs and investment programs in the transmission and distribution sectors.

The World Bank does not plan to fund any further power generation projects in India, either directly or as part of restructuring programs. Since all money is fungible, Bank loans still free up resources which can be used for other purposes, including the development of thermal or hydro power plants. Given this fungibility, the investment programs of states which receive World Bank funding still need to be monitored. (This problem is further discussed in chapter 3.3.)

The World Bank's role in the financial sector

The financial sector is not a focus area of the World Bank in India. From the 1950s to 1980s, the Bank extended support to financial institutions such as IDBI, and helped to set up ICICI. In the early 1990s, it exerted strong influence on the liberalization of the financial sector through a structural adjustment program in 1991, and an external sector and investment loan in 1993. The Bank believes that its policy advice – for example through a report and a seminar on the banking system in 1990 and 1997 – "played an important role in financial reform as it set out all issues involved and indicated the policy choices to the borrower." This advice, according to an evaluation report, had a "large impact on the development of the financial sector."[23]

Since 1991, only the Bank's Financial Sector Development Project provided direct support to Indian financial institutions. This $700 million project was approved by the Executive Board in March 1995. Its purpose was

- to recapitalise six public sector banks (of which one bank was subsequently excluded);
- to modernize the technology base of the participating banks; and
- to fund a so-called backstop facility of $200 million which was meant to facilitate long-term lending by the participating banks.

The backstop facility was badly designed, and was cancelled on request from the Indian authorities immediately after the loan was approved. One is left to wonder how this project was appraised in the first place, especially given the fact that India's public sector banks do not specialize in long-term lending.

According to the Bank's evaluation report, the Financial Sector Development Project was not particularly successful: "All the banks reached targeted profits. (...) However, the impact of the project on the management development of the targeted banks was imperceptible. There was a doubt whether those banks would not lose capital again." The Bank report also acknowledges that "NPAs are growing as fast as fresh lending because of poor lending practices and the flawed legal framework."[24]

No new financial sector projects are included in the World Bank's India pipeline for 2002-2004. The institution will restrict its role to offering "analytical advice and possibly technical assistance to government and regulatory institutions as needed."[25] A financial sector specialist of the Bank confirms that the institution "does not find it very effective to work through financial institutions." The International Finance Corporation – another organization of the World Bank Group – will play a more active role in India's financial sector.

3.2. THE IFC AND MIGA

The International Finance Corporation is an active player in India's power and particularly financial sectors. It has never funded a large dam in India, but rather supports what it believes to be innovative technologies and projects. IFC has environmental policies in place, but implements them in a narrow, non-transparent and unaccountable way.

IFC's sister institution, MIGA, has not yet become active in India. It is however interested in supporting large-scale private investments in a liberalized infrastructure sector in the near future.

IFC's overall relations with India

By early 2000, IFC had approved 158 projects in India for a total amount of $1.8 billion. In January 2001, its active portfolio included engagements of $668 million in 68 companies. While India is the most important client of the World Bank, it only ranks fifth in IFC's portfolio. The reason may be that in many areas, India's private sector plays a rather limited role. IFC's exposure is strongest in the financial sector and in private infrastructure. The Corporation is an attractive funding partner for Indian institutions in that it does not only provide foreign currency loans, but depending on the circumstances, also equity.

IFC participated in the international sanctions after India's nuclear tests, so in the 1998-2000 period, it approved new funding for India of only about $300 million. However, according to the Corporation's regional staff, a "substantial pipeline has been built up, and IFC investments can be expected to rise rapidly, if the current favourable economic and political situation can be maintained."[26] IFC expects to approve $1-1.5 billion over the 2002-2004 period. Investments will continue to focus on private infrastructure, the financial sector, and mid-size manufacturing and service companies.

> *"A substantial pipeline has been built up, and IFC investments can be expected to rise rapidly, if the current favourable economic and political situation can be maintained."*
>
> **The World Bank, June 2001**

IFC's role in the power sector

Among the international financial institutions, it is clearly the World Bank which sets or influences the policy agenda in India's power sector. IFC backs up the role of its large sibling by providing funds to what it believes to be pioneering private companies. The Corporation supports the following Indian power projects:

- In 1989, IFC approved $20.83 million for the Ahmedabad Electricity Company and between 1990 and 1994, a total of $130.64 million for Tata Electric Companies. Ahmedabad and Tata are two of India's traditional private power utilities. IFC does not provide any substantive information on projects approved before 1995.

- In 1991 and 1993, IFC approved $54.75 million for the Budge Budge project, a 500 MW thermal power plant in West Bengal. Budge Budge was India's earliest IPP. It is being developed by CESC, one of the oldest private power utilities in Kolkata (Calcutta). The project suffers from poor management, and time and cost overruns. A first unit of 250 MW was commissioned in 1999.

- In 1992 and 1996, IFC approved loans and equity for a total of $37.45 million for GVK's Jegurupadu project, a 235 MW combined cycle plant in Andhra Pradesh. In 1996, Jegurupadu was the first Indian fast-track power project which became operational.

- In the mid-1990s, IFC considered extending a loan of $180 million and equity of $18 million for the ST-CMS Neyveli project in Tamil Nadu. Neyveli is a 250 MW lignite-fired plant. The funding was never approved, and the project has been dropped from IFC's pipeline.

- In October 1999, IFC approved a loan and equity of $9 million for the Astha power project, a private 26 MW captive thermal power plant in an industrial park in Andhra Pradesh.

- In June 2000, IFC approved two credit guarantees for a total of $39 million for two privatised power distribution companies in Orissa.

- In May 2001, the Corporation approved guarantees of Rs. 490 million for GI Windfarms Ltd. This private company is developing two wind farms totalling 21 MW in Maharashtra.

- After 1997, IFC was in negotiations about equity and debt support for the Balagarh project during several years. Balagarh is a 500 MW coal-fired power plant in West Bengal. Because CESC, the sole customer, did not manage to sufficiently raise the tariffs of the electricity it sells, IFC never approved the project, and has dropped it from its pipeline.

- IFC plans to provide debt and equity of $4 million for the retail marketing of photovoltaic systems in South India. This project is part of the Corporation's finance/insurance pipeline.

Unlike in countries such as Chile or Uganda, IFC has never directly funded hydropower projects in India. As the above list indicates, its understanding of innovative approaches to India's energy sector for many years consisted of supporting large-scale IPPs.

In December 2000, Bernard Pasquier, then the director of IFC's South Asia Department, concluded that "there is no point investing in generation if the power does not reach the consumer."[27] In the future, and according to the Bank Group's India country assistance strategy, IFC plans to keep its focus on newly privatised distribution companies, and on captive, co-generation and renewable energy projects. Given its enlarged pipeline, funding for such projects may well increase in the next few years.

IFC's role in the financial sector

While World Bank involvement in India's financial sector is limited, the sector has in recent years become IFC's focus area in the country. When lending to financial institutions, the Corporation attempts not simply to transfer resources, but to strengthen the risk management and technology base of its project partners, and to support the development of new financial instruments. According to the country assistance strategy of the World Bank Group, the financial sector will remain a focus area of IFC in the medium-term future.

For the purpose of this paper, IFC's involvement in the sector can be categorized as follows:

Support for development finance institutions:
Since 1995, IFC has approved, or is about to approve, $75 million in loans and equity for three projects with Indian development finance institutions.

- In October 1997, IFC provided $20 million of equity capital to the newly created IDFC. In February 2001, the so-called Basu committee recommended that IFC and other international financial institutions also be invited to become strategic investors in IFCI. IFCI has so far not followed up on this recommendation.

- In 2001, IFC approved an ICICI guarantee facility of up to $40 million. The facility is supposed to guarantee up to 50% of ICICI's rupee loans to medium-sized companies and projects. By December 2001, the respective contract had not yet been signed.

- In September 2000 and May 2001, IFC set up risk management facilities of $50 million each with ICICI and the State Bank of India respectively. Such facilities allow IFC to exchange foreign currency in rupees for use in other projects, and do not constitute a net transfer of resources to the financial institutions.

- In January 2002, IFC's board was supposed to approve a contribution of $15 million for the creation of a new financial instrument, a so-called collateralised debt obligation vehicle, by ICICI. The new instrument is supposed to encourage the trading of corporate bonds in India. At the time of writing, the project had not been approved yet.

Support to commercial banks:
Since 1995, IFC has provided $40 million in equity and loans to two commercial banks in India.

- In May 1998, IFC approved a loan of $10 million to the private Global Trust Bank, in which it then held an equity stake of 9.6% (and now, of 11.5%). The new private bank will lend the funds on to small and medium sized companies particularly in the export sector.

- In July 2000, the Corporation approved an investment of $20 million in Global Trust Bank in order to allow the bank to take up long-term lending to small and medium-sized enterprises. IFC will support the training of project finance skills, and participate in the initial loans.

- In March 2001, IFC approved an equity participation of up to $10 million (or 10%) in the Vysya Bank. The participation is supposed to strengthen the technology base and risk management mechanisms of the private bank.

Support to housing finance institutions:
Since 1995, IFC has approved at least four loans to housing finance institutions, including HDFC. Total support during this period amounted to $150 million. HDFC, which has recently started to provide project finance to hydropower projects, has received at least five loans from IFC since 1978. (One of these loans was supposed to be approved in October 2001. At the time of writing, this project had not yet been approved.)

Participation in investment funds:
Since 1995, IFC has approved investments for a total of $42.5 million in five different collective investment vehicles targeting companies in India. Two of these vehicles are venture capital funds, and one exclusively targets companies in the auto ancillary industry. In August 1997, IFC also approved its participation with $10 million in a $125 venture capital fund of ICICI and the Trust Company of the West. The fund invests in medium-sized Indian companies in a wide range of industries.

Support for leasing companies:
Since 1995, IFC has approved (or is about to approve) eight different projects with a total volume of $150 million for the support of leasing companies. Most of the projects encouraged the leasing of equipment for the construction of infrastructure schemes, including roads, irrigation canals, and dams. Three of the projects assisted two leasing companies, SREI and Infrastructure Leasing & Financial Services Ltd. (IL&FS), in providing long-term loans for the development of infrastructure projects. IL&FS is a senior project partner of IFC. The Corporation had invested in the leasing company in 1991, and has a representative on its board.

Other financial sector projects:
With a small number of projects, IFC has supported the creation of other new financial service institutions in India, including a small private microfinance company and a factoring company which services the export industry.

IFC's social and environmental policies

As a public international financial institution, IFC is supposed to follow a set of social and environmental policies to ensure that the projects it funds do not have negative social or environmental impacts. What is IFC's responsibility when it extends resources through financial intermediaries such as development finance institutions or investment funds, which lend the respective resources on to their own subprojects, or invest them in separate companies?

According to IFC's environmental procedures, financial intermediaries which receive IFC funds need to put in place management systems to screen subprojects for environmental and social problems. They need to provide IFC with annual reports on their environmental performance, and may normally provide finance only to subprojects which comply with IFC/World Bank policies and guidelines. Concretely, financial intermediaries must require that any subprojects of $500,000 or more comply with IFC's policies, and IFC must clear all subprojects of the (most sensitive) environmental assessment category A. If a company in which an IFC-supported fund has invested undertakes a category A subproject, the fund manager must again try to ensure that the subproject complies with IFC's policies.

If IFC is represented on the board of a financial intermediary, it tries directly to ensure that all subprojects funded by the institution meet IFC requirements. The Corporation has veto power on the board of IDFC, and possibly other financial institutions, for this purpose. As was elaborated in chapter 2.6, IFC used this position to prevent IDFC funding for the Dabhol project.

In principle, it is positive that IFC accepts responsibility for the impacts of the subprojects of the financial intermediaries which it supports. The Indian experience demonstrates that in practice, there are two major problems with IFC's approach.

First, the Corporation at best considers the social and environmental impacts of subprojects within a very narrow perspective. For example, it did not oppose the fundamentally flawed Dabhol project based on a more sustainable perspective of India's power sector, but based on the resettlement which the plant would have caused. And although IFC says that one of its objectives is to strengthen the risk management capacities of the financial institutions it supports, it did not discuss with ICICI, one of its traditional partners in India, its large and imprudent involvement in the Dabhol project.[28]

The extent to which IFC actually deals with social and environmental issues in financial sector projects is shrouded in a high degree of secrecy.

IFC's loan and equity investment of $10 million in leasing company Indian Infrastructure Equipment Ltd. provides another example of an extremely narrow approach to social and environmental concerns. In this case, the Corporation requested the company to set up an environmental advisory board to ensure that it does not lease equipment for projects which do not meet minimum environmental criteria. The project's environmental review summary suggests that the reason for creating this mechanism was to screen out any involvement in subprojects with "unacceptable reputational risks" for the company and IFC.[29] At the same time, one of the project's purposes for IFC is "to further accelerate the process of mechanisation in the Indian infrastructure sector." Nowhere does the Corporation consider the social impacts which this mechanization of a highly labour-intensive sector will have on India's poor.[30]

Secondly, the extent to which IFC deals with social and environmental issues in financial sector projects is shrouded in a high degree of secrecy. The Corporation for example does not make publicly available the list of subprojects it funds through financial intermediaries like ICICI "for reasons of client confidentiality."[31] This gap is critical, and the reason given for it is spurious. Upon an identical request, ADB had no problems providing the list of subprojects which it funds in a similar project through ICICI. IFC also refuses to make publicly available the annual environmental performance reports which its financial intermediaries are supposed to submit, as if environmental or social issues could still be considered a matter of legitimate commercial secrecy. Finally, IFC responded to questions in the context of this research project in writing, but was the only international financial institution which did not accommodate a personal meeting to discuss its policies and projects.

In June 2001, Environmental Rights Action, a Nigerian NGO, filed a complaint with IFC's Compliance Advisor/Ombudsman (CAO) on an IFC financial intermediary project in Nigeria. The complaint related to the design of the project, and not to individual subprojects. Even so, the CAO's report criticized the IFC's lack of transparency, and recommended participatory design, monitoring and evaluation processes for the project.[32] Filing a complaint regarding a specific subproject funded by IFC through an intermediary institution could help clarify the responsibilities of the Corporation in such projects. However, access to the accountability mechanism of IFC is prevented or made very difficult if the people affected by a subproject of the Corporation do not even have the right to know who funds the project which affects them.

MIGA in India

The Multilateral Investment Guarantee Agency, the youngest member of the World Bank Group, was created in 1985. Its role is to guarantee the political risks of private foreign investment in its member countries, and thus to encourage such investment. Like Brazil and Mexico, India originally opposed the creation of MIGA. After the policy shift of the early 1990s, India joined the new agency as a member in 1993.

According to a MIGA press release, the Agency approved a guarantee of $9.6 million for a Motorola corporation project to set up cellular networks in Karnataka and the Punjab in the winter of 1997/98. This was supposed to be MIGA's first project in India. Yet the World Bank Group's country assistance strategy of June 2001 states that "at present, MIGA has no exposure in India."[33] This indicates that the Motorola project likely did not materialize, even after a public guarantee was approved.

The Bank Group expects MIGA to play a more active role in India in the future. Its country assistance strategy states: "MIGA expects high demand for its guarantee activities once infrastructure sectors, such as energy, telecommunication, transportation and water, have been restructured. MIGA's per-project limit of up to $200 million, its ability to syndicate additional insurance on the private market, as well as providing guarantees against Breach of Contract, position the Agency very well to facilitate infrastructure investments into India."[34]

The tough stance which export credit agencies are presently taking in seeking to protect the sanctity of the corrupted contracts of the Dabhol power project might make India's government hesitant to invite a powerful multilateral guarantee agency to back up future foreign investments. In the medium-term future, MIGA may still be an agency to watch in India's power sector.

3.3. *THE ASIAN DEVELOPMENT BANK*

After the World Bank and Japan's JBIC, the Asian Development Bank is India's third largest official donor. The power sector is one of the Bank's focus areas in the country, and the institution is also active in the financial sector. ADB follows the same power sector strategy as the World Bank. Some of its partner institutions, including the Madhya Pradesh government, have highly questionable investment programs in the power sector. This raises questions about ADB's responsibility for the investment priorities of its major borrowers.

Overall relations with India

ADB only started lending to India in 1986. Between May 1998 and September 2000, it cut down its program due to the country's nuclear tests. By the end of 1999, ADB had approved 47 public sector loans for 40 projects totalling $7.7 billion. Within the Bank's India portfolio, energy is the most important sector with 36% of approved loans. The social infrastructure, transport and communication sectors are further priority areas. With 21 loans and equity investments for a total of $271 million, India also has the largest private sector portfolio of ADB.[35]

Two major dimensions of ADB's overall country strategy for India are the promotion of efficient and transparent governance ("an important building block") and private sector development ("an integral part of ADB's operational strategy in India").[36] Both dimensions are also elements of the Bank's power sector strategy. Like the World Bank, ADB has shifted the focus of its sector restructuring operations from the central to the state level.

Financial sector operations

The financial sector is not a focus area of ADB in India. So far, three projects have been particularly important for financial institutions.

In December 1992, the Bank approved $300 million for an India Financial Sector Program Loan. The proceeds were used to strengthen the capital adequacy of several public sector banks, to enable them to attract private shareholders. The banks in question were selected by the government, and not by ADB. On the policy level, the program contained 58 measures which aimed at, among other things, increasing competition in the sector, and developing "autonomous, financially sound banks and DFIs." Overall, ADB rated the program "generally successful." The Bank considered liberalized interest rates, the entry of private banks into the sector and enhanced competition to be "major achievements" of the project. At the same time, it acknowledged that important problems, including the "nonperforming assets of financial institutions," needed continued close monitoring.[37]

In November 1996, ADB approved $300 million for a Private Sector Infrastructure Facility. The project consisted of loans to ICICI ($150 million), IFCI ($100 million), and the Shipping Credit and Investment Corporation of India ($50 million - cancelled when this institution was merged with ICICI). The three financial intermediaries were to lend the loans on to small and medium scale private projects in the power, telecommunications, roads and ports sectors.

ADB has to approve all subprojects funded under the facility. Subprojects must be assessed regarding their environmental impacts, and must comply with the Bank's resettlement and other relevant policies. By November 2001, ADB had approved eight subprojects of $108 million under the ICICI loan, and five subprojects of $62 million under the IFCI loan. The list includes two private hydropower projects, Jai Prakash (ICICI and IFCI loans), and Malana in Himachal Pradesh (IFCI loan).[38] Jai Prakash is the developer of the Baspa II and Vishnuprayag HEPs. Upon request, ADB did not clarify which of the two projects it had funded. The closing date of the Facility is September 2002.

In March 1998, the ADB took up $15 million in equity of the newly founded IDFC. Unlike IFC, it is not represented on the Corporation's board. IDFC has a large portfolio of power projects, including the Vishnuprayag and Srinagar HEPs. According to information from the US Securities and Exchange Commission, ADB also holds a share of 13.8% in SBI Capital Markets, the investment bank subsidiary of the State Bank of India. In February 2001, the Basu report recommended that institutions like ADB become strategic investors in the crisis-ridden IFCI. ADB has not yet been approached.

In December 2001, ADB approved a new Private Sector Infrastructure Facility at the State Level of $200 million. IDBI and Infrastructure Leasing & Financial Services Ltd will each receive $100 million. The new facility will support private projects in the power, road, urban mass-transit, water supply, sanitation and other sectors in Andhra Pradesh, Gujarat, Karnataka, and Madhya Pradesh. Within power, no new private generation projects, but only the upgrading of existing plants and private distribution projects will be considered. ICICI was also supposed to receive a loan of $100 million under the new facility, but at the last minute withdrew from the project.

Power sector operations

At least in theory, ADB's energy policy is progressive. Its sector policy initiatives stipulate that capacity additions should only be funded if efficiency improvements and demand-side management options have received adequate attention, and that power utilities should be encouraged to prepare and implement demand-side management master plans. Further, private projects should only be supported if they are part of least-cost power development plans, if they leverage additional financial resources, and are based on competitive bidding.[39]

In India, energy is ADB's most important lending and policy focus. Within the power sector, the Bank has concentrated on strengthening the country's transmission and distribution network, and on sectoral restructuring programs at the state level. In a certain division of labour with the World Bank, ADB is focusing its restructuring programs on Gujarat, Madhya Pradesh, and Kerala. The Bank also supports PFC and the Power Grid Corporation in order to leverage restructuring efforts in states where it is not directly active.

ADB sanctioned projects for the Power Grid Cororation in 1995, 1999, and 2000. The loans funded subprojects which help facilitate the transmission of power between different regions and states. This contributes to the better management of India's power system. The loans also funded transmission lines to evacuate power from various new power plants, including a line from the Kopili hydropower project in Southern Assam. As in the case of the World Bank, such subprojects should be considered extensions of the associated generation projects rather than improvements of the transmission network.

ADB has financed a few private thermal power plants in order to catalyse private sector participation in the sector. Except through financial intermediaries (see above), it has not funded any hydropower projects in India.[40] A technical assistance study for assessing and prioritising hydropower projects in India is presently in ADB's pipeline. It might be approved in 2002, or later. It is not clear whether ADB will in this study follow the guidelines on options assessment established by the World Commission on Dams.

ADB's response to the WCD report is guardedly positive. ADB has not made compliance with the WCD's recommendations a condition of its lending to institutions like the PFC, but plans to carry out a workshop on the WCD report in India in April 2002.

In March 1992, the Bank approved a first project of $250 million for the Power Finance Corporation. The loan was used to fund 123 subprojects, primarily for upgrading transmission and distribution systems, in five states. Even after the closing date had been extended by 18 months until June 1998, $61 million were not disbursed.

ADB's assessment of PFC is telling. According to the Bank's project completion report, the Corporation "normally" supports projects which are "techno-economically sound," with economic or financial rates of return of not less than 12%. However, PFC does not prepare project completion reports – even if this was required under ADB's loan agreement –, and its portfolio quality "continues to be a matter of concern."[41] The Bank also recommends that "PFC should apply more due diligence in evaluating loan proposals."[42]

A new loan of $250 million for PFC is in ADB's pipeline, and is expected to move to the Bank's Executive Board for approval by the end of March 2002. The loan is again expected to finance trans-

mission and distribution subprojects in selected reform-oriented states like Assam and West Bengal. The completion report of the 1992 project recommends that ADB should only approve future lending through PFC under certain conditions. These include the ADB needing to "conduct a detailed evaluation of PFC's (...) capacity to maintain prudent financial and operational norms, and independence in decision-making."[43] According to information received from the Bank's management, ADB will assess PFC's institutional capacities during fact-finding and appraisal for this new loan. One may assume that the management would not have started project preparation so quickly if it were not prima facie satisfied with the Corporation's performance.

ADB in Madhya Pradesh's power sector

Once ADB had shifted the focus of its adjustment operations from the central to the state level, it selected Madhya Pradesh as the second recipient state after Gujarat. The Bank initiated a first restructuring program in MP in 1999, and approved another in December 2001.

The $250 million Madhya Pradesh Public Resource Management Program was approved in December 1999. The program aims at making government operations in Madhya Pradesh more efficient, at reducing the deficits of public enterprises (for example by dismissing employees and raising tariffs), and opening public sectors for private investment. The program advocates that public expenditure should be prioritised, and the health and education budgets shielded from cuts. Two years after the program was started, ADB views the state government's progress in implementing it as satisfactory.

Madhya Pradesh's power sector exemplifies the problems of public management. Transmission losses are rampant, and according to ADB data, MPEB incurs annual losses of more than Rs. 15 billion by providing subsidized electricity to agricultural consumers. As the Bank points out, the state government actively seeks "private sector participation in infrastructure development, but needs to redirect its focus from case-by-case interventions to evolving a policy, institutional, and regulatory environment characterized by transparency, legal assurance, and political noninterference."[44]

In December 2001, ADB approved a Madhya Pradesh Power Sector Development Program. The main goals of the restructuring program are to reduce the drain of public resources into the power sector, and to open the sector for private investment. A $100 million policy loan will cushion the adjustment costs, and a project loan of $200 million will fund measures to reduce transmission losses, rehabilitate and modernize distribution systems, and install meters.

The policy measures on which the program is contingent are typical for ADB's restructuring agenda in India's power sector: The MPEB will be unbundled; near-commercial tariffs introduced for all consumers; an independent electricity regulatory commission with tariff-setting powers is to be created; and private sector participation in transmission and distribution encouraged. The new program is supposed to be fully implemented by 2005.

In November 2001, mass movements and trade unions held a workshop in Bhopal on the power sector restructuring program. Referring to the experiences with the Dabhol and Maheshwar projects, they denounced the ADB program as an attempt to "deliberately dismantle and destroy the Indian power sector by a set of unworkable prescriptions that have failed disastrously in some states." The movements expressed their opposition to the ADB project, and called on the MP government to formulate its power policies in discussion with the public rather than with international funders.[45] In preparing for the program, ADB considered providing grant funds to the state government for the "social marketing of power sector reform."[46]

ADB and the Maheshwar project

The Maheshwar project in Madhya Pradesh is not based on competition or market considerations, but on political protection. If built, it will constitute a large drain on public resources for several decades. On all accounts, the project runs counter to the tenets of "transparency, legal assurance and political noninterference" which ADB upholds. It is interesting to see how the ADB restructuring programs relate to this private and clearly corrupted project.

In a letter dated 7 November, 2001, ADB management clarified that the Bank "did not discuss the merits of specific individual private sector investments" such as Maheshwar with the state government as part of its public resource management program. "ADB has never assisted hydropower projects in India," the letter added, "and so our ability to provide guidance to government in this respect is some-

what limited." And since "work on this project is reported to be at a stand still," ADB – at least officially – has not discussed the Maheshwar HEP in the context of its power sector development program.[47]

According to a draft Aide Memoire of April 2001, ADB intended to include up to Rs. 3.58 billion to "settle IPP related issues" under the adjustment costs of the planned reform programme.[48] Upon request, ADB did not clarify under which legal title IPP issues needed to be settled, and if such a settlement would include payments to the promoters of the Maheshwar project. As was elaborated in chapter 1.2., SMHPCL has itself owed the MP state utility Rs. 260 million since 1993, and it would be disturbing if any ADB resources should flow into the corrupt venture.

ADB's large-scale support for distribution and other subprojects frees up foreign currency resources for other purposes, including for power generation. And the investment priorities of the power utilities which ADB has selected for support are highly questionable.

While ADB's management in its communication tries to keep a cautious distance from the corrupted dam on the Narmada river, it seems to be well-informed about the state of the project. As ADB management informed the author, Maheshwar was also submitted to the Bank under its first Private Sector Infrastructure Facility. Yet after "the issue of resettlement was raised, (...) the proponents never came back to pursue the proposal."[49]

The problem of fungibility

ADB has selected Gujarat, Madhya Pradesh and Kerala as the partners of its power sector restructuring programs. The loans which the Bank has extended included both policy and investment components . The investment components funded subprojects mainly targeted at modernizing distribution. In Gujarat, ADB is also financing under its power sector loan a pilot scheme for energy and water conservation through drip irrigation.

The ADB loans to the utilities of Gujarat, Madhya Pradesh and Kerala raise a difficult issue. The promotion of drip irrigation is certainly a positive thing. Yet money is fungible. ADB's large-scale support for distribution and other subprojects frees up foreign currency resources for other purposes, including for power generation. And the investment priorities of the power utilities which ADB has selected for support are highly questionable. Madhya Pradesh has invested equity and promised escrow coverage for the Maheshwar HEP, and is a major funder of the power component of the Sardar Sarovar project. The state government also plans to take up the giant Indira Sagar and Omkareshwar projects on the Narmada river in a joint-venture with NHPC. Gujarat spends large amounts of resources on the wasteful and destructive Sardar Sarovar project. And Kerala has announced plans to revive the ominous Silent Valley project. Silent Valley is a 240 MW hydropower scheme which would flood a national park in the unique Nilgiri Biosphere Reserve. The project was shelved in the early 1980s by Indira Gandhi after a campaign by Indian and international environmental organizations.

Even if money is fungible, funders can realistically not be made responsible for any minor project which their borrowers implement. If they extend large loans, they do share a responsibility for the major investments of their borrowers in the respective sectors. This is certainly the case with ADB, which is (or will be) a major funder of the Gujarat, MP and Kerala SEBs. It is probably for this reason that ADB has formulated general governance principles for the partners of its projects, including transparency and accountability. These principles square badly with the investment programs of its major partners in the power sector.

Conclusion

The overall approach and the restructuring programs of the Asian Development Bank and the World Bank in India's power sector are very similar. Like its global competitor, ADB has in its programs so far focused on privatisation, and has not promoted a fundamental shift towards a more balanced strategy addressing the inefficiencies in producing and consuming power.

Unlike the World Bank, ADB does not have to deal with a legacy of failed generation projects. Its policy documents stress the importance of principles like transparency and the rule of law as key ingredients of sectoral reform. In the context of this research project, the Bank's own record regarding transparency was mixed.

In the larger context, there is a question mark regarding the relation between the Bank's rhetorical commitments and actual reality. ADB has prepared (and published) a very critical evaluation of PFC's lending policies. It remains to be seen whether the new loan for the Corporation which is in its pipeline will indeed address the problems of prudent and independent decision-making. The Bank has also put forward useful principles of transparency and accountability for the borrowers of its power sector loans. Yet the partners which it has chosen so far do not adhere to these principles in their investment programs. This creates an impression that ADB simply selects partner governments on the basis of their willingness to accept its policy conditionality, rather than based on institutional criteria like accountability and the rule of law.

3.4. *BILATERAL INSTITUTIONS*

India's power sector receives a variety of forms of support from bilateral funders. Some bilaterals provide direct support for specific thermal, hydro or transmission projects on soft terms. Others co-finance the power sector restructuring programs of the World Bank and ADB in various states, particularly by extending technical assistance to state electricity boards. Several agencies have also funded Indian development finance institutions through lines of credit and, occasionally, by taking up equity.

One agency stands out among all bilateral institutions. Japan's JBIC plays a prominent role in India's power sector even in comparison with multilateral financial institutions. (The following list of agencies and projects is not exhaustive.)

Japan's JBIC

The Japan Bank for International Cooperation (JBIC) is the world's largest bilateral financial institution, and together with its predecessor agencies has for more than ten years been the most important bilateral funder in India. JBIC was created in October 1999 in a merger between Japan's export credit agency JEXIM and soft loan agency OECF. The new institution extends both official export credits (or so-called international financial operations, see chapter 3.5.) and soft loans (or overseas economic cooperation operations).

In FY 1999/00, JBIC's export credits amounted to ¥1,086 billion ($8.8 billion), and its soft loan commitments, to ¥672 million ($5.4 billion). By extending loans on extremely concessional terms, JBIC accounts for about 40% of Japan's official development assistance. The institution supports specific projects as well as structural adjustment programs. Although in principle its soft loans are untied, in FY 1999/00 Japanese companies accounted for 58% of all soft loan contracts funded by JBIC.

After the 1998 nuclear tests, Japan stopped most new commitments of development assistance for India. By March 2001, JBIC (and before, OECF) had approved 154 projects in the country for a total of ¥1,663 billion. With a value of $13.4 billion (at the current exchange rate), this was considerably more than ADB's cumulative commitments of $7.7 billion. By March 2000, the energy sector accounted for 46.5% of all commitments, and for 56 of the 143 economic cooperation projects of JBIC in India. The bulk of energy sector lending consisted of thermal and hydropower projects. Sector restructuring programs and transmission projects made up the rest.

Since 1978, OECF/JBIC have approved at least 28 soft loans for hydropower projects in India (with several projects receiving more than one loan). The largest support was committed for the following projects:

- Srisailam Left Bank (900 MW, Andhra Pradesh), with five loans totalling ¥76.5 billion between 1988 and 1997;
- Dhauliganga (280 MW, Uttaranchal), with two loans and ¥22.0 billion in 1996 and 1997;
- Purulia (a 900 MW pumped storage project in West Bengal), with two loans and ¥21.1 billion in 1988 and 1995;
- Nagarjunasagar (960 MW, Andhra Pradesh), with two loans and ¥15.4 billion already in 1978 and 1981;
- Teesta Canal (67.5 MW, West Bengal), with two loans and ¥14.2 billion in 1986 and 1991;
- Tuirial (60 MW, Mizoram), with a loan of ¥11.7 billion in 1997; and
- Ghatghar (a 250 MW pumped storage project in Maharashtra), with a loan of ¥11.4 billion in 1988.

Other projects with significant or recently approved OECF loans include:

- Sardar Sarovar (1450 MW, Gujarat), with a loan of ¥2.85 billion in 1985 to support a contract by Sumitomo;
- Upper Indravati (600 MW, Orissa), with a loan of ¥3.7 billion in 1988; and
- Umiam I (36 MW, Meghalaya), with a loan of ¥1.7 billion for the rehabilitation of this existing project in 1997.

According to media reports, an unnamed Japanese agency is also interested in funding the Priyadarshini Jurala HEP (239 MW, Andhra Pradesh) along with PFC. And in February 2001, a Japanese Study Group on Electric Power Development for India and PFC announced that they would elaborate a master plan for the development of hydropower projects with a total capacity of 5,000 MW in India. The resulting projects would then be considered for support by Japan.

The state has always played an important role in Japan's economic development. The Japanese government has therefore traditionally been sceptical of the structural adjustment policies applied by the World Bank and the IMF, and particularly of privatisation. In India's power sector, JBIC has not supported any private hydropower projects, and does not co-finance any power sector restructuring programs funded by the World Bank or ADB. The institution is funding reform programs of the SEBs in Haryana and West Bengal.

In 1991, OECF approved a large loan of ¥24.4 billion for India's Rural Electrification Corporation for the development of small hydro schemes and other measures. According to JBIC officials, a line of credit for PFC is also currently in the pipeline. It is unclear whether this instrument would constitute part of JBIC's overseas economic cooperation or rather international financial operations. JBIC would need to approve the individual projects under this LoC. And while JBIC says it does not co-finance multilateral projects, ADB states that the agency is currently co-financing its Private Sector Infrastructure Facility in India.[50]

JBIC maintains that its soft loans are meant to promote social and economic development and poverty reduction. It has in the past, however, supported extremely destructive dams in India such as Sardar Sarovar. The funding for the dam on the Narmada river was stopped by the Japanese parliament, the result of an effective lobbying campaign by Japanese NGOs working with Indian colleagues.

JBIC has a portfolio which roughly equals the one of the World Bank. Yet its staff numbers less than one tenth of the personnel of the international financial institution. One wonders how JBIC can adequately appraise its large number of projects with its minimal staff.

JBIC's current environmental guidelines are extremely vague. New draft environmental guidelines were released for public comment in January 2002. Compared with existing policy, the draft guidelines put forward some improvements regarding the assessment of environmental impacts, but fall short of the recommendations which an official independent committee had prepared. They are particularly vague on access to information.

JBIC has a portfolio roughly equal in size to that of the World Bank. Its staff however numbers only about 800, less than one tenth of the World Bank's personnel. JBIC officials say they want to concentrate on investing a maximum amount of public money in concrete projects, and not on public relations, and that for this reason JBIC cannot presently afford to be accountable to the public. JBIC representatives make it clear that they believe the World Bank to be overstaffed. Even at international financial institutions, not all staff are of course absorbed by public relations, and one wonders how JBIC can adequately appraise its large number of projects with its comparatively minimal number of staff.

Other bilateral agencies

Germany's KfW:
Like JBIC, Germany's Kreditanstalt fuer Wiederaufbau extends financial assistance on soft terms as well as export and project financing. So-called composite loans – soft official credits complemented with commercial bank loans – constitute a third form of KfW lending. By 1998, the Kreditanstalt had approved more than DM 18 billion for projects and programs in India. Financial assistance amounted to some DM 12 billion, export and project finance to DM 4.4 billion, and composite loans to some DM 2 billion.

Since 1990, KfW has extended nine mixed and composite loans for projects in the Indian power sector. A majority of them supported thermal power plants of NTPC and other public utilities. In 1999, KfW extended a line of credit to the Indian Renewable Energy Development Agency (IREDA) for the funding of renewable energy projects. In 2001, the Kreditanstalt approved a loan for the development of the Mathania power plant in Rajasthan, a combined solar (35 MW) and naphta (105 MW) project co-financed with the Global Environment Facility.

In 1995, KfW approved a mixed credit for PFC for the rehabilitation of the Koyna HEP (600 MW, Maharashtra). PFC would like to spend the balance of this credit on the rehabilitation of the Hirakud HEP (208 MW, Orissa), but this has not yet been sanctioned by KfW. Since 1990, KfW has not approved any bilateral aid for the development of new hydropower projects. Such projects have however been funded by the Kreditanstalt through export credits (see chapter 3.5.).

In the past, KfW has approved bilateral lines of credit for ICICI and IFCI. According to media reports, KfW has in principle agreed to extend a new line of $100 million for PFC for the renovation and modernization of power plants. Under lines of credit, the agency approves the individual projects to be funded. IFCI is currently considering inviting Kreditanstalt to take up equity as a strategic investor.

British bilateral cooperation:
British bilateral assistance to India's power and financial sectors is extended by the Department for International Development (DFID) and the Commonwealth Development Corporation (CDC). The World Bank's power restructuring policies in India were initially based on the experience of power sector privatisation in the UK, and DFID has extensively co-financed the Bank's restructuring programs in the country. In 1996, the Department contributed $110 million to the controversial sector restructuring program in Orissa. It also extended technical assistance in the form of grants for similar programs in Haryana, Andhra Pradesh and West Bengal.

On the project level, DFID's predecessor, the Overseas Development Administration (ODA), funded the Uri I HEP (480 MW, Jammu & Kashmir). DFID funded the renovation of two units of the Hirakud HEP, and facilitated an assessment of the micro-hydro potential of the Himalayan region.

ODA and the CDC extended lines of credit to ICICI. CDC holds a share of 6.1% in IDFC. IFCI is currently discussing inviting CDC to become one of its strategic investors.

> "Energy projects were part of the 80s. India needed the power and we had the experience but now I would have to say in terms of development, it's not very good."
>
> ***André Gingras, CIDA, 1992***

Canada's CIDA:
The Canadian International Development Agency has extended loans and grants for at least three hydropower projects in Kerala: Idukki (780 MW), Lower Periyar (182 MW), and Kuttiyadi (75 MW). In 1984, CIDA provided a large loan of C$245.5 for the Chamera I HEP(540 MW, Himachal Pradesh). After Chamera I was completed, CIDA offered support for Chamera II, but the Indian government did not take the agency up on the offer. Both projects were built by Canadian companies. CIDA is also extending technical assistance for power restructuring programs in states such as Kerala, Andhra Pradesh and Madhya Pradesh.

In hindsight, the head of CIDA's program in India commented on Chamera I that "we could spend the money better elsewhere (…) such as on poverty alleviation." "Energy projects were part of the 80s," the Canadian official said in 1992. "India needed the power and we had the experience but now I would have to say in terms of development, it's not very good."[51]

USAID:
In 1992, the US Agency for International Development approved technical assistance of $14 million for PFC. In March 2000, the agency signed an agreement with the Indian government to carry out a $25 million energy conservation program. USAID also extends technical assistance to prepare power sector restructuring programs in Indian states.

Sweden's SIDA
The Swedish International Development Agency funded the construction of NHPC's Uri I HEP, along with the Swedish Agency for International Technical and Economic Cooperation (BITS), Sweden's export credit agency EKN, the Nordic Investment Bank, and the British ODA. The project

was built by a Scandinavian consortium led by Skanska. SIDA has since then withdrawn from funding large dams.

Denmark's DANIDA:
The Danish International Development Agency provides bilateral support for IREDA. It is also listed by the World Bank as a potential partner for the co-financing of its future operations in India's energy sector. Danish power sector aid priorities will presumably be influenced by the country's strong wind power industry.

Swiss bilateral cooperation:
The Swiss State Secretariat for Economic Affairs holds 3.8% of IDFC's equity. Like DANIDA, the Swiss Agency for Development and Cooperation is listed by the World Bank as a potential partner for its future power sector operations in India.

French bilateral cooperation:
The French government is paying for French consultants to work on the Tehri pumped storage project (1,000 MW, Uttaranchal). This is done under the so-called FASEP program, which funds investments by French small and medium-sized companies in Southern countries.

Dutch bilateral cooperation:
The Netherlands provide bilateral support to IREDA.

Bilateral cooperation with China:
The China National Water Resource Hydro Power Engineering Corporation is currently negotiating with the government of Himachal Pradesh to take up 49% of the equity in the 16 MW Patikari project. Earlier, the state government of Kerala had asked China to provide technical and financial assistance to develop 18 small hydropower projects. A new state government which came to power in late 2001 announced that it would review this request.

Cooperation with Kuwait and OPEC:
In February 2001, the government of Himachal Pradesh sought assistance from the Kuwait Oil Fund to finance the Larji HEP (126 MW), and from OPEC to fund the Khauli HEP (12 MW). The Himachal Pradesh government seems to be particularly creative in dreaming up new foreign funding partners. In November 1998, it had announced that it would seek assistance from the World Bank for the Parbati HEP, and as mentioned, it is also in negotiations with a Chinese hydropower corporation.

3.5. *EXPORT CREDIT AGENCIES*

Official export credit agencies are an important source (or guarantor) of foreign currency for projects which are not funded by multilateral institutions. Given the withdrawal of the World Bank from directly funding large dams, the role of ECAs in funding such projects has increased over time. The environmental, social and governance policies of such agencies lag behind internationally accepted standards.

The role of foreign contractors

Apart from the civil works for a dam, the most important components of a hydropower project are the turbines and generators. Civil works on Indian projects are usually carried out by domestic companies. After independence, the country also developed a heavy electrical engineering industry. Still, the turbines and generators of many Indian hydropower projects are imported. Almost all hydro- and electro-mechanical equipment was supplied from abroad before 1970. Imported turbines and generators accounted for 43% of new hydropower capacity created between 1990 and 1997. The foreign share continued to be high for turbines and generators of less than 50 MW, and of more than 200 MW.

According to research done by the South Asia Network on Dams, Rivers and People (SANDRP), the most important foreign supplier of hydropower equipment up to 1997 was Japan (with 9.2% of total turbine capacity, and 11.3% of generator capacity). Next in importance were Canada (with 9.6% of each); the former USSR (with 7.1% of each); the United Kingdom (with 4.6% of turbine and 8.1% of generator capacity); France (with 8.1 and 0.6% respectively); and Germany (with 2.4 and 5.2%). Other sizable imports came from the US, Sweden, and Switzerland. Interestingly, Japan's share of contracts is smaller than the amount of hydropower generating capacity supported in India by soft loans from OECF (see chapter 3.4.).[52]

In September 2001, Power Minister Suresh Prabhu indicated that Austria, Canada, Norway, Spain, Sweden and Russia were particularly interested in participating in India's future plans to promote hydropower. The Minister is considering cooperation with foreign governments not only in the funding of equipment supplies, but also in the operation of power plants. In January 2002, he raised the possibility of creating joint ventures with governments from countries such as France, where power companies are fully state owned. According to media reports, at a seminar in Delhi in February 2002 companies from Sweden, France, Germany, Canada, Austria, Switzerland, the Netherlands and Norway expressed interest in participating in future NHPC projects.

The policies of ECAs

Hydropower projects have a long gestation period, meaning that it takes many years for their prospected revenues to materialize. Large dams are thus the typical kind of projects which are funded by official export credit agencies (ECAs). This is particularly true for IPPs, where the foreign currency portion of the debt is normally split between export credit agencies and commercial banks. "It would have been impossible to get a single IPP off the drawing board without their assistance," *India Poweronline* comments on the role of these agencies.[53] Given the failure of many hydro projects to reach financial closure, ECAs have become much more involved in India's thermal than in the hydro sector.

Export credit agencies normally request a counter-guarantee from a host country institution when they fund a project. With a few important exceptions, India's central government does not provide guarantees for power projects, so ECAs have to operate with counter-guarantees from public financial institutions. The Swiss Export Risk Guarantee, for example, accepts counter-guarantees from IDBI, RBI, SBI, and the Union Bank of India. As the

Dabhol project demonstrates, counter-guarantees for uneconomic projects can turn into huge liabilities for Indian financial institutions, and for the public purse.

Several export credit agencies extend lines of credit (LoCs), or engage in other forms of cooperation with Indian financial institutions. Lines of credit are pre-packaged loans for which the interest rates and repayment terms have already been arranged. They speed up the administrative procedures once an exporter applies for ECA coverage. Normally, the individual project loans or guarantees under an LoC have to be approved separately by the ECAs, so that the respective agencies can still be held accountable for the projects they support.

Export credit agencies are a traditional instrument of trade diplomacy. Visiting presidents or trade ministers frequently sign Memoranda of Understanding (MoUs) with host country governments with a view to expand the use of official export credits. Such MoUs do not entail any binding commitments however, and often seem to be more form than substance.

"Unlike the major development financing agencies," the World Commission on Dams commented in its final report in November 2000, "ECAs generally lack policies on environmental and social issues and do not necessarily adhere to internationally accepted standards and guidelines. (…) The absence of common standards among ECAs leads to ad hoc competitive decision-making."[54] The experience with export credit agencies in India's hydropower sector confirms this observation by the WCD. Unlike most multilateral and bilateral institutions, many ECAs are still prepared to fund large dams indiscriminately.

The provision of official exports and guarantees usually leverages additional funding from commercial banks. Often private banks will rely on the appraisal of respective projects by the ECAs. This makes the failure by such agencies to apply appropriate social and environmental standards all the more disturbing.

"Unlike the major development financing agencies, ECAs generally lack policies on environmental and social issues and do not necessarily adhere to internationally accepted standards and guidelines. (…) The absence of common standards among ECAs leads to ad hoc competitive decision-making."

World Commission on Dams, November 2000

In 2000, the German and Portuguese export credit agencies decided against funding the Maheshwar HEP on social and environmental grounds. In 2001, ECAs from various countries decided against funding the Ilisu dam in Turkey. NGOs and social movements need to ensure that these decisions do not remain isolated incidents, but mark the beginning of a strengthened awareness among export credit agencies of the social and environmental impacts of the projects they consider.

ECAs in India's hydropower sector

Most export credit agencies are less transparent and accountable than development finance institutions. Some, for example the US Exim Bank, KfW and the Swiss Export Risk Guarantee (ERG), provide information about the projects they have funded in the past. Others, such as Canada's EDC, do not. The following list of ECAs in India's hydropower sector is therefore not exhaustive.

Germany's KfW and Hermes:
As was elaborated in chapter 3.4, Kreditanstalt fuer Wiederaufbau not only extends soft and composite loans, but also export credits. Since 1990, KfW has approved export credits for the Nathpa Jhakri HEP (1,500 MW, Himachal Pradesh, in 1994) and for the Tehri HEP (1,000 MW, Uttaranchal, with two credits in 1997 and 2001). The credit of October 2001 for the notorious Tehri dam was ostensibly meant as a political gesture to prepare the ground for a visit to India of Chancellor Gerhard Schroeder and a large German private sector delegation.

Hermes, Germany's official export guarantee agency, covered the contracts of a Siemens consortium for the Baspa II HEP (300 MW, Himachal Pradesh) in 1999, and guaranteed KfW's export credit for the Tehri project. As was elaborated in chapter 1.2, a similar guarantee for the Maheshwar HEP was refused in August 2000 after a campaign by Indian and German NGOs. Hermes or KfW may in future be approached to fund the Sawalkot HEP (see below).

Canada's EDC:
A prominent if controversial showcase of Canada's Export Development Corporation in India are the Chamera I and II projects (540 MW and 300 MW respectively) in Himachal Pradesh. As was mentioned in chapter 3.4, the Canadian contracts for Chamera I were sweetened by a soft loan from CIDA. According to media reports, Canada also funded the Idukki (780 MW), Lower Periyar (182 MW), and Kuttiyadi (75 MW) HEPs in Kerala through loans and grants. EDC declined to clarify whether it had been involved in these projects.

In June 2001, EDC extended a line of credit of $75 million to the Power Finance Corporation. The agency will sanction the funding of individual projects from this instrument. In January 2002, PFC announced it was in discussions to set up another LoC with EDC of $75 million for the renovation and modernization of power plants.

By the year 2000, EDC had funded power projects worth more than $800 million in India. It is not clear how much of this amount accrued to the hydro sector.

Norway's GIEK and Eksportfinans:
Norway's government is particularly active in promoting the interests of the country's hydropower industry. In 2000 and 2001, both the Norwegian Foreign and Prime Ministers visited India with a delegation of hydropower lobbyists. In February 2002, Norway co-hosted a conference on non-fossil fuels in Delhi with the Ministry of Power, the Central Electricity Authority, and Austria.

Norway's Eksportfinans is involved in funding the Nathpa Jhakri project. Exportfinans is 85% privately and 15% state owned; frequently it funds projects jointly with the official Norwegian Institute for Export Credits (GIEK). NCC International, a Norwegian company, holds equity in the proposed Sawalkot HEP (600 MW, Jammu & Kashmir). The consortium developing the project hopes to mobilize funding from the Norwegian and German ECAs.

France's COFACE:
In the early 1990s, the French COFACE provided funding for the Dulhasti HEP (390 MW, Jammu & Kashmir). As was mentioned in chapter 2.1., this project incurred huge time and cost overruns, and resulted in a diplomatic conflict between India and France over the responsibility for the delays and the cost escalation.

In summer 2001, Alstom applied for funding from COFACE for contracts in the Vishnuprayag project (400 MW, Uttaranchal). By the end of 2001, no decision had yet been taken.

Japan's JBIC and NEXI:
Since World War II, one quarter of all Japanese exports have been supported by official export credits or guarantees. While JBIC extends direct export loans (through so-called international financial operations), a separate institution, the Nippon Export and Credit Insurance (NEXI), reinsures export loans by private banks, and foreign private investment by Japanese companies.

As was explained in chapter 3.4., the Japan Bank for International Cooperation (or its predecessor OECF) has extended no less than 28 soft loans for hydropower projects in India since 1978. The institution provides a full list of soft loan projects, but is less transparent when it comes to the commitment of official export credits.

In 2001, Mitsui applied for JBIC funding, presumably in the form of export credits, for its contract in the Teesta V project (510 MW, Sikkim). Outside the hydropower sector, JBIC provides a lot of funding for thermal power plants, including a large export credit for the Dabhol project.

In January 1995 and December 1997 respectively, JBIC's predecessor JEXIM granted so-called overseas investment loans of $300 million to IDBI and of $50 million to ICICI. According to media reports, JBIC is presently finalizing a line of credit of $100 million (or according to other sources, $250 million) for PFC. The LoC would consist of export credits for the renovation and modernization of power projects. Unlike other ECAs, JBIC does not in all cases expect to sanction the individual projects funded under its lines of credit. As a JBIC official explained, this depends on the appraisal capabilities of the borrowing institution. In the case of PFC, the institution will reserve the authority to sanction individual projects.

By far the largest part of NEXI's business is the reinsurance of short-term trade credit. In FY 2000/01, middle- and long-term loan and investment reinsurance amounted to ¥578 billion, or roughly half of JBIC's export credits. Power projects accounted for 22% of the middle- and long-term coverage. In December 2001, NHPC announced that it hoped NEXI would reinsure export credits for the Teesta II and IV power projects in Sikkim.

Great Britain's ECGD:
In 1996, the British Export Credit Guarantee Department approved a guarantee of £ 23 million for the Nathpa Jhakri project in Himachal Pradesh. In May 2000, ECGD signed Memoranda of Understanding with ICICI and IDFC. The Department did not respond to questions about the exact amounts and modalities of the MoUs.

Sweden's EKN:
Sweden's Exportkreditnaemnden (EKN) funded the Uri I HEP (480 MW, Jammu & Kashmir) along with the Nordic Investment Bank, SIDA and other institutions.

The US Exim Bank:
The US Export Import Bank has funded thermal power plants including the Dabhol project, but has so far not been a major player in India's hydropower sector. In February 2000, Exim signed a Memorandum of Understanding on the exchange of information on power projects with PFC. In September of the same year, Exim signed an MoU for $500 million with the State Bank of India. Two further so-called Master Credit Facilities of $150 million each were also meant to encourage imports from the US, with the State Bank of India acting as a financial clearing house.

In January 2002, the Power Finance Corporation announced it was again in talks to raise a line of credit of $500 million from the US Exim Bank. If this materializes, it will fund transmission and distribution projects and the environmental upgrading of thermal power plants.

Exim's multi-million MoUs with Indian financial institutions were announced when Prime Minister Atal Bihari Vajpayee visited the United States in September 2000. By November 2001, no specific contracts had been signed under them, and none were in the pipeline.

Portugal's COSEC:
In 2000, ABB/Alstom applied for funding from Portugal's COSEC for their contract in the Maheshwar HEP. Like Hermes, the Portuguese ECA denied funding for the destructive project on the Narmada river.

Austrian interests:
So far, no Austrian ECA coverage for Indian hydropower projects has been recorded. With the acquisition of Sulzer Hydro in 2000, the Austrian company VA Tech strengthened its position in the international hydro equipment market. In August 2001, the Austrian government announced its intention to share its expertise in hydropower projects with India through a working group of the Indo-Austrian joint economic commission. In February 2002, Austria co-hosted an international conference on non-fossil fuels in Delhi.

3.6. INTERNATIONAL CAPITAL MARKETS

Compared with other major industrializing countries such as China, India attracts very little private investment capital. This is partly a matter of political choice, partly a consequence of a lack of infrastructure, and partly one of bureaucratic red tape. More recently, the Dabhol fiasco has scared away foreign investors by demonstrating that privatisation may not always be an opportunity for quick profits, and by creating an impression that contracts will not necessarily be honoured in India. So the primary sources of private foreign capital for the country are debt, both through loans and bonds, and the bank deposits and transfers of the NRI community.

India attracts very little private investment capital. The primary sources of private foreign capital for the country are debt, both through loans and bonds, and the bank deposits and transfers of the NRI community.

Project finance

All public institutions in India's power sector – and most of all, the state electricity boards – are short of funds. In private projects, equity capital is expensive, and the investors will cover at most 30% of the capital cost. So no matter whether a project is public or private, a large part of the cost will need to be financed through debt. Even if the civil works are carried out by Indian companies, the debt portion usually includes loans from international banks. Private power projects were meant to attract foreign capital, and so Indian financial institutions are not allowed to provide more than 40% of the cost of IPPs.

During the 1990s, project finance has become the focus of private international lending to Southern countries. Project finance is done on a so-called non-recourse basis, in that debt needs to be serviced and repaid from the revenues generated by the project, and creditors do not have recourse to the capital of the project sponsors as a security.

To avoid or pass on the risk of default of a hydropower project, lenders look for a legally enforceable power purchase agreement, and for the coverage of their risks by official export credits or guarantees. Export credit agencies in turn insist on counter-guarantees from the host government or a state institution. In India, such guarantees are no longer provided by the central government, but by DFIs and public sector banks. (See chapter 3.5.) So even when a project is private, most of the risk is still borne by public institutions.

Project finance loans involve large amounts of funds, and have long maturities of between 10 and 30 years. Export credit agencies will typically cover around 85%, but not the full amount of foreign currency loans. Most ECAs exclude certain features such as construction risk from their coverage. And once problems arise, they will only allow banks to call on their guarantees if the latter have exercised due diligence in appraising the project.

As a consequence, private banks still face considerable risk when they become involved in project finance. They usually share this risk by syndicating project finance loans among several banks, with one or a small number of banks playing the role of lead arrangers. For a commission, lead arrangers appraise the different risks of a project. This is done by credit officers and the bank's credit committee. Technical services and legal counsel – either from within the bank or from external consultants – provide advice on the physical features (including environmental problems) and the regulatory requirements of a project.

According to project finance specialists from Dresdner Kleinwort Benson, banks typically analyse

the following risks when appraising a hydropower project:[55]

- Environmental and social impacts (compliance with local and World Bank standards);
- economic feasibility;
- construction risk (non-completion, delays, cost overruns);
- operational risk (for example the experience of the operator);
- market risk (in particular the ability of the costumer to pay); and
- country risk (including the risk of legal changes).

Bonds of Indian financial institutions

The Indian government does not issue foreign currency bonds. Yet many institutions such as the development finance institutions and PFC do. Their capacity to borrow is quite narrowly determined by India's perceived country risk. On the positive side, rating agencies and investors have commonly assumed that the government will bail out public financial institutions if the need arises – as it has often done in the past. On the negative side, economic problems will directly influence the asset quality of financial institutions in India.

The large and prosperous NRI community creates a steady and reliable demand for the bonds of Indian institutions. Furthermore, there are many fund managers of international banks with an Indian background. They are familiar with India's financial sector and often quite willing to consider an investment in Indian bonds. Citibank for example operates its own NRI Services division, with offices in New York, Chicago, Houston and California. For these reasons, Indian institutions can usually raise capital at lower cost than other so-called emerging markets with a similar country risk.

The creditors

Generally, Japanese banks tend to be more active in lending to Southern countries than European or US banks. Looking at project finance in the Indian power sector, it is striking to see how many banks have become involved in this area. While the lead arrangers are usually large international banks or Indian financial institutions, even small banks become involved in loan syndicates as so-called participants or providers, typically contributing amounts of less than $10 million each.

Scores of banks have become involved in lending to India's power sector in some form. They include institutes such as Baden-Wuertembergische, Berliner, Fuji, Hypovereinsbank, Natexis, NatWest, Norinchukin, Skandinaviska Enskilda, Tokai, Tokyo-Mitsubishi, Tokyo Trust and Banking, and United Taiwan Banks. Some of the most active lead arrangers of loans to India's power sector are ANZ Banking Group from Australia, Bank of America from the US, HSBC from the United Kingdom and ABN AMRO Bank from the Netherlands. ANZ, for example, was the lead arranger of high-profile loans to thermal power projects such as Dabhol phase II and Neyveli (in Tamil Nadu), and 1998 alone arranged foreign currency loans for PFC, ICICI and IDBI. The bank is also one of the candidates for arranging a pending loan to NHPC.

Indian financial institutions also play an active role in arranging international lending for power projects in India. IDBI, ICICI and IFCI have arranged a series of loans for thermal power projects. IDBI arranges the financial package for the Baghliar HEP, and PFC, for the Larji HEP. Indian financial institutions pay higher rates than international banks when they raise foreign capital. So in terms of foreign currency loans, one can assume that they are usually not the first choice of Indian borrowers.

NRI bonds

A particular source of foreign currency funding for Indian infrastructure projects is the community of non-resident Indians. Indian financial institutions regularly tap this source through special bond issues when the country's foreign currency reserves reach a dangerous low. The so-called India Development Bond was launched in October 1991 as a response to the country's balance of payment crisis. The Resurgent India Bond followed in August 1998, as a response to the economic sanctions after India's nuclear tests. The India Development Bond fetched $1.6 billion, and the Resurgent India Bond, $4.2 billion. In the latter case, 50% of the applicants were based in the Middle East, 20% in South East Asia, and only 30% in all other regions, including North America and Europe.

When foreign exchange reserves dwindled again in the second half of 2000 due to rising oil prices, the Reserve Bank of India encouraged the State Bank of India to launch the so-called Millenium Deposits programme. This issue achieved a subscription of $5.5 billion from almost 73,000 applicants. As in the case of the Resurgent India Bond, SBI announced that the instrument would primarily cover the financial needs of infrastructure projects. The bank invests some of the funds directly, lends some of them on to other financial institutions, and forwards the rest to the Reserve Bank of India, which administers the country's foreign currency reserves.

Impressed by the success of the Millenium Deposits, the Power Finance Corporation in January 2001 floated the idea of an NRI bond of $5 billion for the financing of power projects. Yet foreign exchange issues need to be sanctioned by RBI, and there is probably stiff competition among different institutions regarding the issuance of attractive bonds. A small element of NRI bonds will possibly be included in the new India Power Fund, which PFC is planning to set up on behalf of the Power Ministry.

Notes

1 World Bank, Country Assistance Strategy for India, June 27, 2001, p. 16.

2 Ibid., p. 39.

3 Ibid., p. 21.

4 World Bank, India Country Assistance Evaluation, June 4, 2001, p. 35.

5 World Bank representative Carter J. Brandon quoted in *The Hindu,* 30 September 2001.

6 India Country Assistance Evaluation, p. 127.

7 Ibid., p. 29.

8 R. Rangachari, N. Sengupta, R.R. Iyer, P. Banerjee and S. Singh, *Large Dams: India's Experience,* a WCD Case Study prepared for the World Commission on Dams, Cape Town, 2000, p. 171.

9 World Commission on Dams, *Dams and Development: A New Framework for Decision-Making,* Earthscan, London, November 2000, p. 191.

10 India Country Assistance Evaluation, p. 130.

11 Abhay Mehta, *Power Play: A Study of the Enron Project,* Orient Longman, Hyderabad, 2000, p. 48.

12 Heinz Vergin, Director, India Country Department, World Bank, letter to Mr. M.S. Ahluwalia, Secretary, Department of Economic Affairs, Ministry of Finance, 30 April 1993.

13 Shantanu Dixit, Girish Sant, Subodh Wagle, 'Regulation in the WB-Orissa Model: Cure Worse Than Disease,' *Economic and Political Weekly,* 25 April 1998, p. 1.

14 Navroz K. Dubash and Sudhir Chella Rajan, *Power Politics*: *The Process of Power Sector Reform in India,* Draft, 3 August 2001, pp. 26f.

15 Amulya Reddy, 'Need for Rethink of Karnataka Power Reforms,' *Deccan Herald,* 4/5 January 2002.

16 Edwin Lim, pers. com., 13 December 2001.

17 Address by Edwin R. Lim, Country Director, World Bank, at Conference on Distribution Reforms, October 12-13, 2001, pp. 8, 3.

18 World Bank, Country Assistance Strategy for India, p. 15.

19 India Country Assistance Evaluation, p. 128.

20 World Bank, *India: Reducing Poverty, Accelerating Development,* 2000, p. 7.

21 *The Observer,* 16 November 2000 (web edition).

22 Country Assistance Strategy for India, Annex B3.

23 India Country Assistance Evaluation, p. 110.

24 All quotes from ibid., p. 110.

25 Country Assistance Strategy for India, p. 28.

26 India Country Assistance Evaluation, p. 159.

27 *Power Line,* December 2000.

28 Letter from IFC, 12 December 2001.

29 IFC, Indian Infrastructure Equipment Limited project, Environmental Review Summary.

30 IFC, Indian Infrastructure Equipment Limited project, Summary of Project Information.

31 Letter from IFC, 12 December 2001.

32 See IFC and MIGA, Compliance Advisor/Ombudsman, Assessment Report, Complaint filed to the CAO regarding the Nigeria Delta Contractor Revolving Credit Facility, August 2001.

33 Country Assistance Strategy for India, p. 38.

34 Ibid.

35 All figures from ADB, Country Assistance Plan India (2001-2003), p. 8.

36 Ibid., pp. 26ff.

37 Quotes from ADB, Program Performance Audit Report on the Financial Sector Program Loan in India, December 1999, pp. 1ff., 6.

38 Christine Wallich, ADB, pers. com., 7 November 2001.

39 Bank Policy Initiatives for the Energy Sector, paragraph 85.

40 Christine Wallich, ADB, pers. com., 7 November 2001

41 Quotes from Asian Development Bank, Project Completion Report on the Power Efficiency (Sector) Project in India, August 2001, pp. 10ff.

42 Ibid., p. 17.

43 Ibid., pp. 17ff.

44 Press note of Jan Sangharsh Morcha, AITUC Madhya Pradesh and Vidyut Karamchari Janata Union, 25 November 2001.

45 Data and quote from ADB, Report and Recommendation of the President, Madhya Pradesh Public Resource Management Program, p. 8.

46 ADB, 'India: Madhya Pradesh Power Sector Development Program and Fact Finding Mission, Aide Memoire – Draft for Discussion,' paragraph 34.

47 Christine Wallich, ADB, pers. com., 7 November 2001.

48 ADB Aide Memoire, paragraph 37.

49 Christine Wallich, ADB, pers. com., 7 November 2001.

50 See ADB, Country Assistance Plan India (2001-2003), p. 30.

[51] André Gingras of CIDA quoted in Working Group on the Export Development Corporation, 'Reckless Lending,' May 2001, Volume II, p. 8.

[52] Data on equipment supplies from South Asia Network on Dams, Rivers and People, 'Hydropower Turbines and Generators: An Analysis of Sources,' January 2002.

[53] *India Poweronline,* January 1999.

[54] See World Commission on Dams, *Dams and Development,* November 2000, pp. 188ff.

[55] Tyll Pahl and Sonja Köberle, 'The Evolution of Financing Structures for Large Dams,' in ICOLD – 69th Annual Meeting Dresden, Proceedings, pp. 405-409.

PART 4

CONCLUSION

4. CONCLUSIONS

India's power sector in crisis

India's power generation capacity has expanded rapidly since independence. Even so, the growth of generation could not keep up with demand. The country has a power shortage of 8% on average, and of 11% at peak times. Power supply is unreliable and of poor quality, and many rural communities have no access to electricity.

India's per capita electricity consumption of 350 kWh per year is very low by international standards. Even at this level, the lack of generating capacity is not the main problem. Power in India is produced, transmitted, distributed and consumed inefficiently. A large part of what is produced is simply stolen, predominantly by middle class and industrial consumers. So far, India's power sector strategies have barely touched upon these inefficiencies and gaps. They have not been based on a balanced assessment of all options and comprehensive least-cost plans, but have aimed – and failed – at creating a maximum amount of new generating capacity.

For a variety of reasons, India's power sector is under great financial stress. The combined losses of the state power utilities are estimated at Rs. 260 billion a year (or twice the amount which the states spend on health care).[1] The state governments do not have the means to cover the deficits of their utilities. Many state utilities can therefore not invest in new generating capacity, or enter into long-term power purchase agreements with independent power producers. This is the main reason why private investment in power projects, and particularly in risky hydropower schemes, is not coming forward, and why many state sector projects have been stalled. Social and environmental problems have further contributed to the logjam. But the slump in investment is not a matter of policy choice. Neither is it caused by a lack of funds for lending. If the clients of prospective power plants were in better financial shape, equity capital would be invested, and loans would be extended.

Even now, new power plants, both thermal and hydropower, are being built, based primarily on the limited public capital which is available for investment. Government expenditure in the power sector is increasing, and all indicators suggest that it will continue to do so over the next few years. The financial crisis of the state power utilities needs to be resolved. Once it is, there is a risk that resources will again flow into a rapid expansion of generating capacity, rather than into a rational power development strategy based on a balanced options assessment. The risk exists that in such a situation, Indian society will be faced with even more economically unviable, socially and environmentally destructive power projects than it is today.

Indian and international financial institutions already play an important role in supporting and influencing the country's power sector strategy. If investment in power projects picks up again, they will become critical arbiters of the future course of India's power sector development.

The role of Indian financial institutions

A large amount of investment capital is created in India. Traditionally, it has been the role of the country's development finance institutions to make such capital available to industry and infrastructure utilities in the form of long-term loans. During the 1990s, the government to some extent withdrew from funding infrastructure projects. Economic liberalization pushed some of the traditional industrial clients of DFIs into financial distress, while the most credit-worthy clients started to raise debt on the capital market directly, and no longer needed to go through lending institutions. It is no surprise that in this situation, the development finance institutions turned towards infrastructure, and particularly the power sector, where so much demand for funding seemed to exist. Since the mid-1990s, power has been one of the most important, if not

the single most important, sector for loan approvals of all Indian DFIs.

Liberalization has blurred the distinctions between different groups of financial institutions. Particularly since the late 1990s, India's commercial banks (such as SBI and other public sector banks) and investment institutions (such as LIC or UTI) have taken up long-term lending for infrastructure, and have also become involved in the power sector. The State Bank of India in particular has strong links with the non-resident Indian community, and through its NRI bonds is an important potential source of foreign currency lending for power projects.

As mentioned above, India's power sector is beset by fundamental problems. Even if projects are approved, they often do not move forward because power purchase agreements cannot be concluded, or because investment capital is committed but does not materialize. In the case of hydropower projects, geological and hydrological difficulties and the opposition of affected people add to the problems. In many cases, the appraisal and decision-making systems of the financial institutions are not up to this challenge. DFIs have committed large amounts of long-term resources for power schemes, but have been unable to release their costly loans because the projects did not move forward. Or they released loans prematurely, and saw them turning into non-performing assets because the developers did not service the debt. It is an open question to what extent inappropriate lending decisions were caused by bad luck, by incompetence, or by "other forces at work," as one experienced observer of the financial sector put it.[2]

Due to such problems, financial institutions seem to go through a certain cycle of hope and disillusionment regarding power, and particularly hydropower, projects in India. The World Bank approved ten hydropower projects in the country between 1983 and 1990. It cancelled several of the loans in 1992 because the projects did not move forward, and since then has not approved any new generating projects. DFIs moved into the sector in the 1990s, and started to limit their exposure and to cancel loans in late 2000. Commercial banks and investment institutions are the latest entrants into the sector, even if on a lower level of commitments. In cases such as the Maheshwar or Baghliar projects, these newcomers have already run into serious problems.

Financial institutions seem to go through a certain cycle of hope and disillusionment regarding power, and particularly hydropower, projects in India.

In response to these problems, lenders and other actors are turning to the institutions of the central government. In the case of hydropower, NHPC and other central agencies are expected to expand their portfolio, and to take over ailing private or state sector projects. The Power Finance Corporation and other financing schemes under the Power Ministry are expected to play an even more prominent role in funding such projects. Only since late 2001, NHPC has been called upon to take over the Nathpa Jhakri and the private Maheshwar projects. LIC and ICICI have extended large loans or lines of credit to both NHPC and PFC, and such institutional loans may well turn out to be an alternative to direct lending for power projects.

Unlike most financial institutions, NHPC and PFC have for a long time specialized in appraising power projects. Since they are the pivotal agencies of the central government within their sectors, they are in a strong position as developers or creditors of power projects. Financial institutions may hope that loans for NHPC and PFC are safer assets than direct project financing. However, being close to the government, both agencies are particularly exposed to political influence, and can be bullied into taking up politically well-connected, but uneconomic projects. And if PFC to some extent substitutes other lenders in the power sector, it will be in a less privileged creditor position than it is today because some borrowers will have no choice but to default on their debt to PFC. Either way, the Power Finance Corporation and NHPC are certainly institutions to watch in the next few years.

The role of international financial institutions

The multilateral development banks have completely withdrawn from directly funding hydropower projects in India. With the prominent exception of Japan's JBIC, the bilateral funders have also done so. But the international development banks still fund such projects through Indian financial institutions acting as their intermediaries. ADB for example is funding the Malana and the Vishnuprayag or Baspa projects through a loan to IFCI and ICICI. Both ADB and IFC are investors in IDFC, which in turn

has funded hydropower projects. The International Finance Corporation does not inform the public about which subprojects it supports through financial intermediaries. This demonstrates that at least in the case of IFC, accountability suffers when funds are lent indirectly.

Most official export credit agencies still seem to be interested in supporting any kind of power project regardless of their viability or social and environmental impacts. Under strong public pressure, Germany's Hermes and Portugal's COSEC declined to get involved in the Maheshwar project at the cost of export contracts for their national industries. In future, export credit agencies will have to live with constant public scrutiny if they take up controversial projects. Yet the recent decision by Germany to back the Tehri project, the active interest of the Canadian, Norwegian and other agencies in the sector, and the lack of a critical assessment of their own record by such institutions suggest that official export credits and guarantees may still come forward even for clearly unviable and destructive projects.

Even when export credit agencies extend official guarantees, international commercial banks often have to shoulder part of the credit risk when they fund power projects. Internationally, banks seem to have become more sceptical about the economic and financial viability of hydropower projects in recent years. Institutions like NHPC, PFC and most development finance institutions are perceived to enjoy quasi-sovereign guarantees in that they would be bailed out by the government in times of crisis. So while many commercial banks have become reluctant to extend project finance for hydropower projects, they are still an important source of institutional foreign currency funds for the DFIs and the central power sector agencies, or for projects which are almost fully covered by official guarantees.

The problem of fungibility

Multilateral development banks have withdrawn from directly funding power projects in India. Globally, World Bank lending to infrastructure has declined by 30% from FY 1995 to FY 2001. The energy sector has seen a decline by 65% during the same period. A Bank task force concluded that "an important part" of this decline "is attributable to client perceptions of the Bank's application of safeguard policies" regarding procurement and the environment. According to the task force, borrowers expressed the following "explicit hierarchy of preference" for infrastructure borrowing from official sources: domestic resources, bilateral donors, regional development banks and lastly, the World Bank.[3]

Even if they have stricter safeguard policies than other funders, and have stopped funding power projects directly, multilateral development banks still have a strong presence in India's power sector. For the reasons described below, they share a responsibility for the type of power projects which are being developed.

ADB and IFC have in the past funded hydropower projects through intermediary institutions like ICICI, IFCI and IDFC. Experience demonstrates that when doing so, they cannot simply rely on the lending policies and appraisal capacities of their partner institutions. When IFC opposed a loan to the Dabhol project within IDFC, when ADB raised the unresolved resettlement problems of Maheshwar vis-à-vis IFCI, the institutions accepted their responsibility as lenders through intermediaries. In other cases, they have not. ADB for example approved a subproject of Jai Prakash Ltd. – a hydropower developer which, as one official of a financial institution puts it, is known for his „long hands" into politics. The subproject has since run into problems.

Since the early 1990s, the World Bank and ADB have shifted their focus from power generation to transmission and distribution, for example through loans to the Power Grid Corporation and to PFC. In principle, this is positive, because an efficient transmission and distribution network facilitates an improved management of the country's power system. Even lending for transmission projects can be tricky however. Both the World Bank and the Asian Development Bank have funded the evacuation of power from thermal and hydro power plants under such schemes, and ADB has done so as late as 1999. Such schemes should really be considered and appraised as part of the respective generation projects, rather than as general improvements of the country's transmission system.

Extending large loans to the Power Finance Corporation for transmission and distribution also frees up other resources for power generation. The more PFC can cover its T&D portfolio from official funds, the more it can invest the foreign currency funds it raises from other sources in generation projects. In this sense, multilateral development banks need to assess the full investment portfolio of an in-

stitution like PFC before they approve large-scale lending for them.

Finally, multilateral development banks have become a major source of foreign currency borrowing for the power utilities of Indian states like Andhra Pradesh, Gujarat, Madhya Pradesh, and Orissa. The banks have linked the respective restructuring programs to strict, detailed and painful policy conditionalities. Carrying out effective demand-side management programs or comprehensive options assessments has never been a priority of these policy loans.

The investment portions of sector restructuring loans are usually targeted at improvements in the distribution system as a precondition for privatisation. Yet as in the case of transmission projects, since money is fungible, covering the cost of distribution frees up resources for other purposes, including generation projects. This criterion of fungibility should not be applied too rigidly, since it would otherwise preclude any financial transfers. Yet when financial institutions are major lenders to certain utilities, and the borrowers invest large amounts of resources in highly questionable projects, the lenders share responsibility and need to be concerned about such questionable investments.

For these reasons, ADB should be concerned about the investment of the MP electricity board in the Maheshwar, Sardar Sarovar and Indira Sagar projects, and Gujarat's investment in Sardar Sarovar. The Bank seems to recognize its responsibility for the overall investment portfolio of major lenders, in that it expresses concerns about their governance and policy frameworks. Yet, looking at ADB's strong support for Madhya Pradesh's power sector development, one wonders how this concern is translated into actual practice. The impression arises that ADB – and possibly other official funders – do not judge borrowers by the rationality and sustainability of their investment portfolios, but simply by their willingness to accept the policy conditionalities of power sector restructuring.

Challenges for India's civil society

Public institutions like the Power Ministry, the Planning Commission and the state governments still shape the course of the country's power sector development. Civil society movements need to monitor and to remain involved in this political process. Analysing options and potential alternatives, exposing vested interests, doing research on particular investments, and opposing projects which only add to the country's debt burden, or which destroy the livelihoods of affected communities and the environment continue to be important tasks. Internationally, Indian social movements and NGOs have gained a reputation for using such approaches well and vigorously.

As the role of government shrinks, financial institutions need to accept that they have a social and environmental responsibility and a need for accountability to the public of their own.

With the liberalisation of the financial and the power sectors, financial institutions have gained a more influential role in India's power sector development. As the role of government shrinks, financial institutions need to accept that they have a social and environmental responsibility and a need for accountability to the public of their own. In accordance with international standards, Indian financial institutions should codify their social, environmental and information policies. Within the water and power development sectors, the World Commission on Dams has prepared a useful set of principles and guidelines, including recommendations for follow-up action by private financiers and financial institutions.[4]

In this perspective, it is important for Indian NGOs and movements to strengthen their knowledge about how such institutions work, and about how civil society can monitor and engage them. Movements and NGOs should think about creating networks and building professional knowledge on the role of financial institutions. They should start to exchange information and cooperate with interested parties within these institutions, with financial journalists, analysts, and rating agencies. They should explore possibilities of cooperation with the supervisory divisions of RBI, with consumer unions, with socially responsible investors, provident funds and other investors who share a long-term horizon. Internationally, NGOs have started to gain experience in how to campaign within the financial sector, and Indian civil society can profit from this.[5]

The community of non-resident Indians is an important source of foreign currency for India, particularly for the infrastructure sector. The Power Ministry and PFC might soon look to NRI investors again to contribute to the new India Power Fund. In

principle, the solidarity of the NRI community needs to be maintained. At the same time, investors in NRI bonds should be sensitised about the impacts of certain investments, and should be encouraged to invest selectively rather than for indiscriminate instruments.

Challenges for international civil society

Internationally, NGO networks should continue to monitor export credit agencies, commercial banks, and bilateral institutions, and should press for these institutions to abide by internationally accepted standards when they fund particular projects, including power plants. One particular institution merits more scrutiny. JBIC has funded more hydropower projects in India than any other foreign institution (including the World Bank). It is a silent giant, and deserves more attention.

For a long time, NGO networks have worked to strengthen the operational policies of international financial institutions, and to oppose or influence specific projects. India's experience demonstrates that as far as direct lending is concerned, their campaigns have had some success. NGO networks have so far neglected the indirect funding of projects through financial intermediaries, and the issues which arise when official funders (both multilateral and bilateral) support financial intermediaries, and power plant developers and operators such as the SEBs.

As a first step, NGOs should strengthen their knowledge about the extent of intermediary lending for infrastructure development by different public financial institutions, and about the policies which they apply. Already, some issues are emerging. Financial institutions must be accountable for the funds which they invest through intermediaries, and the lack of transparency which IFC displays in this context is not acceptable. If a subproject funded through intermediaries violates the operational policies of respective funders, affected communities and NGOs could consider filing a complaint with an Inspection Panel, or with the Compliance Advisor/Ombudsman of IFC. Doing so again requires access to basic information about the respective subprojects.

In financial intermediary projects and in sector restructuring programs, international financial institutions should, just as in straightforward investment projects, follow the internationally recognized principles and guidelines of the World Commission on Dams.

Apart from financial intermediary lending, NGO networks should also become more aware of the issues at stake when official funders support infrastructure utilities such as India's state electricity boards. NGOs already deal with the policy conditionality of the respective sector restructuring loans. They also need to look at the question of fungibility. NGOs should start to assess large adjustment and investment loans based on the overall policies and investment programs of the respective utilities, and should hold financial institutions accountable for the investment programs of their major borrowers. In financial intermediary projects and sector restructuring programs within the water and power sectors, international financial institutions should, just as in straightforward investment projects, follow the internationally recognized principles and guidelines of the World Commission on Dams.

NGOs and social movements have come a long way, and the new challenges are an opportunity for them to learn and to develop further skills.

Notes

[1] See address by Edwin R. Lim, Country Director, World Bank, at Conference on Distribution Reforms, October 12-13, 2001, p. 1.

[2] Sucheta Dalal in rediff.com, 20 June 2001.

[3] Quotes and figures from World Bank, 'The Cost of Doing Business: Fiduciary and Safeguard Policies and Compliance,' 17 July 2001, p. vii.

[4] See World Commission on Dams, *Dams and Development: A New Framework for Decision-Making,* Earthscan, London, November 2000, Part II and particularly pp. 315ff.

[5] Nicholas Hildyard and Mark Mansley, *The Campaigners' Guide to Financial Markets,* The Corner House, Sturminster Newton, England, 2001, is a useful introduction into how NGOs can work within the financial sector.

BIBLIOGRAPHY

Literature and unofficial reports

Deolalkar, D.H., *The Indian Banking Sector: On the Road to Progress* (undated).

Dubash, Navroz K. and Sudhir Chella Rajan, "Power Politics: Process of Power Sector Reform in India," in *Economic and Political Weekly,* Vol.XXXVI, No. 35, 1 September 2001.

Hagler, Bailly Consulting, Inc. & CRISIL, The Financing Capacity of Indian Institutions to Provide Alternatives to Sovereign Guarantees, prepared for USAID/Office for Energy, Environment, and Technology, 1996.

Head, Chris, *Financing of Private Hydropower Projects,* World Bank Discussion Paper No. 420, July 2000.

McCully, Patrick, *Silenced Rivers: The Ecology and Politics of Large Dams,* Zed Publishers, London, 1996/2001.

Mehta, Abhay, *Power Play: A Study of the Enron Project,* Orient Longman, Hyderbad, 2000.

Moody's Investors Service, Global Credit Research, India, November 2000.

...., India Banking System Outlook, September 2000.

Narmada Bachao Andolan, *Risks Associated with Public Issue for the Maheshwar Project* (undated).

Palit, Chittaroopa, *Loot of public money: The Role of Indian financial institutions in the Independent Power Projects,* The case-study of the Maheshwar Hydro-Electric Project (undated).

Prayas/Public Sector International, India Power Sector Reform Update, Issue 1, October 2001.

Official sources

Asian Development Bank, Project Completion Report on the Power Efficiency (Sector) Project (Loan 1161-IND) in India, August 2001.

...., Country Assistance Plan (2001-2003), India, August 2000.

...., Program Performance Audit Report (Loan No. 1208-IND) on the Financial Sector Program Loan in India, December 199.

...., Report and Recommendation of the President to the Board of Directors on a Proposed Loan and Technical Assistance Grant to India for the Madhya Pradesh Public Resource Management Program, November 1999.

...., Technical Assistance Performance Audit Report on Advisory and Operational TAs in the Power Sector in India, December 1998.

Godbole Committee, Report of the Energy Review Committee, April 2001.

Ranchagari, R., N. Sengupta, R. R. Iyer, P. Banerjee and S. Singh, *Large Dams: India's Experience,* a WCD Case Study prepared for the World Commission on Dams, Cape Town 2000.

Unites States, Securities and Exchange Commission, Form 20-F, Annual Report for the fiscal year ended March 31, 2001, ICICI Limited.

Wogart, Jan Peter, *Industrial and Financial Restructuring of India's Development Finance Institutions,* IFC-Asia Department Economic Paper No. 9, July 1999.

World Bank, *Cost of Doing Business: Fiduciary and Safeguard Policies and Compliance,* 17 July 2001.

...., Memorandum of the President of the IBRD, the IDA and the IFC to the Executive Directors on a Country Assistance Strategy of the World Bank Group for India, June 27, 2001.

...., Operations Evaluation Department, India Country Assistance Evaluation, April 23, 2001.

....., *India: Reducing Poverty, Accelerating Development,* 2000.

...., Operations Evaluation Department, *Meeting India's Energy Needs (1978-1998): A Country Sector Review,* 12 December 1999.

World Commission on Dams, *Dams and Development: A New Framework for Decision-Making,* Earthscan, London, November 2000.

Websites

Asian Development Bank: www.adb.org

Central Electricity Authority: www.cea.nic.in

CRISIL: www.crisil.com

Dams and Development Project: www.unep-dams.org

Friends of River Narmada: www.narmada.org

ICICI: www.icici.com

IDBI: www.idbi.com

IDFC: www.idfc.com

IFC: www.ifc.org

IFCI: www.ifciltd.com

International Rivers Network: www.irn.org

LIC: www.licindia.com

MIGA: www.miga.org

Ministry of Power: www.powermin.nic.in

NHPC: www.nhpcindia.com

Power Finance Corporation: www.pfcindia.com

Power Line: www.indiapoweronline.com

Reserve Bank of India: www.rbi.com.in

State Bank of India: www.statebankofindia.com

Urgewald: www.urgewald.de

World Bank: www.worldbank.org

World Commission on Dams: www.dams.org

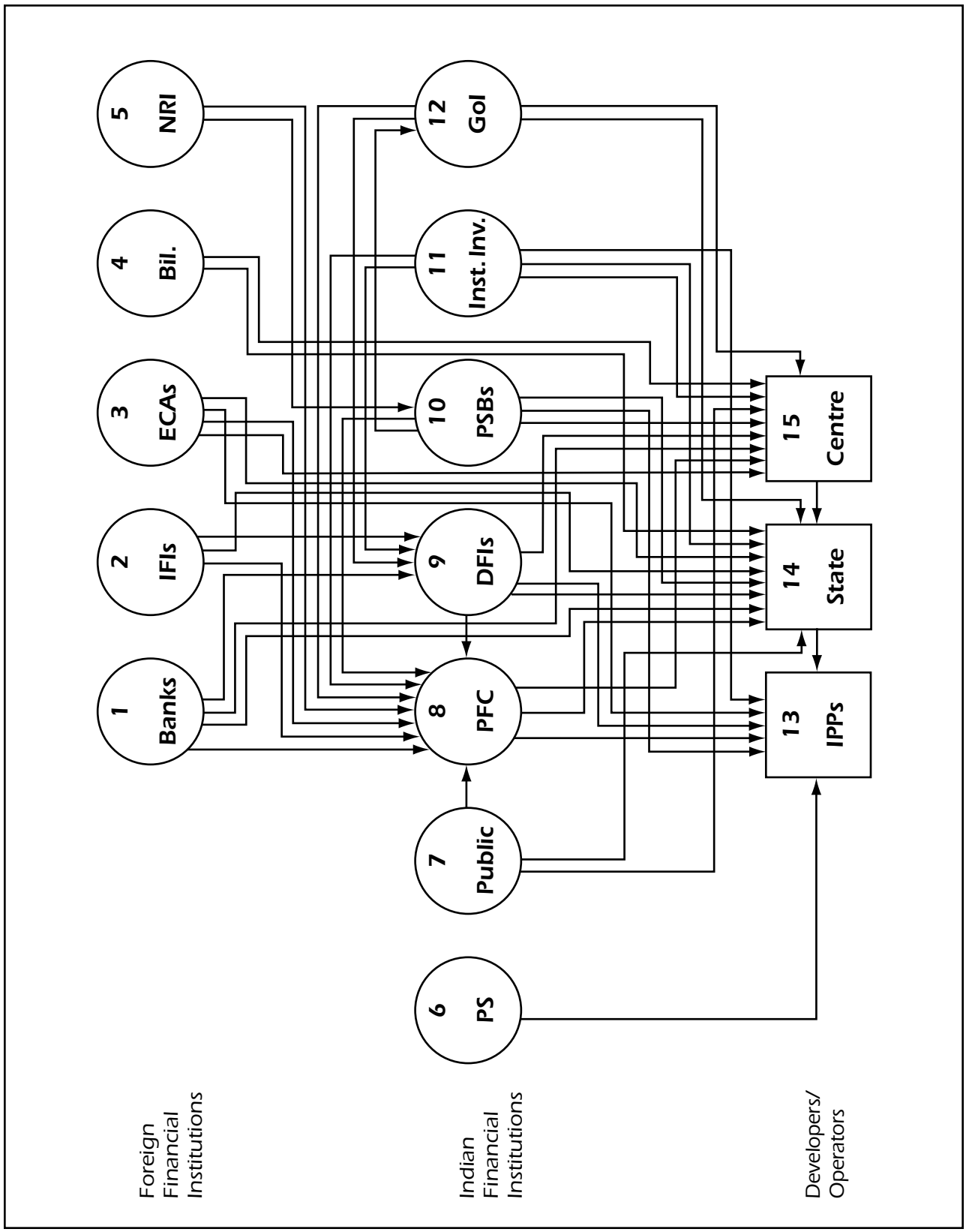
ANNEX 1: HYDROPOWER PROJECTS IN INDIA

Note: The following table lists the hydropower projects which are mentioned in this report, but does not present a full overview of all hydropower projects in India.

Name of dam	Location	Capacity (in MW)	Developer/ operator	Status	Indian funders	Foreign funders
Allain Duhangan	HP	192	IPP	Plan	ICICI, IFCI, PFC?	
Almatti	Karnataka	297	IPP, then State	Plan	PFC	
Baghliar	J&K	450	State	U/C	ICICI, IDBI, J&K Bank, LIC, PFC; SBI?	
Baira Siul	HP	180	NHPC	U/O		
Balimela VII & VIII	Orissa	120	State	Plan?	PFC	
Balpahari (PSS)	Jharkhand	340	DVC	Plan		
Baspa II	HP	300	IPP	U/C	ICICI, IDBI, IFCI, PFC, SBI, UTI, PSBs	Hermes, ADB?
Bhakra Left Bank	HP	540	BBMB	U/O		
Bhakra Right Bank	HP	760	BBMB	U/O		
Bhira VII (PSS)	Maharashtra	150	TEC	U/O		World Bank
Bhivpuri	Maharashtra	72	TEC	U/O		
Bursur	J&K	1,020	NHPC	Plan		
Chamera I	HP	540	NHPC	U/O		EDC, CIDA
Chamera II	HP	300	NHPC	U/C	SBI, PSBs	EDC
Chamera III	West Bengal	231	NHPC	Plan		
Dehar	HP	990	BBMB	U/O		
Dhaulasidh	HP	80	State	?	KCCB	
Dhauliganga	Uttaranchal	280	NHPC	U/C		OECF
Doyang	Nagaland	75	NEEPCO	?		
Dulhasti	J&K	390	NHPC	U/C	PFC	COFACE
Ganguwal	HP	84	BBMB	U/O		
Gerussopa	Karnataka	240	State	U/C, U/O		World Bank
Ghanvi	HP	22	State	U/C	PFC	
Ghatghar (PSS)	Maharashtra	250	State	U/C		OECF
Hirakud I - IV	Orissa	208	State	U/O (ren.)	PFC	DFID, OECF; KfW?
Idukki	Kerala	750	State	U/O		Canada
Indira Sagar/Sarovar	MP	1,000	NHPC/State	U/C	PFC?	World Bank
Kalinadi	Karnataka	270	State	?		World Bank
Kalpong	N&A	5	NHPC	U/O		
Kameng	Ar P	600	NEEPCO	U/C		
Khauli	HP	12	State	?		OPEC?
Khopoli	Maharashtra	72	TEC	U/O(ren.)	IDFC	
Kishenganga	J&K	330	NHPC	Plan		
Koel Karo	Jharkhand	710	NHPC	Plan		
Koldam	HP	800	NTPC	Plan		
Kopili (Lower)	Assam	150	NEEPCO	Plan		
Kopili II	Assam	25	NEEPCO	U/C		
Koteshwar	UP	400	THDC	U/C		
Kotla	HP	82	BBMB	U/O		
Koyna I & II	Maharashtra	560	State	U/O (ren.)	PFC	KfW
Koyna IV	Maharashtra	1,000	State	U/C		World Bank
Kurichu	Bhutan	60	NHPC	U/O		
Kuttiyadi	Kerala	75	State	U/O		Canada
Lakhwar Viyasi	UP	420	State	Plan		
Larji	HP	126	State	U/C	PFC	Kuwait Oil Fund?
Loktak I	Manipur	105	NHPC	U/O		
Loktak Downstream	Manipur	90	NHPC	U/C		
Lower Periyar	Kerala	182	State	U/O		World Bank, Canada
Maheshwar	MP	400	IPP	U/C	IDBI, LIC, GIC, BHEL; IFCI, PFC, SBI, PSBs	
Maithon	Jharkhand	60	DVC	U/O		

Name of dam	Location	Capacity (in MW)	Developer/ operator	Status	Indian funders	Foreign funders
Malana	HP	86	IPP	U/O	ICICI, IFCI, PFC, PSBs	ADB
Maneri Bhali II	Uttaranchal	304	NHPC/State	U/C	PFC	
Nagarjunasagar	AP	960	State	U/O		OECF
Nathpa Jhakri	HP	1,500	NJPC	U/C	PFC, LIC?	World Bank, ECGD, KfW,
Omkareshwar	MP	520	NHPC/State	U/C	PFC?	
Pakal Dul	J&K	1,000	NHPC	Plan		
Panchet	Jharkhand	80	DVC	U/O		
Parbati I	HP	750	NHPC	Plan		
Parbati II	HP	800	NHPC	Plan	ICICI	
Parbati III	HP	501	NHPC	Plan		
Patikari	HP	16	State	?		China?
Pong	HP	360	BBMB	U/O		
Priyadarshini Jurala	AP	239	State	Plan	PFC?	Japan?
Purulia (PSS)	West Bengal	900	NHPC/State	U/C		OECF
Rampur	HP	535	NJPC	Plan		
Ranganadi	Ar P	405	NEEPCO	U/C		
Ranganadi II	Ar P	160	NEEPCO	Plan		
Rangit	Sikkim	60	NHPC	U/O		
Salal I	J&K	345	NHPC	U/O		
Salal II	J&K	345	NHPC	U/O		
Sardar Sarovar	Gujarat	1,450	State	U/C		World Bank, OECF
Sawalkot	J&K	600	?	Plan		Hermes/GIEK?
Sewa II	J&K	120	NHPC	Plan		
Siang Lower	Ar P	1,700	NHPC	Plan		
Siang Middle	Ar P	700	NHPC	Plan		
Siang Upper	Ar P	11,000	NHPC	Plan		
Silent Valley	Kerala	240	State	Scrapped		
Srinagar	UP	330	IPP	Plan	ICICI, IDBI, IDFC, PFC	World Bank
Srisailam	AP	900	State	U/O, U/C		OECF
Subansiri (Lower)	Ar P	2,000	NHPC	Plan	ICICI, LIC?	
Subansiri (Middle)	Ar P	2,000	NHPC	Plan		
Subansiri (Upper)	Ar P	2,500	NHPC	Plan		
Tanakpur	Uttaranchal	120	NHPC	U/O		
Teesta II	Sikkim	1,200	NHPC	Plan		NEXI?
Teesta IV	Sikkim	495	NHPC	Plan		NEXI?
Teesta V	Sikkim	510	NHPC	U/C	ICICI	JBIC?
Teesta Low Dam III	West Bengal	100	NHPC	Plan		
Teesta Low Dam IV	West Bengal	132	NHPC	Plan		
Teesta Canal	West Bengal	68	State			OECF
Tehri I	UP	1,000	THDC	U/C		Hermes/KfW
Tehri II (PSS)	UP	1,000	THDC	Plan		
Tilaiya	Jharkhand	4	DVC	U/O		
Tipaimukh	Manipur	1,500	NEEPCO	Plan		
Tuirial	Mizoram	60	State	U/C		OECF
Tuivai	Mizoram	210	NEEPCO	U/C		
Turga (PSS)	West Bengal	600	NHPC/State	Plan		
Umiam I	Meghalaya	36	State	U/O (ren.)		OECF
Upper Indravati	Orissa	600	State	U/O	PFC	World Bank, OECF
Upper Krishna I - IV	Karnataka	810	NHPC	Plan		
Uri I	J&K	480	NHPC	U/O	SIDA, ODA, EKN, NIB	
Uri II	J&K	280	NHPC	Plan		
Vishnuprayag	Uttaranchal	400	IPP	U/C	ICICI, IDBI, IDFC	COFACE, ADB?
West Yamuna Canal	Haryana	14	State	U/C	PFC	

ANNEX 2: MAJOR FINANCIAL FLOWS INTO INDIA'S HYDROPOWER SECTOR



Key to Annex 2

Types of institutions:

(1) Foreign commercial banks
(2) International financial institutions
(3) Official export credit agencies
(4) Bilateral institutions
(5) Non-resident Indians
(6) Indian private companies
(7) Indian individuals
(8) Power Finance Corporation
(9) Indian development finance institutions
(10) Indian public sector banks
(11) Indian institutional investors, including LIC and UTI
(12) Government of India
(13) Independent power producers
(14) State sector utilities
(15) Central government utilities

Types of financial flows

Major flows: All major financial flows as far as they are related to the power sector;

Debt flows and grants: Loans, bonds, guarantees, escrow accounts, deposits, grants;

Investment flows: Investment of equity capital.

Amortisations, interest and dividend payments, and counter guarantees are not covered.

About the publishers

International Rivers Network (IRN) supports local communities working to protect their rivers and watersheds. IRN works to halt destructive river development projects, and to encourage equitable and sustainable methods of meeting needs for water, energy and flood management.

IRN, 1847 Berkeley Way, Berkeley, CA 94703, USA
phone +1 510 848 1155, fax +1 510 848 1008
e-mail: irn@irn.org, www.irn.org

The South Asia Network on Dams, Rivers and People (SANDRP) was started in 1998 as a small NGO with an informal network of individuals and organisations in South Asia. It is concerned with the issues of water and energy resources, and has a special focus on large dams and options. SANDRP is a project of YUVA, Mumbai.

SANDRP; 53B, AD block, Shalimar Bagh
Delhi 110 088, India
phone +91 11 747 9916
e-mail: cwaterp@vsnl.com

Urgewald is a German advocacy NGO that campaigns against the involvement of German banks, companies and aid agencies in destructive projects, including large dams, in the South. The organization played a key role in achieving Germany's withdrawal from a number of controversial projects, including the Maheshwar dam on the Narmada River.

Urgewald, Von-Galen Str. 2
48336 Sassenberg, Germany
phone +49 2583 1031; fax: +49 2583 4220
e-mail: urgewald@urgewald.de, www.urgewald.de

About the author

From 1987 until 2001, Peter Bosshard was a program officer and later, the director of the Swiss advocacy organization, the Berne Declaration. He has a long record of monitoring financial institutions and transnational corporations, particularly in the power sector. Peter Bosshard is now a consultant on international environmental and human rights issues in Zurich and Berkeley.