Document of
The World Bank

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Report No.: 17234-IN

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED LOAN

IN THE AMOUNT OF US$ 60 MILLION EQUIVALENT

TO

INDIA

FOR A

HARYANA POWER SECTOR RESTRUCTURING PROJECT

IN SUPPORT OF

THE FIRST PHASE

OF THE

HARYANA POWER SECTOR RESTRUCTURING AND DEVELOPMENT PROGRAM

December 16 , 1997

Energy Sector Unit
South Asia Region

CURRENCY EQUIVALENTS AND METRIC EQUIVALENTS

(Exchange Rate Effective: December 10, 1997)

Currency Unit	=	Indian Rupee
Rupee 1.00	=	US$ 0.028
US$ 1.00	=	Rupee 38.78
Rupee Crore	=	Rupee 10,000,000
1 Megawatt (MW)	=	1,000 Kilowatts (kW)
1 Megawatt-hour	=	1,000 Kilowatt-hours
1 Gigawatt-hour (GWh)	=	1,000,000 Kilowatt-hours

FISCAL YEAR
April 1 - March 31

ABBREVIATIONS AND ACRONYMS

APL	=	Adaptable Program Loan
BSES	=	Bombay Suburban Electric Supply
CAS	=	Country Assistance Strategy
CEM	=	Country Economic Memorandum
CIDA	=	Canada International Development Agency
CY	=	Calendar Year
DFID	=	Department For International Development (UK)
DISCOM	=	Distribution Company
ERR	=	Economic Rate of Return
FRR	=	Financial Rate of Return
FY	=	Financial Year
GENCO	=	Haryana Generation Company
GOH	=	Government of Haryana
GOI	=	Government of India
GRIDCO	=	Grid Corporation of Orissa
HERC	=	Haryana Electricity Regulatory Commission
HSEB	=	Haryana State Electricity Board
IBRD	=	International Bank for Reconstruction and Development
IFC	=	International Finance Corporation
IPP	=	Independent Power Producer
KfW	=	Kreditanstalt fur Wiederaufbau
kV	=	Kilo Volt
kWh	=	Kilowatt-hour
MW	=	Megawatt
NPV	=	Net Present Value
NTPC	=	National Thermal Power Corporation
OECF	=	Overseas Economic Cooperation Fund of Japan
PFC	=	Power Finance Corporation
SAR	=	Staff Appraisal Report
SEB	=	State Electricity Board
SOE	=	Statement of Expenses
TRANSCO	=	Haryana Transmission Company

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Country Director:	**Edwin R. Lim**
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HARYANA POWER SECTOR RESTRUCTURING AND DEVELOPMENT PROGRAM
HARYANA POWER SECTOR RESTRUCTURING PROJECT

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HARYANA POWER SECTOR RESTRUCTURING PROJECT

Project Appraisal Document

South Asia Region

Date: **December 12, 1997**	Task Team Leader: **Djamal Mostefai**
Country Director: **Edwin R. Lim**	Sector Manager: **Alastair J. McKechnie**
Project ID: **IN-PE-35160** Sector: **Power**	Program Objective Category: **PSD**
Lending Instrument: **Adaptable Program Loan**	Program of Targeted Intervention: [ ] Yes **[x] No**

Program Financing Data

APL		Indicative Financing Plan (Sector Investment Program)				Estimated Implementation Period (Bank FY)		Borrower
		IBRD		Others	Total	Commitment Date	Closing Date	
		US$ million	Av.%	US$ million	US$ million			
APL 1	Loan	60	75	20	80	January 1998	December 2000	Government of India
APL 2	Loan	150	33	310	460	1999	2003	
APL 3	Loan	200	44	260	460	2000-01	2004-05	
APL 4	Loan	100	25	300	400	2002-03	2005-06	
APL 5	Loan	90	23	310	400	2004-05	2007-08	
Total		**600**	**33**	**1,200**	**1,800**			

Notes:
Partial risk guarantee operations may also be considered as separate operations outside the APL framework.
Loan amounts for APL2 to APL5 are indicative only, and will be determined during project implementation.
APL4 and APL5 may be consolidated into a single loan based on progress achieved in reform implementation, financing requirements and lessons learned during project implementation.

Project Financing Data [X] **Loan** [ ] **Credit** [ ] **Guarantee** [ ] **Other**

Amount (US$ million):	**60**				
Proposed Terms:		[ ]	Multicurrency	[X]	Single currency
Grace period (years):	**5**	[ ]	Standard Variable	[ ]	Fixed [X] LIBOR-based
Years to maturity:	**20**				
Commitment fee:	**0.75% less any waiver**				
Service charge:	**Nil**				

Financing plan (US$ million):	Local	Foreign	Total
IBRD	**32.6**	**27.4**	**60.0**
DFID (subject to final approval)	1.0	5.5	6.5
Other bilaterals (tentative)	1.0	3.0	4.0
Government of Haryana	4.0	-	4.0
Indian Financial Institutions	3.8	1.4	5.2
Total	**42.4**	**37.3**	**79.7**

Borrower: Government of India Guarantor: N/A

Responsible agency(ies): HSEB, successor companies (TRANSCO, GENCO, distribution companies)

Estimated disbursements (Bank FY/US$ million):	**1998**	**1999**	**2000**	**2001**
Annual	5	32	15	8
Cumulative	**5**	**37**	**52**	**60**

Project Implementation Period: 33 months
Expected effectiveness date: March 1, 1998 Expected closing date: December 31, 2000

A: Program and Project Development Objective

1. Program development objective and key performance indicators (see Annex 1):

The development objective of the **Haryana Power Sector Restructuring and Development Program** is to ensure that, by year 2007, the power requirements for the State's economic growth and its population are met, and that consumers are provided with reliable, high-quality and cost-effective electricity services by creditworthy and commercially-operated power utilities, functioning in a competitive and appropriately regulated power market, with significant private ownership and participation.

Key Program Performance Indicators [a/]	1997	2002	2007
Power (energy) deficit (%)	~ 25	8-12	0-5
Per capita consumption (kWh)	460	720-750	950-1050
Transmission and distribution losses (%)	> 32	26-28	17-19
Contribution of the power sector to the State's budget (US$ million)	- 50	- 26	66
Utilities' average operating surplus as % of total capital employed [b/] (%)	8	19-23	24-28
Subsidies as % of revenue from sales of electricity	31	4-6	0
Private sector participation (%) in:			
Generation	<1	15-18	28-44
Distribution [c/]	0	> 51	70-100

a/ Haryana's Program and Project Implementation Plan (summarized in Annex 12) includes detailed annual projections of the program performance indicators.

b/ After subsidies.

c/ This percentage represents the share of private interests in the capital structure of the distribution companies. By end-2002, for each distribution company, the private sector is expected to have at least 51 percent of the equity; by end-2007, for each distribution company, the share of the private sector is expected to increase to at least 70 percent.

This development objective will be achieved with steady progress over an agreed 10-year program including the following phases:

Phase I Establishment of a new legal, regulatory and institutional framework, and removal of some of the most critical bottlenecks of the power system (1998-99);

Phase II Privatization of the distribution business; achievement of financial sustainability in the sector, and improvements in system efficiency (1999-2002);

Phase III Consolidation of the functioning and financial situation of the new power utilities, and achievement of more reliable power supplies (2002-04);

Phase IV Achievement of higher consumer satisfaction through the reduction of the power deficit, attainment of higher quality and efficiency in electricity services, and furtherance of power sector reforms to increase competition and private participation (2004-2007).

2. Project development objective and key performance indicators (see Annex 1):

The development objective of the **Haryana Power Sector Restructuring Project** is to support the first phase of the reform process by establishing the new legal, regulatory and institutional framework (including the creation of an independent regulatory commission and of the new power corporations), initiating the privatization of the distribution business, and removing the most critical bottlenecks of the power system with a view to demonstrating - in a few selected areas - the benefits which could be expected from a successful reform of the power sector.

Key Project Performance Indicators	Completion Date
Comprehensive reform legislation brought into effect	April 1998
Regulatory Commission established [a/]	April 1998
Restructuring measures effected, and new power utilities established and operational	
Transmission and generation companies	April 1998
Distribution companies	September 1998
Financial restructuring measures completed as per Haryana's Financial Restructuring Plan (the Plan)	
HSEB's assets and liabilities restructured and transferred to HSEB's successor as per the Plan	April 1998
Haryana's financial support to the HSEB's successors provided as per the Plan	Continuous
Detailed debt and commercial liabilities rescheduling plan negotiated and agreed between Haryana, and HSEB's creditors	June 1998
Tariff adjusted as per the Plan	April 1998

a/ The Regulatory Commission will be considered as established when: (i) the Government of Haryana has issued a Notification of Establishment as per the Haryana Electricity Reform Act; and (ii) the Commissioners have been appointed and have taken oath.

B: Strategic Context

1. Sector-related CAS goal supported by the program (see Annex 1):

The sector-related goal stated in the CAS is to contain power infrastructure bottlenecks by promoting and implementing comprehensive state power sector reforms. The promotion of sectoral reforms at the state level contributes to state finance adjustment, and aims at building institutional capability and increasing resource mobilization for public and private infrastructure investment. By reducing pressures on the State's public finances, and removing sectoral constraints to the State's economic growth, power sector reforms will facilitate sustainable poverty reduction.

Document Name: India: Country Assistance Strategy (Report 14509-IN of May 19, 1995). Date of latest CAS discussion: India: CAS Progress Report of May 9, 1996. The executive directors will discuss the latest joint Bank and IFC CAS for India at the same time as this project on Jaruary 15, 1998.

2. Main Sector issues and Government's strategy:

India's Power Industry

India's power industry is characterized by inadequate and inefficient power supply. Peak capacity and energy supply shortages are estimated to be over 20 percent and 15 percent respectively. The sector is plagued by major revenue shortfalls due to low tariffs, heavy cross-subsidies, and extremely poor collection performance. The sector's heavy reliance on increasingly tight state budget resources has constrained power expansion and systems upgrading. In 1991, in an effort to mobilize resources for power plant additions, the Government of India has opened the power generation to private sector investments. However, private investments have not been readily forthcoming without Central Government assurances of counter guarantees. It has since become evident that in the absence of major structural and regulatory reforms in the power sector, notably at the state level, no revenue enhancement and investment mobilization would be sustainable. Accordingly, the Government of India, with the assistance of the Bank, has been encouraging States to undertake in depth power sector reforms. Selected state governments, including Haryana, have decided to embark on such reforms. (This has been documented in the recent CEMs, the ESW report on "India: Energy Sector Issues and Options", and the SAR for the Orissa Power Sector Restructuring Project.)

Main Sector Issues in Haryana

Haryana's power sector is in a poor physical and financial situation, which affects the economic growth of the state and the welfare of its population. Over the last 8 years, there has been no addition in generating

capacity and maintenance has been kept to a minimum. In 1997, the energy deficit exceeded 25 percent. Technical and non-technical losses are estimated conservatively at 35-40 percent. The Haryana State Electricity Board (HSEB), the vertically integrated, state-owned utility, is in a critical financial situation. The accumulated commercial losses of HSEB (excluding State's subsidies) have reached Rs. 34 billion (US$ 940 million); HSEB's negative net worth (Rs. 2.9 billion in 1997) reflects the magnitude of the financial crisis. This situation is largely due to abnormally high distribution losses and to low tariffs charged to agricultural and residential consumers. The State government has heavily subsidized HSEB, directly and indirectly (see section E.2 and Annexes 5 and 12). Given the deterioration of its fiscal situation, it is no longer possible for the Government to support the functioning and development of the power sector.

Causes

The root cause of this situation - now largely recognized and accepted by Haryana's policymakers - is the pervasive politicization of most decisions affecting HSEB's operations and expansion, and the resulting lack of a commercial outlook in its functioning. The state has regarded HSEB as an extension of the government and has exerted influence over its tariff, operational, personnel, procurement and investment decisions to further political objectives. As a consequence, HSEB has been required to charge low tariffs to agriculture and residential consumers, and to undertake or continue unremunerative activities on behalf of the state government without proper compensation; HSEB has not been able to enforce normal remedies to collect bills, and to take bold measures to eliminate the large system non-technical losses. HSEB, impeded for many years from behaving as a commercial entity, has thus been progressively transformed into an extension of the state government, unable to meet the power requirements of the state.

Challenge and Government Strategy

The demand for power is expected to grow at about 8 percent per year. Eliminating the power deficit and meeting this potential demand - through supply and end-use efficiency improvements and additional capacities- require overall capital expenditures in excess of US$ 4 billion in generation, transmission and distribution facilities over the next ten years (either by Haryana's utilities or bulk power suppliers such as NTPC and IPPs). This is the challenge that Haryana's political leaders have decided to address. Haryana's long-term vision is that of a financially healthy sector, securing enough power - by purchase from NTPC and other central or regional utilities, from private IPPs, or from State sector companies; power utilities focusing on their clients' needs and providing high quality services; the Government no longer needing to provide subsidies, loans and guarantees and actually deriving a net income from the power sector, and an incentive system rewarding efficiency and success. The Government of Haryana is now convinced that the State's power requirements cannot be met without a massive mobilization of private financial resources, the restoration of the creditworthiness of the power utilities, and the establishment of a proper enabling environment, notably a regulatory framework, which would insulate the power sector from external influences and provide the appropriate incentives for efficiency. The ultimate objective of the reforms decided by Haryana is for the Government to withdraw from the power sector as an operator and regulator of utilities and to have commercially operated, largely privately-owned utilities functioning in a competitive and appropriately regulated power market.

3. Sector issues to be Addressed by the Program and Strategic Choices

The Haryana Power Sector Restructuring and Development Program is designed to address the above issues. In shaping the strategy which underpins this program, Haryana has made a number of strategic choices relating to the structure, regulation, and ownership of the power industry, and the implementation approach.

a. *Unbundled power industry versus integrated monopoly.* Haryana has decided to **unbundle** its power industry into separate generation, transmission and distribution activities. The new structure of the industry is expected to facilitate: (i) functional specialization; (ii) private participation in each of the activities of the sector; (iii) efficient regulation of the sector; (iv) transparency, autonomy and accountability in the governance of the sector; and (v) in the longer

term, competition in the power industry. As an initial step, the industry will be structured along the "single buyer model"; at later stage, the industry structure is expected to evolve to allow wholesale competition.

b. *Independent regulation versus state regulation.* Haryana has decided to provide for an independent regulation of the sector to minimize the interference of the State's Government, and the politicization of key sector decisions (for example, on tariffs).

c. *Private versus public ownership.* Given the massive financing requirements, Haryana has decided that new generation facilities, except when developed by regional or central utilities, would be developed by independent private power producers. Haryana has decided to privatize its distribution business since this appears to be the best (if not the only) solution to reduce the huge non-technical losses, which plague the sector; in addition, Haryana expects that, in the longer term, private distributors would contribute to financing the large required investments.

d. *Integrated planning versus supply side planning.* Hitherto, in Haryana, power sector plans focused almost exclusively on new supply. To encourage the most economically efficient allocation of resources, emphasis will be laid on integrating all resources including energy efficiency and DSM in the power planning process to effectively manage demand and optimize generation capacity.

e. *Aggressive implementation versus gradualism.* Haryana has decided to implement the reform program aggressively, notably to create the new institutional and regulatory framework in 1998; and to privatize most of the distribution business by 2001. Besides political considerations (the next state elections are due in 2001), this strategy aims at reducing uncertainty periods, and at generating quickly efficiency improvements, which would minimize the tariff adjustments needed to restore the creditworthiness of the utilities.

4. The Haryana Power Sector Restructuring and Development Program

4.1. Reform Program

Industry and Market Structure

Initially two corporations will be created out of HSEB. Generation functions will be transferred to Haryana Generation Company (GENCO). Transmission, distribution and system operation functions will be transferred to Haryana Transmission Company (TRANSCO). GENCO and TRANSCO will be established as state-owned corporations. TRANSCO will subsequently transfer the distribution functions to a number of distribution companies. The distribution companies will initially be state-owned corporations.

GENCO and TRANSCO would enter into long term power purchase agreements (PPAs). Following the establishment of the separate distribution companies, TRANSCO would become their bulk supplier. Over time, the distribution companies would also be expected to enter into direct power purchase agreements with generators and other bulk suppliers, TRANSCO increasingly focusing on transmission and system operations. The pace of movement from the single-buyer model to multi-buyer model would be determined *inter-alia* by the Haryana Electricity Regulatory Commission based on the creditworthiness of the individual distributors, the experience and knowledge gained on the functioning of the restructured industry, and the potential for wholesale competition.

Reform Legislation and Regulatory Framework

A complete reform legislation (the Haryana Electricity Reform Bill) has been approved by the State Assembly in July 1997 for the restructuring of the electricity industry and the establishment of the Haryana Electricity Regulatory Commission. Haryana will enact the Bill when the President of India's Assent has been granted. Haryana expects to make the Act effective in April 1998, and establish GENCO, TRANSCO and the Regulatory Commission at the same time. The Regulatory Commission will be fully functional by end 1998. The distribution companies are expected to be established in September 1998.

Privatization of Distribution

The distribution companies will be progressively privatized through the sale of equity shares to strategic private investors. Haryana expects that the privatization of the first distribution company will be completed between end 1998 and mid 1999. The other companies are expected to be privatized before end CY 2001. Given the lack of experience in privatization of distribution and the uncertainties surrounding such transactions, it would be unrealistic for Haryana to set a more precise schedule. The reactions of private investors to the new institutional, legal and regulatory regime will also need to be assessed, in Haryana but also in other states, like Orissa and Rajasthan. Based on these reactions, Haryana, like other states, may have to take additional measures (including amending the Haryana Electricity Reform Act) to attract private sector in the distribution business.

4.2. Investment Program (see Annex 12 for more detailed description)

Investment in generation would be carried out essentially by IPPs, central and regional power utilities, and, in the case of imports of power from neighboring countries, by foreign power utilities and developers. Haryana's utilities would purchase the additional power, and would not incur any investment expenditures in generation (except for the rehabilitation of the existing power stations). The proposed APLs would support, to the extent of US$ 600 million, the investment program that Haryana's utilities would implement, and which amounts to about US$ 1.8 billion (see Annex 12). This program would focus on the rehabilitation and modernization of the existing power stations at Panipat and Faridabad (US$ 235 million), the rehabilitation and expansion of the transmission and distribution systems, and DSM and energy efficiency measures. The proposed APLs would notably contribute to financing:

a. The rehabilitation and expansion of the transmission system (indicative cost of the component over the program implementation period: US$ 330 million). The objective of this component would be to: (i) evacuate power from the proposed power plants and bulk supply points to the load centers; (ii) ensure a high level of reliability of the transmission system; (iii) expand the system to meet the growing load demand; and (iv) ensure that the transmission losses and voltage regulation are within permissible limits;

b. The rehabilitation and expansion of the sub-transmission and distribution system (indicative cost of the component over the program implementation period: US $ 1,140 million). The objective of this component would be to: (i) achieve significant reduction in technical and non-technical losses; (ii) improve the voltage profile, system reliability and efficiency; and (iii) expand the system to meet the growing demand. IBRD financing would be available essentially during a transition period, until private distribution companies are in a position to finance on their own the expansion of the distribution network. If needed, IBRD financing from the APLs could be made available to the private distribution companies during the initial years of their operations;

c. The implementation of demand-side management measures (indicative cost of the component over the program implementation period: US$ 70 million). The objective of this component would be to: (i) improve the end-use efficiency; (ii) minimize the consequences of the power deficit through rational load management and power curtailment and demand side management; and (iii) mitigate the impact of raising retail tariffs. This component would include: (i) the procurement and installation of load research equipment; (ii) the implementation of specific load management and energy efficiency investments by the utilities and end-users (such as efficient motors and lighting equipment in industries, reactive power compensation improvement in industries, co-generation projects, or efficiency improvements in pumpsets); and (iii) fostering private sector provision of energy efficiency services; and

d. Technical assistance and engineering services to assist Haryana power sector's entities in implementing the reform measures and the investment program (indicative cost of the component over the program implementation period: US$ 21 million); and, in adddition, compensatory and redeployment costs which would be determined during project implementation and be, possibly,

proposed for financing through APL 2 and/or subsequent loans.

In addition to APLs, the World Bank Group's support could also include the provision of guarantee to IPPs and the participation of IFC and/or MIGA in private power generation and/or distribution. Any such operations would be processed as separate operations.

4.3. Key Conditions for Subsequent Loans (see Annex 13)

The subsequent loans would be considered when the following key milestones agreed with India and Haryana have been achieved, and would be processed based on the relevant standard Bank's policies and procedures. Because APLs are intended to allow for adjustments to the program in the light of experience, the milestones become increasingly uncertain over time. Adjustments to the milestones and corresponding changes in APL amounts and timing are likely as the program unfolds.

The Second Haryana Power Sector Restructuring Project (APL2; indicative amount of $ 150 million) would be considered when:

a. The Government of Haryana has:

- caused the Haryana Electricity Reform Act to become effective;
- established the new power utilities (GENCO, TRANSCO, and the distribution companies);
- entered into corporatization agreements, satisfactory to the Bank, with GENCO, TRANSCO and the distribution companies;
- implemented measures, included in the Financial Restructuring Plan prepared by Haryana (see section E.2) as per the schedule provided by this Plan and the Financial Commitment Letter sent by the Government of Haryana to the Bank (see section E.2);
- updated and approved its part of the Program and Project Implementation Plan (PPIP) satisfactory to the Bank. The revised PPIP would in particular detail the reform measures and milestones expected to be achieved before APL3 would be committed; and
- achieved satisfactory progress in privatizing one of the distribution companies (East Zone) as a joint venture with private majority ownership; more specifically when: (i) Haryana has selected a strategic joint venture private investor following a selection procedure satisfactory to the Bank, and; (ii) the Bank has been satisfied that the sale of equity to this private investor can reasonably take place within six months following the approval of the loan.

b. The Regulatory Commission has been established, has become functional, and has issued licenses to TRANSCO and the distribution companies. The Regulatory Commission will be considered functional when: (i) all the Commissioners have been appointed; (ii) the regulations regarding the Commission proceedings have been notified; (iii) the key professional staff have been appointed; (iv) an institutional development (or capacity building) plan has been approved by the Commissioners; and (v) funding of the Regulatory Commission has been provided for in the State's budget.

c. The beneficiary power utilities (TRANSCO and the distribution companies as the case may be) have:

- Approved corporate business plans, satisfactory to the Bank, and including measures relating to, *inter alia*: (i) the company's institutional strengthening and development; (ii) operational

[1] *A distribution company is considered privatised when a private investor owns at least 51% of the equity shares.*

and managerial efficiency improvements; (iii) financial performance; and (iv) privatization (for the state-owned distribution companies); and

- Updated and approved their parts of the PPIP, satisfactory to the Bank.

d. Retail tariffs have been increased to an extent not less than that provided in the Financial Restructuring Plan (see section E.2) , subject to the procedures set up by the Regulatory Commission when relevant.

The Third Haryana Power Sector Restructuring Project (APL3) (indicative amount: $ 200 million) would be considered when:

a. The Government of Haryana has:

- privatized at least two-thirds of the distribution system, e.g., at least about two-thirds of the electricity is distributed by private companies, licensed by the Regulatory Commission;
- updated and approved its part of the PPIP, satisfactory to the Bank. The revised PPIP would in particular detail the reform measures and milestones expected to be achieved before the APL4/APL5 would be committed; and
- taken all the measures within its purview, included in the Financial Restructuring Plan and as per the schedule provided in this Plan and the Financial Commitment Letter (see section E.2).

b. The beneficiary power utilities (TRANSCO and the distribution companies as the case may be) have:

- complied with the provisions of the corporate business plans presented before the approval of the Second Haryana Power Sector Restructuring Project, and substantially met the objectives and targets set in these plans;
- updated and approved corporate business plans satisfactory to the Bank; and
- updated and approved their parts of the PPIP, satisfactory to the Bank.

c. Retail tariffs, including to agricultural consumers, have been increased to an extent not less than that provided in the Financial Restructuring Plan.

One or two additional loans (APL4 and APL5) (tentative total amount: $ 190 million) would be considered when:

- the distribution business has been fully privatized;
- Haryana's power sector functions along the principles stated in the Detailed Haryana's Power Sector Policy Statement (see Annex 11) and underlying the Reform Program;
- the Regulatory Commission operates in accordance with the Haryana Electricity Reform Act and the relevant rules and regulations;
- the power utilities operate in accordance with their business plans;
- the beneficiaries have presented business plans acceptable to the Bank; and
- the tariffs paid by the agricultural consumers have been adjusted to cover at least half of the average supply cost, subject to the procedures set up by the Regulatory Commission.

The milestones that would have to be achieved before the APL4/5 are committed, would be further defined and agreed during the appraisal of the APL3 and APL4.

In addition to the above project-specific milestones, it is expected that before considering any loan:

the Bank; project implementation is satisfactory to the Bank; at least 75 percent of loan funds are committed through contracts; and disbursements are satisfactory to the Bank[2];

b. Progress in implementing the Reform Program, as set out in the Detailed Policy Statement and PPIP, is satisfactory to the Bank;

c. The beneficiary entities have defined their priority investment and financing plans, prepared bidding documents and invited bids in accordance with Bank's guidelines with the support of their engineering consultants for an amount of at least 80% of the proposed loan; and

d. Standard environmental and social requirements are met as per Bank guidelines and policies.

C: Project Description Summary

1. Project components (see Annex 2 for a detailed description and Annex 3 for a detailed cost breakdown):

Component	Category	Cost Incl. Contingencies (US$M)	%	Bank-financed (US$M)	Percent Bank-financed
1. Emergency Investment Measures:					
1.a. Construction of critically needed transmission lines and sub-stations	Physical	15.0	19	11.2	75
1.b. Rehabilitation of sub-transmission and distribution systems	Physical	47.3	61	44.8	95
2. Improvement of commercial and technical services to consumers	Physical	1.2	2	1.0	83
3. Technical assistance and engineering services	Capacity building Project management	13.5	18	[a/]3.0	22
Total		77.0	100	60.0	78

[a/] Includes the PPF advance granted to Haryana (US$ 2 million).

2. Key policy and institutional reforms supported by the project:

- Enacting a comprehensive reform legislation, the Haryana Electricity Reform Bill (already approved by the State's legislature), after the President's Assent has been obtained; and preparing the associated subordinate legislation;

- Unbundling the transmission, generation and distribution functions and establishment of a generating company (GENCO), a transmission company (TRANSCO) and distribution companies, incorporated under the Companies Act;

- Establishing the Regulatory Commission as provided for by the Haryana Electricity Reform Act;

[2] *Disbursements for APL1, APL2 and APL3 should be respectively at least 35%, 50% and 60% before the subsequent loan can be committed. If there is a fifth APL, disbursements for APL4 should be 70% before APL5 could be approved.*

- Initiating the privatization of the distribution business; and
- Implementing a financial restructuring plan, including tariff adjustment.

3. Benefits and target population:

Benefits	*Target population*
Improved quality of power in selected demonstration areas; improved relations with the consumers.	Consumers, notably farmers, in few areas selected on the basis of the demonstration impact: e.g., where: (i) the quality of the power supplied is particularly poor (overloaded distribution systems); and (ii) the improvement in quality of power and services to consumers will therefore be more visible.
Demonstration of the beneficial impact of reform leading to increased acceptance of, and support to the reform program.	Haryana's population at large, in the longer-term.
Increased institutional capability to implement the reform measures and execute the investment program.	Primary beneficiaries: HSEB and successor entities. Final beneficiaries: Haryana's population at large, in the longer-term.
Improved work safety conditions for employees and increased facilities for transportation for field staff for better operational efficiency and customer service.	HSEB's and successor entities' staff.

4. Institutional and implementation arrangements:

Channeling of IBRD Assistance

The borrower will be the Government of India. The Government of India will onlend the proceeds of the Bank loan, under the Government of India's standard arrangements for developmental assistance to the States, and fully additional to Haryana's regular assistance. The Government of Haryana will onlend the proceeds to HSEB, in the first instance and until Haryana Electricity Reform Act is brought into effect; and then to the new power companies (TRANSCO and the distribution companies), at terms and conditions satisfactory to the Bank. The Government of Haryana will release funds simultaneously with releases by the Government of India.

Executing agencies

The Haryana State Electricity Board (HSEB) will be the executing agency in the first instance. After the restructuring of HSEB into separate companies (GENCO for generation, TRANSCO for transmission, and the distribution companies) and the establishment of the regulatory commission, TRANSCO, the distribution companies and the regulatory commission will take over the execution of the project as follows:

Project Component	Executing Agency
1. Emergency Investment Measures	
1.a. Construction of critically needed transmission lines and sub-stations	TRANSCO
1.b. Rehabilitation and expansion of sub-transmission and distribution systems	TRANSCO and distribution companies(see "Transfer and Assignment of Obligations" below)
2. Improvement of commercial and technical services to consumers	Distribution companies
3. Technical assistance and engineering services	Regulatory Commission; GENCO; TRANSCO and distribution companies

Transfer and Assignment of Obligations

All contracts signed by HSEB will be transferred to TRANSCO (including, inter alia, contracts relating to distribution items) as per the Transfer Scheme rules (as provided by the Haryana Electricity Reform Act). When the new distribution companies are created, TRANSCO will enter into back-to-back agreements with them in respect of equipment/goods supplied in each particular distribution area. The distribution companies will discharge the obligations to TRANSCO and TRANSCO will discharge the obligation to the suppliers. The suppliers will continue to hold TRANSCO as liable.

Project Monitoring and Coordination

Haryana has created a Steering Committee chaired by the Chief Secretary and attended by the Secretaries in charge of energy and finance, and the Chairman, HSEB. The role of the Steering Committee is to: (i) guide and evaluate the implementation of the reform program and the execution of the Bank-supported project; and (ii) advise the Cabinet. If needed, the Steering Committee may invite independent reputed experts to assess the progress of the implementation of the reform program. In addition, an Implementation Committee chaired by the Secretary (Energy) to the Government of Haryana will co-ordinate and monitor the implementation of the reform program. At the operational level, HSEB has established a Reform and Restructuring Team to prepare and conduct the implementation of the first steps of the reform measures and of the investment program.

When the new power entities (Regulatory Commission, power utilities) are established, the composition of the above Steering and Implementation Committees will be modified to include the chairpersons of GENCO, TRANSCO and the distribution companies. The role of these committees will also be revisited to reflect the change in the role of the State in the governance and regulation of the power sector. At the operational level, each of the executing agencies will implement its own institutional development and strengthening program with the assistance of reputed consultants; they will have also project management units to carry out the implementation of the investment measures. These project management units will be assisted by reputed engineering consultants.

Project Supervision

Given its complexity, the project will be closely supervised. The supervision will be essentially carried out by field-based staff (through short visits to Haryana and supervision missions); specialized senior staff from Washington would also visit Haryana about every four months. The missions will supervise the implementation of the reform program and the execution of the project. **While supervising the implementation of the project, the same missions will also prepare and appraise the Second Haryana Power Sector Restructuring Project.**

Accounting and Auditing

HSEB currently maintains its accounts in accordance with the required provisions of the Electricity Act; there is no comprehensive system of internal controls in place and the financial planning and budgeting functions appear to be more perfunctory than functional (see Financial Appraisal Report). Certain accounting system modifications will be necessary for HSEB's successors to be in compliance with the requirements of the Companies Act; in addition, for making the financial, budgeting and accounting systems responsive to the needs of the emerging commercial environment in which the new entities shall have to operate, HSEB's successor entities will need to improve financial controls, professionalize the organization, upgrade the skills, and improve the technology. As part of the institutional strengthening and development program of HSEB's successor entities, Haryana has agreed to engage reputed consultants to assist in developing appropriate systems and procedures, and strengthening the organization.

HSEB and its successors will prepare quarterly financial statements on the project in a manner that will show expenditures compared to the amounts budgeted with an analysis of the variance. The Government of India will: (i) have the records and accounts for the project and those for the Special Account for each

fiscal year audited in accordance with appropriate auditing principles consistently applied by independent auditors acceptable to the Bank; and (ii) furnish to the Bank as soon as available, but in any case not later than six months after the end of such fiscal year, the report by the auditors of sufficient scope and detail as the Bank may reasonably request, including a separate opinion by the auditors as to whether the statements of expenditures submitted during such fiscal year together with the procedures and internal controls involved in their preparation can be relied upon to support the related withdrawals.

Co-Financing

UK Department For International Development (DFID), has agreed in-principle to finance (parallel financing) specific technical assistance activities (see Annex 12). Consultants will be hired directly by DFID based on terms of reference agreed between DFID and Haryana and discussed with the Bank. DFID's own procurement policy, guidelines and procedures will apply. It is expected that the other technical assistance activities will be financed by bilateral donors (CIDA and USAID have expressed interest in assisting Haryana); should bilateral funding not be available, these activities could be financed by the proposed loan.

KfW and OECF have also expressed interest in supporting Haryana's reform program and financing, notably, the rehabilitation of the Faridabad power station (KfW), and transmission and distribution investment (OECF) for the subsequent projects.

D: Program and Project Rationale

1. Alternatives considered and reasons for rejection:

a. The Bank considered supporting state power sector reforms through "wholesaling" arrangements where Bank's loans would be channeled through a financial intermediary, such as PFC, to assist several candidate reforming states (including Haryana). For the time being, this option has been rejected because the experience in state power sector reform in India is very limited; and a direct relationship between the Bank and the reforming states was considered essential, at least for the first few states, for the transfer of global knowledge and for adapting the approach to reforms in the light of experience. Also, financial intermediaries have limited experience in facilitating sector reforms.

b. The Bank also considered providing a single larger loan (of about US$ 350-400 million) to finance a 5-year investment time slice. The loan would have been committed after Haryana would have implemented various agreed upfront measures, ensuring a reasonable degree of irreversibility in the reform process, following an approach similar to the Orissa Power Sector Restructuring Loan (Ln. 4014). A variant of this approach would have been to wait until HSEB negotiates and agrees with its financial and commercial creditors a rescheduling of the overdue commercial liabilities and debt servicing obligations before committing a first loan. The above alternatives have been rejected since the proposed approach, based on the new adaptable lending instruments, provides more flexibility than the traditional instruments to support long-term, complex reforms. In particular, it makes it possible to: (i) demonstrate and materialize the Bank's support at an **early stage** of the reform process; (ii) assist Haryana in carrying out its financial restructuring (by providing comfort to HSEB's creditors on the governance and management of the power industry); and (iii) adapt further support from the Bank to actual progress in reform implementation and financing requirements.

c. Generation has been excluded from the physical scope of the proposed loan. The rehabilitation and modernization of the existing state-owned power stations would be carried out under commercial arrangements with private parties (at Panipat) or proposed for support by KfW (at Faridabad). For future power generation, Haryana's policy is to promote the development of private investment and purchase from central/regional utilities. The program will focus on very cost-effective measures in transmission, distribution, and demand-side management, needed to remove the system bottlenecks, reduce the technical and non-technical losses, and improve the quality of supply. This is a priority area to ensure that the tariff adjustments required to recover costs are kept minimum, and are accompanied with actions aiming at improving the service to consumers. By focusing on these physical investments, the program

will directly contribute to increasing the acceptance of the reform measures. Although it is expected that the private sector will progressively participate in distribution and will ultimately finance and carry out the required investments, in the short and medium term, when large investments are required, the contribution of the private sector will remain limited.

2. Major related projects financed by the Bank and/or other development agencies (completed, ongoing and planned):

Major Sector Issue

Lack of creditworthiness of the state power utilities, tariff distortions, large operational and managerial inefficiencies (e.g., system losses), insufficient resources to meet expansion requirements at the state level.

World Bank

Completed Projects		**FY**	**Amount (US$ million)**		
			Initial	Cancelled	Disbursed
Karnataka Power	L2827	87	330	260	70
Second Karnataka Power	L2938	88	260	236	24
Kerala State Power	L2582	85	176	77	99
UP Power	L2957	88	350	326	24
Private Power Utilities (BSES)	L3344	91	200	5	195
Private Power Utilities (TEC)	L3239	90	98	0	98

				Latest Form 590 Ratings	
On-going projects				**IP**	**DO**
Maharashtra Power	L3096	89	354.0	S	S
Second Maharashtra Power Project [a/]	L3498	92	350.0	S	U
Power Utilities Efficiency Improvement	L3436	92	265.0	S	S
Orissa Power Sector Restructuring Project [b/]	L4014	96	350.0	S	S

[a/] Under suspension because of non-compliance with the loan covenants.
[b/] First project in India addressing the state power sector issues through systemic measures.

Planned projects

Power Sector Restructuring Projects in Andhra Pradesh and Rajasthan

Asian Development Bank

Completed

Rayalaseema Power Project (Andhra Pradesh) [L988-IND] closed on April 7, 1997

On-going

Northern Madras Thermal Project I (Tamil Nadu) [L798-IND] closing on June 30, 1998

Northern Madras Thermal Project II (Tamil Nadu) [L1029-IND] closing on June 30, 1998
Unchahar TPS Extension Project (NTPC - Uttar Pradesh) [L907-IND] closing on March 31, 1999
Power Efficiency Project (Power Finance Corporation) [L1161-IND] closing on June 30, 1998
Power Transmission Project (Power Grid Corporation of India) [L1405-IND] closing on March 30, 2001

Planned

Gujarat Power Sector Restructuring and Madhya Pradesh Restructuring

IP/DO Ratings: HS (Highly Satisfactory), S (Satisfactory), U (Unsatisfactory), HU (Highly Unsatisfactory)

3. Lessons learned and reflected in proposed project design:

Over the 1980s and up to the early 1990s, the Bank followed a three-pronged strategy in its lending to the power sector in India. It supported Government-owned agencies - NTPC in particular - as a means of

effecting sector-wide improvements. It financed a selected number of SEBs whose management and state governments appeared to be committed to revitalization e.g., improving their performance in a gradual fashion. In cooperation with IFC, it financed existing private power utilities and encouraged the Government to lower entry barriers for new investors. The success of this strategy has been uneven, reflecting fundamental sectoral weaknesses. Operations with central and private utilities have been generally successful; state-oriented activities have not. The revitalization of institutionally and financially weak SEBs did not turn out to be feasible. Furthermore, the weak financial conditions of SEBs created receivables problems for the central utilities, and threatened to undermine the generally effective performance of central utilities. Projects in these states failed to meet expectations beyond the physical construction of facilities, and the Bank was forced to take such strong measures as suspension of disbursements and subsequently loan cancellation.

Based on the lessons of the past, the Bank decided in 1993 to lend its financial support to only those states that demonstrate a commitment to implement a comprehensive reform of their power sector. The first state to move along these lines was Orissa. The SEB has been unbundled and OHPC, the hydro power corporation, and GRIDCO, the transmission company, have started operating on their own. One distribution zone was placed under private control through a management contract but GRIDCO has recently terminated the contract, and envisages now to fully privatize its entire distribution system (through a sale of business) in a single shot. The Regulatory Commission has been established and is now up and running. Although it is too early to draw definite lessons about this operation, the reform program in Haryana and the design of the proposed project have benefited extensively from a close observation of this first state power restructuring operation. For example, the Haryana Electricity Reform Bill has extensively drawn upon the Orissa Electricity Reform Act; based on Orissa's experience, in particular, Haryana has decided to avoid a management contract phase as a first step toward privatization of distribution and to move directly for full privatization. In the future, the project will also benefit from the experience and lessons gained in Orissa on the functioning of the regulatory regime and privatization as they unfold.

4. Indications of borrower commitment and ownership:

Since November 1993 the Government of Haryana , HSEB and the Bank have discussed problems affecting the development of power sector and reviewed a variety of possible solutions to address them. In 1994, Haryana initiated studies to review and recommend reform options, and identify investment requirements. The consultants, funded by a US$ 2 million Project Preparation Facility advance, completed their assignment in 1995. The reform program was formally approved by Haryana's Council of Ministers in December 1995 and, on January 1, 1996, Haryana issued a general policy statement outlining its power sector policy. The new government, which came to power after the state elections in May 1996, confirmed, after several deliberations, its commitment to power sector reforms in October 1996. A comprehensive reform legislation has been prepared by Haryana and approved by the State's Legislature in July 1997. A detailed policy statement and implementation plans, including a far-reaching financial restructuring plan, acceptable to the Bank have been approved by the Government of Haryana (see Annexes 11 and 12).

Political Context

The political debate on the situation of the power sector and the Government's policy has been intense during the first quarter of 1997, particularly during the session of the State Assembly, when the Government announced its reform policy. The debate has been exacerbated by the decision of the recently appointed Government in Punjab, a neighboring state, to provide free water and power to farmers, and by similar pronouncements in other states (for example Bihar). Haryana's Chief Minister has persistently defended the Government's power policy, expressed his support for the privatization of the distribution business through joint venture arrangements, and affirmed his commitment to implement the reform agenda in "total transparency" and in an "orderly" way. Haryana has now started a comprehensive campaign of communication and sensitization. Haryana is also resisting the increasing pressure from political opposition requesting that Haryana's farmers be treated at par with the farmers across the border

in Punjab[3]; and Haryana's Government has repeatedly stated that there will be no free power to Haryana's farmers.

Haryana is one of the very few states in India to charge the power supplied to farmers at an average of more than 50 paise/kWh, which is the minimum level agreed in the Common Minimum National Action Plan for Power endorsed by a Conference of State Chief Ministers at the end of 1996. Most other states either provide their farmers with free power (Punjab, Tamil Nadu) or at less than 50 paise/kWh.

Internalization

The reform efforts have been led by the senior management of HSEB, with support of the senior Government officials (Chief Secretary and Energy Secretary). A Steering Committee chaired by the Chief Secretary has reviewed and endorsed all major policy options before their submission to the Cabinet. Within HSEB several working groups have been constituted. HSEB's senior management had numerous meetings with staff at different levels to explain the reform agenda and consult them about its implementation.

5. Value added of Bank support in this project

Since 1993 the Bank has been extensively involved in a policy dialogue with the central and state Governments to promote systemic power sector reforms at the state level. The Bank is already supporting the power sector reform in Orissa, and has gained a significant understanding and experience of these reforms in the Indian context. The Bank can use different instruments (loans and guarantees) concomitantly while IFC and/or MIGA could also participate in private power development. Haryana will, therefore, benefit to a large extent from the synergy between a variety of instruments and approaches. The Bank Group is particularly well positioned to respond to the opportunity and challenges posed by Haryana today, by:

- providing and catalyzing the critical long term capital needed to support the much needed growth of Haryana's power sector until the reforms progress far enough to attract a sufficient volume of private capital ;
- using the leverage of its lending volume and its advisory capability to further and accelerate the reform process and create an enabling environment for private investment; and
- providing the lessons of its global experience in power sector reforms to help Haryana deal with the issues of design, implementation and adaptation of its reform program.

[3] *Since October 1997, the Government has been confronted with widespread agitation among farmers regarding the issue of power tariffs for agriculture and collection of dues.*

E: Summary Program and Project Analyses*(Detailed assessments are in the project file, see Annex 8)*

1. Economic Assessment (see Annex 4 and Economic Appraisal Report): [X] Cost-Benefit Analysis

Haryana Power Sector Restructuring and Development Program

The economic benefits of the program are considerable and derive essentially from: (i) the elimination of the power deficit; and (ii) efficiency improvements (notably reduction of technical losses), that **both** the reform measures and the large investment program are expected to bring about. In the absence of the reforms, the power sector would continue to deteriorate: the sector will be less able to meet the needs of the consumers and the imperatives of economic development; and transmission and distribution losses are likely to increase. Based on consumer surplus analysis[4], the program net present value (NPV)[5] is estimated at about Rs. 85 billion (US$ 2.4 billion). The economic benefits are robust with respect to critical assumptions: under a wide range of assumptions on the load growth, expansion program, pace at which system losses will be reduced and other efficiency improvements will take place, and fuel prices, the program NPV remains largely positive.

Haryana Power Sector Restructuring Project

The economic benefits of the first project are proportionally higher than for the overall program since this project focuses on the most inefficient and critical segments of the transmission and distribution systems and low-cost, quick-yielding investments. The net benefits (NPV using 12 percent discount rate at 1997 price levels) are estimated at about Rs. 9.3 billion (US$ 258 million), and the economic rate of return (ERR) at 52 percent (see Annex 4 and "Haryana Power Sector Restructuring and Development: Economic Analysis" report).

2. Financial Assessment (see Annex 5 and Financial Appraisal Report):

The financial turn-around of Haryana's power sector from bankruptcy depends on the successor entities being allowed adequate tariffs, operational autonomy and accountability of the management for improving financial and operational efficiencies, a healthy capital structure, and financing of investments required for rehabilitation and reinforcement of the transmission and distribution system. Efficiency improvements and tariff increases assumed in the financial analysis are conservative, and given the changes in legal and institutional framework and privatization of distribution, within the realm of possibility. In particular, there would be ample opportunities for the new power utilities to improve their operational efficiency at a faster pace. Annex 5 provides summary financial projections of the successor entities on an aggregated basis and demonstrates the financial viability of the aggregate entities. Within this framework, the financial soundness of the desegregated entities would depend on allocation of assets and liabilities and transfer pricing (i.e. generation, bulk supply, and transmission tariffs). The Bank would get an opportunity to review the relevant decisions of tariffs of GENCO, bulk supply and transmission tariffs of TRANSCO, and the transfer scheme, to ensure that the successor companies emerge as financially viable entities[6].

In order to provide satisfactory levels of assets and capital structure to the new companies, Haryana plans to (i) write off HSEB's accumulated losses of Rs. 21.3 billion against its equity and loans amounting to Rs.

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4 *See Annex 4 and the economic appraisal report: "Haryana Power Sector Restructuring and Development Program: Economic Analysis" report, in project files.*

5 *An economic rate of return (ERR) for the reform program has not been reported because, inter-alia, the signs of the economic net flows are changing over time, which makes the solution to the ERR indeterminate (see "Haryana Power Sector Restructuring and Development Program: Economic Analysis", Chapter 10).*

6 *Financial projections of individual entities are being prepared by Haryana with the help of its financial consultants and shall be available before the transfer of assets and liabilities to the companies.*

24 billion; (ii) recognize the unfunded liabilities, on account of retirement dues of the staff, estimated at Rs. 8.7 billion, by issuing government guaranteed bonds to employee-managed Pension and Provident Fund Trusts; (iii) adequately capitalize the companies and provide future financing from the State as equity; (iv) make adequate provision for uncollectible receivables, obsolete inventories, and contingent liabilities likely to devolve; and (v) retain with the State contingent liabilities of Rs. 6 billion not expected to devolve. Draft Transfer Scheme, embodying these decisions shall be submitted to the Bank for review before its finalization.

To reduce distortions in the tariff structure and partially eliminate cross subsidies, Haryana has decided that tariffs paid by agricultural consumers should increase starting FY 2000, at least, by Rs. 0.25/ kWh for the next three years to reach a level of Rs. 1.38/kWh by FY 2003, an average annual increase of about 33 percent. For other categories (i.e. industry, commercial, and domestic) the tariff adjustments are assumed at about 15 percent for FY 1999, 10 percent in FY 2000 and FY 2001, and 8 percent in FY 2002. This is considered a politically feasible pace of tariff adjustments, though not adequate for the companies to earn their rate of return without subsidy. Haryana had made a provision for giving subsidy of about Rs. 2 billion (about US$ 60 million) per year during the current five year plan, which is not considered adequate. To meet the shortfall in rate of return, Haryana has agreed to provide additional subsidy during the transition period but completely eliminate the need for subsidy within the next four years. Commitments of Haryana for financial support to the successor companies will be covenanted through appropriate financial covenants (rate of return, debt service coverage, accounts receivables and payables). Annex 5(a) details the financial support of the State's Government to the power sector and the flow of funds between the power industry and the State.

Haryana's ten-year investment program of Rs. 80 billion, including contingencies and interest during construction, for rehabilitation and reinforcement of the transmission and distribution system is considered reasonable. Its financing plan includes IBRD (33%), private equity (2%), bilateral sources (14%), state government (16%), internal resource generation (12%), and the balance from Indian Financial Institutions/ Commercial lenders including borrowings raised by the private investors. Low internal resource generation in the first three years, due to low tariffs and small capital base, would be compensated through higher support from Haryana government. Significant private capital flows in distribution business would also be expected to emerge once the distribution is privatized.

The financing plan is feasible and commitment has been obtained from Haryana government for providing the estimated financing partly as subsidy and partly as equity (letter from the Government of Haryana dated November 12, 1997). In addition Haryana will negotiate with its creditors, suppliers, and lenders, for restructuring HSEB's overdue payables and liabilities, and debt service falling due in the next two years- the most critical period for its successor entities. Haryana has agreed to provide a detailed, duly negotiated, rescheduling plan, before 30 June, 1998.

Fiscal impact

Expected improvements in financial performance of the successor entities would not only eliminate the need for state subsidy but also reduce their dependence on the state's plan resources for financing their investments. In the past the government had to provide subsidy, and financing support (which is virtual subsidy since accumulated losses would almost completely wipe off the state loans and equity). The net negative budgetary impact of the sector (Annex 5 (a)) between FY 1993 to FY 1997 was about Rs. 18 billion (approx. US$ 575 million). The sector is expected to reverse the budgetary flows within four years and start contributing about US$ 65 million every year between FY 2003 and FY 2007. This does not include likely proceeds of sale of equity in distribution companies.

The burden of the financial restructuring of the sector falls essentially on the State's finances, which is a deliberate decision from the Government of Haryana, following a systematic and detailed review of all the options realistically available to Haryana (see Financial Appraisal Report and Haryana's Financial Restructuring Plan). Financial and operational efficiency improvements have been reflected in the financial projections; sales of assets would have been a complex and lengthy process, and, politically, were not considered feasible; curtailment of power supply in the next years will favor high-tariff consumer

categories. In the current political context (see section D.4) and when most of the other states have decided to provide free power to farmers or to sell it at less than 50 paise/kWh, immediate increases in tariffs to agricultural consumers have been ruled out; additional tariff increases to industries and commercial consumers can only be limited to avoid aggravating tariff distortions and shifting towards captive generation. Going through a standard bankruptcy procedure as for a commercial entity is not feasible for a State Electricity Board; and none of HSEB's commercial or financial creditors would have willingly foregone their claims on HSEB as most of the debt is guaranteed by the State government.

Haryana considers that the State's finances can support this contribution to the power sector's financial restructuring, has agreed to make the necessary budgetary provision, and has formally confirmed its commitments to the Bank (letter from the Government of Haryana dated November 12, 1997) before loan negotiations. It should be noted that:

a. The cumulative contribution of the government between FY 1999 to FY 2002 would be equivalent to what it has planned for the sector. However in the timing of these flows, there is a mismatch between the requirements of the companies and what is planned by the government. Successor companies will need higher than planned support in the first two years (Rs. 15 billion instead of Rs. 10 billion) but lower support in FY 2001 and 2002 (Rs. 7 billion instead of Rs. 12 billion); and

b. The actual contribution of the State government may be lower than what it has agreed to provide, to the extent that any rescheduling of the payment of overdue commercial liabilities and debt servicing will reduce the need for cash support to the utilities (see Financial Appraisal Report). Furthermore, the State government is confident that it could raise through borrowings the additional resources needed in FYs 99 and 00.

3. Technical Assessment:

Haryana Power Sector Restructuring and Development Program

HSEB has a long experience in the design and execution of transmission and distribution projects. The proposed investment program is technically sound, does not involve any complex and non-proven technology, has been prepared with the assistance of reputed consultants (see reports of Kennedy, Donkin, and Rust listed in Annex 8) on a least-cost basis, and has been reviewed in detail by the Bank project team. The rehabilitation and expansion program in transmission has been defined after detailed load flow analysis carried out with the model and software provided by Haryana's consultants. The investments in distribution have been defined following extensive interaction between HSEB and their consultants, and based on detailed sample field studies and a set of criteria aiming at optimizing their technical design and benefits. During the implementation of the program, engineering consultants will also assist HSEB and its successors in updating and implementing the investment program (see section 4 below).

Haryana Power Sector Restructuring Project

The project will include the construction of short transmission lines and sub-stations urgently needed to evacuate power to the Haryana's grid; the design and construction of these transmission lines and sub-stations does not raise any difficulty. The project will also focus on the rehabilitation of the fifty most critically affected feeders; with the assistance of its consultants, HSEB has carried out detailed engineering analyses, and no technical problem is anticipated.

4. Institutional Assessment:

Executing agencies

The investment program HSEB and its successors (TRANSCO and the distribution companies) will execute the investment projects. Although there is no particular technological difficulty associated with the investment measures, the **volume** of work to be

designed and executed is **large** compared to previous years. HSEB has agreed to engage engineering consultants to assist in investment design and execution activities; POWERGRID has already been commissioned to assist in the preparation of selected priority investments in transmission. HSEB and its successors will hire additional engineering consultants, and have already started the commissioning process (see Annex 12).

The reform program

Haryana and HSEB have very limited experience in the areas covered by the reform measures, notably on: (i) regulatory issues; (ii) functioning of the "single-buyer model" (the new structure of the power industry that Haryana is creating); (iii) privatization transactions; (iv) financial restructuring; and (v) corporate management. To mitigate this lack of experience, the proposed project includes a significant technical assistance (TA) and capacity building component. The terms of reference have been agreed with Haryana, the procurement process has started and the consultants are expected to start their assignment during the first quarter of CY 1998. UK-DFID has agreed to finance part of the TA program; other bilateral agencies (USAID, CIDA) have also expressed interest in supporting the TA program. The rest will be financed by the proposed loan.

Program and project implementation strategy and management

Haryana's strategy is to create the new power entities (Regulatory Commission and power utilities) as early as possible after the passing of the reform legislation. This will minimize the transition period and the associated uncertainties; this will also provide an opportunity to constitute the new management teams, give clear and focused mandates based on institutional and corporate goals, and establish more responsive counterpart teams for the provision of technical assistance. A major task of the high-level Steering Committee will be to review the implementation of the reform program as defined in the Program and Project Implementation Plan, gauge the performance of the new institutions, and assess the effectiveness of the technical assistance and institutional development/strengthening programs. Haryana has agreed to get a wide range of views and, as needed, to get assessment from independent and recognized high-level experts.

5. Social Assessment:

Investment Program

No resettlement is expected and no major social issues are involved as evidenced by the socio-economic surveys carried out for a sample of transmission lines and sub-stations. HSEB has prepared its Social Policies and Procedures (including an Entitlement Framework) to deal with land acquisition and other matters, which may have a negative social impact. The main thrust of the policy is to: (i) avoid land acquisition and subsequent displacement; (ii) recognize non-title holders for entitlement; (iii) and provide for transitional allowances and replacement of common properties and amenities. HSEB's Social Policies and Procedures have been reviewed by the Bank before loan negotiation (see section 23) and are consistent with the Bank's OD. 4.20 (Indigenous People) and 4.30 (Involuntary Resettlement).

HSEB has conducted a survey to determine the impact of the physical component of the Haryana Power Sector Restructuring project. No land will have to be acquired, and no person will suffer any significant adverse impact. The land for sub-stations is already under the possession of HSEB and free from all encroachments. In the case of transmission towers and evacuation lines, about 300 persons will suffer temporary crop losses during the erection of the transmission towers. A Resettlement Action Plan, satisfactory to the Bank, has been prepared by HSEB.

Reform Program

The extremely high degree of inefficiency and waste in the present situation makes possible a situation in which most groups benefit from the proposed reform and restructuring program. The State government benefits by being able to devote resources currently used for subsidizing HSEB to other social programs; and through its equity stake in the commercialized and privatized successor entities will derive a return from its investment. All consumer groups will benefit from the increased quantity and quality of power, and the State as a whole will benefit from the elimination of power shortages and the concomitant removal of an important constraint to the economic development of the State. HSEB's successor entities (and IPPs and other engaged in the supply of electricity) will benefit from adequate financial returns to their investment[7].

However, there are three groups of individuals who may potentially suffer some loss:

a. The first is those individuals presently profiting from the high levels of electricity theft (and associated opportunities for corruption). However, elimination of this externality must be viewed as a benefit rather than as a cost from society's standpoint.

b. The second group constitutes those members of HSEB's present staff who may ultimately loose their job as a result of lower manning levels in the reformed entities. However, this is more apparent than real and may be minimized by appropriate policies that safeguard employee rights.[8] Moreover, even at the more efficient staffing levels to be expected as a result of reform, total employment in the sector may not be very different due to the customer growth that can be expected once the constraints that presently limit the sector's growth, are removed by the reforms.

c. The final group that may be adversely affected by the reform program are low income farmers and low-income domestic consumers who presently benefit from the highly subsidized tariff, or the deficient metering, billing and collection procedures. Once these deficiencies are corrected, these consumers may suffer economic and financial loss although the benefits of improved quality and availability of power may largely offset these losses[9]. The formulation and implementation of the mitigating measures to appropriately protect these individuals will be one of the functions and responsibilities of the new regulatory commission. For example, an appropriate lifeline tariff can mitigate the impacts of tariff reform for low-income domestic and agricultural consumers.

6. Environmental Assessment: Environmental Category: [ ] A [x] B [ ] C

The project is expected to have positive environmental impacts through improved efficiency in supply and demand sides. The design of lines and substations would incorporate safety features, and their route/location be defined to minimize any adverse environmental impact. With the assistance of a Bank-funded consultant, HSEB has carried out detailed environmental analyses (see project files) for 15 transmission lines and sub-stations (including the lines and sub-stations to be funded by the proposed project); regarding the evacuation lines (average length: 4-5 km), HSEB has carried out an environmental analysis on a sample of lines. The Bank has reviewed HSEB's analyses and concluded that the construction of the proposed transmission lines and sub-stations would have no significant adverse environmental impact, and that their design and construction were consistent with the Bank's OD. 4.01

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7 *This producer's surplus is presently dissipated in inefficient subsidies to agriculture.*

8 *Haryana's policy is to avoid any involuntary retrenchment and to provide, when the new utilities are established, Voluntary Retirement Scheme facilities (which might be funded under subsequent APLs).*

9 *See Economic Appraisal Report, for example on the costs of repairing damage to pump motors.*

(Environmental Assessment). On the generation side, HSEB has initiated the rehabilitation of the Panipat power station with a private company with financing from KfW (Germany). Haryana has also engaged a dialogue with KfW for financing the rehabilitation of the Faridabad power station. In both cases, the rehabilitation will aim at bringing the stations into compliance with environmental standards. Haryana has agreed to strengthen the environmental management capabilities of HSEB's successors; and terms of reference for consulting services (including, interalia, management of PCB related issues, if required after investigation) have been agreed. TRANSCO will also be proposed to use the planning model developed under the ESW on "Environmental Issues in the Power Sector", which assesses the various environmental implications of policy and expansion options.

7. Participatory Approach:

The key stakeholder groups are: (i) the consumers of electricity and the population at large in Haryana; (ii) HSEB staff; (iii) persons which may be affected by land utilization; and (iv) Government and administration staff.

a. Consumers have been represented in a Steering Committee, chaired by the Chief Secretary (see section 4 "Project Monitoring and Coordination"), and which provided guidance for the design of the reform measures and implementation program. Professional organizations have also been extensively consulted by Haryana and HSEB. A large political debate has taken place before the Haryana had confirmed its decision to embark upon the reform program. The overall result of these consultations has been to increase Haryana's awareness to develop a larger constituency for change, communicate more openly, develop an Emergency Action plan, and phase the implementation of the reform program;

b. HSEB staff has been also extensively informed and consulted. HSEB's senior management has had several meetings to explain the reform program and its implications on personnel. This has helped reduce (but not eliminate) the opposition to reform among staff. As a result of these consultations, Haryana/HSEB have decided to: (i) include a human resource development component into the program; and (ii) ensure, through the Haryana Electricity Reform Bill and the transfer schemes, that staff situation will not deteriorate as a consequence of the restructuring;

c. The draft Social Policy and Procedures (SPP) prepared by HSEB to deal with the social consequences of land acquisition have been discussed and reviewed with a group of stakeholders; their comments have been reflected into the final SPP, when relevant. The SPP also define the participatory approach that Haryana and HSEB plan to follow (see section E.5); and

d. Following the passing of the Reform Legislation, Haryana has undertaken a campaign to explain the reform concepts and measures at various levels of the administration.

F: Sustainability and Risks

1. Sustainability:

Haryana Power Sector Restructuring and Development Program. By implementing the proposed reform agenda, Haryana can make its utilities commercially viable and mobilize resources to finance the rehabilitation and expansion of its power system. Investments will not only contribute to reducing today's power gap, but will also create the basis for sustainable future growth of the system. Closing the chronic supply-demand gap will benefit all electricity consumers. Haryana expects that the State's improved power supply position would contribute to attracting additional investment and encourage existing industries to expand their production facilities.

Haryana Power Sector Restructuring Project. The project, which will facilitate the execution of the above program, will therefore contribute to the sustainability of Haryana's measures. Even if the next phases of the program were not to take place the project would lead, under reasonable assumptions, to

durable reduction in physical system bottlenecks and therefore efficiency improvements, albeit limited to a small part of the power system.

2. Critical Risks (reflecting assumptions in the fourth column of Annex 1):

Risk	Rating	Risk Minimization Measures
From APL 1 Objective to Program Purpose		
The political commitment to reform vanishes during the first years of the program, when the benefits are not yet fully visible;	**S**	• The proposed first project is to help Haryana build up a constituency for reforms and change through communication and demonstration actions. • Haryana has decided to implement an aggressive strategy to reduce system losses, minimize tariff adjustments required to meet minimum profitability requirements, and improve efficiency and quality of service, • The politically difficult decisions such as tariff adjustments will need to be taken progressively. • The flexibility provided by the adaptable lending instrument maintains an incentive for reforms while letting the State government decide upon the optimal pace of reform.
The implementation of subsequent phases of the program lags behind schedule or is not properly carried out.	**S**	• Haryana has decided to implement a sound reform implementation strategy aiming at creating very soon the new sector's entities, constituting dedicated and high-caliber teams, developing institutional capabilities and benefiting from Indian and international experiences and lessons.
Power that Haryana expected to import is not available as scheduled.	**S**	• The power utilities will carry out careful load management measures and curtailment policies based on well defined priorities and approved by the Regulatory Commission.
Haryana is not capable to attract private investors in distribution (e.g., competing demands in other states, overall investment climate)	**M**	• Haryana has decided to provide an attractive regulatory environment; and to prepare carefully the privatization strategy, taking into account privatization plans in other states. Possibility to re-design privatization method to reduce financial exposure of private sector at cost of lower revenues to Haryana.

From Project Outputs to Project Objectives		
Haryana will not select dynamic and competent managers for the new utilities and outstanding commissioners for the Regulatory Commission;	**M**	
Haryana will not allow the sector entities to operate with full autonomy;	**M to S**	• Close monitoring and evaluation of the performance and functioning of the new sector's entities, and their interaction with the State Government. Removal of non-performing staff in the utilities. Application of the dispositions of the Haryana Electricity Reform Act for commissioners.
Haryana will not mobilize sufficient budgetary resources and obtain enough relief from creditors to carry out the financial restructuring plan;	**M**	• In the early phases of the program, maximum contribution of IBRD and other international donors to the funding of the investment program; in order to minimize the contribution of Haryana and of the power utilities, and free resources for the financial restructuring.
Project Components to Outputs		
• Delay in availability of additional power from planned liquid-fuel based power stations;	**M**	• The construction of each evacuation line will be initiated only when financial closure for the construction of corresponding power stations has been completed by the IPP. A contingency action plan has been prepared.
• Unfavorable staff attitudes in new power entities;	**M**	• Communication and sensitization campaigns; improvements of the conditions of service
• Delay in commissioning of consultants by UK DFID under parallel financing arrangements for TA.	**N**	• Commissioning of consultants by Haryana

Risk Rating - H (High Risk), S (Substantial Risk), M (Modest Risk), N (Negligible or Low Risk)

Overall risk rating

The risks associated with the Haryana Power Sector Restructuring and Development Program are moderate to substantial, but would be considerably mitigated by the utilization of the adaptable lending instrument, and the implementation of the proposed Haryana Power Sector Restructuring project. The risks specifically associated with the proposed project are moderate, and can be mitigated through normal project preparation, execution and supervision procedures.

3. Possible Controversial Aspects:

The implementation of the reform will face strong opposition. It will impinge on large and powerful vested interests. The reform measures will also change the framework under which staff and Government officials have been operating: fears about employment generate opposition to change. The political opposition and vested interest groups have used and will continue to use measures like privatization of distribution and tariff adjustments as points of contention. Simultaneously, the reform process will not lead to immediate results: efficiency improvements will come when the investment measures are implemented; reduction in losses and improvement in quality of supply will come when the physical system is rehabilitated and the distribution business is restructured and privatized. **End-users and other stakeholders will be ready to accept the reforms and the consequences provided that they**

perceive real prospects for an improved situation. The implementation strategy designed by Haryana has taken into account the obstacles to be overcome; and will be based on realistic targets, communication, participation and consensus-building. The reform program will be implemented in phases, tariffs will be adjusted progressively; and HSEB's successors will implement aggressive strategies to reduce losses - which would minimize the required tariff adjustments and improve the quality of service.

G: Main Loan Conditions

1. Effectiveness Conditions:

There are no effectiveness conditions, apart from standard Bank legal requirements.

2. Covenants

a. The Government of India shall:

- make the proceeds of the loan available to Haryana in accordance with India's standard arrangements for developmental assistance to the States of India;
- release to Haryana funds equivalent to the amounts withdrawn from the Loan Account including those deposited in the Special Account, immediately after such withdrawals, in accordance with India's standard arrangements for release of such funds to the States of India; and
- maintain and audit loan accounts in accordance with sound accounting and auditing practices.

b. The Government of Haryana shall:

- enter into a Subsidiary Loan Agreement with HSEB, and relend the proceeds of the loan to HSEB under terms and conditions satisfactory to the Bank, which shall include that: (i) HSEB shall pay interest rate of not less than 13% per annum, and repay the principal amount over a period of 18 years including a grace period of 3 years; and (ii) the foreign exchange risk shall be borne by the Government of India;
- make available to HSEB the proceeds of the loan immediately after they have been made available to Haryana by the Government of India;
- participate with HSEB in preparing and negotiating the plan for rescheduling HSEB's overdue payables and liabilities, and debt servicing obligations mentioned in section E.2 above, and submit it to the Bank by June 30, 1998;
- provide financial support to HSEB in accordance with the provisions of the Financial Commitment Letter mentioned in section E.2 above;
- establish the Regulatory Commission in accordance with a time schedule satisfactory to the Bank; (see section A.2 above);
- inform the Bank, by March 31 of each year during the implementation of the project, of the approved budget of the Regulatory Commission;
- take all necessary measures for making effective and implementing a scheme for transferring the property, rights, liabilities and personnel of HSEB to GENCO and TRANSCO in accordance with a time schedule satisfactory to the Bank; (see section A.2 above);
- maintain appropriate policies and procedures to monitor and evaluate the implementation of the project and the program based on the performance indicators mentioned in section A above and Annex 1; and carry a mid-term review of the implementation of the project by March 1999 at latest.

c. HSEB shall:

- comply with the objectives, policies and procedures set out in the Social Policies and Procedures and the Resettlement Action Plan (see section E.5) in carrying out the construction of transmission lines and sub-stations (component 1.a of the project described in Annex 2);

- not finance any investment in transmission lines aiming at evacuating power from liquid-fuel based power stations developed by private promoters unless the promoters have reached financial closure;

- participate with the Government of Haryana in preparing and negotiating the plan for rescheduling HSEB's overdue payables and liabilities, and debt servicing obligations mentioned in section E.2 above, and submit it to the Bank by June 30, 1998;

- maintain appropriate policies and procedures to monitor and evaluate the implementation of the project based on the performance indicators mentioned in section A above and Annex 1;

- maintain or cause to be maintained records and accounts adequate to reflect in accordance with sound accounting practices its operations and financial condition, resources and expenditures, in respect of the Project; and:

  (i) have the said records, accounts and financial statements (balance sheets, statements of income and expenses and related statements) audited, in accordance with appropriate auditing principles consistently applied, by independent auditors acceptable to the Bank;

  (ii) furnish to the Bank, as soon as available but in any case not later than six months after the end of each such year, (a) certified copies of its financial statements for such year as so audited and (b) the report of such audit by said auditors, of such scope and in such detail as the Bank shall have reasonably requested; and

  (iii) furnish to the Bank such other information concerning said records, accounts and financial statements as well as the audit thereof as the Bank shall from time to time reasonably request.

- take all necessary measures satisfactory to the Bank to achieve the financial and operational targets set out in the Financial Restructuring Plan (see section E.2 above).

3. Proposed Covenants Upon Restructuring. Agreements were reached at negotiations that once HSEB's successor companies come into existence (defined as having received assets, liabilities, staff, license to operate as applicable) and the transfer schemes become effective, the HSEB Project Agreement and other legal documents shall be adjusted to reflect the emergence of the new entities, and to include, *inter alia*, the following:

a. Haryana shall onlend the proceeds of the Loan to TRANSCO and the state-owned DISCOMs under Subsidiary Loan Agreements to be entered into between Haryana, and each of TRANSCO/ DISCOMs, under terms and conditions satisfactory to the Bank. Under the current policy of the Borrower, TRANSCO and DISCOMs shall pay interest on the principal amount so onlent and withdrawn and outstanding from time to time at a rate of not less than 13% per annum, and repay the principal amount so onlent over a period of 18 years including a period of grace of three years. Any onlending by Government of Haryana to privatized DISCOMs would be subject to the Borrower's prevailing policy, would be on terms and conditions satisfactory to the Government of India and the Bank, and would be subject to the strategic investor in these companies having been selected through procedures acceptable to the Bank and having submitted satisfactory project reports and financing plans.

b. Haryana shall make available to TRANSCO/ DISCOMs the proceeds of the Loan immediately as they are withdrawn from the Loan Account and made available to Haryana by the Borrower in respect of expenditures to be financed under the respective Subsidiary Loan Agreement.

c. Haryana shall, with the participation of DISCOMs, and subject to any relevant procedures of the Haryana Electricity Regulatory Commission (HERC):

- offer a part of its equity in DISCOMs for sale under terms and conditions satisfactory to the Bank with the objective of divesting such equity and transferring such distribution system to the private sector in accordance with a program and timetable satisfactory to the Bank;

- take all such measures as may be necessary or required for efficiently implementing the transactions resulting from such offer; and

- where no bids are received in response to such offer or those that are received are not deemed responsive by Haryana, revise the terms and conditions of such offer in a manner satisfactory to the Bank and take such other steps which shall, without prejudice to the interests of Haryana/ DISCOMs, be adequate, in the view of the Bank, to making such offers attractive for acceptance by the investors.

d. Haryana/ DISCOMs shall ensure that, while disinvesting Haryana's equity in DISCOMs, and subject to any relevant procedures of the Haryana Electricity Regulatory Commission, any agreement for sale of equity (*shareholder's agreement*) contain terms and conditions satisfactory to the Bank.

e. Haryana/ DISCOMs shall further ensure that Haryana and DISCOMs shall enter into an implementation contract and a Subsidiary Loan Agreement on terms and conditions as the Bank may request.

f. Prior to entering into a Subsidiary Loan Agreement with a DISCOM, subject to the borrower's prevailing policy and any relevant procedures of the Haryana Electricity Regulatory Commission, Haryana shall ensure that:

- the activities to be carried out by such company meet the eligibility criteria set forth in the Agreement and are approved by the Bank for financing;

- a license under the Act has been granted to such Company by the Regulatory Commission enabling it to carry out such activities in a manner satisfactory to the Bank;

- it obtains by an implementation contract with such Company, approved by the Bank, rights adequate to protect the interest of the Bank and Haryana including such rights in respect of the carrying out and operation of the approved activities as shall be satisfactory to the Bank; and

- when the equity is disinvested in a DISCOM, the strategic investor has been selected in accordance with procedures satisfactory to the Bank.

g. Haryana shall take all such actions as may be necessary or required including provision of consents as the *shareholder* of TRANSCO/ DISCOMs, to enable TRANSCO/ DISCOMS to perform their respective obligations under the Agreements with the Bank.

h. Haryana shall prepare a staff transition plan by December 31, 1998.

i. The following financial covenants will be included in the new legal documents when the successor companies have been established:

- TRANSCO, DISCOMs and GENCO shall maintain records and accounts adequate to reflect in accordance with sound accounting practices their operations and financial condition.

- TRANSCO, DISCOMs and GENCO shall: (i) have their records, accounts and financial statements audited by independent auditors acceptable to the Bank; and (ii) furnish to the Bank, as soon as available but in any case not later than six months after the end of each fiscal year, certified copies of their audited financial statements and the auditors' reports.

- GENCO shall take all measures (including, without limitation, adjustments of the structure and levels of tariffs) and conduct its operations in such manner as to achieve: (i) in FY1999, revenues from all sources related to operations and non-operating income sufficient to cover all expenses related to operations; (ii) in FY 2000 a rate of return of 10% on net worth; and (iii) in subsequent FYs such rate of return as may be permissible under applicable notifications issued by the Borrower (GOI).

- TRANSCO and DISCOMs shall take all such measures (including, without limitation, adjustments of the structure and levels of tariffs) and conduct their operations in such manner as to achieve: (i) in FY 1999, revenues from all sources related to operations and net non-operations income sufficient to cover all expenses related to operations; (ii) in FY2000, a rate of return on their net worth of not less than 10%; and (iii) in each subsequent FYs such rate as may be permissible under the Electricity (Supply) Act 1948 or prescribed by the Regulator, whichever is higher.

- TRANSCO, DISCOMs and GENCO shall not incur any debt, unless a reasonable forecast of their revenues and expenditures shows that their estimated net revenues for each FY during the term of the debt to be incurred, shall be at least 1.3 times their estimated total debt service requirements.

- TRANSCO, DISCOMs and GENCO shall take all steps necessary to maintain their accounts receivable (net of provisions) at a level not exceeding an amount equivalent to the proceeds of their sales of power for the three preceding months, and accounts payable not exceeding two months of their purchases of power in case of TRANSCO and DISCOMs, and purchase of fuel and other consumables in case of GENCO.

- TRANSCO, DISCOMs and GENCO shall furnish to the Bank by December 31 of each Fiscal Year: (i) their five year financial projections, including their updated Investment Plan and financing plan for review by the Bank and for comments, if any; and (ii) a report reviewing the adequacy of their tariffs to meet the requirements set forth above.

H. Long-Term Support to the Program

The long-term support of the Bank to the Reform Program will be conveyed in a letter from the Country Director, India, to the Governments of India and Haryana, after the Board has approved the loan for the Haryana Power Sector Restructuring project as the first APL to support the Reform Program. The milestones that Haryana would need to achieve for the Bank to consider the subsequent loans, have been listed in section B. 4.3 above.

I. Readiness for Implementation

[X] The engineering design documents for the first year's activities are complete and ready for the start of project implementation.

[X] The procurement documents for the first year's activities are complete and ready for the start of project implementation. The Bank has already reviewed and given its no-objection to procurement documents in excess of US $ 50 million (i.e., in excess of 80 percent of the proposed loan).

[X] The Program and Project Implementation Plan (PPIP) has been appraised and found to be realistic and of satisfactory quality. The PPIP deals with: (i) the implementation of the overall reform program; (ii) the execution of the 10-year investment program; and (iii) the execution of the Emergency Action Plan supported by the APL1.

J. Compliance with Bank Policies

[X] This project complies with all applicable Bank policies.

Task Team Leader: Djamal Mostefai

Sector Manager: Alastair J. McKechnie

for Country Manager/Director: Edwin R. Lim

Annex 1

Project Design Summary

HARYANA POWER RESTRUCTURING AND DEVELOPMENT PROGRAM
HARYANA POWER RESTRUCTURING PROJECT

Narrative Summary	Key Performance Indicators	Monitoring and Evaluation	Critical Assumptions
Sector-related CAS Goal Contain power infrastructure bottlenecks by promoting and implementing comprehensive state power sector reforms.	In several states: • Progressive reduction of power deficits and improvement in the quality of power; • Progressive restoration of the creditworthiness of the power utilities • Progressive elimination of state subsidies and cross-subsidies (notably to agriculture) • Adoption of a comprehensive reform legislation. • Progressive establishment of independent State Electricity Regulatory Commissions; • Progressive privatization of electricity distribution; • Significant increase in the share of electricity generated by private producers.	• CAS discussions and review • Portfolio reviews • Occasional Bank reports on the power sector (ESW) • Relevant information from various project supervision mission reports.	**(from Goal to Bank Mission)** • State power sector reforms will contain a major bottleneck to economic growth, thereby facilitating poverty alleviation. • Concomitant progress in other infrastructure sectors (e.g, transport) and basic human resource development to maintain sustained rapid growth (especially in rural areas);
Program Purpose: To ensure that by end-2007, the power requirements of the State's economy and population are met, and that consumers are provided with reliable, high-quality and cost-effective electricity power services by creditworthy and commercially-operated power utilities, functioning in a competitive and appropriately regulated power market, with	**Program Indicators:** 1. Power (energy) deficit (%): ~25% in 1997; 8-12 % by end-2002; 0-5 % by end-2007. 2. Per capita consumption (kWh): 458 in 1997; 720-750 by end-2002; 950-1050 by end-2007. 3. Transmission and distribution losses (%): >32 in 1997; 26-28 by end- 2002; 17-19 by end-2007. 4. Contribution of the power sector to the State's budget (US$ million), excluding	• Supervision and appraisal missions • ICR for each APL • Evaluation mission reports	**(from Program Purpose to Goal)** • The power sector reform in Haryana leads to visible and significant benefits to consumers and the State's economy, which justifies the political risks taken at the outset of the process. • Successful reforms in Haryana and in other states have a positive demonstration effect on other States.

significant private ownership and participation. ***Phase I:*** Establishment of a new legal, regulatory and institutional framework, and removal of some of the most critical bottlenecks in the power system (1998-99); **Phase II:** Privatization of the distribution business; achievement of financial sustainability in the sector, and improvements in system efficiency and quality of power (1999-2002); **Phase III:** Consolidation of the functioning and financial situation of the new power utilities, and achievement of more reliable power supplies (2000-04); **Phase IV:** Achievement of higher consumer satisfaction through elimination of the power deficit, attainment of higher quality and efficiency in electricity services, and furtherance of power sector reforms to increase competition and private participation (2003-2008).	any net amount accruing to the State Government as a result of its on-lending the proceeds of the World Bank loan: -50 in 1997; -26 by end-2002; +66 by end-2007. 5. Utilities' average operating surplus as % of total capital employed after subsidies (%): 8 in 1997; 19-23 by end-2002; 24-28 by end-2007. 6. Subsidies as % of revenue from sales of electricity: 31 in 1997; 4-6 by end-2002; 0 by end-2007. 7. Private sector share (%) of generation: <1 in 1997; 15-18 by end-2002; 28-44 by end-2007. 8. Private sector share (%) of distribution: 0 in 1997; >51 by end-2002; 70-100 by end-2007.		• Concurrent progress at the national level to develop bulk market mechanisms, create a new central regulatory regime, and increase the capabilities of the central utilities.
Project Development Objective (Phase I of the program): To initiate the reform process by establishing the new legal, regulatory and institutional framework (including the creation of an independent regulatory commission and the new power corporations, and the initiation of the privatization of the distribution business), and removing the most	**Outcome and Impact Indicators:** *To be met before commitment of APL2* *By end-April 1998:* 1. Comprehensive reform legislation brought into effect; 2. Regulatory commission established; 3. Restructuring measures effected, and new power utilities (GENCO, TRANSCO) established and operational;	• Quarterly progress reports. • Supervision mission reports • Evaluation mission reports	**(from Objective to Program Purpose)** • The political commitment to reform remains strong during the first years of the program, when the benefits are not yet fully visible • The subsequent phases of the program are successfully

critical bottlenecks of the power system with a view to demonstrate -- in a few selected areas -- the benefits which could be expected from a successful reform of the power sector.	*By end June 1998* 4. Debt and overdue commercial liabilities rescheduling plan negotiated and agreed with HSEB's creditors *By end September 1998* 5. New distribution companies established *By end 1998* 6. Strategic private investor for the East Zone distribution company selected 7. Financial restructuring implemented as per the agreed plan		implemented • There is enough power available that Haryana can import • Haryana is capable to attract private investors in distribution given competing demands in other states
Outputs: 1. Power system strengthened in priority areas (via Emergency Action Plan). 2. Improved efficiency and effectiveness in consumer services for selected areas; 3. Preparation completed for Phase II of the program.	**Output Indicators:** 1.1 Evacuation and transmission of 650 MW of additional power by end-CY2000; 1.2 Improved voltage profile in selected areas with reference to baseline data by end-CY2000; 1.3 Reduction in system losses in selected areas with reference to baseline data, by end-CY2000. 2.1 Gradual improvements in measures of efficiency and effectiveness for consumer services (above baseline levels, by EOP); 2.2 Improved consumer confidence in, and support to power sector policy (above baseline levels by EOP) 3.1 Institutional development programs designed and initiated by September 1998 3.2 Detailed engineering planning and procurement arrangements completed for	• Quarterly progress reports. • Supervision mission reports • Evaluation mission reports • Regular consumer surveys	**(from Outputs to Objective)** • GOH will select dynamic and competent managers for the new utilities and outstanding commissioners for the Regulatory Commission; • GOH will allow the sector entities to operate with full autonomy; • GOH will mobilize sufficient budgetary resources and obtain enough relief from creditors to carry out the financial restructuring plan;

	Phase II of program by September 1998.		
Project Components/Sub-components:	**Inputs:** (budget for each component)		**(from Components to Outputs)**
1. Emergency Investment Measures:	1. US$ 62.3 million	• Quarterly progress reports and disbursement reports • Supervision mission reports • Evaluation mission reports	• Timely availability of additional power from planned power stations; • Favorable staff attitudes in new power entities; • Timely commissioning of consultants by UK DfID under parallel financing arrangements for TA..
1.a. Construction of critically needed transmission lines (approx. 180 kms.) and sub-stations (3 Nos.)	1.a. US$ 15.0 million		
1.b. Rehabilitation of sub-transmission and distribution systems (50 feeders)	1.b. US$ 47.3 million		
2. Commercial and technical consumer services: • complaint center operational; • computerized billing system in selected areas	2. US$ 1.2 million		
3. TA and engineering services: • Reform management and communication; • Institutional development and strengthening (regulatory commission, TRANSCO); • Revenue enhancement (distribution companies); • Privatization of distribution; • DSM Engineering and procurement	3. US$ 13.5 million		

Annex 2

Detailed Project Description

HARYANA POWER RESTRUCTURING AND DEVELOPMENT PROGRAM
HARYANA POWER RESTRUCTURING PROJECT

Project Component 1: Emergency Investment Measures.

Project Component 1.a. Construction of critically needed high voltage evacuation lines and transmission lines and sub-stations. US$ 15.0 million.

HSEB's investment program includes three 220 kV, three 132 kV and six 66 kV lines, and three 220 kV, two 132 kV and five 66 kV substations. These works are needed to stabilize the grid voltage, to improve the system stability and to evacuate power: (i) from Nathpa Jhakri Hydro Project, (ii) NTPC thermal power and (iii) a number of small (25MW) liquid-fuel based power stations. Power Grid is constructing new transmission works to interconnect hydro and thermal power plants respectively to the Northern system. Based on system studies, HSEB would construct its portion of transmission works to wheel additional power to its grid system. The details of the lines and substations are:

1.a.1. Transmission lines and sub-stations (US$ 12.5 million)

1. 220 kV 80 km. long double circuit (DC) line from Yamunanagar to Shahbad;
2. 220 kV 30 km. long DC line from Palli to Palla;
3. 220 kV 20 km. long line DC from Palli to Samaypur;
4. Augmentation of 220 kV substations at Shahbad, Palla (presently 66 kV, to be upgraded to 220 kV) and Samaypur.

1.a.2. Evacuation lines from liquid-fuel based power stations (US$ 2.5 million)

This sub-component will include a number of 132/66 kV lines to evacuate power from small (25MW) liquid-fuel power stations to the Haryana's grid. The average line length is about 4-5 km. The evacuation lines to be actually funded by the proposed loan will be defined based on the progress achieved in the construction of the power stations by their promoters. Only lines for which the promoters have reached financial closure will be eligible for financing under the loan.

Project Component 1.b. Rehabilitation of sub-transmission and distribution systems. US$ 47.3 million.

HSEB has identified 24 substations (33 kV) and 50 feeders (11 kV), which are critically overloaded and need to be augmented and rehabilitated immediately. HSEB has prepared a detailed bill of material for these works. This component would also include tools and safety equipment, meters, utility vehicles and spares (11 kV switchgear, distribution transformers, LT circuit breakers, LT capacitors, line materials, etc.) for strengthening the distribution system.

Project Component 2. Improvement of commercial and technical services to the consumers. US$ 1.2 million.

HSEB has decided to introduce decentralized computerized billing systems at all sub-divisional offices (about 400). Under the proposed loan, HSEB plans to introduce the above facility at 20 selected places. It will benefit from the support of competent consultants.

HSEB has also decided to improve and upgrade the complaint centers at all district headquarters (17) and operation division headquarters (45). All the above places will have base and mobile radio complaint systems equipped with radio communication. Further, at the district headquarters, there will be tape

recorded complaint registering system, and pagers will be provided to the supervisory staff. All these measures are expected to enhance the efficiency and quality of service and have a significant impact on the consumers.

Project Component 3. Technical assistance and engineering services. US$ 13.5 million.

This component includes the PPF advance (US$ 2 million) granted to Haryana. Haryana, HSEB and the emerging new entities of the power sector will get technical assistance as follows:

1. Reform program management and communication: Estimated costs: US$ 500,000;

2. Establishment and institutional development of the Regulatory Commission. Estimated costs: US$ 3 million;

3. Privatization of one distribution company. Estimated costs: US$ 1.5 million;

4. Institutional strengthening of TRANSCO. Estimated costs: US$ 1.5 million;

5. Enhancement of the metering, billing, and collection functions of the distribution companies before their privatization; and improvement of the efficiency of their commercial and technical services to consumers. Estimated costs: US$ 1.5 million;

6. Demand-Side management and promotion of non-conventional energies. Estimated costs: US$ 1.0 million;

7. Engineering services (preparation of bidding documents, evaluation of bids of complex technical works, project management and supervision of investment execution). Estimated costs: US$ 1.5 million;

8. Miscellaneous. US$ 1.0 million.

Annex 3

Estimated Project Costs

HARYANA POWER RESTRUCTURING AND DEVELOPMENT PROGRAM
HARYANA POWER RESTRUCTURING PROJECT

Project Component	Local	Foreign	Total	Local	Foreign	Total
	US$ million			Rs. million		
1.a. Construction of critically needed transmission lines and sub-stations	5.6	7.2	12.8	212.1	272.6	484.7
1.b. Rehabilitation of sub-transmission & distribution systems	25.5	14.9	40.4	945.1	551.4	1,496.6
2. Improvement of commercial and technical services to consumers	0.5	0.6	1.1	18.2	21.8	40.0
3. Technical assistance and engineering services	3.3	9.7	13.0	123.7	363.5	487.2
Total Baseline Cost	**34.9**	**32.4**	**67.3**	**1,299.0**	**1209.4**	**2508.4**
Physical Contingencies	3.2	2.6	5.8	120.6	93.7	214.3
Price Contingencies	3.8	0.1	3.9	140.9	5.7	146.5
Total Project Cost	**41.9**	**35.1**	**77.0**	**1,560.5**	**1308.8**	**2869.3**
Interest during construction	0.5	2.3	2.7	16.7	84.2	100.9

Duties and taxes included in Local cost - US$ 2.7 million

Annex 4

Cost Benefit Analysis Summary

HARYANA POWER RESTRUCTURING AND DEVELOPMENT PROGRAM
HARYANA POWER RESTRUCTURING PROJECT

Main Assumptions

	Business as usual (BAU)	With Reform
Demand forecast	Base case load growth at about 8% pa	Same as BAU
T&D losses	Increase from 32% to over 40% (2007) as a consequence of overloading of the system consequent to lack of investment	Technical losses are reduced to 13% and non-technical losses to 4%
Unserved energy	Increases from 19% (consumer level) to over 50% (2007)	Energy curtailment eliminated by year 2007. Load management required to meet peak demand.
Imports	Only from NTPC Faridabad (on going project) and shares in central utilities projects	Include in addition purchases from Nabinagar and CEPA projects (or equivalent)
Tariff	No increase in real tariffs	Tariffs are increased as per the financial restructuring plan. Agriculture tariffs increase from 55 paise (1997) to 175 paise in 2003
New generating facilities in Haryana	Limited program since IPPs will find it increasingly difficult to finance projects	Presently proposed IPPs are commissioned over a 10 year period (including Panipat 6, and 225 MW of liquid-fuel projects)
Investment program	Minimal program at current levels (150 crores per year)	Comprehensive program supported by international aid agencies

Methodology

The net economic benefits of each case (BAU, Reform, as well as the sensitivity analysis cases) are estimated as the differences between the demand curve (willingness to pay) to the point of the consumption level (which is supply-constrained at least until 2005), and the economic costs of supplying that level of consumption. The benefits of the reform and restructuring scenario follow as the difference in the net economic benefits (change in consumer and producer surplus). The specific assumptions underlying the economic and financial analyses (tariffs, capital costs etc.) are detailed in the economic appraisal report ("Haryana Power Sector Restructuring and Development Program: Economic Analysis") in the Project File.

Results

The net economic benefits (NEB) of the overall reform and investment program are estimated at Rs. 81,500 million or 8,150 crores (NPV discounted at 12%) relative to a "business-as-usual" case (BAU case) that is characterized by increasing levels of unserved energy, system losses and inadequate investment. The financial benefits are estimated at Rs. 75,000 million or 7,500 crores (NPV discounted at 12%). The table below summarizes the economic (E) and financial (F) benefits (in Rs. 1,000 crores at 1997 price level).

		Utilities		Government		Consumers		Society	
		F	E	F	E	F	E	F	E
1	Cost of production	-32.6	-31.6					32.6	-31.6
2	Revenue	31.7				-31.7			
3	Benefits					74.2	61.1	74.2	61.1
4	Subsidy	0.8		-0.8					
5	Total Reform	0	-31.6	-0.8		42.5	61.1	41.6	29.5
6	Total BAU		-17.5	-4.2		38.4	38.5	34.2	21.0
7	Impact of reform a/		-14.1	3.4		4.1	22.6	7.5	8.5

a/ [7]=[5]-[6]

These results show that for the reform program to succeed, Haryana must still provide support for the next four years (even though the flow of funds reverses after FY 2002) as the first dividends are paid to HSEB's successor organizations). However, for every crore that Haryana provides to enable the financial restructuring and reform program to move forward, Haryana receives almost 10 crores in benefits (800 crores of subsidy support would generate 7,500 crores of benefits). In the case of business as usual, the Haryana support is Rs. 4,200 million for no corresponding net benefit.

Sensitivity Analysis

The robustness of the economic and financial benefits has been tested by a sensitivity analysis. Under wide range of input assumptions, the economic and financial benefits of reforms are demonstrably superior to no reform. The economic benefits of the reform scenario would vary as follows (NPV in Rs. 1,000 crores at 1997 price level).

Scenario	Economic Benefits (EB)	Variations
Base case	29.51	0
Limited expansion plan	26.85	-2.65
Accelerated loss reduction program	31.27	+1.75
Delayed loss reduction program	28.93	-0.57
Higher economic cost of coal	27.46	-2.05
More price-elastic demand	28.46	-1.05
Export of energy surplus	29.63	+.12

In all cases, the variations of the economic benefits associated with a reform scenario are lower than the net economic benefits brought by the reform program (Rs. 8,500 crores).

(Rs. million; at 1997 Price levels)

	Present Value of Flows		Fiscal Impact	
	Economic Analysis	Financial Analysis	Taxes	Subsidies
Benefits	63,176	65,529	See Annex 5.a	
Costs	53,781	53,355		
Net Benefits:	9,396	11,174		
IRR:	52.4%	53.0%		

Main Assumptions

1. Costs include power purchased from generating stations for which evacuation lines are being built.

2. Benefits of power evacuation are taken as the willingness to pay (economic) or tariff (financial). In the base case it is assumed that the tariff is equal to the cost of the marginal supply source (liquid-fuel based power stations) adjusted for transmission losses; and that the willingness to pay (WTP) is equal to this tariff. These are conservative assumptions (resulting in a WTP of Rs. 3.00/kwh levelised at 1997 price levels); the economic returns are significantly higher if the consumer surplus change methodology is applied (resulting in a WTP of Rs. 3.4/kwh).

Explanation of Results

The IRRs are unusually high because of the extremely poor condition of the distribution system (and because the proposed project addresses the worst segments of the distribution system); and because of the high level of unserved demand eliminated by the evacuation lines.

The economic benefits exceed the financial benefits because the economic benefits of reducing unserved energy substantially exceed the tariffs.

The benefits exclude quantification of the reduction in the following externalities:

1. The reduction in accident and mortality rates consequent to the purchase of safety equipment for staff.

2. The reduction in damage to equipment owned by consumers consequent to the improvement in supply quantity in the rehabilitated feeders.

3. Reduction in damage to distribution transformers consequent to the improvement in feeder loading.

4. Long term benefits of the reform program (of which the Emergency Action Plan funded by this loan is just the first step).

Risk Assessment

A comprehensive risk assessment was conducted to test the sensitivity of returns to input assumptions. The economic and financial returns of the feeder rehabilitation and the economic returns of the power evacuation component are highly robust. The only major risk identified is if the power from the liquid-fuel power stations (for which the Emergency Action Plan is providing power evacuation lines) were sold to agricultural consumers at unremunerative tariffs, which obviously would result in negative financial returns. The curtailment policy that underpins the financial restructuring plan decided by Haryana excludes such an assumption.

Annex 5

Financial Summary for Revenue Earning Project Entities (Haryana State Electricity Board)

Years Ending March 31: 1994 through 2004
(In Millions of Current Rupees)

	FY 94 Act.	FY 95 Act.	FY 96 Act.	FY 97 Unaud.	FY 98 Est.	FY 99 Proj.	FY 00 Proj.	FY 01 Proj.	FY 02 Proj.	FY 03 Proj.	FY 04 Proj.	Average
Income statement items												
Unit volume (GWh)	8,316	8,202	8,745	9,103	8,835	9,050	9,537	12,229	14,699	15,581	16,613	7%
Revenues (excl. subsidy)	8,564	9,946	12,946	15,382	16,953	19,717	23,708	35,908	49,621	58,352	62,781	22%
Operating income (incl. subsidy)	(2,721)	1,699	2,778	1,126	(897)	1,583	4,112	5,725	6,743	9,255	8,313	-31%
Net income (incl. subsidy)	(4,110)	162	783	(1,192)	(3,331)	(1,346)	608	1,218	1,555	3,594	2,460	23%
Funds statement items												
Internal resources	(1,925)	3,133	4,268	2,557	634	4,301	7,316	9,533	11,307	12,533	12,702	39%
Borrowings	4,734	5,048	5,521	5,133	6,520	5,053	7,528	7,621	7,189	5,027	4,842	4%
Equity investments	0	0	0	3,100	0	2,682	3,057	315	548	122	226	
Others	316	371	(3,765)	2,460	3,253	348	245	193	199	204	208	-122%
Total sources	3,125	8,552	6,024	13,251	10,407	12,384	18,146	17,662	19,243	17,887	17,978	21%
Capital expenditures	1,501	1,478	614	1,821	3,107	5,466	8,636	8,669	9,102	7,677	7,745	27%
Working capital increase/ decrease	(1,013)	(2,397)	2,023	781	883	2,368	2,793	2,660	2,598	1,673	138	-5%
Debt service	2,511	9,389	3,544	10,650	6,318	4,301	6,440	6,181	7,281	8,246	9,782	33%
Other assets	124	85	(158)	1	100	248	278	152	262	291	313	1297%
Total applications	3,123	8,555	6,022	13,253	10,407	12,384	18,146	17,662	19,243	17,887	17,978	22%
Balance sheet items												
Current assets less current liabilities	(12,089)	(7,843)	(8,195)	(4,883)	(4,241)	(7,511)	(3,619)	(1,553)	307	520	284	-12%
Net fixed assets	16,761	17,671	16,293	15,881	17,408	29,218	34,279	40,766	45,688	49,171	51,576	12%
Capital works in progress	3,982	3,115	3,629	4,430	4,479	4,561	5,231	4,085	4,316	4,002	4,300	2%
Other assets	406	491	333	333	433	661	870	897	1,003	1,086	1,153	16%
Total assets	9,060	13,435	12,060	15,762	18,080	26,929	36,760	44,194	51,314	54,780	57,313	17%
Debt	13,051	16,891	14,267	15,514	20,228	24,006	29,926	35,633	40,452	41,793	42,662	12%
Equity	11,900	11,900	11,900	15,000	15,000	2,682	5,739	6,054	6,602	6,724	6,950	7%
Retained earnings	(17,696)	(17,535)	(16,752)	(17,944)	(21,275)	(1,346)	(737)	481	2,036	3,833	5,063	17%
Other reserves	1,810	2,181	2,649	3,194	4,129	1,590	1,835	2,028	2,228	2,432	2,640	10%
Total liabilities and equity	9,065	13,438	12,065	15,764	18,082	26,932	36,762	44,196	51,316	54,782	57,315	17%
Financial ratios												
Operating income as % of revenue	*(32%)*	*17%*	*21%*	*7%*	*(5%)*	*8%*	*17%*	*16%*	*14%*	*16%*	*13%*	
Net income as % of revenue	*(48%)*	*2%*	*6%*	*(8%)*	*(20%)*	*(7%)*	*3%*	*3%*	*3%*	*6%*	*4%*	
Return on average invested capital	*(37%)*	*1%*	*6%*	*(9%)*	*(20%)*	*(6%)*	*2%*	*3%*	*3%*	*7%*	*4%*	
Operating surplus as % of total capital employed	*(21%)*	*23%*	*35%*	*16%*	*4%*	*16%*	*19%*	*21%*	*21%*	*26%*	*24%*	
Debt service coverage ratio	*(0.8)*	*0.5*	*1.3*	*0.4*	*0.2*	*1.0*	*1.3*	*1.5*	*1.5*	*1.7*	*1.4*	
% of average capital expenditure financed by internal generation	*(118%)*	*(676%)*	*(458%)*	*(416%)*	*(88%)*	*(38%)*	*(23%)*	*10%*	*19%*	*34%*	*37%*	
Current ratio	*0.5*	*0.5*	*0.6*	*0.7*	*0.8*	*0.5*	*0.7*	*0.9*	*1.0*	*1.0*	*1.0*	
Debt as % of capitalisation	*144%*	*126%*	*118%*	*98%*	*112%*	*89%*	*81%*	*81%*	*79%*	*76%*	*74%*	

Note: Figures in the Funds Statement and Balance Sheet Items may not match due to rounding off.

Definitions of parameters used:

Presentation	*Justification*
Operating income:	Total revenue from operations including subsidy less total expenses relating to operations, but excluding interest
Net income:	Total revenue less total expenses.
Invested capital:	The sum of long term liabilities, equity and retained earnings. Average invested capital refers to the average of the opening and closing balances of invested capital in a year. Total capital employed and total capitalization are used interchangeably with invested capital.
Operating surplus:	Income before depreciation and interest.
Debt service coverage ratio:	Net income before interest, depreciation and other non-cash charges divided by the sum of interest charged to operations and repayments due during the year.
Internal resource generation:	The sum of gross revenues from all sources related to operations for the year, consumer deposits, consumers' contribution, reductions in non-cash working capital less the sum of all expenses related to operations for the year excluding depreciation and other non-cash operating charges, interest and other charges on debt, repayment of loans, all taxes or payments in lieu of taxes, all cash dividends and other cash distribution of surplus.
Current ratio:	Total current assets divided by total current liabilities (including current maturities of debt and accumulated overdue interest).

Annex 5(a)

PROJECTIONS OF CONSOLIDATED SUCCESSOR COMPANIES
HARYANA - POWER SECTOR FUNDS FLOWS

Values in Rs. million	FY 93 Act	FY 94 Act	FY 95 Act	FY 96 Act	FY 97 Unaud.	FY 98 Est.	FY 99 Proj	FY 00 Proj	FY 01 Proj	FY 02 Proj	FY 03 Proj	FY 04 Proj	FY 05 Proj	FY 06 Proj	FY 07 Proj
RECEIPTS															
Onlending of IBRD loan	0	0	0	0	0	180	2,234	2,339	3,375	3,868	3,720	4,314	3,404	2,124	1,000
Onlending of grants	0	0	0	0	0	162	168	58	0	0	0	0	0	0	0
Electricity Duty	503	503	453	374	403	478	492	532	741	971	1,055	1,140	1,232	1,331	1,435
Interest on Haryana loans	0	0	3,500	1,058	1,185	1,000	0	0	0	0	0	0	0	0	0
Repayment of Haryana loans	8,000	0	3,731	10	6,603	2,318	0	0	0	0	0	0	0	0	0
Interest on IBRD	0	0	0	0	0	11	162	448	804	1,243	1,680	2,115	2,493	2,694	2,703
Repayment of IBRD loan	0	0	0	0	0	0	0	0	15	201	396	677	1,000	1,310	1,669
Dividends	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*1,797*	*1,230*	*1,198*	*1,392*	*1,642*
TOTAL	8,503	503	7,684	1,442	8,190	4,149	3,055	3,376	4,935	6,283	8,648	9,476	9,327	8,850	8,448
PAYMENTS															
Onlending of IBRD loan	0	0	0	0	0	180	2,234	2,339	3,375	3,868	3,720	4,314	3,404	2,124	1,000
Onlending of grants	0	0	0	0	0	162	168	58	0	0	0	0	0	0	0
Cash subsidy	352	718	1,151	1,250	1,192	1,500	4,631	4,766	4,446	2,000	0	0	0	0	0
Subsidy by adjustment[10]	0	0	3,500	5,233	3,244	3,318	0	0	0	0	0	0	0	0	0
Settlement of receivables from Haryana depts.	0	0	3,731	0	0	0	0	0	0	0	0	0	0	0	0
Loan to the power sector	1,894	2,300	2,990	3,267	2,363	2,874	0	0	0	0	0	0	0	0	0
Equity	8,000	0	0	0	3,100	0	2,682	2,878	300	540	72	134	406	610	866
Interest on IBRD loan	0	0	0	0	0	8	113	313	563	870	1,176	1,481	1,745	1,886	1,892
Repayment on IBRD loan	0	0	0	0	0	0	0	0	10	141	277	474	700	917	1,168
TOTAL	*10,246*	*3,018*	*11,372*	*9,750*	*9,899*	*8,042*	*9,828*	*10,354*	*8,694*	*7,419*	*5,245*	*6,402*	*6,254*	*5,536*	*4,926*
NET SURPLUS (DEFICIT)	(1,743)	(2,515)	(3,688)	(8,308)	(1,709)	(3,893)	(6,772)	(6,978)	(3,759)	(1,135)	3,403	3,073	3,072	3,314	3,522
US$ million	(56)	(81)	(119)	(268)	(50)	(108)	(182)	(179)	(92)	(26)	75	65	62	64	66

[10] *The flows in FY 96 and FY 97 appear skewed because of a time lag in the payment of subsidies to HSEB. While part of the subsidy receivable by HSEB in FY 96 was actually received in FY 97, HSEB reflected this amount in its FY 96 accounts. If the flows are adjusted for this time lag, the adjusted flows would be Rs. 4,100 million and Rs. 6,200 million in FY 96 and FY 97 respectively.*

Annex 6

Procurement and Disbursement Arrangements

HARYANA POWER RESTRUCTURING AND DEVELOPMENT PROGRAM
HARYANA POWER RESTRUCTURING PROJECT

Procurement

Institutional capability

None of the project component involves complex procurement issues; and HSEB has generally the capability to carry out the procurement activities. Two engineering groups headed by chief engineers deal with preparation of design and bidding documents respectively: (i) for 66 kV and higher transmission system; and (ii) 33 kV and lower subtransmission and distribution systems. However, given the time constraints and the increase in investment activities, HSEB has decided to use consultants to assist in procurement activities, as indicated below.

The bidding documents of the transmission lines and sub-stations (see Annex 2, component 1.a.1) have been prepared with the assistance of POWERGRID. Similarly HSEB will use short-term consultants to assist in preparing the bidding documents for the goods to be procured for improving the commercial and technical services to the consumers (see Annex 2, component 2). The terms of reference for the technical assistance and engineering services (see Annex 2, component 3) have been prepared with the assistance of the Bank team and UK-DFID. For all the other project components, HSEB has prepared most of the bidding documents, which have been reviewed by the Bank.

HSEB will hire national consultants through a very small assignment (less than US$ 50,000) to assist in evaluating the bids for supply and erect type of contracts (works for transmission lines and sub-stations) and for goods of technically more complex nature (meter testing equipment, boundary meters, LT capacitors and switches). In addition, Haryana has decided to get the support of reputed engineering consultants to assist in the preparation, execution and supervision of the long term program (e.g., APL2 and subsequent ones), including on procurement activities (see attachment 8, Annex 8 of the Program and Project Implementation Plan); Haryana expects that these consulting services would be funded by bilateral sources, and would therefore be procured through the funding agency's procurement procedures. Should these consulting services be funded through the Bank's loan, they would be procured in conformity with the Bank's guidelines for the selection and employment of consultants by World Bank borrowers (January 1997).

Procurement methods

Most of the works and goods (94% of the total value of the works and goods contracts) will be procured through ICB as indicated in Table A. The rest of the works and goods may be procured through National Competitive Bidding (NCB) procedure. The NCB procedure has been selected for the following cases:

Communication systems (estimated costs: US$ 700,000): the district headquarters are scattered throughout Haryana, and the contract is of a small size,

- Poles (estimated costs: US$ 1,100,000): it is not feasible for international bidders to manufacture and transport prestressed concrete poles to Haryana
- Safety kits (estimated costs: US$ 400,000): the contract value is too small to attract interest from international bidders.

- Erection and rehabilitation works in the distribution network (feeders and sub-stations) (estimated costs: US$ 1,400,000). These works will be carried out throughout the Haryana state, and would require a large flexibility from the contractor to adapt to operational constraints.

Technical assistance and engineering services amounting to US$ 10.5 million (78% of the total technical assistance and engineering services component) are expected to be funded by UK-DFID (US$ 6.5 million) and other bilateral donors (US$ 4 million). The project also includes services for US$ 2 million, funded through a Project Preparation Facility advance (3 contracts amounting to US$ 1.840 million have been awarded through quality-based selection, 1 contract amounting to US$ 62,000 has been awarded on a single-source basis, and a last contract (less than US$ 100,000) is expected to be awarded before end CY 1997 through quality-based selection). It is expected that under the project, the Bank will finance technical assistance services for US$ 1 million (quality- and cost-based selection). Tables A(i) and A(ii) summarizes the procurement arrangements while Annex 6 (a) lists the main contracts.

The following procurement procedures (summarized in Table B(i)) will be followed:

- Works contracts of US$ 5,000,000 and more will be awarded through ICB
- Works contracts of US$ 100,000 and more but less than US$ 5,000,000 will be awarded through NCB
- Works contracts of less than US$ 100,000 will be awarded through quotation
- Good contracts of US$ 200,000 and more will be awarded through ICB except for the items noted above
- Good contracts of US$ 30,000 and more but below US$ 200,000 will be awarded through NCB
- Good contracts of less than US$ 30,000 will be awarded through shopping.

Prior review thresholds

Prior Bank review of bid documents and approval of all contracts would be mandatory for:

- All contracts to be awarded through ICB
- All works contracts of US$ 500,000 and more regardless of the procurement procedure
- All good contract of US$ 200,000 and more regardless of the procurement procedure
- Consultant contracts (individual) of US$ 50,000 and more
- Consultant contracts (firms) of US$ 100,000 and more regardless of the procurement procedure.

Disbursement

Allocation of loan proceeds (Table C)

Use of statements of expenses (SOEs) (Table B)

Special account: **US$ 4 million**

Table A.1: Project Costs by Procurement Arrangements
(in US$ million equivalent)

Expenditure Category	Procurement Method				Total Cost (including contingencies)
	ICB	NCB	Other	N.B.F.	
Works					
1.a. Construction of critically needed transmission lines and sub- stations					
	15.0				15.0
	(11.2)				(11.2)
1.b. Rehabilitation of sub-transmission & distribution systems					
		1.6			1.6
		(1.3)			(1.3)
1.c. Improvement of commercial and technical services to consumers					
	1.2				1.2
	(1.0)	-			(1.0)
Goods	43.4	2.3			45.7
	(41.6)	(1.9)			(43.5)
Technical assistance and engineering services					
(including PPF)	-	-	3.0[a/]	10.5[b/]	13.5
	-	-	(3.0)	-	(3.0)
Total	59.6	3.9	3.0	10.5	77.0
	(53.8)	(3.2)	(3.0)	-	(60.0)

N.B.F: Not Bank-Financed
Figures in parenthesis are the amounts to be financed under the Bank loan.
a/ Includes the PPF advance for US$ 2,000,000.
b/ Expected to be financed by UK-DFID (US$ 6.5 million) and other bilateral donor(s) (US$ 4 million).

Table A.2: Consultant Selection Arrangements
(in US$ million equivalent)

Consultant Services	Selection Method				Total cost (including contingencies)
	QCBS	QBS	CQ	N.B.F.	
A. Firms	1.0 (1.0)	1.94[7] (1.94)	0.06[7] (0.06)	10.5	13.5 (3.0)
B. Individuals					
Total	1.0 (1.0)	1.94 (1.94)	0.06 (0.06)	10.5	13.5 (3.0)

a/ Consultants funded under the US$ 2 million PPF advance.
Note: QCBS: Quality and cost-based Selection
QBS: Quality-based selection
CQ: Selection based on consultants' qualifications
Other: Selection of individual consultants (per Section V of Consultants' Guidelines),
N.B.F. Not Bank-financed. (Figures in parenthesis are the amounts to be financed under the Bank loan).

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11 *TA includes PPF (US$ 2 million), project consultancy, training for HSEB engineers and institution building support.*

Table B.1: Thresholds for Procurement Methods and Prior Review

Expenditure Category	Contract Value (Threshold)	Procurement Method	Contracts Subject to Prior Review / Estimated Total Value Subject to Prior Review
	US$ million		Numbers / US$ million
1. Works	< 0.1	Quotation	0/0
	>0.1 and <5	NCB	1 / 1.4
	>5	ICB	2/15
2. Goods	<0.03	Shopping	0/0
	>0.03 and <0.2	NCB	3 / 2.2
	> 0.2 a/	ICB	18/59.5
3. Services	as per Bank's guidelines		

a/ Except for items mentioned in Annex 6, section "Procurement" above.

Table B.2: SOE Limits

Category	Threshold limit
Works	US$ 500,000
Goods	US$ 200,000
Consultancy - Firms	US$ 100,000
- Individuals	US$ 50,000

Table C: Allocation of Loan Proceeds

	Expenditure Category	Amount in US$ million	Financing Percentage
A.	Works	12.2	(i) 80% of expenditure for works executed through supply and erect ICB procedures
			(ii) 80% of expenditure for works executed through NCB procedures
B.	Goods	40.0	100% of CIF expenditure
			100% of ex-factory expenditure
			80% of other local expenditure
C.	Services	2.8	100% of foreign expenditure and local expenditure
	Sub-total	55.0	
	Unallocated	5.0	
	Total	60.0	

Annex 7

Project Processing Budget and Schedule

HARYANA POWER RESTRUCTURING AND DEVELOPMENT PROGRAM
HARYANA POWER SECTOR RESTRUCTURING PROJECT

A. Project Budget (US $000)	Planned (At final PCD stage)	Actual
Regular Budget (RB)	391	475

B. Project Schedule	Planned (At final PCD stage)	Actual
Time taken to prepare the project (months)		
First Bank mission (identification)	06/21/1994	06/21/1994
Appraisal mission departure	07/21/1997	09/15/1997
Negotiations	08/25/1997	11/20/1997
Planned Date of Effectiveness	12/01/1997	03/01/1998

Prepared by: **Haryana State Electricity Board and Government of Haryana**

Preparation assistance:
PPF Advance: US$ 2,000,000 out of which US$ 1,900,000 have been committed
Trust Funds: US$ 680,000

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Annex 8

Documents in the Project File

HARYANA POWER RESTRUCTURING AND DEVELOPMENT PROGRAM
HARYANA POWER SECTOR RESTRUCTURING PROJECT

A. Government of Haryana and Haryana State Electricity Board (HSEB)

A.1. Policy and Program Statements

General Power Sector Policy Statement, January 1996
Detailed Power Sector Policy Statement, November 1997
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A.2. Assessments

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Volume 2: Load Forecasting
Volume 3: Integrated Least-Cost Expansion Study; Vol. I & II
Volume 4: Implementation Program Final Report
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Volume II: Diagnostic Report
Volume III: Assessment and Comparison of Options for Reform
Volume IV: Recommended Reform Program
Volume V: Implementation Plan
Volume VI: Technical Appendix

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- Rehabilitation and Reinforcement of HSEB Network, 1996

Mantec Consultants PVT

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- Environmental Impact Assessment/Environmental Management Plan (Panipat Power Station), August 1997

B. World Bank Assessments

- Haryana Power Sector Restructuring and Development Program: Reform Agenda and World Bank Assistance; June 1997
- Haryana Power Sector Restructuring and Development Program: Economic Analysis; October 1997
- Completion of Panipat Unit 6: Issues and Options - prepared by Dr. Peter Meier, IDEA, 1995
- Financial Restructuring: Issues, Options and Simulations, May 1997
- Financial Appraisal Report, November 1997

C. Other: Demand Side Management and Co-Generation

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- India: Haryana State Power Sector Restructuring Project - Bio-mass Cogeneration Project Development Study - May 1997
- Haryana State Power Sector Restructuring Project - Study on Bio-mass Cogeneration in Haryana - May 1997
- Haryana State Power Sector Restructuring Project - Energy Efficiency Services - Volume I - Main Report; Volume II - Annexures - April 1997

Annex 9

Status of Bank Group Operations in India
IBRD Loans and IDA Credits in the Operations Portfolio
(As of September 30, 1997)

Project ID	Loan or Credit No.	Fiscal Year	Purpose	Original Amount in US$ Millions				Difference Between expected and actual Disbursements a/	
				IBRD	IDA	Cancel-lations	Undis-bursed	Origi-nal	Form. Rev'd
Number of Closed Loans/credits: 367									
Active Loans									
IN-PE-	IDA29360	1997	TUBERCULOSIS	0.00	142.40	0.00	130.08	137.86	0.00
IN-PE-	IDA29640	1997	MALARIA CONTROL	0.00	164.80	0.00	163.13	165.44	0.00
IN-PE-	IDAN0180	1997	REPRODUCTIVE	0.00	248.30	0.00	245.66	249.20	0.00
IN-PE-	IBRD41660	1997	AP IRRIGATION III	175.00	0.00	0.00	175.00	325.00	0.00
IN-PE-	IDA29520	1997	AP IRRIGATION III	0.00	150.00	0.00	97.67	275.28	0.00
IN-PE-	IDA29160	1997	ECODEVELOPMENT	0.00	28.00	0.00	25.11	26.17	0.00
IN-PE-	IDA29300	1997	ENV CAPACITY BLDG TA	0.00	50.00	0.00	44.53	47.17	0.00
IN-PE-	IDA29420	1997	RURAL WOMEN'S DEV	0.00	19.50	0.00	18.48	19.53	0.00
IN-PE-	IBRD41140	1997	TA ST'S RD INFRA DEV	51.50	0.00	0.00	47.68	47.68	0.00
IN-PE-	IBRD41560	1997	A.P. EMERG. CYCLONE	50.00	0.00	0.00	50.00	150.00	0.00
IN-PE-	IDA29500	1997	A.P. EMERG. CYCLONE	0.00	100.00	0.00	90.66	142.03	0.00
IN-PE-9995	IBRD41920	1997	STATE HIGHWAYS I(AP)	350.00	0.00	0.00	350.00	350.00	0.00
IN-PE-	IBRD39230	1996	B SEWAGE DISPOSAL	167.00	0.00	0.00	147.90	172.90	0.00
IN-PE-	IBRD40560	1996	UP RURAL WATER	59.60	0.00	0.00	56.74	56.74	0.00
IN-PE-	IDA27740	1996	HYDROLOGY PROJECT	0.00	142.00	0.00	116.86	135.31	0.00
IN-PE-	IDA28010	1996	ORISSA WRCP	0.00	290.90	0.00	219.14	241.98	0.00
IN-PE-	IBRD40140	1996	ORISSA POWER SECTOR	350.00	0.00	0.00	334.57	334.57	0.00
IN-PE-	IDA28760	1996	DISTRICT PRIM EDUC 2	0.00	425.20	0.00	390.12	323.04	0.00
IN-PE-	IDA28330	1996	STATE HEALTH SYS II	0.00	350.00	0.00	308.90	337.29	0.00
IN-PE-	IBRD39920	1996	ILFS-INFRAS FINANCE	200.00	0.00	0.00	175.00	180.00	0.00
IN-PE-	IDA28380	1996	ILFS-INFRAS FINANCE	0.00	5.00	0.00	4.65	205.00	0.00
IN-PE-	IDA28620	1996	COAL ENV&SOCIAL MIT.	0.00	63.00	0.00	56.42	60.00	0.00
IN-PE-	IBRD39076	1995	MADRAS WATER SUP II	269.80	0.00	189.30	75.79	271.09	75.79
IN-PE-	IBRD37790	1995	INDUS POLLUTION PREV	93.00	0.00	0.00	85.93	160.93	0.00
IN-PE-	IBRD37806	1995	INDUS POLLUTION PREV	50.00	0.00	0.00	45.23	163.23	0.00
IN-PE-	IDA26450	1995	INDUS POLLUTION PREV	0.00	25.00	0.00	24.22	168.00	0.00
IN-PE-	IDA26610	1995	DISTRICT PRIMARY ED	0.00	260.30	0.00	181.81	192.92	0.00
IN-PE-	IDA27450	1995	TAMIL NADU WRCP	0.00	282.90	0.00	235.16	268.27	0.00
IN-PE-	IDA26630	1995	AP 1ST REF. HEALTH S	0.00	133.00	0.00	111.40	120.11	0.00
IN-PE-	IDA26990	1995	AGRIC HUMAN RES DEVT	0.00	59.50	0.00	48.37	52.17	0.00
IN-PE-	IDA27000	1995	MP FORESTRY	0.00	58.00	0.00	42.56	46.09	0.00
IN-PE-	IDA27330	1995	ASSAM RURAL INFRA	0.00	126.00	0.00	106.64	121.59	0.00
IN-PE-	IBRD38560	1995	FINANCIAL SECTOR DEV	350.00	0.00	0.00	200.00	550.00	340.82
IN-PE-	IBRD38576	1995	FINANCIAL SECTOR DEV	144.00	0.00	0.00	140.82	696.82	340.82
IN-PE-	IDA25720	1994	FORESTRY RESEARCH	0.00	47.00	0.00	33.63	33.44	0.00
IN-PE-	IDA25730	1994	ANDHRA PRADESH	0.00	77.40	0.00	52.36	52.69	0.00
IN-PE-	IDA26110	1994	BLINDNESS CONTROL	0.00	117.80	0.00	99.49	99.50	0.00
IN-PE-	IDA26300	1994	POPULATION IX	0.00	88.60	0.00	71.95	74.21	0.00
IN-PE-	IDA25940	1994	MAHARASHTRA	0.00	246.00	29.19	40.37	65.34	35.99
IN-PE-9870	IBRD37530	1994	CONTAINER TRANSPORT	94.00	0.00	0.00	82.46	82.46	0.00
IN-PE-9964	IDA25920	1994	WATER RES CONSOLID H	0.00	258.00	0.00	183.27	181.17	0.00
IN-PE-	IDA24330	1993	ADP - RAJASTHAN	0.00	106.00	0.00	44.19	46.67	0.00

Project ID	Loan or Credit No.	Fiscal Year	Purpose	Original Amount in US$ Millions				Difference Between expected and actual Disbursements a/	
				IBRD	IDA	Cancel-lations	Undis-bursed	Origi-nal	Form. Rev'd
IN-PE-	IDA24390	1993	BIHAR PLATEAU	0.00	117.00	0.00	82.83	88.33	0.00
IN-PE-	IDA24490	1993	RENEWABLE	0.00	115.00	0.00	86.20	189.33	0.00
IN-PE-	IBRD35770	1993	PGC POWER SYSTEM	350.00	0.00	0.00	176.54	176.54	0.00
IN-PE-	IDA24830	1993	KARNATAKA WS & ENV.	0.00	92.00	0.00	66.51	66.84	0.00
IN-PE-	IBRD36320	1993	NTPC POWER	400.00	0.00	0.00	231.67	231.67	0.00
IN-PE-	IDA25280	1993	NATL LEPROSY ELIMINA	0.00	85.00	0.00	49.51	50.36	0.00
IN-PE-9955	IDA25090	1993	UTTAR PRADESH BASIC	0.00	165.00	0.00	66.46	66.66	-98.21
IN-PE-9959	IDA24090	1993	RUBBER	0.00	92.00	36.58	36.87	73.34	36.80
IN-PE-9961	IDA25100	1993	UP SODIC LANDS RECLA	0.00	54.70	0.00	31.13	30.66	0.00
IN-PE-9977	IDA24700	1993	ICDS II (BIHAR & MP)	0.00	194.00	0.00	160.56	159.80	159.80
IN-PE-	IDA23280	1992	MAHARASHTRA	0.00	124.00	16.18	55.49	70.99	54.31
IN-PE-	IDA23410	1992	WEST BENGAL	0.00	34.00	0.00	4.58	3.62	0.00
IN-PE-	IDA23500	1992	AIDS PREVENTION AND	0.00	84.00	0.00	31.54	31.48	0.00
IN-PE-	IBRD34980	1992	MAHARASHTRA POWER II	350.00	0.00	0.00	237.75	237.75	0.00
IN-PE-9888	IBRD34360	1992	POWER UTIL EFFIC IMP	265.00	0.00	25.00	68.91	93.91	68.92
IN-PE-9921	IDA23290	1992	SHRIMP & FISH CULTUR	0.00	85.00	48.51	24.36	71.83	23.20
IN-PE-9946	IBRD34700	1992	NAT. HIGHWAYS II	153.00	0.00	0.00	153.00	306.00	0.00
IN-PE-9946	IDA23650	1992	NAT. HIGHWAYS II	0.00	153.00	0.00	66.44	208.00	0.00
IN-PE-9963	IDA23940	1992	POPULATION VIII	0.00	79.00	0.00	69.87	69.54	0.00
IN-PE-	IDA21730	1991	ICDS I (ORIS & ANDHR	0.00	96.00	21.65	19.13	44.31	12.70
IN-PE-	IDA22340	1991	MAHARASHTRA RURAL	0.00	109.90	0.00	37.98	40.89	0.00
IN-PE-	IBRD33640	1991	GAS FLARING REDUCTIO	450.00	0.00	0.00	20.49	20.49	0.00
IN-PE-9877	IDA22410	1991	DAM SAFETY	0.00	130.00	0.00	94.28	114.72	91.74
IN-PE-9885	IBRD32590	1991	PETROCHEMICALS	233.00	0.00	70.30	29.91	112.21	31.81
IN-PE-9906	IBRD33340	1991	IND POLLUTION CONTRO	124.00	0.00	0.00	20.29	51.89	0.00
IN-PE-9906	IDA22520	1991	IND POLLUTION CONTRO	0.00	31.60	0.00	16.89	140.13	0.00
IN-PE-9958	IBRD33000	1991	AGR.DEV.I (TN)	20.00	0.00	0.00	20.00	112.80	0.00
IN-PE-9958	IDA22150	1991	AGR.DEV.I (TN)	0.00	92.80	0.00	15.35	37.06	0.00
IN-PE-9988	IDA22230	1991	TECH EDUC II	0.00	307.10	51.37	122.69	180.08	127.68
IN-PE-9860	IDA21310	1990	WTRSH PLAINS	0.00	55.00	0.00	16.52	18.18	11.18
IN-PE-9882	IDA21000	1990	WTRSH HILLS	0.00	75.00	0.00	29.42	37.50	24.51
IN-PE-9890	IDA21150	1990	HYDERABAD W/S	0.00	79.90	0.00	19.88	20.65	10.63
IN-PE-9895	IBRD31190	1990	TECHNOLOGY	145.00	0.00	20.00	16.41	91.41	42.73
IN-PE-9895	IDA20640	1990	TECHNOLOGY	0.00	55.00	0.00	22.84	161.32	42.73
IN-PE-9932	IDA21580	1990	SECOND TN NUTRITION	0.00	95.80	29.81	.92	23.78	-6.08
IN-PE-9940	IDA21330	1990	POP. TRG (VII)	0.00	86.70	22.74	5.07	32.16	-.61
IN-PE-9965	IDA20760	1990	PUNJAB IRR & DRAINAG	0.00	150.00	4.72	32.65	36.33	16.62
IN-PE-9982	IBRD32370	1990	NOR REG TRANSM	485.00	0.00	0.00	244.84	244.84	0.00
IN-PE-9989	IDA21300	1990	TECH EDUC I	0.00	235.00	24.26	51.61	85.95	36.70
IN-PE-9869	IBRD30240	1989	NATHPA JHAKRI HYDRO	485.00	0.00	0.00	227.21	227.21	0.00
IN-PE-9941	IBRD30960	1989	MAHARASHTRA POWER	400.00	0.00	62.67	72.27	134.94	72.28
IN-PE-9973	IBRD29940	1989	STATE ROADS I	170.00	0.00	61.41	6.99	148.40	1.70
IN-PE-9990	IDA20080	1989	VOCATIONAL TRAINING	0.00	250.00	103.33	36.48	163.97	30.67
Total				**6,433.9**	**7,388.1**	**817.0**	**8,034.3**	**11,936.8**	**1,585.2**

Annex 9

STATEMENT OF IFC's
Committed and Disbursed Portfolio
As of September 30, 1997
(In US Dollar Millions)

		Committed				Disbursed			
		IFC				IFC			
FY Approval	Company	Loan	Equity	Quasi	Partic	Loan	Equity	Quasi	Partic
1964/75/79/90	MUSCO	0.00	1.08	0.00	0.00	0.00	1.08	0.00	0.00
1978/87/91/93	HDFC	40.00	2.29	0.00	0.00	40.00	2.29	0.00	0.00
1981	Nagarjuna Steel	0.00	.07	0.00	0.00	0.00	.07	0.00	0.00
1981/86/81/91/93/9	ITW Signode	0.00	1.55	0.00	0.00	0.00	1.55	0.00	0.00
6981/86/89/94/92	TISCO	6.65	15.37	0.00	0.00	6.65	15.37	0.00	0.00
1981/90/93	M&M	.83	6.49	0.00	3.33	.83	6.49	0.00	3.33
1982	Modi Cement	16.56	0.00	0.00	0.00	16.56	0.00	0.00	0.00
1984/90/94	India Lease	1.09	.86	0.00	0.00	1.09	.86	0.00	0.00
1984/91	Bihar Sponge	12.84	.68	0.00	0.00	12.84	.68	0.00	0.00
1986	EXB-City Mills	.48	0.00	0.00	0.00	.48	0.00	0.00	0.00
1986	EXB-CECL	.01	0.00	0.00	0.00	.01	0.00	0.00	0.00
1986	EXB-NB Footwear	.19	0.00	0.00	0.00	.19	0.00	0.00	0.00
1986	EXB-Paharpur	.15	0.00	0.00	0.00	.15	0.00	0.00	0.00
1986	EXB-STG	.43	0.00	0.00	0.00	.43	0.00	0.00	0.00
1986	EXB-TAN	.03	0.00	0.00	0.00	.03	0.00	0.00	0.00
1986	EXB-Wires & Fab.	.07	0.00	0.00	0.00	.07	0.00	0.00	0.00
1986/92/93/94	GESCO	0.00	13.05	0.00	0.00	0.00	13.05	0.00	0.00
1986/93/94/95	India Equipment	.54	.77	0.00	1.33	.54	.77	0.00	1.33
1987	Hindustan	7.38	0.00	0.00	0.00	7.38	0.00	0.00	0.00
1987/88/90/93	Titan Watches	1.69	1.03	0.00	0.00	1.69	1.03	0.00	0.00
1988/90/92	Tata Telecom	0.00	.10	0.00	0.00	0.00	.10	0.00	0.00
1988/94	GKN Invel	0.00	1.40	0.00	0.00	0.00	1.40	0.00	0.00
1989	AEC	13.68	0.00	0.00	0.00	13.68	0.00	0.00	0.00
1989	UCAL	0.00	.63	0.00	0.00	0.00	.63	0.00	0.00
1989/90/94	Tata Electric	60.96	0.00	0.00	0.00	60.96	0.00	0.00	0.00
1989/91	Gujarat State	11.23	0.00	0.00	0.00	11.23	0.00	0.00	0.00
1989/95	JSB India	0.00	1.21	0.00	0.00	0.00	1.21	0.00	0.00
1990	HOEL	0.00	.28	0.00	0.00	0.00	.28	0.00	0.00
1990	TDICI-VECAUS II	0.00	1.59	0.00	0.00	0.00	1.59	0.00	0.00
1990/92	CESC	48.27	0.00	0.00	67.00	48.27	0.00	0.00	67.00
1990/93/94	IL & FS	25.50	3.11	1.81	9.00	25.50	3.11	1.81	9.00
1990/94	ICICI-IFGL	0.00	.30	0.00	0.00	0.00	.30	0.00	0.00
1990/95	ICICI-SPIC Fine	0.00	1.88	0.00	0.00	0.00	1.88	0.00	0.00
1991	BSES	42.50	0.00	0.00	0.00	42.50	0.00	0.00	0.00
1991/93	Triveni	0.00	1.11	0.00	0.00	0.00	1.11	0.00	0.00
1991/96	VARUN	10.10	1.35	0.00	5.33	10.10	1.35	0.00	5.33
1992	Indus VC Mgt Co	0.00	.01	0.00	0.00	0.00	.01	0.00	0.00
1992	Indus VCF	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
1992	Info Tech Fund	0.00	.64	0.00	0.00	0.00	.64	0.00	0.00
1992	SKF Bearings	5.74	0.00	0.00	0.00	5.74	0.00	0.00	0.00
1992/93	Arvind Mills	0.00	17.10	0.00	0.00	0.00	17.10	0.00	0.00
1992/94/97	Ispat Industries	82.58	5.77	0.00	85.00	42.72	5.77	0.00	0.00
1992/95	Creditcapital VF	0.00	1.05	0.00	0.00	0.00	1.05	0.00	0.00
1992/96/97	NICCO-UCO	1.88	.50	0.00	0.00	1.88	.50	0.00	0.00
1993/94/96	Indo Rama	20.31	11.98	0.00	8.13	20.31	11.98	0.00	8.13
1993/97	20TH Century	15.78	.80	0.00	4.62	5.78	.80	0.00	4.62

		Committed				Disbursed			
		IFC				IFC			
FY Approval	Company	Loan	Equity	Quasi	Partic	Loan	Equity	Quasi	Partic
1994	Centurion Growth	0.00	2.39	0.00	0.00	0.00	2.39	0.00	0.00
1994	Chowgule	15.00	4.58	0.00	27.00	14.65	4.58	0.00	26.36
1994	Crdcap Asset Mgt	0.00	.32	0.00	0.00	0.00	.32	0.00	0.00
1994	DLF Cement	9.90	4.94	0.00	14.88	9.90	4.94	0.00	14.88
1994	Global Trust	0.00	3.19	0.00	0.00	0.00	3.19	0.00	0.00
1994	Gujarat Ambuja	0.00	8.23	0.00	0.00	0.00	8.23	0.00	0.00
1994	Taurus Starshare	0.00	7.17	0.00	0.00	0.00	7.17	0.00	0.00
1994	TCAMC	0.00	.16	0.00	0.00	0.00	.16	0.00	0.00
1994/97	GVK	40.00	8.30	0.00	37.05	30.00	8.30	0.00	37.05
1995	Centurion Bank	0.00	3.87	0.00	0.00	0.00	3.87	0.00	0.00
1995	EXIMBANK	25.00	0.00	0.00	0.00	25.00	0.00	0.00	0.00
1995	ISIC	0.00	.32	0.00	0.00	0.00	.32	0.00	0.00
1995	Prism Cement	15.00	5.02	0.00	15.00	15.00	5.02	0.00	15.00
1995	Rain Calcining	19.25	5.40	0.00	0.00	10.50	4.72	0.00	0.00
1995	RPG Communicatns	0.00	8.30	0.00	0.00	0.00	8.30	0.00	0.00
1995	Sara Fund	0.00	6.96	0.00	0.00	0.00	1.10	0.00	0.00
1995	SRF Finance	13.75	5.00	0.00	0.00	13.75	4.39	0.00	0.00
1996	CVF Oil Gas-AL	8.00	8.00	0.00	0.00	0.00	0.00	0.00	0.00
1996	India Direct Fnd	0.00	7.50	0.00	0.00	0.00	1.76	0.00	0.00
1996	Indus II	0.00	5.00	0.00	0.00	0.00	3.00	0.00	0.00
1996	Indus Mauritius	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1996	Moser Baer	5.70	.60	0.00	0.00	5.70	0.00	0.00	0.00
1996	United Riceland	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1997	Asian Electronic	16.86	5.50	0.00	0.00	0.00	5.50	0.00	0.00
1997	CEAT	20.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1997	Owens Corning	25.00	0.00	0.00	0.00	20.00	0.00	0.00	0.00
1997	SREI	15.00	3.00	0.00	0.00	0.00	3.00	0.00	0.00
1997	WIPRO	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1998	TCW/ICICI	0.00	10.00	0.00	0.00	0.00	1.50	0.00	0.00
	Total Portfolio:	**675.9**	**208.8**	**1.81**	**277.7**	**522.1**	**176.8**	**1.8**	**192.0**

Approvals Pending Commitment

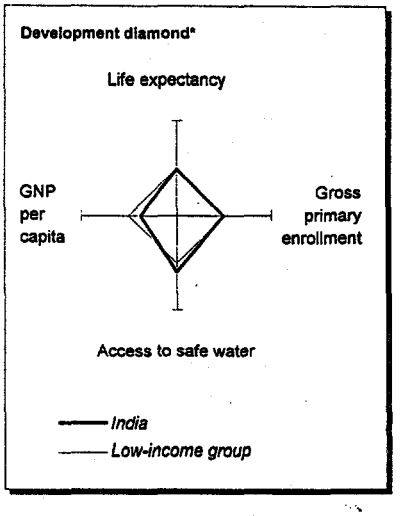
		Loan	Equity	Quasi	Partic
1996	CESC II -BLINC	0.00	0.00	0.00	37.00
1996	DEV CREDIT BANK	0.00	1.89	0.00	0.00
1997	DUNCAN HOSPITAL	7.00	1.00	0.00	0.00
1997	EEPL	0.00	.03	0.00	0.00
1995	IB VALLEY POWER	50.00	20.00	0.00	0.00
1998	IDFC	0.00	20.00	0.00	0.00
1997	ITC CLASSIC	20.00	0.00	10.00	0.00
1994	NEYVELI POWER	30.00	18.00	0.00	150.00
1997	NUFSL	5.00	0.00	0.00	5.00
1997	SAPL	0.00	.07	0.00	0.00
1995	SPIC-RGHTS ISSUE	0.00	.86	0.00	0.00
1996	TARUN SHIPPING	0.00	.80	0.00	0.00
1997	WALDEN - MGMT	0.00	.08	0.00	0.00
1997	WIV	0.00	6.00	0.00	0.00
	Total Pending Commitment:	112.00	68.73	10.00	192.00

Annex 10

India at a glance

11/7/97

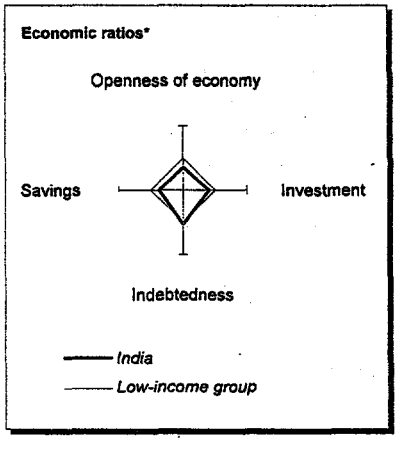
POVERTY and SOCIAL	India	South Asia	Low-income
Population mid-1996 *(millions)*	943.2	1,264	3,229
GNP per capita 1996 *(US$)*	380	380	500
GNP 1996 *(billions US$)*	358.4	481	1,601
Average annual growth, 1990-96			
Population *(%)*	1.7	1.9	1.7
Labor force *(%)*	2.0	2.1	1.7
Most recent estimate *(latest year available since 1989)*			
Poverty: headcount index *(% of population)*	35	..	..
Urban population *(% of total population)*	27	26	29
Life expectancy at birth *(years)*	62	61	63
Infant mortality *(per 1,000 live births)*	68	75	69
Child malnutrition *(% of children under 5)*	63	..	..
Access to safe water *(% of population)*	63	63	53
Illiteracy *(% of population age 15+)*	48	50	34
Gross primary enrollment *(% of school-age population)*	102	98	105
Male	113	110	112
Female	91	87	98



KEY ECONOMIC RATIOS and LONG-TERM TRENDS

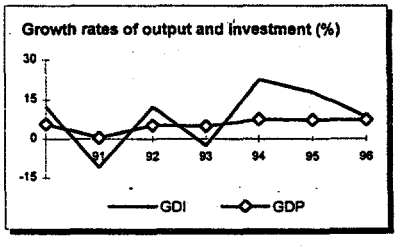
	1975	1985	1995	1996
GDP *(billions US$)*	91.0	214.3	328.3	355.8
Gross domestic investment/GDP	20.8	24.2	26.2	26.5
Exports of goods and services/GDP	6.2	6.0	12.1	12.0
Gross domestic savings/GDP	20.4	21.1	22.7	23.1
Gross national savings/GDP	20.6	21.6	24.2	25.3
Current account balance/GDP	0.0	-2.8	-2.1	-1.2
Interest payments/GDP	0.3	0.6	1.4	1.3
Total debt/GDP	15.1	19.1	28.9	25.2
Total debt service/exports	13.1	22.7	26.9	22.6
Present value of debt/GDP	..	..	22.8	..
Present value of debt/exports	..	..	161.4	..

	1975-85	1986-96	1995	1996	1997-05
(average annual growth)					
GDP	4.2	5.6	7.3	7.5	6.5
GNP per capita	1.9	3.5	5.4	5.2	..
Exports of goods and services	3.9	11.5	31.6	7.5	10.3

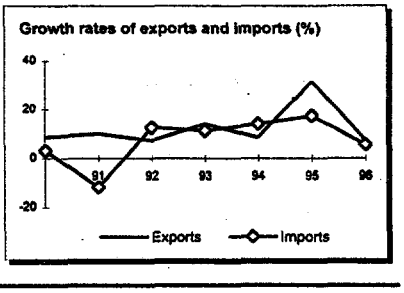


STRUCTURE of the ECONOMY

	1975	1985	1995	1996
(% of GDP)				
Agriculture	40.5	33.0	27.9	27.8
Industry	23.7	28.1	30.1	29.2
Manufacturing	16.7	17.9	19.7	20.1
Services	35.8	38.8	42.1	43.0
Private consumption	70.2	67.8	66.8	66.4
General government consumption	9.4	11.1	10.5	10.5
Imports of goods and services	6.6	9.1	15.6	15.3



	1975-85	1986-96	1995	1996
(average annual growth)				
Agriculture	2.5	3.6	-0.1	5.7
Industry	5.3	6.6	11.6	7.0
Manufacturing	5.5	6.7	13.6	8.1
Services	5.1	6.7	8.8	7.4
Private consumption	4.5	4.8	2.6	6.8
General government consumption	6.5	3.9	5.1	7.2
Gross domestic investment	4.1	7.1	17.9	8.5
Imports of goods and services	9.1	6.0	17.3	5.7
Gross national product	4.1	5.4	7.2	6.7



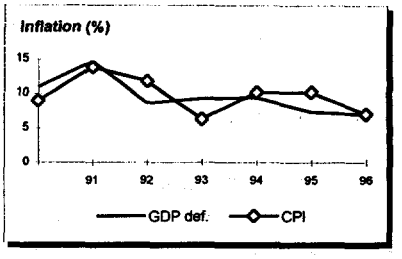
Note: 1996 data are preliminary estimates. All GDP data other than sectoral value-added are in market prices.

* The diamonds show four key indicators in the country (in bold) compared with its income-group average. If data are missing, the diamond will be incomplete.

India

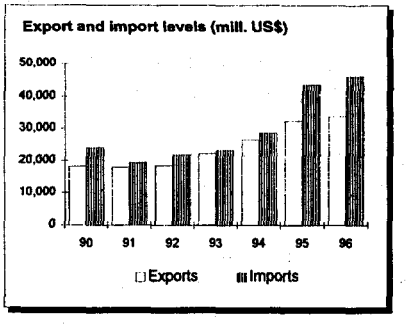
PRICES and GOVERNMENT FINANCE

	1975	1985	1995	1996
Domestic prices				
(% change)				
Consumer prices	..	5.6	10.2	7.0
Implicit GDP deflator	-1.5	7.5	7.3	7.0
Government finance				
(% of GDP)				
Current revenue	..	23.8	24.7	25.2
Current budget balance	..	2.2	1.0	1.3
Overall surplus/deficit	..	-11.0	-10.1	-10.4



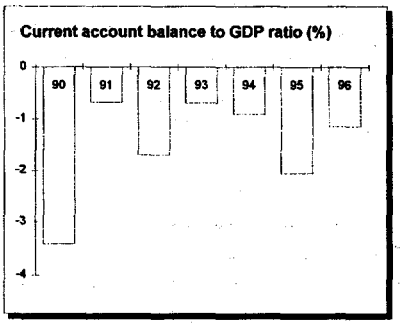
TRADE

	1975	1985	1995	1996
(millions US$)				
Total exports (fob)	..	8,793	32,311	33,638
Tea	..	512	352	290
Iron	..	473	515	484
Manufactures	..	5,640	24,540	24,749
Total imports (cif)	..	15,957	43,670	46,121
Food	..	1,321	1,293	1,359
Fuel and energy	..	4,054	7,526	9,679
Capital goods	..	3,502	4,560	4,513
Export price index *(1980=100)*	..	98	104	103
Import price index *(1980=100)*	..	84	115	116
Terms of trade *(1987=100)*	..	118	90	89



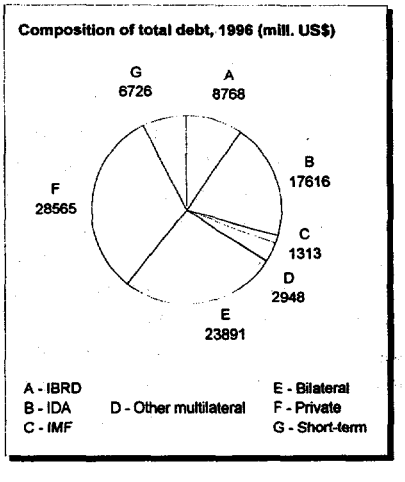
BALANCE of PAYMENTS

	1975	1985	1995	1996
(millions US$)				
Exports of goods and services	5,650	12,773	39,668	42,556
Imports of goods and services	5,990	19,422	51,213	54,431
Resource balance	-340	-6,649	-11,545	-11,875
Net income	-150	-1,552	-3,735	-4,118
Net current transfers	470	2,207	8,506	11,888
Current account balance, *before official capital transfers*	-20	-5,994	-8,774	-4,105
Financing items (net)	20	6,542	3,050	10,095
Changes in net reserves	0	-548	3,724	-5,990
Memo:				
Reserves including gold *(mill. US$)*	2,065	9,493	21,246	26,160
Conversion rate *(local/US$)*	8.7	12.2	33.5	35.5



EXTERNAL DEBT and RESOURCE FLOWS

	1975	1985	1995	1996
(millions US$)				
Total debt outstanding and disbursed	13,708	40,960	94,858	89,827
IBRD	436	2,396	9,849	8,768
IDA	2,809	9,750	17,499	17,616
Total debt service	822	3,532	13,346	12,667
IBRD	89	313	1,713	1,514
IDA	24	124	357	364
Composition of net resource flows				
Official grants	511	450	345	408
Official creditors	1,260	1,424	-1,048	-163
Private creditors	83	2,277	589	-1,102
Foreign direct investment	85	106	2,133	2,359
Portfolio equity	0	0	2,471	2,775
World Bank program				
Commitments	917	2,882	1,697	1,725
Disbursements	531	1,375	1,318	1,628
Principal repayments	63	157	1,169	1,074
Net flows	467	1,218	149	554
Interest payments	50	280	901	804
Net transfers	417	938	-752	-250



Annex 11

DETAILED POLICY STATEMENT

HARYANA POWER RESTRUCTURING AND DEVELOPMENT PROGRAM
HARYANA POWER SECTOR RESTRUCTURING PROJECT

The Present Power Scenario in Haryana

1. Since the creation of the new State of Haryana in 1966, the State's power sector has grown at a remarkable rate, reflecting the dynamic development in agricultural and industrial sectors. The State Government has given the highest priority to the power sector, and as a result, Haryana has electrified all its villages in 1970. This was a unique achievement made by a State for the first time in the country.

2. The installed capacity available to the State has increased from 340 MW in 1967 to about 2400 MW in 1997. The transmission and distribution network has increased nine fold during this period. The Haryana State Electricity Board (HSEB) today serves more than 3.3 million consumers, over ten times what the Board served in the year 1967. Per capita power consumption has increased from 57 units to over 460 units during this period.

3. In spite of these impressive achievements, the power sector has not been able to keep pace with the increase in power demand in the State. Haryana is currently facing an acute power shortage of about 25 percent. There are long queues of applicants seeking new electricity connections. The power sector is faced with problems of low plant load factor in its thermal power stations (about 48%), very high transmission and distribution losses (in excess of 30%), extremely low voltage and frequent interruptions. This has resulted in an adverse impact on the development and economy of the State and the welfare of its people. The State Government is very concerned about the continuing power shortage and the frequent power cuts imposed on various categories of electricity consumers.

4. The root cause of the declining performance of the power sector is the lack of adequate investment to meet the sector's capital requirements and the deterioration in sector efficiency. The primary reason for the lack of investment is the critical financial situation of HSEB. As on 31st March 1997, the accumulated commercial losses of HSEB, excluding the State subsidies, were of the order of Rs. 3400 crores, and cash liabilities in excess of Rs. 1000 crores. HSEB has not been able to meet its operational cash requirements, resulting in poor market credibility. The power sector has not been able to mobilise the resources required to finance development activities. The continuing cash shortfall has also resulted in inefficient operations and maintenance of the existing system. The State's budgetary resources are extensively used to support the operations of the power sector, which could alternatively have been used for other social development activities.

5. Over the next decade, Haryana will need about 2350 MW of additional generation capacity to meet its power demand. Substantial investments will be required in transmission and distribution to supply this additional power and rehabilitate the existing transmission and distribution system so as to reduce system losses and improve quality of power supply. The estimated investment required in the power sector i.e. for generation, transmission and distribution, over the next 10 years is about Rs. 20000 crores. The State's power requirements cannot be met without a massive mobilisation of private resources, the restoration of the creditworthiness of the power utilities, and the establishment of a proper enabling environment. The Government of Haryana is determined to overcome the prevailing problems in the power sector and to face, without any delay, the huge challenges to achieve this goal. This is why the Government of Haryana has decided to restructure and reform the State's power sector.

The Vision of the Government of Haryana

6. Being fully conscious of the current power crisis and of its causes, the Government of Haryana aims to create a financially viable, self-sustaining and healthy power sector, able to meet the power demand of the consumers in an efficient and economical manner. Upon the implementation of the reform and development program, power supply interruptions and curtailments will be eliminated. The State will not be required to provide subsidies to cover the power sector's losses, and the sector will be a net contributor to the State's resources. The new power entities will operate on commercial principles, under an independent regulatory framework; they will ensure a high quality of service to consumers, expeditious release of new connections, supply of quality power at economic rates and expeditious redressal of complaints of consumers.

The Principles of the Reform and Development Program

7. The goal of the Haryana power sector reform is to restore and ensure the sustainable creditworthiness of the power industry, and to create an environment which will attract the investment needed to meet the growing power demand, promote competition, efficiency and economy, and facilitate the development of the power sector. The prime principle of the reform is for the State Government to withdraw from the power sector as an operator and regulator of utilities, and to have commercially operated utilities functioning in a competitive and appropriately regulated power market, with significant private sector ownership and participation. In parallel with the reform program, the Government of Haryana will promote a large investment program to rehabilitate and expand the transmission and distribution systems.

8. The State Government confirmed its commitment to the reforms by issuing the "General Power Sector Policy Statement" on 1st January, 1996. The main components of the reform program outlined in the Policy Statement are:

- Segregation of the power generation, transmission and distribution functions into separate services to be provided by separate companies,
- Corporatization and commercialisation of the emerging power sector entities,
- Creation of an independent power regulatory mechanism,
- Private sector participation in power generation, transmission and distribution,
- Promotion of efficiency and competition,
- Adjustment of tariffs to restore the creditworthiness and viability of the power sector, to reduce and progressively phase out tariff distortions and subsidies across consumer categories, and to promote end use efficiency; and
- Development of demand side management measures to conserve energy, promote efficient use of energy and take suitable measures for environmental protection.

9. The World Bank confirmed in January, 1996, and again in August, 1997, that it was ready to support Haryana's efforts to reform and develop its power sector through financing a part of Haryana's investment requirements up to US$ 600 million, arranging co-financing and, if requested, providing guarantee.

The New Structure of the Power Sector

10. The power sector will be restructured to encourage functional specialisation, decentralisation, autonomy and accountability in decision-making; to facilitate private sector participation; to promote competition in generation and distribution; and to ensure an effective, efficient and independent regulation of the sector. The new power companies will operate within an incentive framework which promotes efficiency and makes the companies and their staff accountable for the quality of the service provided to the consumers.

11. The functions presently being performed by the vertically integrated HSEB will be segregated into separate generation, transmission and distribution companies. The existing generating stations of HSEB will be grouped under a separate power generation company (GENCO). Transmission of power will be entrusted to a separate transmission company (TRANSCO). Power distribution will be assigned to a number of independent power distribution companies. A State Electricity Regulatory Commission will be created to regulate the operation of the power utilities with the primary objective of ensuring the long term viability of the sector for the benefit of consumers.

Power Generation

12. The existing Panipat and Faridabad Thermal Power Stations, and the Western Yamuna Canal Hydro-Electric Project (including Stage - II which is under construction) will be transferred to a new generation company called 'Haryana Power Generation Company Ltd' (HPGCL). This Company will start its operations as a State owned Company. At a later stage, the State Government may invite private sector participation in this Company. This Company will operate on commercial principles. The Company will sell power to the transmission company for further sale to the distribution companies. This Company has already been registered under the Indian Companies Act.

13. The Government of Haryana has decided not to make any major new investment in power generation. In future, new power generation projects in Haryana will be developed either by Independent Power Producers (IPPs), selected through international competitive bidding (ICB), by Central Generating Corporations or by Joint Venture Companies with private parties, other states or central undertakings as equity partners. All generating companies will operate in a competitive environment without discrimination based on ownership structure.
Power Transmission

14. The power transmission network from 220 kV to 132/66 kV will primarily be entrusted to a power transmission company called 'Haryana Vidyut Prasaran Nigam Ltd' (HVPNL). This company will also start its operations as a State owned company operating on commercial principles. At a later stage, the State Government may invite private sector participation in this company. HVPNL will be responsible for purchasing power from HPGCL and various IPPs in Haryana, importing power from central power generation corporations, jointly owned projects, regional projects, other SEBs, other power projects within or outside the country. The pooled power will be supplied to different distribution companies. While HVPNL will be the principal transmission company in the State, as provided in the Reform Act, in future, the private sector may also be involved in developing the power transmission network.

15. HVPNL will take over the entitlements and commitments undertaken by HSEB regarding the procurement of bulk power and will carry them on in accordance with the its corporate objectives and the directives of the Haryana Electricity Regulatory Commission (HERC). HVPNL will ensure that the proposed purchases of bulk power are part of a rational overall expansion program aiming at meeting the demand of power in the most cost-effective way. The transmission company will purchase power in an economic manner and under a transparent power purchase and procurement process. HVPNL will allow power despatches on merit order basis so as to avail the least cost power available in the grid.

Power Distribution

16. For distribution of power, the State will be geographically divided into a number of distribution zones (e.g. East, West, North and South zones). Each distribution zone will be managed by an independent distribution company registered under the Indian Companies Act, 1956. These companies, on establishment, will be owned by the State Government and will subsequently be privatised as joint ventures, with majority share holding and management control by the private investor. These distribution companies will operate pursuant to the licence granted by HERC, within the overall power policy framework set by the Government. They will approach HERC individually for fixing their retail tariffs; and amongst the distribution companies, differential tariffs will progressively emerge based on relative costs.

Corporate Structure

17. The new companies, which will succeed HSEB, will be incorporated under the Indian Companies Act. To grant appropriate managerial and operational autonomy to the new companies even while these are State owned, the Government will ensure that a sizeable number of Directors are from outside Government entities. The Government of Haryana has decided that for each company, the Directors will be appointed exclusively on the basis of professional merit. The State Government and the new companies will sign Corporatization Agreements to stipulate and delineate the role, rights and obligations of the State Government as owner, and ensure that the companies will be given the broadest managerial, operational and financial autonomy. In addition, each company will be required to develop a human resource policy more conducive to stimulate and reward efficiency.

Regulation of the Power Sector

18. The Haryana State Electricity Reform Bill has been passed by the State Legislative Assembly on 22nd July, 1997 to provide for the establishment of a new regulatory framework and restructuring of the power sector. The Bill will be notified as soon as the assent of the President of India is obtained. Following the coming into force of the new Legislation, the Government of Haryana will establish the Haryana Electricity Regulatory Commission (HERC).

19. The objectives of the HERC will be; to regulate the power sector, promote transparency, efficiency and economy in the operation and management of the power utilities, encourage competition and help Haryana attract private capital for development while ensuring fair deal to the consumers. The HERC will have three members, each having a fixed tenure and appointed by the Government of Haryana based on the recommendations of an independent Selection **Committee as stipulated under the Act.**

20. The main functions of the Commission will be to:

- regulate the purchase, distribution, supply and utilisation of electricity, the quality of service, the tariff and charges payable keeping in view the interest of the consumers as well as the electricity companies;
- issue licences for power transmission and distribution in the State;
- regulate the working of licensees and to promote their working in an efficient, economical and equitable manner;
- promote efficiency, economy and safety in the use of electricity in the State with particular regard to quality, continuity and reliability of service to the consumer;
- promote competition and encourage the participation of the private sector while ensuring fair deal to the consumers;
- set an appropriate code of conduct and standards for the electricity industry;
- require licensees to formulate prospective plans and schemes for the promotion of generation, transmission, distribution and supply of electricity,
- aid and advise the State Government in matters concerning electricity generation, transmission, distribution and supply in the State; and
- act as arbitrator or adjudicator to settle disputes arising between the licensees.

21. The Government of Haryana re-affirms its commitment to take all necessary steps to facilitate the independent functioning of the HERC as per the spirit of the Reform Legislation; notably to ensure the autonomy of the Commission and the selection of the most qualified and competent members of the Commission. The Government also re-iterates its commitment to take all necessary measures to abide by the provisions of the Reform Legislation with regard to fixation of tariff by the Commission; and, whenever the Government decides to subsidise the supply of power to specific group of consumers, it will pay the required subsidies as determined by the Commission.

Restructuring and Formation of Joint Venture Companies

22. The power distribution function will be entrusted to a number of distribution companies e.g. East Zone, West Zone, South Zone and North Zone. These companies will be incorporated as State owned companies and will be converted into Joint Venture Companies (JVC) with majority share holding of private strategic investors. This entire process will be completed by end 2001, although aiming for a more rapid schedule.

23. The East Zone comprising the districts of Rohtak, Karnal, Panipat and Sonepat will be the first to be operated by a JVC. The selection of the private partner will be done through international competitive bidding route and the JVC is likely to commence its operations by December, 1998. The private partner will hold the majority shares and will have management control. Similar process in other zones will be undertaken as rapidly as possible and completed by 2001. Two or more zones may be considered simultaneously to expedite this process. The shares of the distribution companies will be sold to private investors through a carefully designed competitive bidding process, to ensure selection of a technical and financially competent partner. In all these companies the private partners will hold the majority shares and management control. All the distribution companies will work under the license to be issued and enforced by HERC. The management of these State owned distribution companies will be given a clear mandate to prepare for privatization of the companies

24. These distribution companies will initially get bulk power through HVPNL which will in turn procure power from various generation sources and transmit to distribution companies. At a later stage, the distribution companies may enter into direct power purchase agreements with the generating companies.

Development of New Generation Capacity and Private Sector Participation

25. The Government of Haryana attaches the highest priority for achieving additional generation capacity within the shortest possible time so as to bridge the gap between power availability and demand. Over the last one year the Government of Haryana has been able to firm up the allocation of entire power from Faridabad 400 MW gas based power station to be constructed by National Thermal Power Corporation. The Government of Haryana has received an allocation of liquid fuel for power generation to the extent of 860 MW. The process is on for utilization of the liquid fuel allocation by firming up Power Purchase Agreements with Independent Power Producers (IPP) selected through competitive bidding route for setting up a number of 25 MW capacity power plants near the load centres. A Memorandum of Understanding has been signed with an IPP selected through competitive bidding route to complete the 210 MW Unit-6 at Panipat Thermal Station. A comprehensive rehabilitation and life extension project has been launched for the existing four units of 110 MW each at Panipat Thermal Station with a private company selected through competitive bidding route. A similar program of rehabilitation and life extension has also been initiated for the Faridabad Thermal Station.

26. The Government of Haryana has engaged consultants to assist in preparing bid documents, and inviting offers following international competitive bidding from IPPs for setting up thermal power stations at Yamunanagar and Hisar. Negotiations are in progress with M/s Indian Oil Corporation for setting up a 300 MW residual fuel based thermal station at Panipat for supplying power to Haryana on a long term basis.

27. Haryana State is a share holder (25% equity partnership) in the inter-State Parbati Hydro-electric Project (2051 MW) which is being executed as a Joint Venture of Haryana, Rajasthan, Gujarat, Delhi and Himachal Pradesh. In addition, the State Government is negotiating power purchase agreement with M/s Consolidated Electric Power Asia (CEPA) for purchasing 500 MW power from the coal based thermal project being set up at Hirma, in Orissa.

28. The State is also exploring the possibility of purchasing power from hydel projects like Baspa, in the neighbouring State of Himachal Pradesh, Snowy Mountains Project in Nepal and the thermal project proposed at Nabinagar in Bihar.

Financial Restructuring and Tariff Rationalisation

29. Given the present poor financial standing of HSEB, the power sector reform program will include the implementation of a major financial restructuring plan. Such a restructuring is critical to enable the new companies to start their operations on a financially viable footing. The financial restructuring will include rationalisation of tariffs, restructuring of the balance sheets through identification and write-off of and provisioning for doubtful or non-performing assets, settlement of un-funded liabilities, and design and implementation of a suitable mechanism to clear the debt overhang and overdue commercial liabilities.

30. Presently the agricultural sector, and to a lesser extent the domestic sector, are highly subsidized, resulting in an annual cash shortfall of nearly Rs. 700 crores (FY1998). This shortfall is compensated by cross-subsidies, direct subsidies from the State Government and long-term borrowings from the open market and financial Institutions guaranteed by the State Government . The reforms program aims to eliminate state subsidies in a phased manner and make the power sector self-reliant and in fact, a net generator of resources for the State economy, over a period of time. Haryana has agreed to the Common Minimum National Action Plan for Power notified by the Government of India, in December 1996. The State Government will take the appropriate steps to achieve the targets set in this Plan regarding the subsidization of specific consumer categories.

31. To protect the interests of small rural consumers and the poor, appropriate rates will be charged, based on the socio-economic considerations. Government of Haryana expects that the overall growth of the state economy and resultant poverty alleviation will steadily reduce the need for subsidies in power supply.

32. The State Government has resolved to expeditiously install energy meters on all un-metered agriculture connections expeditiously so that the consumers are charged on the basis of actual metered supply.

33. One of the objectives of power sector reform is to restore the financial viability of the power utilities as quickly as possible so that the sector ceases to be a burden on the state's budget, becomes a generator of net resources, and is able to attract the needed investments on its own strength. It is expected that the revenue from operations, including subsidy where appropriate, of the new companies (Genco, Transco, and Distribution companies) will be sufficient to cover all their operating expenses, in the first year of operation (FY 99); and to generate a rate of return on net worth of at least 10 percent in FY 2000, and thereafter earn a rate of return as per tariff notifications applicable to them. In addition, these companies shall meet all their financial and commercial obligations on time, and generate adequate resources internally to a level that may be necessary to support financing of their respective investment programs.

34. While transferring the assets and liabilities, the government shall set-off cross debts and make necessary provision for write-offs to provide a satisfactory opening balance sheet to the companies. The Government will adjust tariffs before the Regulatory Commission comes into operation to the extent required for enabling the entities to achieve the financial targets envisaged in the financial restructuring plan. In addition, future financing for investment program and long term working capital needs shall be provided to the companies in the form of equity instead of loans as in the past. Thus government contribution will enable HSEB's successor companies to meet their financial performance goals and finance their investment program. The Government will make adequate budgetary provision for the estimated financial support required for the year and will provide this support in cash to the companies, in equal monthly instalments as per the current practice.

35. In accordance with the proposed Haryana Electricity Reform Act, the government shall take over all the assets and liabilities of HSEB on the appointed date, and transfer to the new companies assets & liabilities through a transfer scheme prepared by the Government of Haryana. In particular the adjustments under the Transfer Scheme shall be done to: (a) set off accumulated losses of HSEB against

government equity and loans, (b) make adequate provision for obsolete stores, uncollectible receivables, contingent liabilities likely to devolve, (c) recognize and provide for unfunded liabilities related to pensionary and other retirement dues of the staff, (d) revalue the assets to the extent necessary to carry out the balance sheet restructuring, and (e) retain with the government disputed contingent liabilities that are not likely to devolve.

36. In the post-reform scenario, the power sector will have a modified financial structure under which every power entity will be required to self sustain its operations and to raise resources from the market on its own strength for future development activities. However, this will be supplemented by the loans negotiated under the Reform Program.

37. The financial restructuring plan drawn up by the State includes an investment of about Rs. 7900 crores including Rs. 927 crores in generation projects and balance Rs. 6974 crores for the Rehabilitation of T&D works to be spent over the next 10 years. The resources will be mobilized from IBRD (34%), JVC (23%), GoH (12%), IFIs (10%), KfW (4%), OECF (8%), and Internal (9%). The T&D losses will be reduced by 10% in technical losses and 5.8% in non-technical losses over the next 10 years. The collection efficiency will be improved from the present level of 90% to 95%. Necessary steps to bring improvement in all elements of operations shall be undertaken from the very beginning itself. The State Government shall provide the transition support so that the new companies shall not face the shortfall in internal generation of funds. The tariff support will be provided in the transition period.

38. The State Government commits to make up for gap in the necessary funds, if potential identified financing sources do not materialize. The State would also provide funds for covering the contingent liabilities if these devolve at the time of apportionment of assets and liabilities. The pending debts and payables would be rescheduled to reduce the requirement of funds in the transition phase. The State Government will set off existing Equity, Loans, etc. of HSEB under the transfer scheme. The Government of Haryana will provide the Plan Assistance to the power entities as equity contribution instead of the present system of releasing it as a loan. The State Government also assures to provide necessary subsidy for the transition stage to cover the costs and meet financial targets by the new power entities.

Demand Side Management

39. The reform program will also address issues like energy efficiency and demand side management with the objective to improve efficiency in supply and end use of electricity. The main focus will be on :

- introduction of incentive linked tariffs such as; time of day tariffs for selected categories of consumers, peak load tariffs, seasonal tariffs and other related incentives and disincentives;
- improvement of efficiency of agriculture tubewells and industrial installations by actions such as rehabilitation of agriculture pump-sets, installation of capacitors, provision of meters on un-metered connections and advice to consumers on various energy conservation measures. These end-use efficiency improvement activities in the agricultural sector and the Water Resource Consolidation Program, initiated by the State Government with the assistance of the World Bank, will complement each other; they will ultimately result in preventing depletion of the sub-soil water table; and
- promotion of Energy Service Companies and Energy Service Centres to play advisory role to the consumers and provide necessary financial assistance and backup.

40. All resources including energy conservation and use of non-conventional energy sources will be considered in the process of power planning to manage the power demand effectively and reduce the need for additional generation capacity. Various options available with the HVPNL and distribution companies to bring in demand side management measures will be explored and suitable policies will be notified in consultation with the HERC.

41. Energy efficiency and DSM programs will be promoted through developing bankable strategies and programs in consultation with the stake holders. Private sector participation through formation of

Energy Service Centres will be encouraged. Consumer awareness campaigns will be launched to promote energy conservation.

Environmental and Social Aspects

42. Government of Haryana is very keen to ensure a fair, efficient and transparent handling of all matters relating to land acquisition and involuntary resettlement, including loss of assets and other negative impacts on Project Affected Persons (PAPs) resulting from its transmission investment program, irrespective of sources of financing. In this context, the State Government has formulated the Social Policy and Procedures (SPP). This policy not only provides for rehabilitation of the owners of land acquired for the power projects but also addresses interests of tenants, share croppers, lease holders, encroachers, squatters etc. There are specific provisions for compensating loss of livelihood, loss of standing crops and trees, loss during transition period, loss of access to common resources and properties and even losses to host communities which were hitherto not protected under the law.

43. The State Government will give utmost importance to the environmental aspects of power generation and supply under the reform program. Environmental impact will be fully integrated in planning and implementation of all the generation, transmission and distribution projects. The renovation and modernisation of existing power generation stations, already undertaken, will minimise the environmental impacts on the surrounding areas and the population in the adjoining areas. All new projects will be developed in accordance with applicable environmental standard, and resettlement and rehabilitation policies. The burgeoning of highly polluting small urban diesel generators will cease. Reform initiatives such as reduction in transmission and distribution losses, improved metering, billing and collections, improvement in energy efficiency, promoting DSM will have a positive impact on the environment. Power sector planning in future will incorporate environmental cost along with economic and financial cost to draw up the optimal plan.

Human Resource Development

44. Haryana expects that given the anticipated growth of the system and the superannuation process, there will not be any need for retrenchment of employees. All the existing employees of HSEB will be absorbed in the new power utilities. Transfer of employees will be based on a time bound transfer scheme prepared by the State Government.

45. The Haryana Electricity Reform Bill, passed by the State Legislature on 22nd July, 1997, clearly provides for safeguarding the interests of the employees of the HSEB. It ensures that any change in service conditions or rules will not be less favourable than those available today.

46. The new power companies may notify an attractive voluntary severance package and provide for transparent benefits to the employees who might opt to seek alternative employment or seek voluntary severance.

47. The reform process will be accompanied by programs to improve skills and work environment. These will cover various levels of employees to enable them to discharge their responsibilities and functions in a more efficient manner. A key objective of restructuring is to create a culture where customer service is paramount. The employees will have new opportunities to undertake greater responsibility; but they will also be accountable for delivering results.

The Implementation Strategy

48. The Government of Haryana is aware that the success of the reform process will hinge on its acceptance by the stakeholders e.g. consumers, employees, State Government. Beyond ensuring that all the technical aspects of the reform process are properly addressed, the implementation strategy will develop participatory approaches and will aim at building a broad and durable constituency for change.

49. The Government and the management of HSEB and its successors will continue and intensify the communications campaigns to explain why the reforms are necessary, what they include, how and when they will be implemented. The communication efforts will focus on the various groups of HSEB' employees, end users - notably industrial, agricultural and domestic consumers, Government functionaries, academics, opinion leaders, NGOs. At the same time, this process will help improve the design and implementation of the reform measures, as this was already demonstrated during interaction with HSEB employees for the preparation of the Emergency Action Plan and with various groups for the preparation of the Social Policy and Procedures (transmission investment).

50. The Government of Haryana is fully committed for ensuring the irreversibility of the process. The enactment of the Electricity Reform Bill in 1997, the establishment of the HERC and of the new power corporations in 1998, alongwith the initiation of process of privatisation of the distribution business and of the financial restructuring of the sector constitute the foundations of the Haryana's new power industry. At the same time, HSEB and its successors will implement an Emergency Action Program, to be implemented through 1998 and 1999, to address the most urgent needs of the sector, improve the quality of power in the most critically affected areas, improve the interface with consumers, and improve the safety and working conditions of staff.

51. The prime objective of the implementation strategy will be to ensure that the quality of power improves and tariff increases are kept to a minimum through improvements in system efficiency. To achieve this objective, the highest priority will be given in the early years of the reform program to investment in distribution and transmission, efficiency improvement in generating stations and privatisation of the distribution business.

52. A major effort will be needed to establish the new power sector entities, develop the required skills, and to implement an investment plan of an unprecedented magnitude. Similar reforms in power industries have been taken or are taking place in India and elsewhere in the world. The Government of Haryana will welcome exchange of experiences; to learn from the experiences of other States and other countries, and also to share Haryana's own experience. Private sector participation will contribute in bringing the required expertise, specially in management and financial efficiencies. In addition, particularly during the initial and transition phases, Haryana may avail of the services of national and international experts.

53. The Government of Haryana has also decided to guide and monitor closely the implementation of the reform program. The Government will formulate an implementation plan which will spell out clearly the implementation actions, steps, resources, responsibilities, milestones and schedules. The implementation plan will constitute the reference framework for monitoring the progress in carrying out the reform program. A senior level Steering Committee chaired by the Chief Secretary of the Government and including concerned Secretaries as Members has been constituted to guide and evaluate the implementation of the reform program. If needed, the Steering Committee may invite independent reputed experts to assess the progress of the implementation of the reform program. In addition, an Implementation Committee headed by Secretary/Power will co-ordinate and monitor the implementation of the reform program.

54. Government of Haryana is fully committed to reform the power sector in the State. It has taken several policy initiatives to accomplish this task. The passage of the Haryana Electricity Reform Bill has put in place the required legislative framework. The institutional changes required to implement the reform process are under active consideration and it will be possible to maintain the implementation schedule. The Government of Haryana realises that the reform process will need close co-operation between all stakeholders: Government of Haryana, power sector employees, consumers, financial institutions. Given its clear commitment to the people of Haryana to provide quality power, efficiently and at reasonable rates, Government of Haryana dedicates itself to the task of reforming the power sector.

Annex 12

SUMMARY OF HARYANA'S PROGRAM AND PROJECT IMPLEMENTATION PLAN

Objective of PPIP

1. The objective of the ***Program and Project Implementation Plan (PPIP)*** is to describe how the Government of Haryana intends to:

- implement the reform program and restructure the State's power sector and promote its development along the lines indicated in the Government's *General Power Sector Policy Statement* of 1 January, 1996, and further elaborated in the *Detailed Power Sector Policy Statement* of 4 November, 1997; and

- carry out its long term investment program (over the next 10 years), and more specifically the ***Emergency Action Plan, approved by the State Government and supported*** by the first World Bank loan, under the Adaptable Program Loan.

2. The PPIP is intended to be a dynamic instrument, which will be updated and completed during various stages of implementation of the Power Sector Reform and Development Program. The first version of the PPIP defines with precision the steps that will be taken and the milestones that Haryana expects to achieve in the near-term. It also provides details of the implementation arrangements for the Emergency Action Plan.

3. The long-term actions are also stated in the PPIP, although with less detail and precision. Given the magnitude of changes that the power sector will undergo, it would be illusory to try to define now the measures or results that would be accomplished in five or seven years hence. However the policy goals, the reform components, and the sequencing of activities are clearly spelled out in the PPIP.

4. The PPIP is intended to serve as a monitoring instrument to be used by the Government, the World Bank and other funding agencies for assessing, from time to time, the progress in implementing Power Sector Reform and Development Program. This will allow the State Government, the World Bank and other funding agencies to gauge the achievement of critical milestones in the reform program, to attend to any need for adjustment to the program, and to complete the appraisal of the subsequent phases, of the Haryana Power Sector Reform and Development Program.

Implementation of the Reform Program

5. **Phased Approach**: The reform program will be undertaken in a phased manner, over a 10 year period, (1998-2007), with the involvement and participation of the various stakeholders in order to build a broad and durable constituency of change. In view of the technical complexity and sensitivity of the reform program, the phased approach of the reform program is aimed to demonstrate the benefits of the reform at every step and thereby ensure the irreversibility of the process. The various phases of the implementation of reform program are described below.

- The initial phase (1998-99) of the reform program will set the legal, regulatory and structural stage for the reform. At the same time, HSEB and its successors will implement an *Emergency Action Plan* with the objective to remove some of the most critical shortcomings of the sector, improve the quality of power (in few selected areas), improve the interface with consumers, and improve the safety and working conditions of staff.

- The second phase, (1999-2002), will focus on privatization of distribution business, achievement of financial sustainability in the sector, institutional development of the new entities and improvements in system efficiency, quality of power and customer service. The prime objective of the implementation strategy will be to ensure that in parallel with tariff adjustments there is some improvement in the

quality of power; however, it may be unrealistic to assume that the quality of power would improve dramatically in the initial years of the program.

- In the third phase (2002-04), efforts will be made towards consolidation of the functioning and financial situation of the new entities and achievement of more reliable power supplies. By the end of this phase, privatization of the entire distribution area would have been completed, most of the financial restructuring measures would have been implemented, and further investments would have been made for system expansion and efficiency improvements in distribution.

- Fourth phase (2004-07), will focus on achievement of higher consumer satisfaction through progressively ensuring adequate supply of power to meet the power demand, attainment of higher quality and efficiency in electricity services and furtherance of power sector reforms to increase competition and private sector participation (for example evolving from the single buyer model to other models allowing a higher degree of competition at the wholesale and retail levels). It is expected that during this phase the sector would be in a position to finance its growth and development through internal resource generation by the entities and through access to capital market.

6. **Reform Act**. The enforcement of the Reform Act, will enable the establishment of Haryana Electricity Regulatory Commission (HERC) and unbundling of HSEB into new corporate entities based on functional specialization. The Act provides for a specific time frame from the date of its enforcement for establishing HERC, GENCO and TRANSCO. The State Government will simultaneously establish the new entities and therefore link the effective date of the Reform Act to the level of preparedness for establishment of HERC, GENCO and TRANSCO.

Table ES-1: Effectiveness of Reform Act

Passing of Reform Bill in State legislative assembly	22 July 1997
Publication in the Official Gazette after Presidential Assent	early December 1997
Notification for effectiveness of Reform Act	March 1998
Effectiveness of the Reform Act	1 April 1998

7. **Establishment of HERC**: HERC will be established on 3 April 1998, following the enforcement of the Reform Act on 1 April, 1998. The process for selection of three Commissioners for HERC will be initiated following the notification of the Reform Act in official gazette in early December 1997. To assist in the preparation for establishment and operation of HERC as scheduled by early April 1998, Government of Haryana has set up a *Core Working Group*. This group will carry out the initial tasks required for establishing the regulatory commission, e.g. preparation of organizational structure of HERC, assessing staff requirements, logistical aspects, budget, preparation of institutional development plan, preparation for the near-term activities that the Commission will have to undertake when established, for example preparation of code of conduct of the commission, operational and administrative procedures for working of the commission, procedures for issue of license etc. The schedule of implementation of various activities for establishment of HERC is given in the Table ES-2 below.

Table ES-2 : Establishment of HERC

Set up "Core Working Group" for HERC	
• Set up a "Core Working Group	5 November 1997
• Initiate preparatory work on behalf of HERC	15 March 1998
• Assist in establishment of basic infrastructure for HERC	15 March 1998
Establish Regulatory Commission	
• Budget allocation for HERC 1998/99	28 February 1998
• Notification of establishment of Selection Committee	15 December 1997
• Appointment procedures & service conditions for commissioners	31 December 1997
• Prepare shortlist of candidates for commissioners	8 February 1998
• Selection of commissioners by Government	4 March 1998
• Notification of establishment of HERC	7 March 1998
• Joining of commissioners/oath taking	3 April 1998
Institutional Development	
• Prepare ToR for consultants to assist HERC	September 1997
• Appoint consultants for HERC	15 February 1998
• Preparation of draft institutional development plan	30 March 1998
Initial Activities	
• Issue provisional license to TRANSCO by Government .	2 April 1998
• Preparation of service rules for HERC staff	1 June 1998
• Appointment of initial staff by HERC	2 August 1998
• Filing of applications for regular license to HERC	9 April 1998
• Publication of notice inviting objections by HERC	24 April 1998
• Filing of objections and hearing	1 September 1998
• Granting of license by HERC to TRANSCO & DISCOMs	September 1998
• Approval of the institutional development plan	30 June 1998
Further mid-term milestones	
• Fix performance standards for licensees	December 1998
• First tariff ruling issued	March 1999
• Implementation of institutional development plan	July 1998 - 2000

8. **Unbundling and Corporatization**. Following the effectiveness of the Reform Act, Government of Haryana will un-bundle the vertically integrated monopoly power utility - HSEB - into new entities based on functional specifications. The restructuring process will be carried in two phases: (i) creation of Haryana Power Generation Company (HPGCL or GENCO) and Haryana Vidyut Prasaran Nigam Ltd. (HVPNL or TRANSCO) (which will initially take care of both transmission and the distribution business); and subsequently (ii) creation of a number of distribution companies to take over distribution business.

9. The implementation strategy for creating a reformed power sector is to: (i) proceed with the creation and corporatization of generation, transmission and distribution companies as soon as it is legally possible; (ii) develop in parallel an active information and communication campaign for the stakeholders and notably the staff; (iii) undertake measures to improve the managerial environment in the new companies; and (iv) undertake a comprehensive institutional development program for the new companies. The strategy for implementation is to restructure the existing framework with the creation of new entities with clear mandate and commercial orientation. All efforts will be made to ensure that the transition period to the new restructured entities is minimized with adequate preparatory work. Schedule of key steps required for unbundling of HSEB and corporatization of new entities is given in Table ES-3.

Table ES-3: Corporatization of New Entities in the Power sector

Incorporation of new entities	
• Registration under the Registrar of Company	
• HPGCL	17 March 1997
• HVPNL	19 August 1997
• DISCOMs	31 January 1998
• Finalization and signing of corporatization agreement	
• HPGCL & HVPNL	15 March 1998
• DISCOMs	15 August 1998
Management of new entities	
• Appointment of Board of directors	
• HPGCL and HVPNL	28 February 1998
• DISCOMs	15 September 1998
• Finalization of organization structure	
• HPGCL and HVPNL	30 April 1998
• DISCOMs	30 October 1998
• Appointment of senior management	
• HPGCL and HVPNL	31 December 1998
• DISCOMs	1 April 1999
Transfer of Undertaking (assets, liabilities and personnel)	
• Finalization of detailed accounts and financial projections	
• HPGCL and HVPNL (including DISCOMs)	31 December 1997
• DISCOMs	30 April 1998
• Finalization of transfer rules	
• HSEB to HPGCL and HVPNL	28 February 1998
• HVPNL to DISCOMs	10 June 1998
• Transfer of undertaking and opening of balance sheets	
• HSEB to HPGCL and HVPNL	1 April 1998
• HVPCL to DISCOMs	1 October 1998
Grant of License to HVPNL & DISCOMs	
• Issue of provisional license by State Govt.(only HVPNL)	1 April 1998
• Application of regular license to HERC	10 April 1998
• Publication in newspaper inviting objections	20 April 1998
• Receipt of regular license	September 1998

10. **Privatization of Distribution**: The power distribution business will be entrusted to a number of distribution companies. The distribution area of HSEB will be segmented into several zones (e.g. North, South, East and West), based on the financial and technical viability, consumer mix etc. and to ensure their attractiveness for private investors. The distribution zones on establishment will be incorporated as the Government owned companies, and will be subsequently converted into joint venture companies with majority share holding and management control of the private investor. The private joint venture partner(s) will be selected through international competitive bidding route. The privatization process will be expeditious and is expected to be completed by December 2001. The schedule of privatization of distribution is given below.

Table ES-4: Privatization of Distribution Business

- Confirmation of the delineation of commercially viable distribution zones.
  - Data Collection — 31 December 1997
  - Define zonal boundaries — 15 January 1998
  - Identify metering requirement for zonal boundaries — 31 January 1998
- Privatization of zone 1 (*)
  - Appoint consultants — 31 January 1998
  - Issue of notice inviting bids for qualification — 03 April 1998
  - Issue Request For Qualification (RFQ) — 30 April 1998
  - Pre-qualification and shortlisting of bidders — 15 July 1998
  - Issue RFP to qualified bidders — 16 July 1998
  - Evaluation of bids and selection of JV Partner — 31 December 1998
  - Shareholder agreement signed and effective — First quarter 1999
- Privatization of zone 2 (*) — December 1999 (tentative)
- Privatization of zone 3 (*) — December2000 (tentative)
- Privatization of zone 4 (*) — December 2001 (tentative)

(*): To facilitate the privatization process some distribution zones will be "grouped" for the transaction. The approach for "privatization" will be decided by Haryana with the assistance of its consultants.

11. **Technical Assistance**: Significant efforts are required to establish the new power sector entities, develop the required skills, and implement an investment program of an unprecedented magnitude. The implementation of the reform program will be supported by comprehensive technical assistance program for HSEB and its successor entities. Important areas for which technical assistance is envisaged are given in Table ES-5.

Table ES-5 : Technical Assistance Program for Power Sector Entities

TA	Client	Potential Funding
Reform Project Management	State Government HSEB	DFID
Communication Strategy and Management	State Government HSEB	DFID
Capacity building for HERC	HERC	DFID
Enhancing billing, collection and customer services standard	DISCOMs	DFID
Distribution Privatization	HSEB/ DISCOMs	DFID
Engineering Services	HVPNL/ DISCOMs	Bilateral donor
Consultancy for Bid Evaluation	HSEB/HVPNL	World Bank
DSM/ Energy efficiency	DISCOMs	Bilateral donor
Renewable Energy /cogeneration	HAREDA	Bilateral donor
Institutional development and human resource development for GENCO	GENCO	Bilateral donor/World Bank
Institutional development and human resource development for TRANSCO	TRANSCO	Bilateral donor/ World Bank

Financial Restructuring

12. Financial turnaround of Haryana's power sector from insolvency depends on HSEB's successor entities being allowed adequate tariffs, operational autonomy and accountability of the management to improve financial and operational efficiencies, a healthy capital structure and financing of investments required for rehabilitation and reinforcement of transmission and distribution system.

13. In order to provide satisfactory opening balance sheets to the new companies in the restructured power sector, Government of Haryana plans to (I) write off HSEB's accumulated losses of Rs. 21.3 billion (expected as on 31 March 1998) against its equity, loans and interest outstanding amounting to Rs. 24 billion (ii) provide for unusable and obsolete stores and uncollectible receivables amounting to Rs. 5.7 billion (iii) recognize the unfunded liabilities, on account of retirement dues of the staff, estimated at Rs. 8.7 billion, by issuing government guaranteed bonds to employee-managed Pension and Provident Fund Trusts; (iv) adequately capitalize the companies and provide future financing from the State Government as equity; (v) make adequate provisions for uncollectible receivables, obsolete inventories, and contingent liabilities likely to devolve; and (vi) retain with Government contingent liabilities of Rs. 6 billion not expected to devolve.

14. To increase cost recovery and reduce distortions in tariff structure, Government of Haryana will support the following tariff measures (i) increase in agriculture tariffs every year starting FY 2000, by Rs. 0.25/kWh every year for the following three years to reach a level of Rs. 1.38/kWh by FY 2003; an average annual increase of 33 percent and (ii) increase in tariffs for industrial, commercial and domestic consumer categories by about 15 percent in FY 1999, 10 percent in FY 2000 and FY 2001 and 8 percent in FY 2002. These tariff revisions will however be subject to the procedures set by HERC. Government of Haryana plans to completely eliminate the subsidies within next 4 years; however in the transition period to meet the shortfall in rate of return Government will provide subsidy in addition to the Rs. 200 crores per annum on average provided in Ninth Plan.

15. A summary of the projected financial performance of the new entities in the power sector, on an aggregate basis, is provided in Table ES-6 below.

Table ES-6: Projected Financial Performance of New Entities (FY 99- 07)

(Values in Rs. million)	FY 99	FY 00	FY 01	FY 02	FY 03	FY 04	FY 05	FY 06	FY 07
Sales (GWh)	9,050	9,537	12,229	14,699	15,581	16,613	17,727	18,846	19,970
T&D losses (% of availability)	32%	31%	29%	26%	23%	20%	19%	17%	17%
Increase in agricultural tariff (%)	0%	37%	33%	25%	10%	0%	0%	(2%)	4%
Increase in non-agricultural tariff (%)	15%	10%	10%	8%	10%	0%	0%	(2%)	4%
Average tariff (Ps/ kWh)	200	230	278	324	361	365	369	365	383
Increase in average tariff (%)	14%	15%	21%	17%	12%	1%	1%	(1%)	5%
Average revenue (Ps/ kWh)	269	299	330	351	374	378	381	377	394
Average cost of supply (Ps/ kWh)	284	292	320	341	351	363	367	362	378
Subsidies as percentage of total revenue	18.6	16.4	10.8	3.8					
Operating Ratio	0.9	0.9	0.9	0.9	0.8	0.9	0.9	0.9	0.9
Return on revalued NFA (%)	(8%)	2%	4%	4%	8%	5%	5%	5%	6%
Return on net worth (%)	*(56%)*	10%	16%	16%	16%	16%	16%	16%	16%
Debt service coverage (with subsidy)	1.0	1.3	1.5	1.5	1.7	1.4	1.4	1.4	1.4
Self financing ratio (%)	(38%)	(23%)	10%	19%	34%	37%	39%	42%	42%
Net accounts receivables (months)	2.0	2.4	2.1	2.1	2.0	2.0	2.0	2.0	2.0
Accounts payables (months)	4.1	3.2	1.9	1.4	1.1	1.1	1.1	1.0	1.0

16. Expected improvements in financial performance of the successor entities would not only eliminate the need for state subsidy but also reduce their dependence on the state's plan resources for financing their investments. The sector is expected to reverse the budgetary flows within four years and begin contributing about US $ 65 million starting FY 2003.

Power Sector Investment Program - FY1998- FY2007

17. Demand for electricity in Haryana state is expected to grow at an annual compounded rate of about 7.5 percent during the period FY 1998 to FY 2007. Energy demand is estimated to be about 20 billion units in FY 2007, up from 8.8 billion units in FY 1998 (at end-use level). The peak demand is estimated to reach 4500 MW in FY 2007. Until FY2000, sales to domestic and industrial consumers is expected to grow annually at about 6 percent and 5 percent respectively, while sales to agriculture sector is projected to grow at about 2 percent. However from FY 2000 onwards, due to increased availability of power, the sales mix is expected to change significantly in favor of higher tariff categories. During the period FY 2000 - FY 2007, among the various consumer categories, sales to industrial sector is expected to increase at a high rate of 16 percent per annum due to shift from captive generation to grid because of improvement in grid supply, phasing out of curtailment and release of new connections. Sales to domestic sector is also projected to grow at about 14 percent per annum with reduction in power curtailment and wait list. Agriculture demand is not expected to grow fast because the cultivable area and cropping intensity have reached a peak in Haryana.

18. Investments of the order of about Rs. 200 billion[12] is estimated to be required in the Haryana's power sector to rehabilitate and expand the system to meet the growing demand for power in the state, over the next 10 years. Broadly the investments are required for (i) creating new assets in generation, transmission and distribution (ii) improving the efficiency of existing assets in operation and (iii) introducing energy efficiency and demand side management activities.

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[12] *Power Sector Development and Investment Planning Study, September 1995, by Rust Kennedy and Donkin.*

19. Government of Haryana has taken a conscious decision to minimize its investments in power generation; to actively encourage private sector participation in the development of additional power generation; and import power from other states in India and also neighboring countries. Government's focus in the coming decade will be to rehabilitate and expand the power transmission and distribution system in the state. The main objectives of the investment program of the State Government are to :(i) expand the size of transmission and distribution system to meet the growing demand for power; (ii) improve operational efficiency of the existing assets; (iii) reduce system losses and improve end use efficiency; (iv) improve the quality of power supply to consumers and (v) support power sector reform program. Government of Haryana's investment program during the next 10 years is estimated to be of the order of about Rs. 80,000 million(about US$ 1800 million). Table ES-7 summarizes the Government of Haryana's investment program for the power sector.

Table ES-7: Government of Haryana's Investment Program

(Values in Rs. million)	FY98	FY99	FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07	Total
Rehabilitation of FTPS and PTPS	1245	1400	3044	1443	1571	571	0	0	0	0	9274
T&D Investment (other than EAP)											
Transmission & sub-transmission	684	381	1,216	2,486	2,331	1,724	1,945	2,756	2,724	2,785	19,030
Distribution	717	2,043	4,007	4,721	5,117	5,301	5,737	5,953	6,330	6,940	46,866
Technical Assistance	0	0	0	20	83	81	63	48	44	19	358
Reform Expenditure	0	0	117	82	86	45	0	0	0	0	330
DSM and other Energy Efficiency Measures	0	0	10	70	176	246	313	239	218	130	1,402
Total	1,401	2,423	5,350	7,379	7,793	7,397	8,057	8,996	9,315	9,874	67,985
EAP	560	1,890	519	0	0	0	0	0	0	0	2,970
Total	3,207	5,714	8,914	8,821	9,364	7,967	8,057	8,996	9,315	9,874	80,230

20. **Phased Approach**: Government proposes to undertake this investment program in a phased manner over the next 10 years. The phasing of the investments will be carried out based on: (i) prioritization of the needs and related investments; (ii) availability of funds; (iii) expected changes in the ownership keeping in view the new evolving structure of the power sector and (iv) overall power sector reform program. The four phases of the implementation of investment program are descried below.

- Initially, the Government plans to implement investment projects which are most critical for the power sector. The Emergency Action Plan will include investments of US$ 77 million, towards (i) construction of critically needed high voltage evacuation lines and transmission lines and sub-stations; (ii) rehabilitation of sub-transmission and distribution systems; (iii) improvement of commercial and technical services to consumers and (iv) provision of technical assistance and engineering services.

- In the second phase, the focus will be on (i) the continuation of the investment program in transmission (ii) the provision of basic distribution equipment (e.g. meters, transformers, capacitors etc.) and rehabilitation and expansion of distribution system; (iii) demand side management measures and rural energy initiatives and (iv) additional technical assistance.

- In the subsequent phases, the expansion of transmission and distribution system will continue, with special focus on improving consumer services and quality and reliability of power supply. The technical assistance to new entities in the power sector will be phased out while demand side management activities will be expanded.

21. **Financing of Investment Program**: State Government proposes to finance its investment program through support of various multilateral and bilateral funding organizations such as World Bank, DFID, KfW, OECF etc. The Government of Haryana expects that with improvement in the creditworthiness of the power sector, it will be able to attract significant resources from private sector and

capital markets. The new entities will also be able to contribute towards investment program through internal resource generation and borrowings from financial institutions and commercial banks.

22. The World Bank confirmed in January 1996 and again in August 1997, that it was ready to support Haryana in its reform and development program on the basis of a long term approach. The Bank is willing to commit support of up to US $ 600 million for next 10 years. The UK Department for International Development (DFID) is currently considering financing the technical assistance component of the investment program. KfW has also expressed interest in financing the rehabilitation of Panipat and Faridabad power stations to bring them in compliance with environmental standards. OECF and Japan Exim Bank have also expressed interest in supporting Haryana's program.

23. The proposed financing plan includes: IBRD (33%), private equity (2%), bilateral sources (14%), State Government (16%), internal resource generation (12%), and the balance from Indian Financial Institutions/Commercial lenders including borrowings raised by the private investors (refer Table ES-8).

Table ES-8: Financing of Investment Program

Values in Rs. million	FY 98	FY 99	FY 00	FY 01	FY 02	FY 03	FY 04	FY 05	FY 06	FY 07	Total
ICG	(3,041	(2,188	(1,730	885	1,627	2,818	2,989	3,307	3,758	3,997	12,423
GoH Loan	2,874	0	0	0	0	0	0	0	0	0	2,874
GoH Equity	0	2,682	2,878	300	540	72	134	406	610	866	8,488
Private equity	0	0	179	15	8	50	92	280	420	597	1,641
IBRD	180	2,234	2,339	3,375	3,868	3,720	4,314	3,404	2,124	1,000	26,556
Bilateral - Loans (OECF)	0	0	780	1,227	1,719	451	0	0	0	0	4,177
Bilateral - Loans (KfW)	620	802	2,085	724	903	87	0	0	0	0	5,221
Bilateral - Grants	162	168	58	0	0	0	0	0	0	0	388
IFIs/ Commercial borrowings	2,412	2,017	2,325	2,294	700	769	528	1,599	2,403	3,414	18,462
Total Financing	**3,207**	**5,714**	**8,914**	**8,821**	**9,364**	**7,967**	**8,057**	**8,996**	**9,315**	**9,874**	**80,230**

Emergency Action Plan : (Haryana Power Sector Restructuring Project)

24. Government of Haryana proposes to implement the Haryana Power sector Restructuring Project with the objective to initiate the reform process by establishing the new legal, regulatory and institutional framework (including the creation of an independent regulatory commission and new power sector entities, and initiation of privatization of the distribution business) and to remove the most critical bottlenecks of the power system (identified under Emergency Action Plan) with a view to demonstrate - in a few selected areas - the benefits which could be expected from a successful reform of the power sector.

25. The EAP will be financed by the support of the World Bank, DFID and HSEB. World Bank has committed US $ 60 million for supporting various components of EAP accounting for 78 percent of the total investment in EAP. The broad components of EAP and their financing is provided in the Table ES-9 below:

Table ES-9 : Financing of EAP

Component	Cost including contingencies (US $ M)	Bank Financed (US $ M)	Bank Financed (%)
Construction of critically needed HV evacuation lines, transmission lines & sub-stations	15.0	11.2	75%
Rehabilitation of sub-transmission and distribution systems	47.3	44.8	95%
Improvement of technical and commercial services to consumers	1.2	1.0	83%
Technical assistance and engineering services	13.5	3.0	22%
Total	**77.0**	**60.0**	**78%**

26. The economic rate of return of EAP is estimated at 52.4 percent (NPV of net benefits being Rs. 9,396 million) and the financial rate of return is estimated at 53 percent (NPV of net benefits being Rs. 11,174 million)[13]. The extremely high rate of returns are due to (I) the nature of investments which is aimed at addressing most critical bottlenecks in transmission and some of the worst segments of distribution system (with large improvement potential) and (ii) because of the high level of unserved demand eliminated by the evacuation lines. These values of economic and financial rate of return would be even higher if (I) it was able to quantify benefits of improvement in quality of power as a result of investments in transmission and distribution system (ii) environmental benefits that derive from reduction of air pollution impacts associated with self generation and (iii) benefits from technical assistance component of EAP and improvements in customer service.

27. HSEB has identified 22 packages for procurement of goods and works for implementation of EAP works. All procurement packages have been finalized along with their schedule for bidding process. The preparation of bidding documents for ICB packages is in advance stage of preparation; about US$ 50 million worth of bidding documents have been finalized.

28. The World Bank Loan (APL 1) for supporting EAP will be lent to GOI. GOI will onlend the proceeds of the loan to Government of Haryana, under GOI's standard arrangements for developmental assistance to the states, and fully additional to the GOI's regular assistance loan to Haryana. State Government will onlend the proceeds to HSEB, which will be the executing agency for APL1. After restructuring of HSEB, the successor entities will take over the execution of the project. All contracts signed by HSEB with regard to implementation of EAP, will be transferred to HVPNL (including interalia contracts relating to distribution items) as per the Transfer Scheme Rules (as provided in Haryana Electricity Reform Act). When new distribution companies are established, HVPNL will enter into a back-to-back arrangement with them in respect of equipment/goods supplied in particular distribution areas.

Benefits of Reform and Investment Program

29. **Economic and Financial Justification**: The economic benefits of the Reform and Restructuring Program, are estimated at Rs. 81,500 million (net present value discounted at 12%) relative to a "business-as-usual" case characterized by increasing levels of unserved energy, system losses and inadequate investments. The financial benefits are estimated at Rs. 75,000 million (NPV discounted at 12%).

30. Reform and Development Program is expected to bring in significant improvements in the overall operations and efficiency of the power sector in meeting the demand for power. It is expected that by FY 2007, the power requirements in Haryana will be met, consumers will be provided with reliable, high quality and cost effective electricity, by creditworthy and commercially operated power utilities functioning in a competitive and appropriately regulated power market, with significant private sector ownership and participation. Table ES-10 provides the summary of some of the important performance targets expected due to implementation of the investment program over the next decade. ***It is however important to note that the present situation of the performance of the power sector may in fact indicate a deterioration in the initial 1-2 years of the initiation of the reform program, primarily due to reflection of more precise performance indicators of the prevailing situation (baseline) and also on account of the time lag before the benefits of the new investments in rehabilitation and expansion of the transmission and distribution can be realized.***

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[13] *Haryana Power Sector Reform and Development Program : Economic Analysis by Peter Meier.*

Table ES-10: Investment Program: Performance Indicators

S. No.	Indicator	FY 1997	FY 2002	FY 2007
1	Power (energy) shortages (%)	~ 25	8-12	0-5
2	Per capita electricity consumption (kWh)	460	720-750	950-1050
3	Transmission capacity (MVA) (220/132 kv)	7570	10000	14200
4	Transmission and distribution losses (%)	>32	26-28	17-19
5	No. of consumers per employee	70	105	175
6	Electricity sales per employee	195	380	710
7	Share of private sector investment in total investments in power sector (%) - Generation - Distribution	 <1 0	 15-18 >51	 28-44 70-100a/
8	No. of metered consumers (agriculture %)	24	50	100
9	Generation Efficiency (GENCO stations) - PLF (%) - Specific Coal Consumption (kg/kWh)	 48 0.82	 70-75 0.75	 70-75 0.75
10	Transformer burn outs (%)	30	20	5
11	Net receivables (months)	4.2	2.1	2.0
12	Payables (months)	5.1	1.4	1.0
13	Collection efficiency (%)	91	>95	>98
14	Contribution of power sector to state budget (US $ million)	- 50	-26	66
15	Utilities average operating surplus as % of total capital employed (after subsidies)	8	19-23	24-28
16	Subsidies as % of revenue	31	4-6	0
17.	Number of electrical accidents (no/year)	>400	<200	<40
18.	Customer service quality (*) - number of complaints received - response time to attend to complaints - waitlist for new electrical connection			

(*) : Survey to establish baseline for customer service quality will be carried out by HSEB.
a/ : This percentage represents the share of private interests in the capital structure of the distribution company. By end 2002, for each distribution company the private sector is expected to have atleast 51 percent of the equity; by end 2007 for each distribution company the share of private sector is expected to increase to alteast 70 percent.

Program Implementation and Monitoring

31 Government of Haryana will closely guide and monitor the implementation of the reform and investment program. A senior level Steering Committee chaired by the Chief Secretary and including the secretaries in charge of energy and finance, and the Chairman, HSEB has been constituted to guide and evaluate the implementation of the reform program.

32 At the operational level, HSEB has established a Reform and Restructuring Team to prepare and coordinate the implementation of the reform measures and the investment program. For the implementation of Emergency Action Plan, a special group has been constituted to monitor the implementation of various aspects of Emergency Action Plan. Consultants will be hired to assist and guide HSEB and its successor entities to undertake complex task of restructuring.

33 A Program Implementation Committee, headed by Secretary Power will be constituted to closely monitor the implementation of the reform and investment program. This committee will include representatives of the new entities in the power sector - HPGCL, HVPNL and DISCOMs. At the operational level, each of the executing agencies will have its own project management unit to carry out the implementation of the investment measures. These project management units may be assisted by reputed engineering consultants.

34 When required, State Government may invite reputed professionals to assess the progress of the implementation of the reform program and achievement of the basic principles and goals of the reform policy. Since this will involve assessing how the Government is meeting its commitment in terms of providing autonomy to the new entities in the power sector, selecting skilled professionals, and discharging its own financial liabilities and commitment, State Government would ensure that these professionals are invited as independent observers and not as consultants appointed by the Government.

Annex 13.1

HARYANA POWER SECTOR RESTRUCTURING AND DEVELOPMENT PROGRAM

SECOND HARYANA POWER SECTOR RESTRUCTURING PROJECT

Preliminary Project Financing Data		**[x] Loan**			
Amount (US $ million)	150	Processing timetable (tentative)			
Borrowers	New power utilities	Negotiations		November 1998	
Potential cofinanciers	OECF, KfW and DFID	Effectiveness		February 1999	
Estimated disbursements (US $ million) (Year ending March 31)		1999	2000	2001	2002
Annual		15	50	60	25
Cumulative		15	65	125	150

Development Objective

Support Haryana in implementing the main reform measures aiming at: (i) setting up the new legal and regulatory framework; (ii) establishing the new power utilities, providing them with appropriate managerial, operational and financial autonomy, and improving their performance; (iii) adjusting tariffs, notably to agriculture, implementing the financial restructuring plan, achieving a turnaround in the profitability for the power utilities; and (iv) privatizing the distribution companies.

Indicative Project Description

The project would finance: (i) the continuation of the rehabilitation and expansion of the transmission and distribution system and of technical assistance; and (ii) demand-side management activities. HSEB has already identified the priority transmission lines, sub-stations and feeders on which the project would focus. The project could also finance: (i) voluntary retirement schemes; and (ii) pilot initiatives for developing rural power cooperatives.

Main Loan Conditions

1. The Government of Haryana has:

- caused the Haryana Electricity Reform Act to become effective;
- established the new power utilities (GENCO, TRANSCO, and the distribution companies);
- entered into corporatization agreements, satisfactory to the Bank, with GENCO, TRANSCO and the distribution companies;
- implemented measures, included in the Financial Restructuring Plan as per the schedule provided by this Plan and the Financial Commitment Letter;
- updated and approved its part of the Program and Project Implementation Plan (PPIP) satisfactory to the Bank. The revised PPIP would in particular detail the reform measures and milestones expected to be achieved before APL3 would be committed; and
- achieved satisfactory progress in privatizing[14] one of the distribution companies (East Zone) as a

[14] *A distribution company is considered privatized when a private investor owns at least 51% of the*

joint venture with private majority ownership; more specifically: (i) Haryana has selected a strategic joint venture private investor following a selection procedure satisfactory to the Bank, and (ii) the Bank has been satisfied that the sale of equity to this private investor can reasonably take place within six months following the approval of the loan.

2. The Regulatory Commission has been established, has become functional, and has issued licenses to TRANSCO and the Distribution companies. The Regulatory Commission will be considered functional when: (i) all the Commissioners have been appointed; (ii) the regulations regarding the Commission proceedings have been notified; (iii) the key professional staff have been appointed; (iv) an institutional development (or capacity building) plan has been approved by the Commissioners; and (v) funding of the Regulatory Commission has been provided for in the state's budget.

3. The beneficiary power utilities (TRANSCO and the Distribution companies as the case may be) have:

   - Approved corporate business plans, satisfactory to the Bank, and including measures relating to, inter alia: (i) the company's institutional strengthening and development; (ii) operational and managerial efficiency improvements; (iii) financial performance; and (iv) privatization (for the state-owned distribution companies); and

   - Updated and approved their parts of the PPIP, satisfactory to the Bank;

4. Retail tariffs have been increased to an extent not less than that provided in the Financial Restructuring Plan, subject to the procedures set up by the Regulatory Commission when relevant.

5. In addition to the above project-specific milestones:

   - For any loan under execution: covenants are complied with; remedies are not being applied by the Bank; project implementation is satisfactory to the Bank; at least 75% of loan funds are committed through contracts; and disbursements under APL1 are at least at 35%;

   - Progress in implementing the Reform Program, as set out in the Detailed Policy Statement and PPIP, is satisfactory to the Bank;

   - The beneficiary entities have defined their priority investment and financing plans, prepared bidding documents and invited bids in accordance with Bank's guidelines with the support of their engineering consultants for an amount of at least 80% of the proposed loan; and

   - Standard environmental and social requirements are met as per Bank guidelines and policies.

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equity shares.

Annex 13.2

HARYANA POWER SECTOR RESTRUCTURING AND DEVELOPMENT PROGRAM
THIRD HARYANA POWER SECTOR RESTRUCTURING PROJECT

Preliminary Project Financing Data		**[x] Loan**	
Amount (US $ million)	200	Processing timetable (tentative)	
Borrowers	New power utilities	. Negotiations	February 2001
Potential cofinanciers	OECF, KfW and DFID	. Effectiveness	May 2001

Estimated disbursements (US$ million) - Year ending March 31	2001	2002	2003	2004
Annual	23	67	65	45
Cumulative	23	90	155	200

Development Objective

Support Haryana in completing the privatization of the distribution business, consolidating the functioning of the restructured power industry, realizing the full potential of efficiency improvements in the transmission and distribution systems, and expanding the power system to meet growing requirements. ***During the implementation of the proposed project, the flow of funds between the state government and the power sector should reverse: the power industry, through debt servicing and payment of return on equity, should become a net contributor to the state budget.***

Indicative Project Description

The project would include: (i) the continuation of the expansion of the transmission and distribution system and of technical assistance; and (ii) demand-side management activities. A guarantee operation to support private power development in generation and distribution may also be envisaged.

Main Loan Conditions

1. The Government of Haryana has:

   - privatized at least two-thirds of the distribution system, e.g., at least about two-thirds of the electricity is distributed by private companies, licensed by the Regulatory Commission;
   - updated and approved its part of the PPIP, satisfactory to the Bank. The revised PPIP would in particular detail the reform measures and milestones expected to be achieved before the APL4/APL5 would be committed; and
   - taken all the measures within its purview, included in the Financial Restructuring Plan and as per the schedule provided in this Plan and the Financial Commitment Letter.

2. The beneficiary power utilities (TRANSCO and the Distribution companies as the case may be) have:

   - Complied with the provisions of the corporate business plans presented before the approval of the Second Haryana Power Sector Restructuring Project, and substantially met the objectives and targets set in these plans;
   - Updated and approved corporate business plans satisfactory to the Bank; and

- Updated and approved their parts of the PPIP, satisfactory to the Bank.

3. Retail tariffs, including to agricultural consumers, have been increased to an extent not less than that provided in the financial restructuring plan.

4. In addition to the above project-specific milestones:

   - For any loan under execution: covenants are complied with; remedies are not being applied by the Bank; project implementation is satisfactory to the Bank; at least 75% of loan funds are committed through contracts; and disbursements under APL2 are at least at 50%;

   - Progress in implementing the Reform Program, as set out in the Detailed Policy Statement and PPIP, is satisfactory to the Bank;

   - The beneficiary entities have defined their priority investment and financing plans, prepared bidding documents and invited bids in accordance with Bank's guidelines with the support of their engineering consultants for an amount of at least 80% of the proposed loan; and

   - Standard environmental and social requirements are met as per Bank guidelines and policies.

Annex 13. 3

HARYANA POWER SECTOR RESTRUCTURING AND DEVELOPMENT PROGRAM
HARYANA POWER SECTOR DEVELOPMENT PROJECT (S)

(This attachment is only for illustration)

Project Financing Data						**[x] Loan**	
Amount (US $ million)	190 (notional)					Processing timetable (tentative)	
Borrowers	New power utilities					Negotiations	2003-04
Potential cofinanciers	n/a					Effectiveness	2003-04
Estimated disbursements (US$ million) (illustrative purpose) - Year ending March 31		2003	2004	2005	2006	2007	
Annual		15	54	61	41	19	
Cumulative		15	69	130	171	190	

Development Objective

Support Haryana in deepening the reform and restructuring of the power market (evolution from a single-buyer market to a multiple-buyer, more competitive market), furthering private participation in the sector (e.g., transmission); expanding the power system and importing power from large private projects in India or neighboring countries. Haryana expects that, during the execution of the project, the power deficit in the state would be eliminated.

Indicative Project Description

The project would finance: (i) the continuation of the expansion of the transmission and distribution system and of technical assistance; and (ii) demand-side management activities. The project could also include a guarantee to support private power development in generation and distribution.

in Loan Conditions (tentative)

- The distribution business has been fully privatized;
- Haryana's power sector functions along the principles stated in the Detailed Policy Statement and underlying the Reform Program;
- The Regulatory Commission operates in accordance with the Haryana Electricity Reform Act and the relevant rules and regulations;
- The power utilities operate in accordance with their business plans;
- The beneficiaries have presented business plans acceptable to the Bank; and
- The tariffs paid by the agricultural consumers have been adjusted to cover at least half the average supply cost, subject to the procedures set up by the Regulatory Commission.

The milestones that would have to be achieved before the APL4/5 would be further defined and agreed during the appraisal of the APL3 and APL4.

4. In addition to the above project-specific milestones:

a. For any loan under execution: covenants are complied with; remedies are not being applied by the Bank, project implementation is satisfactory to the Bank; at least 75% of loan funds are committed through contracts; and disbursements are satisfactory to the Bank (APL3 should be disbursed at 60% at least before APL4 could be approved; and APL4 disbursed at 70% at least before APL5 - if any - be approved);

b. Progress in implementing the Reform Program, as set out in the Detailed Policy Statement and PPIP, is satisfactory to the Bank;

c. The beneficiary entities have defined their priority investment and financing plans, prepared bidding documents and invited bids in accordance with Bank's guidelines with the support of their engineering consultants for an amount of at least 80% of the proposed loan; and

d. Standard environmental and social requirements are met as per Bank guidelines and policies.

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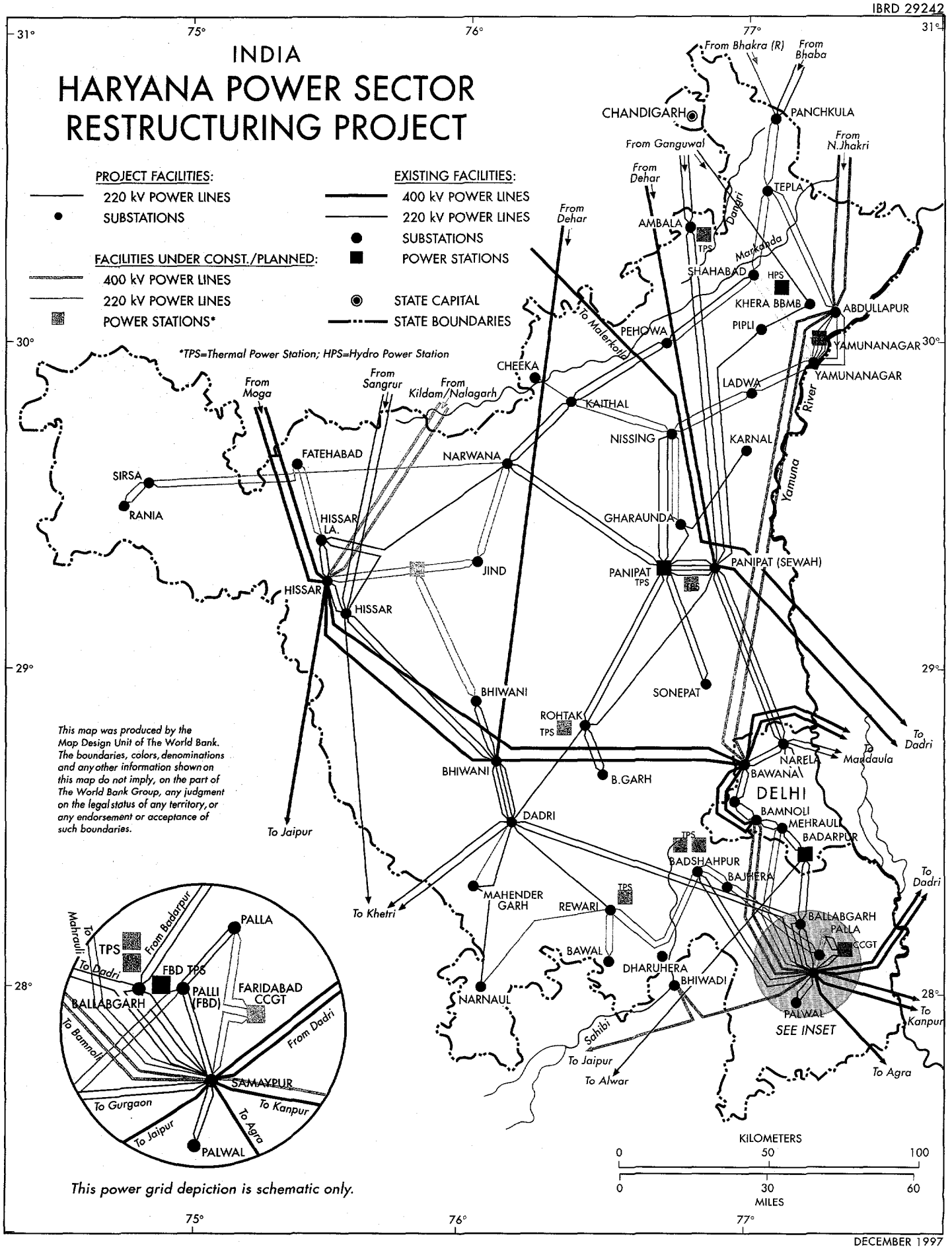
HARYANA POWER SECTOR RESTRUCTURING PROJECT



This power grid depiction is schematic only.

DECEMBER 1997