

**FRAMEWORK FINANCING AGREEMENT
MADHYA PRADESH POWER SECTOR INVESTMENT PROGRAM**

Parties	This Framework Financing Agreement (FFA) dated 20 February 2007 is made between INDIA, acting by its President, and Asian Development Bank (ADB).
Investment Program	<p>INDIA will cause the State of Madhya Pradesh (the State) to implement the Madhya Pradesh Power Sector Investment Program, which is an integral part of the Roadmap and Investment Program. Both the Roadmap and Investment Program are described in Schedule 1 hereto (the Roadmap and Investment Program).</p> <p>The total cost of the Madhya Pradesh Power Sector Investment Program over the period 2007 to 2014 is expected to be \$620 million equivalent. The total cost of the Roadmap and Investment Program, over the period 2007 to 2014 is expected to be \$5,340 million equivalent.</p>
Multitranche Financing Facility	<p>The Multitranche Financing Facility (the MFF) is intended to finance subprojects under the Roadmap and Investment Program (Subprojects) provided that such Subprojects comply with the criteria set out in Schedule 4 hereto and that understandings set out in this FFA are complied with.</p> <p>The Subprojects may include:</p> <ul style="list-style-type: none">(i) Transmission System Expansion. Time-critical transmission lines, substations, and auxiliary equipment will be constructed to evacuate and transmit power from new power stations and substations to consumers.(ii) Distribution System Augmentation. Various targeted capital works designed to improve efficiency through loss reduction and enhance supply reliability. Subprojects include: the rollout of a high voltage distribution system (HVDS); remote metering of high value customers; metering of currently unmetered consumers; distribution transformers metering; renovation of substation protection and modernization of substations; substation SCADA; and the feeder separation scheme.(iii) Non Physical Investments. Various non-physical investments to complement physical investments, including: IT/MIS upgrades and capacity development related to energy efficiency and carbon trading.

This Framework Financing Agreement

This FFA does not constitute a legal obligation on the part of ADB to commit any financing. Financing tranches may be made available by ADB provided matters continue to be in accordance with the general understandings on which the MFF is based and which are laid out in this FFA.

INDIA and ADB may exercise their respective rights to cancel the MFF or any uncommitted portion thereof, and ADB may exercise its right to refuse a financing request, by giving written notice to such effect to the other parties. The written notice will provide an explanation for the cancellation or refusal and, in the case of a cancellation, specify the date on which the cancellation takes effect.

Financing Plan

The financing plan for the Investment Program is summarized below. Details are set out in Schedule 1 hereto.

Financing Sources	\$ Million	%
Domestic Financiers	1,345	44.8
Asian Development Bank	620	20.7
Department for International Development	35	1.2
Private Investors	100	3.3
Internal Funds	600	20.0
Government of Madhya Pradesh	300	10.0
Total Funding	3,000	100.0

Sources: ADB staff estimate

Financing Terms

ADB will provide loans to finance subprojects under the Roadmap and Investment Program (Subprojects), as and when the latter are ready for financing; provided INDIA is in agreement with the understandings hereunder, and the Subprojects proposed for financing are in line with those same understandings. Each loan will constitute a tranche.

Each tranche may be financed under terms different from the financing terms of previous tranches. The choice of financing terms will depend on the Subproject, capital market conditions, and ADB's financing policies that are prevailing at the time the tranche is formalized in a legal agreement.

Tranches may be provided in sequence or simultaneously, and some may overlap in time with each other.

Each individual tranche will be for an amount of not less than \$40 million (with an exception of non-physical investment component for which the minimum loan amount will be \$5 million), or its equivalent. ADB will review the PFR[s] and, if found satisfactory, prepare the related legal agreements.

Commitment charges are not payable on the MFF. They are payable only on financing actually committed by ADB as a loan. ADB rules on commitment charges, which are in effect when a tranche is provided, will apply with respect to each tranche.

Amount

The maximum financing amount available under the MFF is \$620 million (six hundred twenty million US dollars). It will be provided in individual tranches from ADB's Ordinary Capital Resources.¹

Availability Period

The last date on which any disbursement under any tranche may be made will be 31 December 2014. The last financing tranche is expected to be executed not later than 31 December 2010.

Terms and Conditions

INDIA will cause the proceeds of each tranche to be applied to the financing of expenditures of the Roadmap and Investment Program in accordance with conditions set forth in this FFA and the legal agreements for each tranche.

Execution

Madhya Pradesh Power Transmission Company Limited (TRANSCO); Madhya Pradesh Madhya Kshetra Vidyut Vitaran Company Limited (DISCOM-C); Madhya Pradesh Poorv Kshetra Vidyut Vitaran Company Limited (DISCOM-E); and Madhya Pradesh Paschim Kshetra Vidyut Vitaran Company Limited (DISCOM-W) are the Executing Agencies for the appropriate Subprojects. The Executing Agencies will be guided by a Coordinating Committee chaired by the Managing Director of TRANSCO who has experience at major project delivery and loan disbursement. This approach will ensure the sharing of best practice within the state.

Periodic Financing Requests

INDIA may request, and ADB may agree, to provide loans under the MFF to finance the Roadmap and Investment Program and related Subprojects upon the submission of a Periodic Financing Request (PFR). Each PFR should be submitted by INDIA and confirmed by the State. INDIA will

¹ Provisions of the Ordinary Operations Loan Regulations applicable to LIBOR-Based Loans made from ADB's Ordinary Capital Resources, dated 1 July 2001, would apply to each tranches, subject, to modifications, if any, that may be included under any loan agreement.

make available to Executing Agencies, the proceeds of the tranches in accordance with the related PFR, and the legal agreements for the tranches. Unless INDIA otherwise informs ADB in writing, the Joint Secretary/Deputy Secretary, Department of Economic Affairs of the Ministry of Finance of INDIA will be authorized to sign PFRs on behalf of INDIA.

Each individual tranche will be for an amount of not less than \$40 million (with an exception of non-physical investment component for which the minimum loan amount will be \$5 million), or its equivalent. ADB will review the PFR[s] and, if found satisfactory, prepare the related legal agreements.

Subprojects for which financing is requested under the PFR will be subject to the selection criteria set out in Schedule 4 hereto, satisfactory due diligence and preparation of relevant safeguard frameworks, fiduciary requirements, and other relevant documents. INDIA and ADB will agree on an MFF Administration Manual and a schedule to initiate these activities, as soon as possible after the date of this FFA, but prior to the effective date of the legal agreements for the first tranche.

Each new financing request to be converted into a new loan will require evaluation on the performance of the previous one. ADB will conduct periodic review missions, which will include due diligence on warranties and representations made to ADB. In addition, staff will report on any issues or problems faced by the authorities and the execution agencies under the program, and the remedial actions suggested to overcome them.

General Implementation Framework

The MFF will be implemented in accordance with the general framework set out in Schedule 3 hereto.

Procedures

Tranches to be provided under the MFF will be subject to following procedures and undertakings:

- (i) INDIA will have notified ADB of a forthcoming PFR at least 15 days in advance of the submission of the PFR.
- (ii) INDIA will have submitted a PFR in the format agreed with ADB.
- (iii) ADB may, in consultation with INDIA and the State, decline to approve any PFR, or authorize the negotiation of any legal document for a tranche, provided, any decision to so decline is communicated to INDIA by ADB within 30 days from receipt of the PFR.

If no such decline is communicated to INDIA, the legal agreements will be negotiated and executed not later than 30 days from ADB's receipt of the PFR.

PFR information

The PFR will substantially be in the form attached hereto, and will contain the following details:

- (i) Tranche (s) amount;
- (ii) Description of Subprojects to be financed under the tranche (s);
- (iii) Detailed cost estimates and financing plan for the overall tranches (s) and Subprojects;
- (iv) Implementation arrangements specific to the Subprojects;
- (v) Confirmation of the continuing validity of and adherence to the understanding in this FFA;
- (vi) Confirmation of compliance with the provisions under previous legal agreements, as appropriate; and
- (vii) Other information as may be required under the MFF Administration Memorandum.

Safeguard Policies

Attached as Schedule 5 are the Safeguards Frameworks that will be complied with during the implementation of the MFF. ADB safeguard policies and INDIA's and State's applicable safeguard laws in effect as of the provision of a financing tranche will be applied with respect to the Subprojects financed under such financing tranche. ADB safeguard policies include Policy on Involuntary Resettlement, 1995, Policy on Indigenous Peoples, 1998, and Environment Policy, 2002.

Procurement

All goods and services to be financed under the MFF will be procured in accordance with ADB's Procurement Guidelines, 2006, as amended from time to time.

Advance Contracting. To expedite the implementation of subprojects, ADB might consider advance contracting. INDIA request ADB's approval for advance contracting through PFRs.

Retroactive Financing. Retroactive financing of eligible expenditures may be considered/allowed by the ADB's Management when included in PFRs. Except as otherwise agreed with ADB, the expenditures incurred for equipment and consulting services will be eligible under advanced contracting, provided that these expenditures are incurred before the effectiveness of the related loan agreement but not earlier than

12 month immediately preceding the signing of the related loan agreement, and do not exceed an amount of 20% of the individual loan. INDIA, the State and EAs have been informed that approval of advanced contracting and retroactive financing does not commit ADB to finance any of the proposed subprojects. Each PFR will specify the nature of expenditure if retroactive financing is requested.

**Consulting
Services**

All consulting services, if any, to be financed under the MFF shall be procured in accordance with ADB's Guidelines on the Use of Consultants, 2006, as amended from time to time.

Disbursements

The individual loan proceeds will be disbursed in accordance with ADB's Loan Disbursement Handbook, 2007, as amended from time to time. For each loan, INDIA will establish a first generation imprest account in Reserve Bank of India that will be established, operated, and maintained in accordance with ADB's Loan Disbursement Handbook. The imprest account shall be a current account, which will facilitate withdrawal of funds to meet project expenditures whenever needed. A second generation imprest account (SGIA) will be established for each loan in the name of each EA, which receive funds from the first generation imprest account to meet project expenditures incurred. SGIA will be established in a current account at a commercial bank acceptable to both ADB and INDIA. Interest income earned from the SGIA, if any, shall be utilized by the relevant EA only for the related Subproject purposes. ADB's statement of expenditures will be used to reimburse any eligible expenditure and to liquidate advances to the imprest account and SGIA, applicable to expenditures amounting to \$100,000 or less.

**Monitoring,
Evaluation, and
Reporting
Arrangements**

Within 3 months of the effective date of the loan agreement for the related Subproject under the MFF, the Executing Agencies (EAs) will establish a Project Performance Monitoring System (PPMS) in a form and substance acceptable to ADB, in accordance with the Investment Program and Subproject performance indicators. EAs will undertake periodic Subproject performance review under each individual tranche, as also for the Investment Program, in accordance with the PPMS to evaluate the scope, implementation arrangements, progress and achievements of objectives of the related Subproject and overall Investment Program. The EA will prepare and submit to ADB quarterly progress reports for the individual Subprojects under the MFF. The reports will include a description of physical progress, problems, and difficulties encountered and a summary of financial accounts that will consist of loan expenditures during the period, year to day, and total to date and include a report on progress of the implementation of mitigation measures as specified in the contracts and environmental management plan (EMP) and measures to

ensure environmentally responsible procurement. A Subproject completion report will be submitted within 3 months following completion of each Subproject. An MFF completion report will be submitted within 3 months following completion of the MFF.

Representations and Warranties

INDIA through the State assures that it will undertake all actions in all Schedules to this FFA, specifically:

Road Map Specific

- (a) provide its share of funding for the Roadmap and Investment Program in accordance with the Financing Plan and the implementation schedule outlined in Schedule 1 to this agreement as well as provide for any cost over-runs in excess of the contingencies of this Investment Program; and
- (b) fully implement the social and environmental frameworks, given in Schedule 5 to this FFA, for every subprojects.

Fiduciary Oversight

- (a) engage independent private audit firms to conduct annual financial audits and procurement audits, and submit reports to ADB;
- (b) conduct (i) energy audit for distribution reconfiguration, and (ii) business process and performance audits annually by independent auditors whose qualifications, experience and terms of reference are mutually acceptable to ADB and the State.

Governance

- (a) accountability and transparency of the EAs is maintained through the stakeholder meetings and publication of its agendas and actions throughout the duration of the Investment Program; and
- (b) the following measures to strengthen corporate governance will be in place: (i) independent directors at the Board level are recruited; (ii) Board level committees, including an audit committee, are formed; (iii) internal audit functions established and internal audit guidelines in line with best practices, DISCOMs internal audit scope covers revenue audit; and internal audit reports to the audit committee of the Board; (iv) internal controllers are appointed, and report to the Chairman and Managing Directors of the respective EAs on a regular basis.

Capacity and Institutional Development

- (a) ensure that the current capacity development program that covers financial management and human resources development is implemented on a timely basis;
- (b) provide the funding needed for maintaining the investments in good condition during and after the completion of the Roadmap and Investment Program, and adopt inclusion of maintenance provision and longer period of guarantees in the turnkey contracts as the default mode of procurement of maintenance works; and will
- (c) will have appointed functional managers for operations, information and technology (IT), commercial functions, and finance; and will have recruited (i) chartered accountants, (ii) IT specialists (iii) specialists in commercial areas.

INDIA

ASIAN DEVELOPMENT BANK

By: Original Signed
 NAVIN K. CHOUDHARY
 Deputy Secretary (ADB)
 Department of Economic Affairs
 Government of India
 (Authorized Representative)

By Original Signed
 TADASHI KONDO
 Country Director

SCHEDULE 1

ROADMAP AND INVESTMENT PROGRAM

ROAD MAP

A. Background

1. Progress to Date

1. In broad terms, the growth strategy for the power sector in India has shifted from regional self-sufficiency to a focus on the optimization of resources on an all-India basis. INDIA has confirmed its intent to provide power supply to all at an affordable price by 2012. This will require an estimated 70,000 MW for 2007-2012 of new generating capacity as well as downstream networks to evacuate, transmit and distribute power. INDIA has also recognized that the past poor performance of state electricity boards was a roadblock to private sector investment, and in 2001 set a program of unbundling, open access tariff restructuring and rationalization. The Electricity Act 2003 (the Act) is the cornerstone legislation for the power sector, and provides the legal framework for the efficient development of the sector. The Act primarily concerns itself with unbundling of SEB, open access and competition.

2. Reform in the Madhya Pradesh (MP) power sector has progressed within the policy and legislative framework of India, and is summarized in Figure 1. In 2000 the Government of Madhya Pradesh (GOMP) entered into a Memorandum of Understanding (MOU) with the Ministry of Power (MOP), India. The MOU outlined parameters for reorganization of MP State Electricity Board (MPSEB), such as separation of business functions through corporatization, rationalization of tariffs, limiting the role of GOMP in the sector, and providing full support to the MP Electricity Regulatory Commission (MPERC), which was formed in 1999.

3. In order to support the sector reforms contained in the MOU, in 2001 ADB approved the Madhya Pradesh Power Sector Development Program (MPPSDP) comprising a Policy Loan and a Project Loan. It covered four key reform areas: (i) unbundling of MPSEB, (ii) internal reforms such as metering, billing and collection, loss reduction and change management, (iii) tariff rationalization, and (iv) financial restructuring of MPSEB and the financial outlook of the power sector.

4. In 2001 MPERC issued its first tariff orders for all sector companies – off-take tariffs for the electricity generating company (GENCO), allowable costs and returns for the transmission company (TRANSCO), and uniform distribution and retail tariffs for the three distribution companies (DISCOMs). On 1 July 2002, an operation and management agreement was made effective between MPSEB and five successor companies (one each for generation, transmission, and three for distribution) and they began undertaking activities for and on behalf of MPSEB. In the revised tariff philosophy of December 2003, MPERC proposed to determine a full cost tariff for all consumer categories with the objective to ensure that the sector companies receive an income sufficient to cover expenditure and provide a reasonable return on assets.

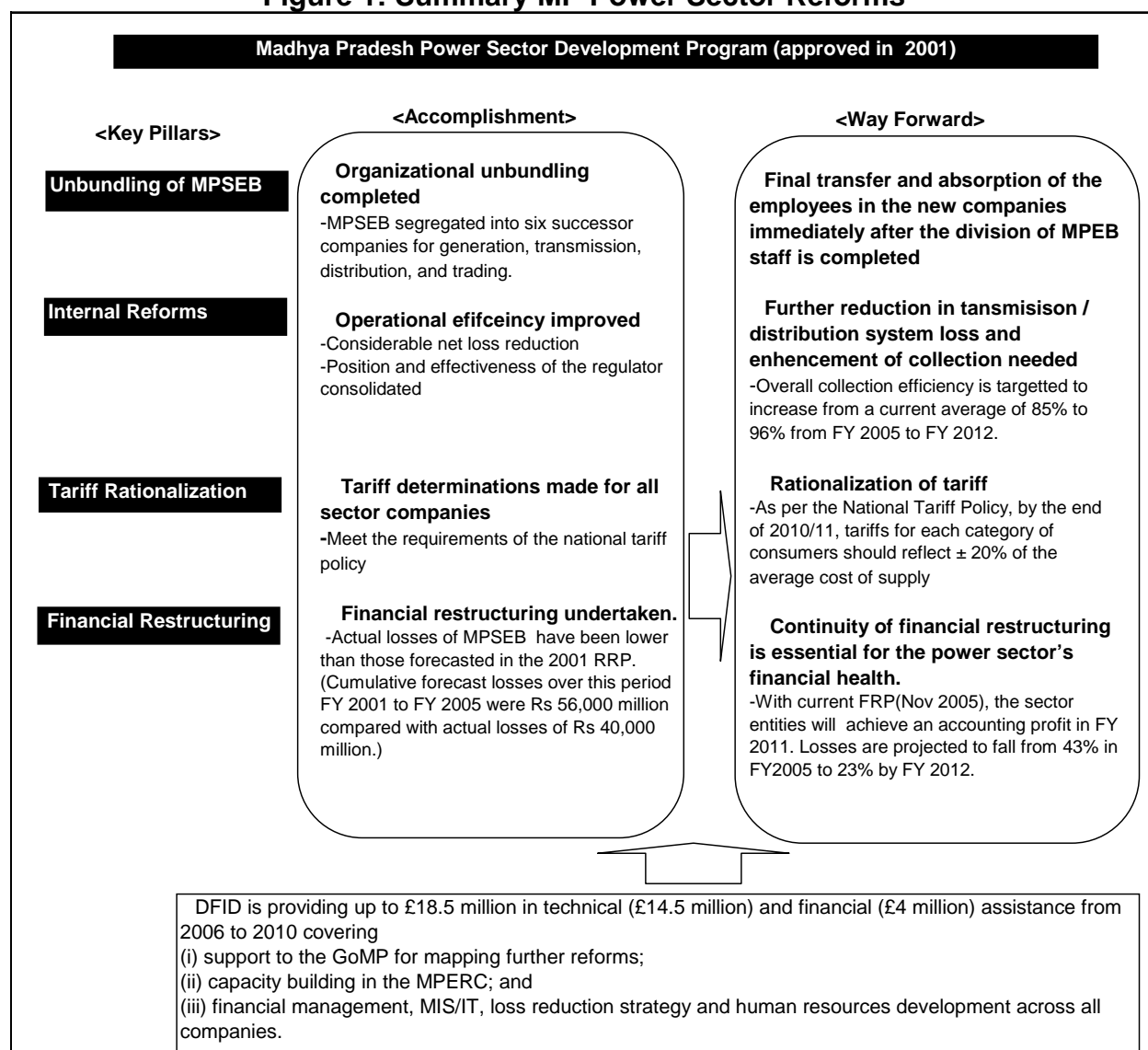
5. Financial restructuring of the sector was given additional impetus through the Financial Restructuring Plan (FRP) which was developed by the GOMP, MPSEB and its successor companies in 2004. The objectives of the FRP were to: (i) consolidate the financial performance and position of the sector; (ii) ensure that the complete debt obligation of the power sector and transfer of funds from GOMP to the sector was accurately established and was transparent; (iii) develop a plan to achieve financial sustainability of the sector through the targeted allocation of

financial obligations; and (iv) introduce rationalization of tariffs and provide a platform for open access.

6. Transfer of assets was done in October 2003 and setting up commercial and contractual mechanisms was accomplished in June 2005, and opening balance sheets for each new company were established. On 2 June 2006, the power trading function was transferred to a new company, TRADECO, which will operate as buyer and wholesaler under a single-buyer model. MPSEB is now a shell company, but will retain the treasury management function until the cash flow situation of the operating companies has improved to the extent that they are able to meet historical debt service obligations (by 2008).

7. In March 2006, MPERC passed the first multi-year tariff orders for generation and transmission covering the period 2007–2009. However the distribution retail tariff order still covered single year, 2007. The first multiyear distribution and retail tariff will cover 2008-2010. DISCOMs have already filed MYT applications before the regulator.

Figure 1: Summary MP Power Sector Reforms



2. Successes and Challenges

8. Power reform progress to date in MP has been significant. With support from ADB, Canadian International Development (CIDA) and the Department for International Development of United Kingdom (DFID), GOMP has established an appropriate regulatory framework including an independent sector regulator is in place, MPSEB has been unbundled, assets have been transferred to the newly formed companies and commercial relationships between the companies have been established. Moreover, cost-reflective tariffs have been set for all sector companies and will gradually move to full cost recovery, and capacity is being developed in all companies to operate in the evolving commercial and competitive sector.

9. GOMP's ongoing objective is to secure the power sector's viability and sustainability while improving the quality of electricity supply to its urban and rural population to facilitate economic growth. Challenges faced in delivering on this objective can be succinctly summarized as follows: (i) there is insufficient generation capacity to meet peak demand, necessitating scheduled and unscheduled load shedding.; (ii) transmission capacity is barely adequate and security of supply is at risk; and (iii) in the absence of a framework for long term distribution planning and a lack of funding, there has been significant underinvestment in the distribution network and poor maintenance of equipment. Consequently, the network is overstretched, losses are high and reliability and quality of supply are poor. In the absence of a strong transmission and distribution networks that are capable of meeting demand reliably and efficiently, the sector will remain financially fragile and will not provide a sufficiently attractive platform for private investment.

B. Road Map

1. Objectives

10. GOMP is presented with the opportunity to translate reform successes to date into a sustainable power sector. To deliver on this opportunity and in order to overcome the challenges outlined above, GOMP has developed a sector road map linked to a comprehensive investment program. The roadmap aims to deliver the following outcomes: (i) strengthened power supply capacity to improve access to reliable and affordable electricity; (ii) enhanced efficiency and quality of power supply; and (iii) financial health of the power sector through continued power sector reform at the sector and corporate levels. The road map is summarized in Attachment 1.

2. Strategy and Policies

11. The provision of a reliable, affordable electricity supply to all is a prerequisite for economic and social development in MP. 100% village electrification by 2010 and 100% household electrification by 2012 are key targets for social development; economic development will be facilitated by a power infrastructure that can deliver reliable and least cost supply to all consumers. This is the strategic imperative underpinning the sector road map.

12. The policy framework is in place to support this strategy. The inefficiencies inherent in MPSEB have largely been eliminated through unbundling, and the new companies are well placed to implement GOMP's strategy for the sector. Targeted investments, channeled through these companies, will alleviate constraints through system rehabilitation, reinforcement and network reconfiguration. Consequently, quality of supply will improve and electricity consumers will directly benefit, underpinning the expected economic value of the reforms.

13. **Generation.** The sector roadmap targets eliminating the energy deficit by 2009 and the peak deficit by 2012. MP has suffered from peak capacity and energy shortages in recent years. The peak deficit has been over 20% and the energy deficit has consistently been around 13% for the past three years. Total capacity installed in or available to MP is currently around 6,300MW, with around 3,000MW owned and operated by GENCO. Generating capacity available to meet peak demand is significantly less than installed capacity.

14. **Transmission.** Since 2002, there has been an almost 14% increase in transmission circuit length and a 41% increase in transformation capacity. Consequently, transmission losses have been reduced to an acceptable level of around 5%, and availability of the transmission network has been in excess of 98% for the past year. However, due to continued growth in demand, the transmission capacity is inadequate to serve peak demand. During 2006, the transmission system served the highest ever maximum demand of 5780 MW. The peak demand is expected to grow at an average of around 9% to 2012.

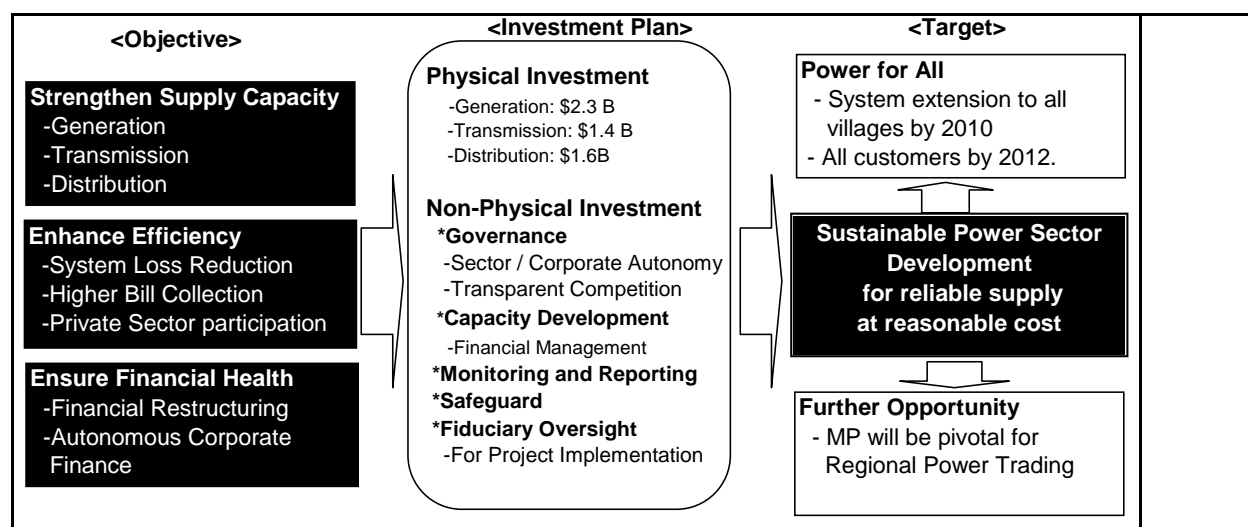
15. **Distribution.** The sector roadmap targets 100% village electrification by 2010 and 100% household electrification by 2012. Loss reduction and reliability improvement are also roadmap imperatives for the distribution sub-sector. Losses for DISCOMs exceed 35%, and power quality is poor due to under-sized conductors, long LV circuits, and distribution transformer overloading.

16. **Private Sector Participation.** Through its National Electricity Policy and in keeping with open access and other provisions contained in the Electricity Act, 2003, INDIA created an enabling platform for greater private sector participation in the power sector.. GOMP is cognizant of the need for further private sector participation both to meet the sector's overall financing requirements and to enhance operational efficiencies. ADB and GOMP have continued policy dialogues since processing the MPPSDP in 2001 and agreed that further private sector participation would be a critical medium-term objective. Through implementation of power sector reform under MPPSDP, GOMP has created enabling environments for private sector participation and public-private partnerships. To date, progress of contribution from the private sector has been slow. GOMP has revised the policies for private sector participation in mini hydel projects (25 MW and less) to make it more attractive for investors. Pilot distribution system franchising schemes have been implemented and some minor maintenance functions have been outsourced. The road map sets out opportunities for private sector involvement including; (i) electricity generation from renewable and non-renewable resources, (ii) transmission network ownership and leasing, (iii) further distribution network franchising and leasing, (iv) bilateral electricity trading and (v) maintenance contracting.

17. **Capacity Development.** ADB's 2001 program loan included a capacity development component to address the policy environment. This assistance was successful, and the capacity to formulate and execute sector policy has been demonstrated by GOMP since 2001. The MP Electricity Regulatory Commission (MPERC) is adequately staffed, has been well supported by consultants, and is functioning at a satisfactory level. The roadmap recognizes that technical, commercial and financial capacities constraints exist in the power sector. The constraint addressed through a comprehensive functional support and capacity-building program supported by DFID.

18. The road map and its accompanying investment plan (discussed below) are summarized in Figure 2.

Figure 2: Overview of Road Map and Investment Plan

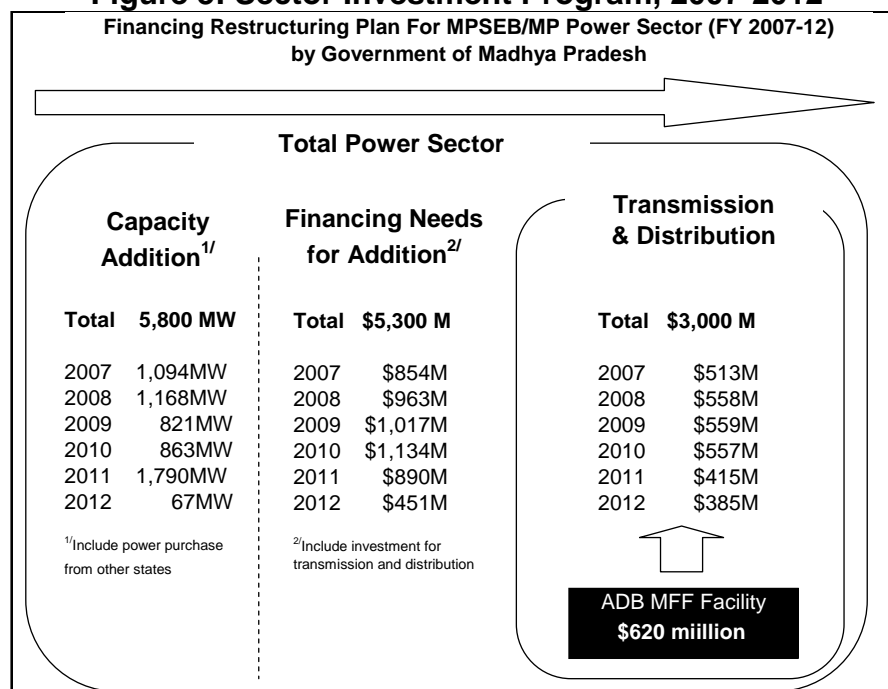


C. Investment Program

1. Physical Investments

19. GOMP intends to deliver on India's mandate to provide universal power supply at an affordable price by 2012. Assuming increases in tariffs to bring them in line with the true cost of supply, unrestricted consumer demand for energy in MP is forecast to increase at 7.1% pa during the Eleventh Plan (2007-12). This means that approximately 17,000GWh of additional demand will be added between now and early 2012. To serve this demand, approximately 6,000MW of additional peak generating capacity is planned for MP over the next five years.

20. The need to transmit an additional 6,000MW of peak power is the key driver of the investment program for the transmission and distribution systems. The transmission system is barely adequate to meet current peak demand and the distribution system is inadequate and significant capacity enhancement is therefore necessary. The investment program is predicated on building sufficient capacity for evacuation of power from existing and planned power stations and substations, and delivering power reliability and efficiency to consumers. It also targets a significant reduction in both technical and commercial losses, reducing the requirement for additional capacity by more than 1,000MW and returning to a capacity and energy surplus by 2011. The total investment requirement for the whole power sector from 2007-2012 is estimated at \$5.3 billion. In the transmission and distribution sub-sectors, an investment of approximately \$3.0 billion will be required in order to alleviate existing system constraints and to meet demand growth. Figure 3 shows the sector investment program for the period 2007-12.

Figure 3: Sector Investment Program, 2007-2012

Source: Updated report by MPSEB, September 2006

21. Provisional financing plans for the entire investment program and for the transmission and distribution program are shown in Table 1 and Table 2 respectively. ADB will finance a total of \$620 million, as outlined in Attachment 2, representing 20.7% of the transmission and distribution investment program. The financing plan assumes \$100 million of private sector investment through a strategic partnership scheme for franchising of urban distribution systems.

Table 1: Power Sector Financing Plan, 2007-2012

Financing Sources	\$ Million	%
Domestic Financiers	2,585	48.8%
Asian Development Bank	620	11.6%
Department for International Development	35	0.7%
Private Investors	700	13.1%
Internal Funds	800	15.0%
GOMP	600	11.2%
Total Funding	5,340	100.0%

Table 2: Transmission and Distribution Financing Plan, 2007-2012

Financing Sources	\$ Million	%
Domestic Financiers	1,345	44.8%
Asian Development Bank	620	20.7%
Department for International Development	35	1.2%
Private Investors	100	3.3%
Internal Funds	600	20.0%
GOMP	300	10.0%
Total Funding	3,000	100.0%

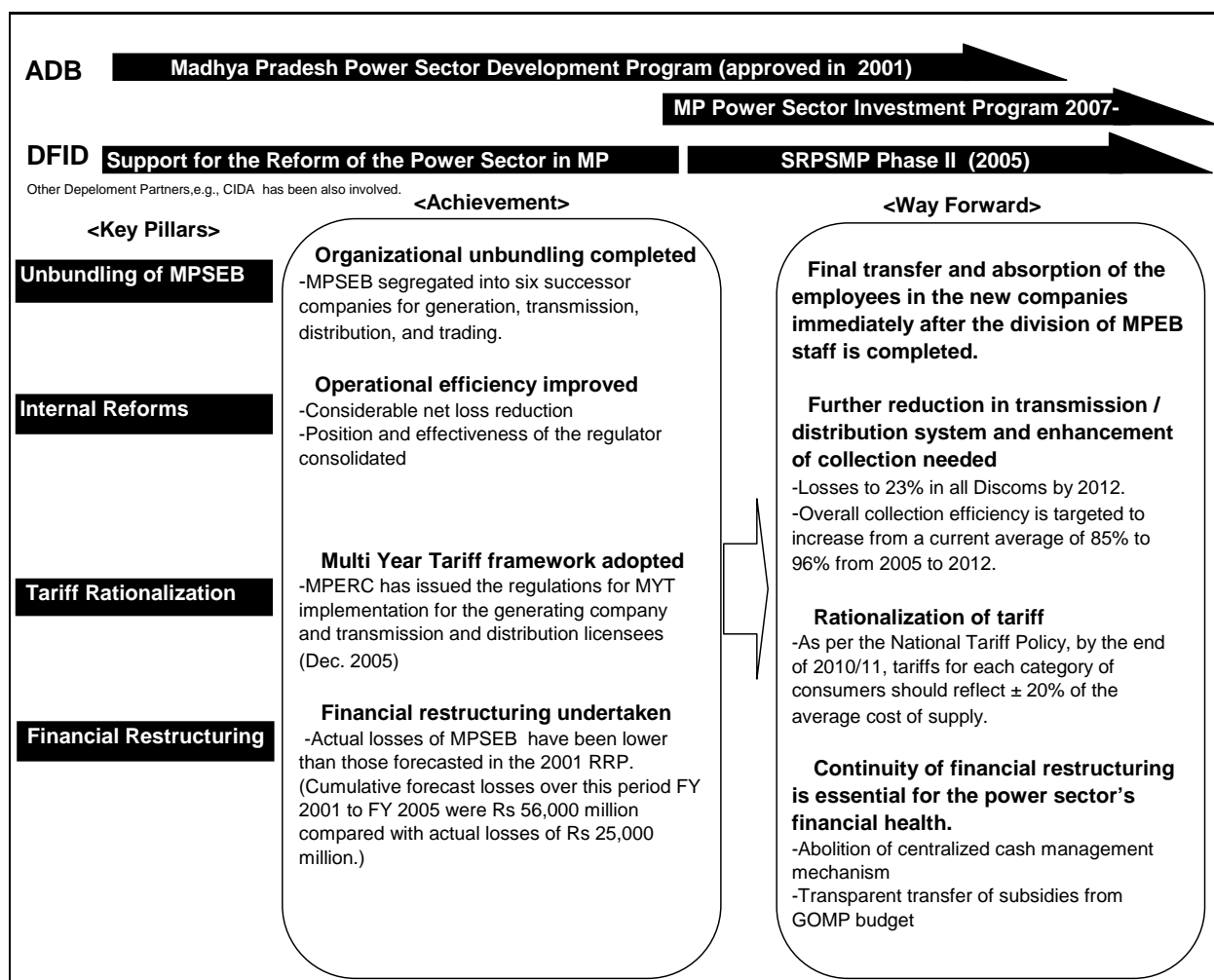
Source: ADB staff estimate

22. The transmission component of the investment program includes construction of new transmission lines which will remove constraints to power flow and will provide additional operational flexibility. Supply reliability will be further improved. The impact of the distribution component, which includes targeted technical and commercial loss reduction initiatives, will be more pronounced and apparent from the perspective of consumers. Improvements in voltage profiles will be evident through better lighting and fewer equipment failures. Supply will be available more consistently and momentary outages will be significantly reduced.

2. Non- Physical Investments

23. Physical investments will be supported by a comprehensive capacity building program supported by DFID). DFID is providing up £18.5 million (\$35.2 million) in technical (£14.5 million) and financial (£4million) assistance over the period 2006-10. The program, which is under implementation across the sector, emphasizes: (i) mapping further reforms through supporting GOMP; (ii) capacity building in the MPERC; and (iii) financial management and human resources development in all companies. In addition to these principal work-streams, socio-economic impact studies are also being conducted. The context of DFID assistance to the sector is shown in Figure 4.

Figure 4: Overview of Capacity Development Program (ADB & DFID)



24. The new companies inherited business processes and a limited number of IT applications from MPSEB. The power sector plans to introduce a 'backbone' ERP system covering billing and collection; finance and accounting; metering data management and MIS and maintenance; materials management; project systems; HR and email solution; together with the appropriate network infrastructure and support. This investment will improve the companies' financial management and reporting, as well as enhancing their internal audit and control capability. The recently formed TRADECO will develop settlements support system.

3. Assurances

25. A set of assurances has been designed to link the overall investment program and ADB's contribution to GOMP's ongoing reform agenda. The intention is to ensure that investments reflect the underlying reform strategy. Assurances have been specified for, amongst other things, financial and cash management, counterpart funding, audit, corporate governance and customer service.

SCHEDULE 2 DESIGN AND MONITORING FRAMEWORK

A. Investment Program

Design Summary	Performance Targets/Indicators	Data Sources/Reporting Mechanisms	Assumptions and Risks
Impact Contributed to sustaining economic growth and social development in Madhya Pradesh. Contributed to meeting the energy demand growth in Madhya Pradesh	Gross State Product (GSP) grows by at least 6% annually in the period 2007-2012 Energy deficit is reduced from 13% in 2007 to 0% in 2012.	Annual economic review and performance reports ¹	Assumptions Central and state governments remain committed to power sector reforms
Outcome Sustainable and commercially operated power sector companies. <u>Transmission Expansion:</u> Improvement in operational efficiency, voltage profile and power delivery capacity of Madhya Pradesh. <u>Distribution Enhancement:</u> Reduction in system losses and improved supply quality and reliability.	Reduced dependency of the sector on direct state support from the current level of approximately 30% of total investment funding to 20% by 2012 Eliminate financial losses in the sector by 2011 (from Rs2,700 million in 2005) Increase transmission capacity from 5,563 MW in 2005/06 to 8,170 MW in 2008/09. Enhancing system availability from 95% in 2005/06 to 97.5% in 2008/09 Reduction in technical losses in transmission system from 5.22% in 2005/06 to 4.9% in 2008/09. Reduction of distribution losses from 40-45% in 2005/06 to 23% in 2012. Improvement in system reliability, substantial reduction in fault restoration time.	Annual reports of the transmission and distribution companies. Reports of the Madhya Pradesh Electricity Regulatory Commission (MPERC).	Assumptions <ul style="list-style-type: none"> Operation and maintenance of the installations are carried out as per standard requirements. Availability of adequate competent staff in the companies. Load growth as projected Consistency of regulatory mechanisms and intervention Successful implementation of DFID capacity development program Risks <ul style="list-style-type: none"> Delays in implementation of related Powergrid transmission projects Generating capacity, including associated facilities not financed by ADB, not commissioned in a timely manner

¹ Available in *Handbook of Statistics on Indian Economy*, available from Reserve Bank of India website (<http://www.rbi.org.in/scripts/publications.aspx>) and updated monthly.

Design Summary	Performance Targets/Indicators	Data Sources/Reporting Mechanisms	Assumptions and Risks
Capacity of Sector Institutions Strengthened.	Reduced customer complaints about quality of electricity supply MP Energy Department able to conduct further reform.		
	Improved capacity of the Madhya Pradesh Electricity Regulatory Commission		
	Improved human resources in all sector companies		
	Improved financial management and accounting in all sector companies		
	Built capacity for Interstate power trade		
Improved Energy Efficiency	Energy Conservation Funds that supports small scale projects promoting energy efficiency fully operational		
Increased Private Sector Participation	Private investment in power sector substantially increased.		
Outputs <u>Transmission Expansion:</u> Construction of transmission lines and substations for power evacuation and strengthening of transmission systems. <u>Distribution Enhancement in East Distribution Zone:</u> Installation of remote	By 2011: <u>400 kV substation:</u> 315 MVA 400/220 kV <u>220 kV substation:</u> 8x160 MVA 220/132kV 3x100 MVA 220/132 kV additional transformers 10x160 MVA 220/132 kV additional transformers <u>220 kV lines:</u> 1570 cct-km. <u>132 kV substation:</u> 10x40MVA 132/33 kV 17x40 MVA 132/33 kV 10x20 MVA 132/33 kV 14x63 MVA 132/33 kV additional transformers <u>132 kV lines:</u> 1545 cct-km.	Quarterly project progress reports, loan review missions	Assumption <ul style="list-style-type: none"> Counterpart funds for timely project implementation are made available Timely approval of contract awards by relevant authorities Timely land acquisition and regulatory approval of construction of transmission lines and substation. Risks <ul style="list-style-type: none"> Regulatory approval for rights-of-way in forest areas is not obtained in a timely manner Increase in prices of raw materials exceeds contingency and inflation forecasts.

Design Summary	Performance Targets/Indicators	Data Sources/Reporting Mechanisms	Assumptions and Risks
<p>metering, high voltage distribution systems, renovation of substation protection system and customer service lines, implementation of SCADA.</p>	<p><u>By 2012:</u></p> <p><u>High Voltage Distribution Systems:</u> 16,500 km conversion of LT lines to HV lines</p> <p>11/0.4 kV distribution transformers: 24,000 nos. of 25 kVA 30,000 nos. of 16 kVA</p> <p><u>Remote metering:</u> 2,000 industrial customers</p> <p><u>Consumer metering:</u> 250,000 three phase 500,000 single phase</p> <p><u>Substation Protection System:</u> 330 33/11 kV substations.</p> <p><u>SCADA:</u> Installation of SCADA system for Jabalpur city circle.</p>		
<p><u>Distribution Enhancement in Central Distribution Zone</u> Installation of high voltage distribution system, remote metering for industrial consumers, consumer metering, renovation of substation protection system, and distribution system strengthening, and distribution transformer metering.</p>	<p><u>Feder separation:</u> 3,800 km 11 kV line 1,800 x25 kVA distr transf.</p> <p><u>By 2013:</u></p> <p><u>High Voltage Distribution Systems:</u> 13,100 km conversion of LT lines to HV lines</p> <p>11/0.4 kV distribution transformers: 22,000 nos. of 25 kVA 32,000 nos. of 16 kVA</p> <p><u>Remote metering:</u> 3,800 industrial customers</p> <p><u>Consumer metering:</u> 131,000 three phase 187,600 single phase</p> <p><u>Substation Protection System:</u> 40 33/11 kV substations</p> <p><u>Distribution System Strengthening:</u> 500 km 33 kV line</p>		

Design Summary	Performance Targets/Indicators	Data Sources/Reporting Mechanisms	Assumptions and Risks
<p>2,300 km 11 kV line 21 new 33/11 kV substations</p> <p><u>Distribution Enhancement in West Distribution Zone</u> Installation of high voltage distribution system, substation protection system, SCADA, feder separation, distribution system strengthening, distribution transformer metering, and capacitor banks.</p>	<p>2,300 km 11 kV line 21 new 33/11 kV substations</p> <p><u>Distribution Transformers Metering:</u> 23,200 nos of meters</p> <p><u>By 2013:</u></p> <p><u>High Voltage Distribution Systems:</u> 3,900 km conversion of LT lines to HV lines</p> <p>11/0.4 kV distribution transformers: 580 nos. of 25 kVA 19,400 nos. of 16 kVA</p> <p><u>Substation Protection System:</u> 400 33/11 kV substations</p> <p><u>SCADA:</u> Installation of SCADA system</p> <p><u>Feder separation:</u> 5,100 km 11 kV line 2,000 x25 kVA distr transf</p> <p><u>Distribution System Strengthening:</u> 580 km 33 kV line 2,500 km 11 kV line 21 new 33/11 kV substations</p> <p><u>Distribution Transformers Metering:</u> 23,000 nos of meters</p>		
<p><u>Non-Physical Investments</u> Development of MIS for power trade function</p> <p>Establishment of Energy Conservation Fund</p> <p>Facilitation of private sector participation in distribution through piloting strategic partnership modality</p>	<p><u>Capacitor Banks:</u> 10 nos 1200 kVAR 115 nos 600 kVAR</p> <p>Fully functioning power trading system by 2009.</p> <p>ECF is operational by 2010 in line with Energy Conservation Act, 2001</p> <p>Pilot scheme is implemented in Gwalior city, in the areas of Dwas, Ratlam and Ujjain districts.</p>		

Design Summary	Performance Targets/Indicators	Data Sources/Reporting Mechanisms	Assumptions and Risks
Activities with Milestones <u>1. Transmission:</u> 1.1 Procurement of major equipment: issuance of bidding documents by December 2006 and contract awards by September 2007 1.2 Land acquisition for substations by July 2007 1.3 Construction started by January 2008 1.4 Commissioning by 2011 <u>2. Distribution-East:</u> 2.1. Procurement of major equipment: issuance of bidding documents by March 2007 and contract awards by September 2007 2.2 Construction started by December 2007 2.3. Commissioning by 2011 <u>Distribution-West:</u> 3.1. Procurement of major equipment: issuance of bidding documents by January 2008 and contract awards by October 2008 3.2 Construction started by December 2008 3.3. Commissioning by 2013 <u>Distribution-Central:</u> 3.1. Procurement of major equipment: issuance of bidding documents by January 2008 and contract awards by October 2008 3.2 Construction started by December 2008 3.3. Commissioning by 2013			Inputs <ul style="list-style-type: none"> • ADB: \$620 million • Domestic Financiers: \$1,345 million • DFID: \$35 million • Private investors: \$100 million • Internal Funds: \$600 million • GOMP: \$300 million

ADB = Asian Development Bank, DISCOM = distribution company, GWh = gigawatt-hour, kV = kilovolt, MFF= Multitranché financing facility, MVA = megavolt ampere, MW = megawatt, PFR = Periodic Financing Request

B. Sector Road Map

Objective	Impact	Performance	Measurement	Responsible party
Achieve financially viable power sector	Reduced burden on the state and release resources for more productive use	Final phase of FRP consolidated in MYT orders Implement final elements of transfer scheme; deal with residual MPSEB functions Review of agricultural subsidy complete and implemented. Cross subsidies addressed A tariff policy implemented; costs contained	Unbundling' process complete and new structure consolidated. Business Plan targets achieved	Sector Companies GOMP GOMP MPERC
Continue the reform process	More autonomous, commercially focused and performance orientated successor companies to MPSEB developed Competition in generation; benchmark/ surrogate competition in transmission and distribution facilitated Climate for private sector participation enhanced	Operationalize TRADECO; consolidate then develop market structure. Distribution companies to have full control over their revenues and the power procurement process Consolidate MYT; introduce intrastate ABT and open access regime (1MW customers by 2007 ahead of Jan 2009 EA deadline) Implement organization structure and build capacity of the six successor companies (and 'supervisory' institutions of Energy Department, MPERC) through successful utilization of DFID funded support program Adoption of high standards of corporate governance 'Backbone' management support (ERP) systems specified and implemented. Human Resource planning, resourcing and productivity addressed	TRADECO trading; market relationships established and fully operational Choice of supplier available to major customers Boards of companies working to appropriate standards of governance Audited financial statements prepared to time Companies' access to finance and services MPERC orders result in progressive performance improvements	Boards of companies GOMP MPERC
Improve power system performance	Power system capable of meeting forecast demand Economic development through access to competitively priced energy supplies facilitated	Improve companies' capacity to deliver by restructuring and capacity development Power from generators evacuated to the grid and supplied to customers Implement program for reducing system technical and non-	MPERC targets for availability and losses met. Improving trend in internationally accepted network performance measures, (SAIFI, SAIDI, CAIFI, CAIDI)	Companies (delivery) MPERC (target and monitor)

Objective	Impact	Performance	Measurement	Responsible party
		<p>technical losses, by HVDS, network construction standards, capacity development, training, provision of tools and equipment.</p> <p>Improve standard of staff and public safety</p>	Improving trend in safety indicators	
Improve power quality	Customers provided with a continuous supply of power	<p>Ensure compliance with license conditions</p> <p>Ensure transformer loading within ratings; system voltages within prescribed limits etc.</p>	MPERC targets met.	<p>Companies (delivery)</p> <p>MPERC (target and monitor)</p>
Improve access to power	All potential customers have the option to take power supplies from their distributor	<p>System extension to 100% villages 2010 and 100% customers by 2012.</p> <p>Meet increased demand to connect new customers; reduce time to connect</p>	GOMP/MPERC targets met.	<p>Companies (delivery)</p> <p>MPERC (target and monitor)</p>

SCHEDULE 3

IMPLEMENTATION FRAMEWORK

C. Implementation Arrangements

1. Unless modified or amended in related loan or project agreements, the Madhya Pradesh Power Sector Investment Program will be implemented as below:

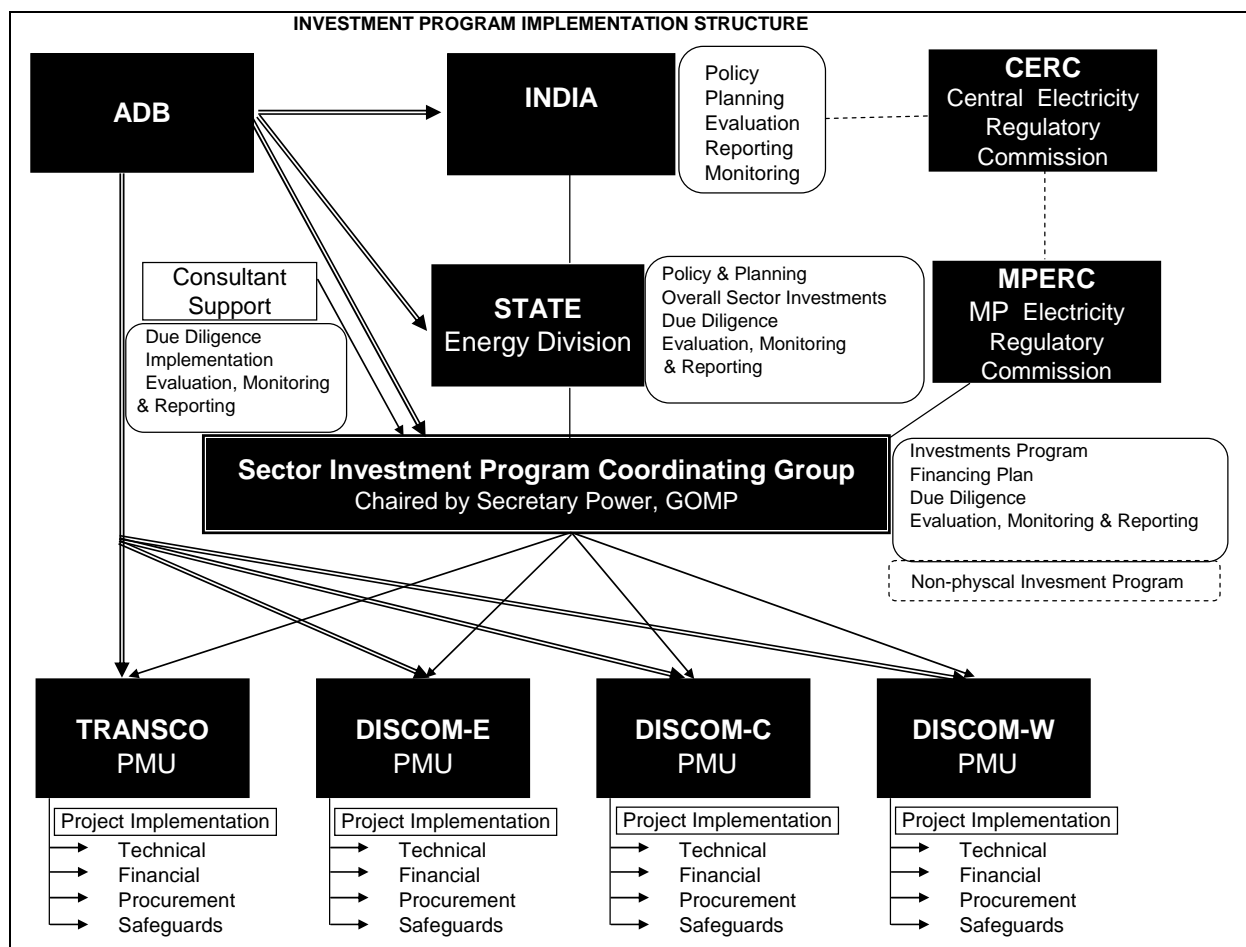
2. **Executing Agencies.** The Investment Program will be implemented by the following executing agencies (EAs):

- (i) Madhya Pradesh Power Transmission Company Limited (TRANSCO) will be the EA for the transmission component;
- (ii) Madhya Pradesh Poorv Kshetra Vidyut Vitaran Company Limited (DISCOM-E) will be the EA for the distribution component in the eastern area;
- (iii) Madhya Pradesh Madhya Kshetra Vidyut Vitaran Company Limited (DISCOM-C) will be the EA for the distribution component in the central area; and
- (iv) Madhya Pradesh Paschim Kshetra Vidyut Vitaran Company Limited (DISCOM-W) will be the EA for the distribution component in the western area.

3. Within each EA, a project management unit (PMU) headed by a PMU Manager was established. The PMU manager will report all subproject related matters to the Chairman and Managing Director of respective EA. Each PMU will comprise technical, financial, procurement and safeguard divisions. The EAs will appraise subprojects under their respective component and be responsible for processing and implementing the subprojects. These will include preparation of technical reports (feasibility studies, preliminary design reports, environment assessment reports, resettlement and indigenous people's development plans, detailed design reports), and bidding documents to ensure compliance with India and ADB requirements.

4. An Investment Program Coordinating Committee, chaired by the Chairman and Managing Director of TRANSCO will be established to coordinate the overall implementation of the Investment Program. The Coordinating Committee will report to the Energy Department (ED) of the State of Madhya Pradesh (the State) through a Program Implementation Unit (PIU) to be established within the ED and to the Madhya Pradesh Electricity Regulatory Commission (MPERC). At the state level, the ED will monitor the implementation of reform policy, planning process and overall power sector investment, while MPERC will conduct review and due diligence for new project proposals submitted by the companies prior to approval, and monitor the performance and improvement of service delivery of the EAs. Consulting services will be provided to ED and PIU if required to assist specifically in due diligence process, monitoring and reporting. At the national level, the Ministry of Power (MOP) will also monitor the state sector policy and investment program implementation.

5. The EAs will provide, as necessary, respective counterpart staff, land facilities, and counterpart funding for related subprojects in accordance with the financing plan in a timely manner through approved annual budget allocations, including the cost of making land available for the subprojects, and environment monitoring including cost of mitigating unforeseen environmental impacts, and general management expenses. Table 1 below shows implementation structure for the investment program.



D. Procurement, Consulting Services and Disbursement

6. The EAs shall ensure that all procurement of goods and services financed by the MFF will be carried out in accordance with ADB's *Procurement Guidelines*, all consulting services, if any, to be financed under the MFF will be procured in accordance with ADB's *Guidelines on the Use of Consultants*, and that the individual Loan proceeds will be disbursed in accordance with ADB's *Loan Disbursement Handbook*.

7. The individual loan proceeds will be disbursed in accordance with ADB's *Loan Disbursement Handbook*. For each loan, INDIA will establish a first generation imprest account in Reserve Bank of INDIA that will be established, operated, and maintained in accordance with ADB's *Loan Disbursement Handbook*. The imprest account shall be a current account, which will facilitate withdrawal of funds to meet project expenditures whenever needed. Interest income earned from the imprest accounts, if any, shall be utilized by the relevant EA only for the related subproject/project purposes. A second generation imprest account (SGIA) will be established for each loan in the name of each executing agency (EA), as necessary, which receive funds from the first generation imprest account to meet project expenditures incurred. SGIA will be established in a current account at a commercial bank acceptable to both ADB and India. ADB's statement of expenditures will be used to reimburse any eligible expenditure and to liquidate advances to the imprest account and SGIA, applicable to expenditures amounting to \$100,000 or less.

E. Performance Monitoring and Reporting

8. The EAs shall ensure that within 3 months of the Effective Date of the related loan agreement, a Project Performance Monitoring System (PPMS) shall have been established by each EA in a form and with a composition acceptable to ADB in accordance with the Investment Program and Subproject performance indicators. The EAs shall undertake periodic Subproject performance review under their respective component and under each individual tranche of the Loan, and also for the Investment Program in accordance with the PPMS to evaluate the scope, implementation arrangements, progress and achievements of objectives of the related Subproject and overall Investment Program.

9. The EAs will prepare quarterly progress reports and submit these to ADB within 30 days of the end of each quarter. These reports will provide (i) a narrative description of progress made during the period (progress on compliance with environmental and social requirements including EMP and RF will also be included), (ii) changes in the implementation schedule, (iii) problems or difficulties encountered, and (iv) work to be carried out in the next period. The progress reports will also include a summary financial account for the components, including subprojects, consisting of expenditures during the period, total expenditure to date, and reports on environmental monitoring, resettlement monitoring and benefit monitoring undertaken pursuant to the preceding paragraph of this Schedule.

10. The EAs will ensure the submission to ADB of a Subproject completion report within 3 months of physical completion of the related Subproject, and MFF completion report within 3 months of physical completion of the Investment Program. These reports shall cover a detailed evaluation of Subprojects and the MFF respectively, covering the design, costs, contractors' and consultants' performance, social, environmental and economic impact, economic and financial rates of return, and other details of each Subproject and the MFF as may be requested by ADB.

F. Review

11. ADB, the State of Madhya Pradesh (the State) and the EAs shall meet regularly as required to discuss the progress of the individual tranche and any changes to implementation arrangements or remedial measures required to be undertaken towards achieving the objectives of the Subprojects and Investment Program.

12. A Mid-term review of each Subproject will be undertaken by ADB, the State and the EAs. The mid-term review will include review of issues and any problems or weaknesses in implementation arrangements, and agree on any changes needed to achieve the objectives of the Investment Program.

13. A similar mid-term review of the Investment Program by ADB, the State, and the EAs will be undertaken in the fourth year from the date of the approval of the MFF by ADB.

G. Accounting and Audit

14. The State and the EAs shall ensure that proper accounts and records are maintained and audited in a timely manner to adequately identify the use of loan proceeds in such manner and detail as may be specified under each related legal agreement.

SCHEDULE 4

SELECTION CRITERIA AND APPROVAL PROCESS FOR SUBPROJECTS

The following criteria will apply in selecting and approving Subprojects intended for financing under the MFF:

- (i) Subprojects for Transmission will include rehabilitation, augmentation and expansion of transmission systems at 400kV and 220kV and 132kV that enable TRANSCO to evacuate power from new power plants, to meet increased demand within the state, transfer power through the state, meet the (n-1) criteria on substations and circuits and carry out diagnostic functions on the power system to support effective operation and loss reduction and any associated facilities related to the operations of the power transmission system.
- (ii) Subprojects for Distribution (three companies) will increase availability of grid based electricity supply in the state; reduce system technical losses in accordance with a loss reduction plan, add protection against non-technical losses through theft, improve reliability and quality of electricity supplies by reduction of unplanned outages, improve daily availability to domestic consumers through load control measures, rehabilitate, augment and expand distribution systems at 33kV, 11kV and low voltage, support revenue management and collection, provide compliance with statutory and regulatory requirements and any associated facilities related to the operations of the power distribution systems.
- (iii) Subproject designs will be consistent with overall least-cost expansion plans designed on a least cost basis and reflect “best practice” design, construction, and operations and maintenance features.
- (iv) Subprojects will display performance-based design consistent with international benchmarks for system efficiency and operational risk. Subprojects should have quantifiable energy efficiency improvements.
- (v) Subprojects will be part of the Madhya Pradesh Power Sector Investment Program of the State of Madhya Pradesh;
- (vi) Subprojects will be eligible for construction in accordance with the approved feasibility assessment, which includes engineering, financial, economic, environmental and social justifications;
- (vii) Safety Measures will be incorporated in the Subproject designs as required under the relevant policies, statutory requirements and regulations of India as amended;
- (viii) Design of Subprojects will be finalized taking account of input from public consultation carried out in the social and environmental assessments as appropriate;
- (ix) If a Subproject requires land to be made available, a meaningful community public consultation process in accordance with ADB’s *Policy on Involuntary*

Resettlement, 1995, will be conducted and the information on process of land transfer, assistance/support options and grievance procedures will be disseminated to the Subproject affected communities, and issues shall be resolved before awarding the civil works contract. In addition subprojects shall be designed to avoid and minimize land acquisition and resettlement impact. Resettlement plan shall be prepared according to the Resettlement Framework if land acquisition can not be avoided.

- (x) Subprojects will be environmentally acceptable with no significant residual impacts after mitigation. No Subproject will be located in an environmentally sensitive area, such as a wildlife sanctuary, national park, or statutory protected area for biodiversity or ecological functions, or in critical or sensitive areas identified as archaeological or heritage sites and monuments by relevant authorities¹
- (xi) An environmental checklist will be prepared for the Subproject in accordance with the EARF;
- (xii) Sufficient counterpart funding will be allocated by TRANSCO, DISCOM-E, DISCOM-C, DISCOM-W as appropriate as required to implement the Subproject as scheduled and to maintain the Subproject; and
- (xiii) All necessary Central and State government approvals will have been obtained for the Subproject.

¹ This condition shall not apply where the identified or sensitive area requires a subproject to facilitate a necessary supply of electricity. In this case the relevant authority must formally request the subproject, and the DISCOM shall agree with the relevant authority all design parameters and mitigating actions.

SCHEDULE 5

SAFEGUARDS REQUIREMENTS AND SOCIAL PROTECTION MEASURES

1. INDIA and the State of Madhya Pradesh (the State) will ensure that all the requirements prescribed in this Schedule, which have been prepared with respect to the MFF and of which ADB has been provided full copies, are complied with during the processing and implementation of the Subprojects under the MFF.
2. Prior to the preparation of each periodic financing request (PFR) the applicability and relevance of each safeguard framework for environmental assessment, involuntary resettlement, and indigenous people (Safeguard Frameworks) will be reviewed and updated to ensure relevance and consistency with applicable country legal frameworks and ADB's safeguard policies, as amended from time to time.
3. In all cases, for each new PFR preparation, the State will review on-going subprojects to check on the status of compliance with the safeguards plans and frameworks, and submit the review reports to ADB, together with other required safeguard documents relevant to the Subprojects included in the tranche. In any case if major noncompliance is discovered in the course of the review of on-going Subprojects, a corrective action plan will be prepared by the relevant EA and submitted through INDIA and the State to ADB.
4. In addition, all ADB safeguards policies in effect as of the date the financing of a Subproject under the MFF will apply to such Subproject.
5. Finally, to strengthen the effectiveness of stakeholder consultation and participation in the implementation of the Investment Program, a full consultation and participation (C and P) process be designed accordingly to include (i) stakeholder analysis, (ii) provision and disclosure of documents to the stakeholder, (iii) announcement of the date for consultation on specific issues; and (iv) adequate monitoring of the C and P process.

A. Environment

6. ADB will only finance investments that meet the eligibility requirements set out in Schedule 4 to this FFA, and which adhere to relevant requirements of INDIA and the State energy policies, attached Environmental Assessment and Review Framework (EARF)¹, and other applicable guidelines for subproject implementation. The State and Executing Agencies (EAs) will monitor the implementation of Subprojects through to their completion of each subproject.
7. The State will ensure that environmental assessment of the subprojects are conducted according to the ADB's *Environment Policy, 2002*; INDIA and the State's environmental laws, regulations, and standards; and the EARF.
8. The State and EAs will ensure that the recommendations of the environmental assessments and environmental management plans (EMP)² approved by ADB and relevant

¹ EARF is in Annex 1

² EMP is Attachment 1 to Annex 1

government agencies are adhered to during design, construction and operation phases of the subprojects.

9. The State and EAs will ensure that (a) the Subprojects are not located within national parks and wildlife sanctuaries, unless prior environmental clearance is obtained from relevant government agencies; (b) monuments of cultural or historical importance are avoided; and (c) EMP with adequate budget is developed and implemented for each Subproject. ADB environment Category A and B-sensitive projects will be subject to the general public 120-day disclosure before a PFR is submitted to ADB.

B. Land Availability and Resettlement

10. The State will cause the respective EAs to, subject to compliance with the relevant provisions of the attached Resettlement Framework (RF)³ and in accordance with all applicable laws and regulations of INDIA and the State, acquire or make available the land and rights to land free from any encumbrances, and cleared the utilities, trees and any other obstruction from such land by providing adequate compensation and assistance, required for commencement of construction activities in accordance with the schedule agreed under the related civil works contract.

11. The State will cause the respective EAs to ensure that all land and rights-of way required by the Subprojects are made available in a timely manner and that the provisions of the resettlement plans (RPs), including compensation and entitlements for affected households and persons, are implemented in conformity with (i) all applicable national and state laws and regulations, (ii) ADB's *Policy on Involuntary Resettlement, 1995*, and the agreed RF prepared for this investment program.

12. The State will cause the respective EAs to ensure that people affected by each Subproject are fairly compensated in a timely manner on market/replacement values in accordance with the related RPs and the RF, such that their living standards are not adversely affected. The EAs, through the State, will submit progress and completion reports on land acquisition and resettlement under the quarterly progress reports for each subproject.

13. The State will cause the respective EAs to ensure that prior to land acquisition and any resettlement under each Subproject, the related RP including its update based on consensus of affected peoples, is disclosed with all necessary information made available to persons affected by the Subproject and confirm that it be uploaded onto ADB web site. The EAs will ensure that essential public infrastructure that may be affected under land acquisition and resettlement is replaced, as appropriate, in an expeditious manner in accordance with the related RPs.

14. The State will cause the respective EAs to ensure that construction contracts contain binding requirements for construction contractors to fully reinstate pathways, other local infrastructures, and agricultural land to at least their pre-Subproject condition upon construction completion. Provision should be made for adequate recording of the condition of roads, agricultural land and other infrastructure prior to transport of material and construction commencement.

³ RF is in Annex 2

15. For each subproject, the State will cause the respective EAs to ensure timely provision of budget for land acquisition, resettlement and other activities outlined in the related RP and will meet any unforeseen obligations in excess of the RP budget estimate in order to satisfy the RP requirements.

16. The State will ensure that within 3 months of the Effective Date of the related loan agreement, the respective EAs will engage an independent external expert/agency mutually acceptable to ADB, INDIA and the State for monitoring and verification of the RP implementation under each Subproject that will be responsible for providing ADB through the investment program Management units (PMUs), quarterly monitoring and evaluation reports on resettlement implementation in accordance with the RPs.

17. The State will ensure that within 3 months of the Effective Date of the related loan agreement, the respective EAs will also establish a grievance redress committee (GRC) having representation from all stakeholders for the related Subproject for addressing any grievances from affected peoples concerning resettlement, environment and other social issues in a timely manner.

C. Indigenous Peoples

18. the State and the EAs will ensure that the requirements set out in the attached Indigenous People's Development Framework (IPDF)⁴ and INDIA's and State's applicable laws on indigenous peoples will be implemented..

C. Execution of Civil Works Contracts

19. The State and EAs will ensure that, subsequent to award of civil works contract under any Subproject, no section or part thereof under the civil works contract will be handed over to the contractor unless the applicable provisions of the RF/RP and the EARF/EMP have been complied with.

20. Any changes to the location, land alignment or environment impacts on account of detailed designs of related subproject roads will be subject to prior approval by ADB and/or EAs as the case may be in accordance with the subproject selection criteria and procedures included in Schedule 4 to this FFA.

⁴ IPDF is in Annex 3

ENVIRONMENTAL ASSESSMENT AND REVIEW FRAMEWORK

A. Introduction

1. Government of Madhya Pradesh (GOMP) through (INDIA) has requested Asian Development Bank (ADB) to provide a multi-tranche financing facility (MFF) to partly fund the power sector investment program in the state of Madhya Pradesh (MP). The investment program will cover physical investments in transmission, distribution, energy efficiency, and non-physical investments in management information system and other areas (e.g., capitalization of a state energy conservation fund). The program will finance expansion and upgrade of transmission and distribution systems in several tranches executed under the MFF. Energy efficiency projects will be included in the investment program scope, with specific projects/subprojects to be included in subsequent tranches.

2. The investments to be supported by ADB will (i) improve quality and reliability of power; (ii) remove transmission bottlenecks; (iii) facilitate in-state and interregional power transfers; (iv) facilitate a reduction in overall system losses; (v) improve energy efficiency, expand renewable energy capacity, and capitalize related carbon market opportunities; and (vi) improve utility operational and financial performance. The proposed program will sustain the reform agenda established with earlier ADB support, and is expected to help to attract other long-term financiers to the sector.

3. This Environmental Assessment and Review Framework (EARF) is applicable to all investments funded by the MFF, and particularly to projects included in subsequent tranches which have not yet been fully defined. The EARF outlines the policy, procedures, and institutional requirements for preparing subsequent projects. The Executing Agencies (EAs) are responsible for preparing the required environmental assessments and obtaining ADB concurrence prior to implementation. These approvals must be in place prior to finalization of contracts and commencement of work.

B. Environmental Regulatory and Policy Framework for Subproject Selection

4. INDIA and ADB environment policies and procedures apply to all projects/subprojects funded by the MFF. The environmental regulations of the Ministry of Environment and Forests (MOEF) categorizes industrial projects into red, orange and green categories according to their anticipated potential environmental impact. Transmission and distribution projects are exempted from the list of projects that require environmental impact assessment (EIA) and environmental clearances from MOEF.

5. Power transmission and distribution projects normally are classified by ADB as Category B. Category B-sensitive or Category A may apply to projects located in environmentally sensitive areas.¹ For each major investment component an initial environmental examination (IEE) will be prepared following ADB's *Environment Policy, 2002* and *Environmental Assessment Guidelines, 2003* and National² environmental assessment regulations and

¹ National Parks, Wildlife Sanctuaries, nature reserves, or wetlands as designated by MoEF and areas declared as heritage sites.

² Ministry of Environment and Forests, INDIA's Environmental Assessment Notifications 1994 and Guidelines for Environmental Impact Assessment for River Valley / Power Projects

guidelines. The IEEs will include an environmental management plan (EMP) with implementation budget³.

C. Environmental criteria for additional subproject selection

6. Specific environmental criteria for project/subproject selection are:

- (i) Projects/subprojects will not be located within national parks, wildlife sanctuaries and nature reserves, or wetlands, unless unavoidable for technical reasons.
- (ii) Monuments of cultural or historical importance will be avoided.
- (iii) An EMP with adequate budget will be developed for each project/subproject.
- (iv) Environment Category A and B-sensitive subprojects must comply with general public 120-day disclosure before a PFR is submitted to ADB.
- (v) Potential environmental impacts will be minimized by routing and siting to avoid sensitive areas. Re-alignment or selection of alternative sites may be required.
- (vi) Clearing of any existing forest resources will be avoided if possible, and where unavoidable will be minimized and compensated as per India regulatory criteria.
- (vii) New equipment / facilities specifications shall follow international standards and best practices mutually agreed upon among ADB, INDIA and the State to avoid use of chemicals causing greenhouse gas (GHG) emissions. All equipment procured shall be free from polychlorinated biphenyl (PCBs).

D. Environmental assessment and review procedures of additional subprojects

1. Application of selection criteria

7. Proposed projects/subprojects will be screened for compliance with selection criteria listed above prior to additional analysis. Environmental categories will be assigned using the rapid environmental assessment checklist (as described in ADB *Environmental Assessment Guidelines 2003*). Design changes may be suggested or required by ADB and INDIA for proposed projects that initially do not meet the selection criteria, and environment categories will be changed as necessary.

a. Preparation of IEEs and EIAs

8. After categorization, an IEE or EIA including an EMP with implementation budget will be prepared for each component. Public consultation will be conducted with local community and potentially affected people as early as possible for each project/subproject. For Category A projects/subprojects, public consultations will be conducted at least twice: (i) once during early stage of EIA field work, and (ii) once with the draft EIA report is available, and before submission of the relevant PFR. IEE and EIAs will be reviewed and approved by ADB and INDIA before commencement of detailed design while IEE results will be communicated to the local community before commencement of construction. Summary IEEs and summary EIAs will be prepared and disclosed in accordance with ADB's *Public Communication Policy 2005*. For Category B-sensitive and A projects, the SIEE a summary IEE or SEIA for subsequent tranches should be made available to general public at least 120 days before a PFR is submitted to ADB.

³ EMP is in Attachment 1.

b. Responsibilities /Authorities of various agencies

9. The EAs (TRANSCO and DISCOMs) will be solely responsible for the implementation of the entire environmental assessment and review procedures. This include, among others, ensuring that the selection criteria are adhered to strictly, the preparation of IEE/SIEEs and EIAs/SEIAs be done in a timely and adequate manner, environmental monitoring and institutional requirements be fully met while public consultations be carried out satisfactorily. The EAs through the State will submit the categorization checklist, IEE/SIEEs and monitoring reports to ADB for review.

10. The EAs will also be responsible for obtaining regulatory approval of the relevant regional environmental protection agency as per the regulatory requirements of INDIA or the State.

11. ADB will be responsible for regular review and timely approval of checklists, IEE/SIEEs and EIA/SEIAs. Technical guidance will be provided by ADB to EAs as needed. ADB will also be responsible for reviewing regular monitoring reports and officially disclosing the SIEEs and SEIAs (for Category A and B sensitive components/subprojects) on its website. For category A project and B-sensitive project, EA will submit semiannual reports on implementation of EMP to ADB.

c. Preparation of detailed design

12. Detailed design work for each additional subproject will follow the recommendations of the IEE. The EAs will review detailed designs before contracts are finalized and modifications incorporated if considered necessary. Certification to ADB that the detailed designs comply with IEE (including EMP) recommendations will be required before contracts can be made effective.

d. Preparation of construction contracts

13. Early in the implementation period, model construction contracts will be prepared incorporating general environmental safeguards and practices. Specific, individual contracts will be based on the model contracts, but vetted by the EAs to ensure that EMP requirements are covered within the contract.

e. Monitoring during the construction period

14. Monitoring during construction will be EA's responsibility. Monitoring will be sufficient to comply with construction contracts, determine the state and health of affected environmental resources, and determine the effectiveness of mitigation measures. Reporting will be to ADB and the relevant environmental agencies (forest department, pollution control board, MoEF etc.) on a regular basis. For Category A and B-sensitive projects, the EA will submit semi-annual reports on EMP implementation to ADB.

E. Environmental Management Plan

15. Attachment 1, presents the general environmental management plan in matrix form that will apply to additional subprojects. The matrix is developed on the basis of environmental

analysis of the proposed first tranche components and subprojects,⁴ and review of environmental impacts of typical power transmission and distribution projects. The mitigation measures for the all subprojects will be developed in the spirit of the principles agreed upon in this EMP framework.

16. Environmental monitoring will consist of routine systematic checking that the above environmental management measures have been implemented effectively during each stage of the project. Table 1 (below) presents the summary monitoring plan for projects to be funded by the MFF. Tables 2 and 3 present the indicative estimated costs for EMP implementation of the first tranche projects.

Table 1: Summary Environmental Monitoring Plan

Environmental Monitoring Tasks⁵	Implementation Responsibility	Implementation Schedule
Pre Construction Phase		
Audit project bidding documents to ensure EMP is included.	EAs through project implementation unit	Prior to issue of bidding documents.
Monitor contractor's detailed alignment survey to ensure relevant environmental mitigation measures in EMP have been included.	EAs with assistance of project implementation unit	Prior to EA approval of contractor's detailed alignment survey.
Audit detailed designs of Facilities to ensure standard environmental safeguards/mitigation measures (as identified in EMP) have been included.	EAs with assistance of project implementation unit	Prior to EA approval of contractor's detailed designs.
Construction Phase		
Regular monitoring and reporting of contractor's compliance with contractual environmental mitigation measures.	EAs with assistance of project implementation unit	Continuous throughout construction period.
Operation and Maintenance Phase		
Observations during routine maintenance inspections of facilities and transmission lines RoWs. Inspections will include monitoring implementation status of mitigation measures specified in EMP.	EA	As per EAs inspection schedules

⁴ An IEE with EMP has been prepared for the proposed first tranche. The SIEE is attached as a core appendix to the RRP.

⁵ Monitoring of issues related to compensation of landowners for land acquisition and loss of production, etc. are addressed in the Resettlement Action Plan.

**Table 2: Summary of Estimated Costs for EMP Implementation
(Transmission Component)**

Item	Sub Item	Total Cost (\$)
Monitoring activities	As detailed under EMP	463,777
Mitigation measures	As prescribed under EMP and IEE	2,272,844
Independent audit and monitoring agencies	As described above	22,222
Contingency	3% contingency	82,765
Total		2,841,610

Note: Costs estimated are indicative only

**Table 3: Summary of Estimated Costs for EMP Implementation
(Distribution Component)**

Item	Sub Item	Total Cost (\$)
Monitoring activities	As detailed under EMP	247,333
Mitigation measures	As prescribed under EMP and IEE	651,666
Independent audit and monitoring agencies	As described above	11,111
Contingency	3% contingency	27,303
Total		937,414

Note: Costs estimated are indicative only

F. Institutional Arrangements

17. An Environmental and Social Management Unit (ESMU) will be established within each company headed by concerned head of the company (TRANSCO and DISCOMs), which will be accountable and responsible for implementation of the EMP. Each unit will have an Environment Officer to coordinate implementation of the EMP. The EA will hire local environmental consultants if required. The local consultants will work in close coordination with ESMU in facilitating EMP implementation. EAs will further ensure the environmental management and monitoring budgets are available and utilized as necessary for timely EMP implementation.

18. The ESMUs will also be responsible for internal monitoring, quality control, supervising activities of local consultants, and progress reports on EMP implementation. The implementation of EMP shall be a time bound activity.

G. Disclosure, Consultation and Grievances

19. SIEEs and SEIAs prepared for additional sub projects will be translated into local language(s) and made available to the public. A Grievance Redressal Committee (GRC) will be set up each of subproject to address all concerns and grievances of the local communities and affected parties. The GRC will comprise of representatives from local authorities, affected parties, and well-reputed persons from health, education sectors, as mutually agreed with the local authorities and APs. This committee will address the Investment Program related grievances of the affected parties and will provide them a public forum to raise their concern or objections. A senior official from region/corporate office will represent EA. The GRC will be located and functional so as to ensure easy access to communities and affected parties. The

EA will be responsible to disseminate information about the functional norms of the GRC. The committee will meet at least twice in a year or as and when required.

H. Monitoring and Evaluation

20. The EMP will have both internal and external monitoring. The ESMU at the local level will be responsible for internal monitoring of the EMP implementation, and will forward quarterly progress reports to the EA with details of activities and progress made in EMP implementation. The EA will submit semiannual monitoring reports to ADB. An independent monitoring agency will be hired by the EA with ADB concurrence for undertaking external monitoring of the all projects funded by the MFF. The monitoring agency will be selected within three months of loan approval. The monitoring agency shall report on semi-annual basis directly to ADB and determine whether sound environmental management practices have been achieved, and suggest suitable recommendations and remedial measures for mid term correction and improvement.

Environmental Management Plan

<i>Project activity /stage</i>	<i>Subproject type of component</i>	<i>Potential impact</i>	<i>Proposed mitigation measure</i>	<i>Parameter to be monitored</i>	<i>Measurement and frequency</i>	<i>Institutional responsibility</i>	<i>Implementation schedule</i>
A - Pre-construction							
Location of Facilities	Transmission line and associated substations, sub-station protection system, HVDS	Exposure to safety related risks	Setback of dwellings to overhead line route designed in accordance with permitted level of power frequency and the regulation of supervision at sites, risks from conversion of LT line to HV line	Tower and substation location and line alignment selection with respect to nearest dwellings	Setback distances to nearest houses - once	TRANSCO, DISCOM	Part of tower siting survey and detailed alignment survey and design
		Impact on water bodies and land	Consideration of tower location at where they could be located to avoid water bodies or agricultural land.	Tower location and line alignment selection (distance to water and/or agricultural land)	Consultation with local authorities and land owners - once	TRANSCO	Part of tower siting survey and detailed alignment survey and design
		Social inequities	Careful route selection to avoid existing settlements, social inequities for HVDS	Tower location and line alignment selection (distance to nearest dwellings or social institutions)	Consultation with local authorities and land owners - once	TRANSCO, DISCOM,	Part of detailed tower siting and alignment survey and design
			Minimise need to acquire agricultural land	Tower location and line alignment selection (distance to agricultural land)	Consultation with local authorities and land owners - once	TRANSCO	Part of detailed tower siting and alignment survey and design
Equipment specifications and design parameters	All equipments	Release of chemicals and gases in receptors (air, water, land)	PCBs not used in substation transformers and other project facilities or equipment.	Transformer design	Exclusion of PCBs in transformers stated in tender specification - once	TRANSCO, DISCOM	Part of tender specifications for the equipment

Project activity /stage	Subproject type of component	Potential impact	Proposed mitigation measure	Parameter to be monitored	Measurement and frequency	Institutional responsibility	Implementation schedule
			Processes, equipment and systems not to use chlorofluorocarbons (CFCs), including halon, and their use, if any, in existing processes and systems should be phased out and to be disposed of in a manner consistent with the requirements of Government of India	Process, equipment and system design	Exclusion of CFCs stated in tender specification – once Phased out schedule to be prepared in case still in use – once	TRANSCO, DISCOM	Part of tender specifications for the equipment Part of equipment and process design
Transmission line design	Transmission line	Exposure to electromagnetic interference	Transmission line design to comply with the limits of electromagnetic interference from overhead power lines	Electromagnetic field strength for proposed line design	Line design compliance with relevant standards - once	TRANSCO	Part of detailed alignment survey and design
Substation location and equipment design	Substation	Exposure to noise	Substation design to meet best practice for noise control (70dB(a) at site boundary)	Expected noise emissions based on substation design	Compliance with regulations – once Noise levels to be specified in tender documents - once	TRANSCO, DISCOM	Part of detailed siting survey and equipment design
Involuntary resettlement or land acquisition	All facilities	Social inequities	Compensation paid for temporary/ permanent loss of productive land as per Land Acquisition Act and its process	RAP implementation	Consultation with affected parties – once in a quarter	TRANSCO	Prior to construction phase

Project activity /stage	Subproject type of component	Potential impact	Proposed mitigation measure	Parameter to be monitored	Measurement and frequency	Institutional responsibility	Implementation schedule
Use of protected area	All facilities	Loss of precious ecological values/ damage to precious species	By careful site and alignment selection	Distance to nearest designated ecological protection area	Consultation with local authorities, Wildlife Department and design engineer - once	TRANSCO	Part of detailed siting and alignment survey /design
Use of ecological sensitive areas	All facilities	Loss of precious ecological values/ damage to precious species	By careful site and alignment selection	Tower location and line alignment selection (distance to nearest designated ecological protection area)	Consultation with local authorities, Wildlife Department and design engineer - once	TRANSCO	Part of detailed siting and alignment survey /design
Use of forest	Transmission lines and substation sites	Deforestation and loss of biodiversity	By careful site and alignment selection	Distance to nearest protected or reserved forest	Consultation with local authorities – once	TRANSCO	Part of detailed siting and alignment survey/design
			Minimise the need by using existing RoW, wherever possible		Consultation with local authorities and design engineers – once		
			Obtain statutory clearances from the forest department	Statutory approvals from forest departments	Compliance with regulations – once for each subproject		
Use of farmland	All facilities	Loss of agricultural productivity	Avoid siting facilities on farmland wherever feasible	Facility location	Consultation with local authorities and design engineers - once	TRANSCO	Part of detailed siting and alignment survey /design

Project activity /stage	Subproject type of component	Potential impact	Proposed mitigation measure	Parameter to be monitored	Measurement and frequency	Institutional responsibility	Implementation schedule
			Farmers compensated for any permanent loss of productive land	Implementation of Crop Compensation (based on affected area)	Consultation with affected parties – once in a quarter		Prior to construction phase
			Farmers/landowners compensated for significant trees that need to be trimmed/ removed along RoW.	Implementation of Tree compensation (estimated area to be trimmed / removed)	Consultation with affected parties – once in a quarter		Prior to construction phase
Interference with drainage patterns/Irrigation channels	All facilities	Flooding hazards/loss of agricultural production	Appropriate siting of facilities to avoid channel interference	Distance to nearest flood zone, irrigation channel	Consultation with local authorities and design engineers - once	TRANSCO, DISCOM	Part of detailed alignment survey and design
Escape of polluting materials	All plant equipment, Phased out equipments	Environmental pollution	Equipment designed with oil spill containment systems, and purpose-built oil, lubricant and fuel storage system, complete with spill cleanup equipment.	Equipment specifications with respect to potential pollutants	Tender document to mention specifications - once	TRANSCO, DISCOM	Part of detailed equipment design /drawings
			Facilities to include drainage and sewage disposal systems to avoid offsite land and water pollution. Rejected equipments shall be disposed off as per INDIA requirements	Substation sewage design, Handling and storage of phased out equipments	Tender document to mention detailed specifications - once	TRANSCO, DISCOM	Part of detailed layout and design /drawings

<i>Project activity /stage</i>	<i>Subproject type of component</i>	<i>Potential impact</i>	<i>Proposed mitigation measure</i>	<i>Parameter to be monitored</i>	<i>Measurement and frequency</i>	<i>Institutional responsibility</i>	<i>Implementation schedule</i>
Equipment submerged under flood	All plant equipment	Contamination of receptors (land, water)	Appropriate siting and facilities constructed above the high flood level (HFL) by raising the foundation pad.	Facility design to account for HFL (elevation with respect to HFL elevation)	Base height as per flood design - once	TRANSCO, DISCOM	Part of detailed layout and design /drawings
Explosions/Fire	All facilities	Hazards to life	Design of facilities to include modern fire control systems/firewalls. Provision of fire fighting equipments to be located close to transformers	Substation design compliance with fire prevention and control codes	Tender document to mention detailed specifications - once	TRANSCO, DISCOM	Part of detailed layout and design /drawings
B – Construction							
Equipment layout and installation	All facilities	Noise and vibrations	Construction techniques and machinery selection seeking to minimize ground disturbance.	Construction techniques and machinery	Construction techniques and machinery creating minimal ground disturbance - once at the start of each construction phase	TRANSCO, DISCOM (Contractor through contract provisions)	Construction period
Physical construction	All facilities	Disturbed farming activity	Construction activities on cropping land timed to avoid disturbance of field crops (within one month of harvest wherever possible).	Timing of start of construction	Crop disturbance – Post harvest as soon as possible but before next crop - once per site	TRANSCO, DISCOM - (Contractor through contract provisions)	Construction period

Project activity /stage	Subproject type of component	Potential impact	Proposed mitigation measure	Parameter to be monitored	Measurement and frequency	Institutional responsibility	Implementation schedule
Mechanized construction	All facilities	Noise, vibration and operator safety, efficient operation	Construction equipment to be well maintained.	Construction equipment – estimated noise emissions	Complaints received by local authorities - every 2 weeks	TRANSCO, DISCOM (Contractor through contract provisions)	Construction period
	All facilities	Noise, vibration, equipment wear and tear	Proper maintenance and turning off plant not in use.	Construction equipment – estimated noise emissions and operating schedules	Complaints received by local authorities - every 2 weeks	TRANSCO, DISCOM (Contractor through contract provisions)	Construction period
Construction of roads for accessibility	All facilities	Increase in airborne dust particles	Existing roads and tracks used for construction and maintenance access to the line / site wherever possible.	Access roads, routes (length and width of new access roads to be constructed)	Use of established roads wherever possible - every 1 month	TRANSCO, DISCOM (Contractor through contract provisions)	Construction period
	All facilities	Increased land requirement for temporary accessibility	New access ways restricted to a single carriageway width within the RoW.	Access width (meters)	Access restricted to single carriageway width within RoW - every 1 month	TRANSCO, DISCOM (Contractor through contract provisions)	Construction period
Temporary blockage of utilities	All facilities	Overflows, reduced discharge	Temporary placement of fill in drains/canals not permitted.	Temporary fill placement (m ³)	Absence of fill in sensitive drainage areas - every 4 weeks	TRANSCO, DISCOM (Contractor through contract provisions)	Construction period
Site clearance	All facilities	Vegetation	Marking of vegetation to be removed prior to clearance, and strict control on clearing activities to ensure minimal clearance.	Vegetation marking and clearance control (area in m ²)	Clearance strictly limited to target vegetation - every 2 weeks	TRANSCO, DISCOM (Contractor through contract provisions)	Construction period

Project activity /stage	Subproject type of component	Potential impact	Proposed mitigation measure	Parameter to be monitored	Measurement and frequency	Institutional responsibility	Implementation schedule
Trimming/cutting of trees within RoW	All facilities	Fire hazards	Trees allowed growing up to a height within the RoW by maintaining adequate clearance between the top of tree and the conductor as per the regulations.	Species-specific tree retention as approved by statutory authorities (average and maximum tree height at maturity, in meters)	Presence of target species in RoW following vegetation clearance – once per site	TRANSCO, DISCOM (Contractor through contract provisions)	Construction period
		Loss of vegetation and deforestation	Trees that can survive pruning to comply should be pruned instead of cleared.	Species-specific tree retention as approved by statutory authorities	Presence of target species in RoW following vegetation clearance – once per site	TRANSCO, DISCOM (Contractor through contract provisions)	Construction period
			Felled trees and other cleared or pruned vegetation to be disposed of as authorized by the statutory bodies.	Disposal of cleared vegetation as approved by the statutory authorities (area cleared in m ²)	Use or intended use of vegetation as approved by the statutory authorities – once per site	TRANSCO, DISCOM (Contractor through contract provisions)	Construction period
Wood/vegetation harvesting	All facilities	Loss of vegetation and deforestation	Construction workers prohibited from harvesting wood in the project area during their employment, (apart from locally employed staff continuing current legal activities).	Illegal wood /vegetation harvesting (area in m ² , number of incidents reported)	Complaints by local people or other evidence of illegal harvesting - every 2 weeks	TRANSCO, DISCOM (Contractor through contract provisions)	Construction period
Surplus earthwork/soil	All facilities	Runoff to cause water pollution, solid waste disposal	Soil excavated from tower footings disposed of by placement along roadsides, or at	Soil disposal locations and volume (m ³)	Acceptable soil disposal sites - every 2 weeks	TRANSCO, DISCOM (Contractor through contract	Construction period

Project activity /stage	Subproject type of component	Potential impact	Proposed mitigation measure	Parameter to be monitored	Measurement and frequency	Institutional responsibility	Implementation schedule
			nearby house blocks if requested by landowners.			provisions)	
Substation construction	All facilities	Loss of soil	Fill for the facility foundations obtained by creating or improving local water supply ponds or drains, with the agreement of local communities.	Borrow area siting (area of site in m ² and estimated volume in m ³)	Acceptable borrow areas that provide a benefit - every 2 weeks	TRANSCO, DISCOM (Contractor through contract provisions)	Construction period
		Water pollution	Construction activities involving significant ground disturbance (i.e. land forming) not undertaken during the monsoon season.	Seasonal start and finish of major earthworks (pH, BOD/COD, Suspended solids)	Timing of major disturbance activities - prior to start of construction activities	TRANSCO, DISCOM (Contractor through contract provisions)	Construction period
Site clearance	All facilities	Vegetation	Tree clearances for easement establishment to only involve cutting trees off at ground level or pruning as appropriate, with tree stumps and roots left in place and ground cover left undisturbed.	Ground disturbance during vegetation clearance (area, m ²)	Amount of ground disturbance - every 2 weeks	TRANSCO, DISCOM (Contractor through contract provisions)	Construction period
				Statutory approvals	Statutory approvals for tree clearances - once for each site	TRANSCO, DISCOM (Contractor through contract provisions)	Construction period
Facility construction – disposal of surplus earthwork/fill	All facilities	Waste disposal	Excess fill from foundation excavation disposed of next to roads or around houses, in agreement with the local community or landowner.	Location and amount (m ³) of fill disposal	Appropriate fill disposal locations - every 2 weeks	TRANSCO, DISCOM (Contractor through contract provisions)	Construction period

Project activity /stage	Subproject type of component	Potential impact	Proposed mitigation measure	Parameter to be monitored	Measurement and frequency	Institutional responsibility	Implementation schedule
Storage of chemicals and materials	All facilities	Contamination of receptors (land, water, air)	Fuel and other hazardous materials securely stored above high flood level.	Location of hazardous material storage; spill reports (type of material spilled, amount (kg or m ³) and action taken to control and clean up spill)	Fuel storage in appropriate locations and receptacles - every 2 weeks	TRANSCO, DISCOM (Contractor through contract provisions)	Construction period
Construction schedules	All facilities	Noise nuisance to neighbouring properties	Construction activities only undertaken during the day and local communities informed of the construction schedule.	Timing of construction (noise emissions in dB(A))	Daytime construction only - every 2 weeks	TRANSCO, DISCOM (Contractor through contract provisions)	Construction period
Provision of facilities for construction workers	All facilities	Contamination of receptors (land, water, air)	Construction workforce facilities to include proper sanitation, water supply and waste disposal facilities.	Amenities for Workforce facilities	Presence of proper sanitation, water supply and waste disposal facilities - once each new facility	TRANSCO, DISCOM (Contractor through contract provisions)	Construction period
Use of farmland	All facilities	Loss of agricultural productivity	Use existing access roads wherever possible	Usage of existing utilities	Complaints received by local people /authorities - every 2 weeks	TRANSCO, DISCOM (Contractor through contract provisions)	Construction period
			Ensure existing irrigation facilities are maintained in working condition	Status of existing facilities			
			Protect /preserve topsoil and reinstate after construction completed	Status of facilities (earthwork in m ³)			

Project activity /stage	Subproject type of component	Potential impact	Proposed mitigation measure	Parameter to be monitored	Measurement and frequency	Institutional responsibility	Implementation schedule
			Repair /reinstate damaged bunds etc after construction completed	Status of facilities (earthwork in m ³)			
		Social inequities	Compensation for temporary loss in agricultural production	Implementation of Crop compensation (amount paid, dates, etc.)	Consultation with affected parties – once in a quarter	TRANSCO, DISCOM	Prior to construction
Uncontrolled erosion/silt runoff	All facilities	Soil loss, downstream siltation;	Need for access tracks minimised, use of existing roads.	Design basis and construction procedures (suspended solids in receiving waters; area re-vegetated in m ² ; amount of bunds constructed [length in meter, area in m ² , or volume in m ³])	Incorporating good design and construction management practices – once for each site	TRANSCO, DISCOM (Contractor through contract provisions)	Construction period
			Limit site clearing to work areas				
			Regeneration of vegetation to stabilise works areas on completion (where applicable)				
			Avoidance of excavation in wet season				
			Water courses protected from siltation through use of bunds and sediment ponds				
Nuisance to nearby properties	All facilities	Losses to neighbouring land uses/ values	Contract clauses specifying careful construction practices.	Contract clauses	Incorporating good construction management practices – once for each site	TRANSCO, DISCOM (Contractor through contract provisions)	Construction period
			As much as possible existing access ways will be used.	Design basis and layout	Incorporating good design engineering practices – once for each site		

Project activity /stage	Subproject type of component	Potential impact	Proposed mitigation measure	Parameter to be monitored	Measurement and frequency	Institutional responsibility	Implementation schedule
			Productive land will be reinstated following completion of construction	Reinstatement of land status (area affected, m ²)	Consultation with affected parties – twice – immediately after completion of construction and after the first harvest		
		Social inequities	Compensation will be paid for loss of production, if any.	Implementation of Tree/Crop compensation (amount paid)	Consultation with affected parties – once in a quarter	TRANSCO, DISCOM	Prior to construction
Flooding hazards due to construction impediments of natural drainage	All facilities	Flooding and loss of soils, contamination of receptors (land, water)	Avoid natural drainage pattern /facilities being disturbed /blocked /diverted by the on-going construction activities	Contract clauses (e.g., suspended solids and BOD/COD in receiving water)	Incorporating good construction management practices – once for each site	TRANSCO, DISCOM (Contractor through contract provisions)	Construction period
Equipment submerged under flood	All facilities	Contamination of receptors (land, water)	Equipment stored at secure place above the high flood level (HFL).	Store room level to be above HFL (elevation difference in meters)	Store room level as per flood design - once	TRANSCO, DISCOM	Construction period
Inadequate siting of borrow areas	All facilities	Loss of land values	Existing borrow sites will be used to source aggregates, therefore, no need to develop new sources of aggregates	Contract clauses	Incorporating good construction management practices – once for each site	TRANSCO, DISCOM (Contractor through contract provisions)	Construction period
Community safety	All facilities	Injury to members of the public due to fall into borrow pit	Depth of borrow pit to be limited to safe limit, provision of fall protection fencing where depth is excessive, contouring of pit after completion of work	Depth of borrow pit (in meters compared to surrounding land)	All borrow pit – once per week	TRANSCO, DISCOM (Contractor through contract provisions)	Construction period

<i>Project activity /stage</i>	<i>Subproject type of component</i>	<i>Potential impact</i>	<i>Proposed mitigation measure</i>	<i>Parameter to be monitored</i>	<i>Measurement and frequency</i>	<i>Institutional responsibility</i>	<i>Implementation schedule</i>
Health and safety	All facilities	Injury and sickness of workers and members of the public	Contract provisions specifying minimum requirements for construction camps Contractor to prepare and implement a health and safety plan. Contractor to arrange for health and safety training sessions	Contract clauses (number of incidents and total lost-work days caused by injuries and sickness)	Contract clauses compliance – once every quarter	TRANSCO, DISCOM (Contractor through contract provisions)	Construction period
Inadequate construction stage monitoring	All facilities	Likely to maximise damages	Training of IA environmental monitoring personnel Implementation of effective environmental monitoring and reporting system using checklist of all contractual environmental requirements Appropriate contract clauses to ensure satisfactory implementation of contractual environmental mitigation measures.	Training schedules Respective contract checklists and remedial actions taken thereof. Compliance report related to environmental aspects for the contract	Number of programs attended by each person – once a year Submission of duly completed checklists of all contracts for each site - once Submission of duly completed compliance report for each contract - once	TRANSCO, DISCOM	Routinely throughout construction period
C - Operation and Maintenance							
Location of transmission towers, lines alignment, substation, HVDS and design,	All facilities	Exposure to safety related risks	Setback of dwelling to overhead line routes designed in accordance with permitted level of power frequency and	Compliance with setback distance	Setback distance to nearest house – once in quarter	TRANSCO, DISCOM	During operations

<i>Project activity /stage</i>	<i>Subproject type of component</i>	<i>Potential impact</i>	<i>Proposed mitigation measure</i>	<i>Parameter to be monitored</i>	<i>Measurement and frequency</i>	<i>Institutional responsibility</i>	<i>Implementation schedule</i>
			the regulation of supervision at sites.				
Equipments submerged under flood	All facilities	Contamination of receptors (water, land)	Equipments installed above the HFL by raising the foundation pad.	Substation design to account HFL	Base height as per flood design – once	TRANSCO, DISCOM	During operations
Oil spillage	All facilities	Contamination of land/nearby water bodies	Oil storage facilities and substation transformers located within secure and impervious bunded areas with a storage capacity of at least 120% of the capacity of tank and oil capacity of transformers. Safe handling and disposal of phased out equipments	Facility bunding All oil storage within bunded area, Phased out equipment storage area, and handling	Bundling capacity and permeability - once	TRANSCO, DISCOM	During operations
Inadequate provision of staff/workers health and safety during operations	All facilities	Injury and sickness of staff /workers	Careful design using appropriate technologies to minimise hazards	Usage of appropriate technologies (lost work days due to illness and injuries)	Preparedness level for using these technologies in crisis – once each year	TRANSCO, DISCOM	Design and operation
			Safety awareness raising for staff.	Training/awareness programs and mock drills	Number of programs and percent of staff /workers covered – once each year		
			Preparation of fire emergency action plan and training given to staff on implementing emergency action plan				

<i>Project activity /stage</i>	<i>Subproject type of component</i>	<i>Potential impact</i>	<i>Proposed mitigation measure</i>	<i>Parameter to be monitored</i>	<i>Measurement and frequency</i>	<i>Institutional responsibility</i>	<i>Implementation schedule</i>
			Provide adequate sanitation and water supply facilities	Provision of facilities	Complaints received from staff /workers every 2 weeks		
Electric Shock Hazards	All facilities	Injury/mortality to staff and public	Careful design using appropriate technologies to minimise hazards	Usage of appropriate technologies (number of injury incidents, lost work days)	Preparedness level for using these technologies in crisis – once a month	TRANSCO, DISCOM	Design and Operation
			Security fences around facility	Maintenance of fences	Report on maintenance – every 2 weeks		
			Barriers to prevent climbing on/dismantling of transmission towers	Maintenance of barriers			
			Appropriate warning signs on facilities	Maintenance of warning signs			
			Electricity safety awareness raising in project areas	Training /awareness programs and mock drills for all concerned parties	Number of programs and percent of total persons covered – once each year		
Operations and maintenance staff skills less than acceptable	All facilities	Unnecessary environmental losses of various types	Adequate training in O&M to all relevant staff of facility maintenance crews.	Training/awareness programs and mock drills for all relevant staff	Number of programs and percent of staff covered – once each year	TRANSCO, DISCOM	Operation
			Preparation and training in the use of O&M manuals and standard operating practices.				
Inadequate periodic environmental monitoring.	All facilities	Diminished ecological and social values.	EAs O&M staff to receive training in environmental monitoring of project operations and	Training/awareness programs and mock drills for all relevant staff	Number of programs and percent of staff covered – once each	TRANSCO, DISCOM	Operation

Project activity /stage	Subproject type of component	Potential impact	Proposed mitigation measure	Parameter to be monitored	Measurement and frequency	Institutional responsibility	Implementation schedule
			maintenance activities.		year		
Equipment specifications and design parameters	All facilities	Release of chemicals and gases in receptors (air, water, land)	Processes, equipment and systems using chlorofluorocarbons (CFCs), including halon, should be phased out and to be disposed of in a manner consistent with the requirements of the Government.	Process, equipment and system design	Phase out schedule to be prepared in case still in use – once in a quarter	TRANSCO, DISCOM	Operations
Transmission line maintenance	All facilities	Exposure to electromagnetic interference	Transmission line design to comply with the limits of electromagnetic interference from overhead power lines	Required ground clearance (meters)	Ground clearance - once	TRANSCO, DISCOM	Operations
Noise related	All facilities	Nuisance to neighbouring properties	Facility sited and designed to ensure noise will not be a nuisance.	Noise levels (dB(A))	Noise levels at boundary nearest to properties and consultation with affected parties if any – once	TRANSCO, DISCOM	Operations

Note: BOD/COD = Biochemical oxygen demand/Chemical oxygen demand, CFC = chlorofluoro carbon, dB = decibel audible, HFL = high flood level, IA = Implementing Agency, m³ = cubic meter, RoW = Right of Way, TRANSCO = Madhya Pradesh Power Transmission Co. Ltd., DISCOM = Madhya Pradesh Poorva Power Distribution Co. Ltd.

RESETTLEMENT FRAMEWORK

A. Introduction

1. The proposed Investment Program will be provided under a multitranchise financing facility (MFF) lending approach over a span of 8 years.
2. The Resettlement Framework (RF) has been formulated to guide the preparation of resettlement plans (RPs), if necessary, for subprojects under the future tranches. The RF identifies the broad scope of the Investment Program and outlines the policy, procedures and institutional requirements for preparing RPs for subprojects under the MFF. The Investment Program Management Units (PMUs) will be responsible for conducting the social analyses and formulating RPs for subprojects, as outlined in the RF. The draft RPs will be submitted to ADB for review and approval prior to contract award, and compensation paid to all affected persons (APs) prior to displacement, and commencement of civil works.
3. A short RP was prepared to address the resettlement impacts of the transmission network expansion component under both Tranche 1 and Tranche 3. No impact is expected for the distribution component under Tranche 1. Minimal or no impacts are also to be expected under future tranches.

B. Resettlement Policy and Framework applicable to the Investment Program

4. The RF is based on ADB's Involuntary Resettlement Policy (1995) as well as on the Borrower's domestic policy instruments, laws, particularly, Land Acquisition Act, 1884 (LAA), *National Policy on Resettlement and Rehabilitation for Project Affected Persons (NPRR)* (2003), and *The Madhya Pradesh Resettlement and Rehabilitation Policy (MPRR)* (2002)¹. The RF will be revised if any major changes in the relevant policies and laws are introduced during the life of the program.
5. A comparison among the INDIA's NPRR, MPRR and ADB's Resettlement Policy is provided in Table 3.

¹ Additionally, the Indian Telegraph Act and Indian Electricity Supply Act are relevant for construction of transmission lines. The Indian telegraph Act, 1885 is usually followed which does not include any sort of land acquisition for construction of transmission pillars and lines. The telegraph authority may, from time to time place and maintain a telegraphic line under, over, along or across, and post in or upon, any immovable property provided that telegraph authority shall not exercise the powers conferred by this section except for the purpose of a telegraph established or maintained by the Central Government, or to be so established or maintained. The Central Government shall not acquire any right other than that of user only in the property under, over, along, across, in or upon which the telegraph authority places any telegraph line or posts. The telegraph authority shall do as little damage as possible, and, when it has exercised those powers in respect of any property other than that referred to, shall pay full compensation to all persons interested for any damage sustained by them by reason of the exercise of those powers. Incase of property and dispute other than that of a local authority where the power is to be exercised, the District Magistrate may, in his discretion, order that the telegraph authority shall be permitted to exercise them.

Table 3: Comparison of NPRR, RR Policy of M.P. and ADB Resettlement Policy

Policy Principle	NPRR	RR Policy of M.P.	ADB	Remarks
1. Resettlement must be avoided wherever possible; and if unavoidable it should be minimized	√	√	√	
2. Affected persons must be compensated to replace their lost assets and to restore/improve their living standards	√	√	√	However, replacement value is not clearly identified.
3. Affected persons should be fully involved and consulted in the planning and implementation of resettlement	√	√	√	
4. Compensation for lost assets must be on the basis of replacement cost	Not defined	√	√	
5. Transaction and transition costs	√	√	√	
6. Wherever feasible land should be an option for compensating loss of land	√	√	√	
7. An RP should be prepared in every instance where involuntary resettlement occurs	Only required where over 500 families are affected in plain areas and 250 or more families are affected in hilly areas	√	√	
8. The RP must be revealed to the affected people before finalization	√	√	√	
9. Application of policy	The Indian NPRR only applies to projects displacing 500 families or more in plain areas and 250 families or more in hilly areas	The Ideal Rehabilitation Policy of Government of Madhya Pradesh, 2002 applies to all the developmental activities which include displacement and land acquisition for all the departments and sectors. However, the policy encourages every department to follow their own policy (if any) if the departmental policy covers better entitlements than this policy.	In all cases where involuntary resettlement occurs	ADB has three categories of impact: A (Significant); B (Not Significant) and C where no involuntary resettlement impacts are foreseen.

Policy Principle	NPRR	RR Policy of M.P.	ADB	Remarks
10. Entitlements under the policy	Chapter VI of the NPRR defines flat entitlements without considering the specific impact on a case by case basis. For example, For acquisition of strips of land for railway lines, highways, transmission lines and pipelines, only an ex-gratia payment of Rs 10,000/= per family is to be paid.	- Specific entitlements have been made in this policy for different categories of losses. Land will be compensated as per market value and amount for rehabilitation assistance has been mentioned in this policy. - Loss of Structures will be compensated as per the Indira Awas Yojana (IAY) which will be @20,000/- - Rehabilitation grant for vulnerable groups (land less labour, SC, ST and Mariginal farmer) has been decided @11, 000/- per household	Each impact must be defined and appropriate entitlements assigned on the basis of the basic principles of replacing lost assets and restoring livelihoods	Neither NPRR nor RR Policy of M.P.will fulfil ADB's resettlement policy specifications.
11. Recognition of untitled persons such as squatters and encroachers	X	√	√	NPRR states that the landless, forest dwellers, tenants and artisans are more severely affected but no mention is made of specific entitlements for them.
12. Surveys and census required	√	Not Defined in exact terms except the market survey for valuation of asset	√	NPRR requires survey findings to be disclosed to the affected persons with a view to inviting objections and suggestions
13. Social networks and cultural links should be preserved	√	√	√	
14. Recognition of vulnerable groups including indigenous people and the poor	√	- Rehabilitation grant for vulnerable groups (land less labour, SC, ST and Mariginal farmer) has been decided @11, 000/- per household	√	NPRR gives preference to STs in land allotment. Additional financial assistance is also defined for them. Their traditional rights to natural resources in the area will be recognized.
15. Grievance Redress Procedure	√	√	√	NPRR requires a Grievance Redress Cell to be set up under a Commissioner for R & R.
16. Organization and Management of Resettlement	√	MP RR Policy sets up Advisory Committee to monitor the displacement and resettlement issues which consists of Chief	√	NPRR will set up a National Monitoring Committee chaired by the Secretary Department of Land

Policy Principle	NPRR	RR Policy of M.P.	ADB	Remarks
		minister, Rehabilitation minister, Revenue minister, law minister, departmental minister, District magistrate, Member of Legislative Assembly (MLA) of concerned area, economist, sociologist, project manager, district administration and village head (Sarpanch)		Resources, under the Ministry of Rural Development and comprising seven other Secretaries.
17. Common property resources should be replaced	√	√	√	
18. All costs relating to resettlement and rehabilitation must be borne by the requiring agency and included in project costs	√	√	√	

6. All APs will be provided with compensation for their property acquired or damaged by the Investment Program. The Land Acquisition Act of India will be applicable for the compulsory acquisition of land. They will also receive 'resettlement assistance' if their land is permanently or temporarily acquired, their income source is adversely affected, their homes are fully or partially affected, or other properties such as commercial structures or agricultural structures, crops, trees, and other facilities or access to properties are damaged or reduced because of the Investment Program. Lack of legal documents of their customary rights of occupancy or land titles shall not affect their eligibility for compensation. Payments for land will be based on replacement value which is equal to statutory (Land Acquisition Act) compensation based on market value and resettlement and rehabilitation assistance². Temporary land losers will be in charge of land clearance and will therefore be compensated for the provision of labor at the minimum agricultural wage rate for the duration of this activity.

7. An Entitlement Matrix for the future tranches subprojects is given in Table 4.

Table 4: Entitlement Matrix

Type of Losses	Definition of APs	Entitlement	Details
1. Land			
Loss of agricultural land	Titled owners and affected persons (APs) with traditional land rights	<ul style="list-style-type: none"> • Compensation based on replacement value • Resettlement assistance • Assistance to vulnerable APs (female-headed households, scheduled tribal households, scheduled caste) 	<ul style="list-style-type: none"> • In case of compulsory acquisition of land, Compensation will be based on the Land Acquisition Act (Land value + 30% solatium + 12% interest, if applicable) • In case of land to be possessed by the investment program authority with mutual and voluntary consent of the affected people, compensation will be paid on estimated market price as decided by the revenue department

² Calculation of market value is done by taking into account updated prescribed rates or the average of the actual transaction rates of similar lands for contemporary years for which sale deeds are registered. The rates are decided on the basis of current rates of buying and selling which is always recent. Therefore, the market value is calculated in such a way which is convergent with replacement value.

		households, poor households, and households headed by physically handicapped or disabled persons)	<p>(District Collector) /competent authority</p> <ul style="list-style-type: none"> • Transaction costs (documentary stamps, registration costs, etc.) Will be borne by the investment program authority during registration. • Resettlement allowance will be paid in the amount of a daily minimum wage for a maximum of one year to the household losing a portion of land resulting in income generation capacity greater than minimum agricultural wage. This will be estimated by the competent authority • Resettlement allowance will be paid in the amount of a daily minimum wage for a maximum of one and half years to the household losing a portion of land resulting in income generation capacity equivalent or less than minimum agricultural wage. • Vulnerable households falling under above categories will be provided an additional allowance as per the extent of vulnerability at a maximum of 30% of the total compensation and assistance. This will be estimated by the competent authority.
	Individual tenant, sharecropper, or leaseholder	<ul style="list-style-type: none"> • <i>Reimbursement for unexpired lease</i> 	<ul style="list-style-type: none"> • Lease rates will be determined by the investment program authority with the help of revenue department and based on consultation with landowners
Temporary loss of agricultural land	Farming households, sharecroppers, tenants, non-titled households	<ul style="list-style-type: none"> • <i>Notice to harvest standing crops</i> • <i>Compensation at market value</i> • Restoration 	<ul style="list-style-type: none"> • Compensation of crop at market value for the number of seasons the crop will be affected by the implementation of the investment program. In any case, no less than one season. • Additionally, temporary land losers will be in charge of land clearance and will therefore be compensated for the provision of labor at the minimum agricultural wage rate for the duration of this activity.
Loss of access to forestland	Affected household with forestland access	<ul style="list-style-type: none"> • <i>Provision of alternative facilities and technical assistance</i> 	<ul style="list-style-type: none"> • <i>Households losing access to forestland for their basic needs such as fuel, fodder, etc. will be provided access to alternative forest land. Communities will be involved in community social forestry schemes coordinated by the Department of Forests.</i> • Vulnerable APs will be provided assistance by the investment program for alternative sources of fuel, fodder, etc. which will minimize their traditional dependency on forests.
2. Income			
Income from standing crops, rent or sharecropping	Farming households, sharecroppers and tenants	<ul style="list-style-type: none"> • <i>Notice to harvest standing crops</i> • <i>Compensation at market value</i> 	<ul style="list-style-type: none"> • Compensation at market value for crops • Preferential employment in the investment program will be provided to vulnerable households.

Income from affected business and wage earnings	Affected individuals	<ul style="list-style-type: none"> • <i>Compensation and income restoration</i> 	<ul style="list-style-type: none"> • Compensation³ equivalent to 6 months of minimum wages • Preferential employment in the Investment Program will be provided to vulnerable households
Income from trees or perennial crops	Affected households	<ul style="list-style-type: none"> • <i>Compensation at market value</i> 	<ul style="list-style-type: none"> • <i>Fruit Bearing Trees and Perennial crops will be compensated as per the value of fruit for one year and the market value of timber</i> • <i>Trees will be compensated on the basis of market value determined by the Forest Department for timber species, and by the Horticulture Department for other trees</i>
Income from forest products and grazing land	Affected households	<ul style="list-style-type: none"> • <i>Lump sum compensation</i> 	<ul style="list-style-type: none"> • <i>Lump sum compensation will be given for lost income for one season based on income from the forest/ grazing land determined by the Revenue department, Investment Program authority in consultation with APs.</i>
3. Community and Cultural Sites	Affected households or individuals	<ul style="list-style-type: none"> • Conservation, protection and compensatory replacement (Schools, community centers, markets, health centers, shrines, other religious sites, places of worship, burial sites, rights to food, medicine, and natural resources) 	<ul style="list-style-type: none"> • <i>Impacts will be documented and mitigated. Cultural properties will be conserved through special measures such as relocation in consultation with the community.</i>
4. Government Property	Relevant Department	<ul style="list-style-type: none"> • Lump sum compensation as per government rules 	<ul style="list-style-type: none"> • <i>Lease rent as applicable per India and State's rules.</i>
5. Other Impacts Not Identified and Impact on Vulnerable Groups	Affected households or individuals	<ul style="list-style-type: none"> • <i>Additional assistance</i> 	<ul style="list-style-type: none"> • Unforeseen impacts will be documented and mitigated based on the principles agreed upon in the resettlement framework • Vulnerable households will be provided an additional allowance as per the extent of vulnerability at a maximum of 30% of the total compensation and assistance. This will be estimated by the competent authority.
6. Loss due to delay in payment for compensation or disbursement of compensation after the scheduled period	Affected Households or Individuals	<ul style="list-style-type: none"> • <i>Additional assistance</i> 	<ul style="list-style-type: none"> • Additional assistance⁴ at per the bank interest on the entire compensation amount for the delayed period will be paid by the project authority.

D. Procedure for RP Preparation

³ There is no loss of house or other structure foreseen. Transmission lines will be designed to avoid settlements. Distribution lines are generally designed to avoid structures. There is no loss of income from business is foreseen. However, incase there will be similar loss, this will be compensated as cash compensation for the total income loss during the period for which the business activities will be damaged. The annual income of the business activities are usually registered in the tax department. Calculation of the income per day will be done by taking in to account the annual income of the APs from the business sources and the amount of compensation will be calculated accordingly for the period of damage. Tax will be paid additionally to the APs.

⁴ This will be in addition to the 12% interest mentioned in case of the LAA. This will be applicable to all the APs and all type of losses in case there is delay in disbursement.

8. The PMU will undertake social impact assessment surveys for each identified subproject, based on the preliminary technical design. RPs for subprojects falling under future tranches will be prepared, in full consultations with all APs and stakeholders, in the following manner:

- (i) if impacts are found to be significant⁵, full RPs will be prepared for each subproject. A full resettlement plan includes a statement of involuntary resettlement objectives and strategy, with (i) organizational responsibilities; (ii) community participation and disclosure arrangements; (iii) findings of the socioeconomic survey and social and gender analysis of least 10% of affected people and 20% of seriously affected people, together with local-level impact (iv) legal framework, including eligibility criteria and an entitlement matrix; (v) mechanisms for resolution of conflicts and appeals procedures; (vi) identification of alternative sites and selection; (vii) inventory, valuation of, and compensation for, lost assets; (viii) landownership, tenure, acquisition, and transfer; (ix) access to training, employment, and credit; (x) shelter, infrastructure, and social services; (xi) environmental protection and management; (xii) monitoring and evaluation; (xiii) a detailed cost estimate with budget provisions; and (xiv) an implementation schedule, showing how activities will be scheduled with time-bound actions in coordination with the civil works. The RP shall also include measures to ensure that socio-economic conditions, needs and priorities of women are identified and that the process of land acquisition and resettlement does not disadvantage women.
- (i) if impacts are not significant, short RPs will be required for Investment Program preparation. A short RP covers the same issues as that of a full RP, as relevant, but in less detail. However, the short RP must ensure that adequate compensation, rehabilitation, and relocation arrangements are planned and budgeted.
- (ii) RP will include measures to ensure that socio-economic conditions, needs, and priorities of women are identified and that the process of land acquisition and resettlement does not disadvantage women.

9. The detailed process and steps of resettlement planning and preparation of RP is as follows: i) data collection through social screening, public consultation, literature and project documents review; ii) social impact assessment; iii) identification of impacted areas; iv) surveys (land acquisition, census, and socio economic); v) preparation of the budget; vi) preparation of the schedule; and vii) disclosure of relevant information to APs.

10. The PMU for subproject preparation and implementation will include social development cum resettlement specialists familiar with ADB policy and procedures for the preparation of subproject RPs. RPs will comply with national resettlement policies and the principles outlined in this agreed RF, ADB's policy on *Involuntary Resettlement* (1995), the Operations Manual, Section F2/OP (2006) and other social safeguard guidelines. The RP for Tranche 1 subprojects for transmission subprojects will be used as a model for the preparation and implementation for the subprojects of future tranches. The draft RPs will be submitted to ADB for review and approval prior to contract award, and compensation paid to all APs prior to displacement, in any case not later than commencement of civil works. The respective PMUs will set the cut-off date on the day of notice (LAA Section 4). The EAs through their respective PMUs will ensure that this RF is closely followed when a RP is formulated for a future subproject. The EA will further

⁵ Resettlement is significant when 200 or more people experience major impacts. Major impacts are defined as involving affected people being physically displaced from housing and/or having 10% or more of their productive, income generating assets lost.

ensure that adequate resettlement budgets are delivered on time to PMU, and involve non governmental organizations (NGOs) for timely implementation of RP.

E. Institutional Arrangements

11. EAs will be sector companies as follow:

- (i) Madhya Pradesh Power Transmission Company Limited (TRANSCO) will be the EA for the transmission component;
- (ii) Madhya Pradesh Poorv Kshetra Vidyut Vitaran Company Limited (DISCOM-E) will be the EA for the distribution component in the eastern area;
- (iii) Madhya Pradesh Madhya Kshetra Vidyut Vitaran Company Limited (DISCOM-C) will be the EA for the distribution component in the central area; and
- (iv) Madhya Pradesh Paschim Kshetra Vidyut Vitaran Company Limited (DISCOM-W) will be the EA for the distribution component in the western area.

12. All the EAs will have their respective PMUs for the project implementation with the inclusion of a Social Development cum Resettlement Specialist where necessary. For subproject RPs, PMU will do the overall coordination, planning, implementation, and financing. The PMU will hire resettlement specialist for the duration of the Investment Program to ensure timely and effective implementation of RPs. The resettlement specialist will subsequently be engaged on a part-time basis for follow-up activities, particularly in monitoring and grievance redress. The PMU will maintain all databases, work closely with APs and other stakeholders. The data base will be managed by the PMU through its resettlement specialist by collecting input from both the field staff and from the external monitoring agency. No special budget will be required for this since this will be managed by the existing PMU staff. Based on regularly updated PMU data, a central database will also be maintained by EA. Roles and responsibilities of various agencies are in Table 5.

Table 5: Agencies Responsible for Resettlement Implementation

Activity	Agency Responsible
Hiring of implementing NGOs and Resettlement Specialists	PMU
Updating the RP	Resettlement Specialist, PMU
Review and Approval of RP	Resettlement Specialist, PMU
Verification survey for identification of APs	PMU (Field staff) and implementing NGO
Land survey for identification of plots	Field Staff and Implementing NGO
Consultation and disclosure of RP to APs	PMU/Implementing NGOs
Compensation award and payment of compensation	Revenue Dept / Competent Authority and PMU
Fixing of Replace cost and assistance	PMU and Competent Authority
Payment of replacement value allowance	PMU
Takeover the possession of acquired land/houses	PMU and Revenue Department
Hand over acquired land to contractors for construction	PMU
Notify construction starting date to APs	PMU and Implementing NGO
Income restoration activities, particularly for vulnerable groups	PMU/Implementing NGO
Restoration of temporarily acquired land to its original state including restoration of private or common property resources	Contractors subject to monitoring by Implementing NGO and PMU
Development, maintenance and updating of resettlement database	PMU
Development, maintenance and updating of central database	EA
Internal monitoring	PMU Implementing NGO
External monitoring	Independent Monitoring Consultant/Agency

13. The EA will ensure that key institutions including local governments are involved in RP implementation. Moreover, in recognition of the complexity of resettlement, experienced NGOs will be hired for RP implementation.

F. Consultation, Disclosure, and Grievances

14. Investment Program information will be disseminated by EA through public consultation and provision of project information. Each subproject RP will be prepared and implemented in close consultation with the stakeholders, particularly APs, through focus group discussions, socio-economic surveys, and stakeholder consultation meetings. Each RP will be made available in local language(s) during focus group discussions and stakeholder meetings at the village/community level to ensure inputs from stakeholders particularly at the village/community level. Female-headed households will be consulted. A resettlement information leaflet containing information on compensation and resettlement options will be made available in local language(s) and distributed to APs. The PMU will conduct consultations in affected villages to explain the resettlement plan in coordination with village/community leaders. Each AP will be provided information regarding specific entitlements. Disputes on entitlements can be forwarded to the PMU for appropriate action. The RP was disclosed on the ADB website, and information dissemination and consultation will continue throughout the subproject implementation period.

15. There is a need for an efficient grievance redress mechanism, which will assist the APs in resolving queries and complaints. A Grievance Redress Committee (GRC) will be formed to ensure APs grievances are addressed and facilitate timely project implementation. The GRC will have representatives from APs, head of PMU, PMU resettlement specialist, field level staff, district magistrate, local administration, revenue authority, Implementing NGO and local community. The GRC will meet once a month. The main responsibilities of the GRC are to: (i) provide support to APs on problems arising from land/property acquisition; (ii) record AP grievances, categorize, and prioritize grievances and resolve them within 4 weeks; (iii) immediately inform the PMU of serious cases; and (iv) report to APs on developments regarding their grievances and decisions of the GRC and the PMU. Other than disputes relating to ownership rights under the court of law, GRC will review grievances involving all resettlement benefits, compensation, relocation, replacement cost and other assistance. Grievances will be redressed within 4 weeks from the date of lodging the complaints. The GRCs will continue to function during the life of the Investment Program including the defects liability period. The GRC will be formed with the help of higher authority having authority to designate the representatives to the GRC.

G. Monitoring and Evaluation

16. Internal monitoring will be the responsibility of the PMU and engaged NGOs. The PMU internal monitoring will include: (i) administrative monitoring: daily planning, implementation, feed back and trouble shooting, individual AP file maintenance, and progress reports; (ii) socio-economic monitoring: baseline information for comparing AP's socio-economic conditions, evacuation, demolition, salvaging materials, community relationships, dates for consultations, and number of appeals placed; and (iii) impact evaluation monitoring: Income standards restored/improved, and socioeconomic conditions of the affected persons. Monitoring and evaluation reports documenting progress on resettlement implementation and RP completion reports will be provided by the PMU to ADB for review.

17. The EA will engage the services of an independent agency not associated with subproject implementation to undertake external monitoring and evaluation. The external agency, with

previous experience in resettlement activities and familiarity with INDIA's, MP's and ADB resettlement policies, will be engaged with ADB concurrence within three months of the loan effectiveness. The external monitor will monitor and verify RP implementation to determine whether resettlement goals have been achieved, livelihood and living standards have been restored, and provide recommendations for improvement. The external monitoring will undertake monthly monitoring and impact evaluation on a sample basis during mid-term and Investment Program completion. Monitoring will also ensure recording AP views on resettlement issues; AP understanding of entitlement policies, options, and alternatives; site conditions; compensation valuation and disbursement; grievance redress procedures; and staff competencies. The external monitor will also evaluate the performance of the PMU, and NGOs. The external agency will report its findings simultaneously to the EA and to ADB twice a year. Provisions have been made in the resettlement budget component for engaging an external monitor. The internal monitoring report will be submitted quarterly to ADB for review where as the external monitoring report will be submitted half yearly to the INRM for review.

H. Implementation schedule

18. Draft RPs will be disclosed to APs prior to ADB review. Where necessary, an update will be completed upon finalization of subproject design, and after undertaking a 100% census of the affected population. All activities related to the acquisition, temporary and/or permanent, of land must be planned to ensure that compensations are paid prior to displacement and commencement of civil works.

I. Resettlement Budget

19. Detailed budget estimates for involuntary resettlement will be prepared for each RP, by the EA which will be included in the overall subproject estimate. The budget will include i) detailed costs of land acquisition, relocation, and livelihood and income restoration and improvement, ii) source of funding, iii) arrangements for approval, and the flow of funds and contingency arrangements. All land acquisition funds will be provided by the EA. All land acquisition, compensation, relocation and rehabilitation of income and livelihood will be considered as an integral component of subproject costs. The EA will deposit the money to the concerned department for the disbursement of compensation to the affected people for land acquisition and resettlement. The EA will keep provisional money out of its annual plan for the resettlement cost and this provisional amount will be planned at the early stage of their annual plan so that the resettlement process won't get delayed.

INDIGENOUS PEOPLES DEVELOPMENT FRAMEWORK

A. Background

1. The Investment Program will be provided under a multitranche financing facility (MFF) lending approach over a span of 8 years.
2. The Indigenous Peoples Development Framework (IPDF) has been formulated to guide the preparation of IPDPs, if necessary, for subprojects under the future tranches. The IPDFF identifies the broad scope of the Investment Program and outlines the policy, procedures and institutional requirements for preparing IPDPs for subprojects under the MFF. The EA, for the Tranche 1 which covers transmission subprojects will be the Madhya Pradesh Power Transmission Company Limited (TRANSCO). The Project Management Units (PMUs) will be responsible for conducting the social analyses and formulating IPDPs for subprojects, as outlined in the IPDF. The draft IPDPs will be submitted to ADB for review and approval prior to contract award, and compensation paid to all APs prior to displacement, and commencement of civil works.
3. No impact is expected for the distribution component under the first tranche. Minimal or no impacts are also to be expected under future tranches.

B. The Indigenous Peoples Development Framework

4. This IPDF is intended to guide selection and preparation of subprojects under the Investment Program to ensure better distribution of subproject benefits and promote development of IPs in the subproject area. There are no IPs found in the subproject areas who will be directly affected, in the first tranche. However, keeping in view the long term subproject duration and since there will be future site identification, it is necessary to have a guideline to address the issues. In cases where significant impacts on IPs are identified, this framework will be applied if necessary during subproject preparation, in accordance with requirements for future tranches and ADB's *Indigenous Peoples Policy* (1998).
5. A full Indigenous Peoples Development Plan (IPDP) is required if: a) an indigenous peoples community is the main beneficiary of a development Investment Program; b) a subproject component significantly benefits the community and; c) the Investment Program or subproject components may have significant adverse impact on IP.
6. If impacts are insignificant, specific actions in favor of IPs can be incorporated within the Resettlement Plan (RP) for the subproject.¹ This would ensure appropriate mitigation and benefits for indigenous people.
7. EAs will be sector companies as follow:
 - (i) The Madhya Pradesh Power Transmission Company Limited (TRANSCO) will be the EA for the transmission component;
 - (ii) The Madhya Pradesh Poorv Kshetra Vidyut Vitaran Company Limited (DISCOM-E) will be the EA for the distribution component in the eastern area;

¹ Impacts are insignificant when fewer than 100 indigenous people are affected.

- (iii) The Madhya Pradesh Madhya Kshetra Vidyut Vitaran Company Limited (DISCOM-C) will be the EA for the distribution component in the central area;
- (iv) The Madhya Pradesh Paschim Kshetra Vidyut Vitaran Company Limited (DISCOM-W) will be the EA for the distribution component in the western area.

8. All the EAs will have their respective PMUs for the subproject implementation with the inclusion of a Social Development cum Resettlement Specialist where necessary. PMU will do the overall coordination, planning, implementation, and financing. The PMU will hire resettlement specialist having knowledge of IP issues for the duration of the Investment Program to ensure timely and effective implementation of social safeguards issues. The PMU will undertake required social assessments (including IP issues) for subprojects. The PMU will be responsible for preparing IPDPs for subprojects, and will submit to EA for review and approval. Approved IPDPs will be provided to ADB for review and approval prior to implementation.

9. The IPDP policy framework is based on the overall local and national development strategies and ADB's *Policy on Indigenous Peoples* (1998). The principal objectives are to:

- (i) ensure IPs affected by any subproject will benefit from the Investment Program;
- (ii) ensure IPs inclusion in the entire process of preparation, implementation, and monitoring of Investment Program activities;
- (iii) ensure benefits of the subprojects are available to IPs more than or at least equal to other affected groups; this may require giving preference to IPs as vulnerable groups over others on certain benefits under the Investment Program; and
- (iv) provide a base for IPs in the area to receive adequate development attention.

C. Procedures for IPDP Preparation

10. This framework seeks to ensure that IPs are informed, consulted, and mobilized to participate in the subprojects. Their participation can either provide them benefits with more certainty, or protect them from any potential adverse impacts of the subproject. The main features of the IPDP will be a preliminary screening process, a social impact assessment to determine the degree and nature of impact of each subproject, and an action plan developed if warranted. Consultations with and participation of IP communities, their leaders, and local government representatives will be an integral part of the overall IPDP.²

1. Preliminary Screening

11. The PMU Social cum Resettlement Specialist will visit all IP communities and villages near subproject sites or areas being affected and influenced by subproject sites. The PMU will arrange public meetings in selected communities to provide information on the Investment Program and the subproject. During the visits, community leaders and other participants will present their views with regard to the Investment Program and subproject.

12. The PMU by using the social surveys and official census data will collect necessary information on subproject affected indigenous peoples for the following:

- (i) Name(s) of IP community group(s) in the area;

² The IPDPs components are: preliminary screening, social impact assessment, mitigation measures, development assistance, and project monitoring.

- (ii) Total number of IP community groups in the area;
- (iii) Percentage of IP community population to that of area population; and
- (iv) Number and percentage of IP households to be affected by the subproject.

13. The PMU will also accomplish an IP assessment checklist. The results of the preliminary screening will be provided to the PMU for review as part of the pre-feasibility assessment of the subproject. If the results show that there are IP households in the zone of influence of the proposed Investment Program, a social impact assessment (SIA) will be planned for those areas.

2. Social Impact Assessment

14. The PMU will undertake Social Impact Assessment (SIA) as part of the detailed technical feasibility report. The SIA will gather relevant information on demographic data; social, cultural, and economic situation; and both positive and negative social, cultural and economic impacts.

15. Information will be gathered through separate group meetings within the IP community, including IP leaders; group of IP men and women, especially those who live in the zone of influence of the proposed work under the subproject. Discussions will focus on positive and negative impacts of the subproject as well as recommendations on the design of the subproject and Investment Program. The PMU will be responsible for analyzing the SIA and for leading the development of an action plan with the IP community leaders. If the SIA indicates that the potential impact of the proposed subproject will be significantly adverse—threatening the cultural practices and IP sources of livelihood, or that the IP community rejects the Investment Program works—the PMU will consider other design options to minimize such adverse impacts. If IP communities support the subproject, implementation of an IPDP will be developed.

3. Indigenous Peoples Development Plan

16. The IPDP is time-bound, with an adequate budget for its implementation. An acceptable IPDP addresses the (i) aspirations, needs, and preferred options of the affected indigenous peoples; (ii) local social organization, cultural beliefs, ancestral territory, and resource use patterns among the affected indigenous peoples; (iii) potential positive and negative impacts on indigenous peoples; (iv) measures to avoid, mitigate, or compensate for the adverse subproject effects; (v) measures to ensure subproject benefits will accrue to indigenous peoples; (vi) measures to strengthen social, legal, and technical capabilities of government institutions to address indigenous peoples issues; (vii) the possibility of involving local organizations and non-governmental organizations with expertise in indigenous peoples issues; (viii) budget allocation; and (ix) monitoring. Where there is land acquisition in IP communities, the Investment Program will ensure their rights will not be violated and that they be compensated for the use of any part of their land in a manner that is culturally acceptable to the affected IPs.³ The IPDP will include:

- (i) Baseline data: Base line data will be collected both from the primary and secondary sources. In India, most of the tribal people are mainstreamed with the help of Government's effort to bring them in to the mainstream. The survey will be designed to collect the baseline data on their socio-economic and cultural aspect which will help in identifying the intensity of impact on indigenous people.
- (ii) Land tenure information; Land holding among the tribal people is very less compared to other section of mainstreamed people. Tribal people use the public

³ The compensation will follow the Resettlement Policy Framework of the Project.

land and forest land for their various uses. Therefore, details on the land tenure and usage pattern will be collected in order to measure the dependency of tribal people on the land.

- (iii) Local participation: The plan will be developed in a participatory approach with due consultation with the local IP communities. The views of the IP will be recorded and will be incorporated in the plan.
- (iv) Technical identification of development enhancement or mitigation activities: The survey and the engineering design should clearly reflect the impact (both positive and negative) of sub projects on the IPs. The sub project engineering plan, thus, be developed or modified based on these inputs so that negative impacts are mitigated or better benefits are distributed to the IPs.
- (v) Institutional arrangement: The detailed institutional arrangements will be prepared as per defined task for each stakeholders. In particular, NGOs, local institutions, representatives of civil society and/or local associations shall be involved in addressing IPs issues, whenever their expertise may improve the design and the implementation of the subproject and the IPDP.
- (vi) Implementation schedule: The implementation schedule has to be aligned with the over all subproject implementation schedule and all the compensation and mitigations will be done prior to the commencement of civil work.
- (vii) Monitoring and evaluation: The IPDP will be monitored both internally and externally. Details are given in the following sections.
- (viii) Cost estimate and financing plan: Based on the impacts, a budget will be prepared for the implementation of IPDP. The EA will provide sufficient resources to formulate and implement IPDPs in subproject which will have impacts on IPs.

17. Where warranted, the IPDP will be developed by the PMU with technical assistance from other team members, and the IPDP will form part of the final feasibility report for the subproject. The PMU and EA will then review and approve the IPDP and provide the approved IPDP to INRM for review and approval. The IPDP policy and measures must comply with ADB's *Policy on Indigenous Peoples* (1998).

D. Consultation and Information Disclosure

18. The IPDP will be prepared in consultation with the affected IP groups. The mitigation measures and strategies will be presented to them by the PMU at various places which will be easily approachable to them. Inputs from the IPs through consultation will be considered in subproject design and the final IPDP. The IPDP will be translated into local IP language(s) prior to implementation. Nongovernmental organizations will be involved in implementing the IPDP and resolution of any dispute arising out of the implementation process. The EA will further ensure that adequate budget will be available to implement the IPDP.

E. Institutional Framework

19. In the preparation of subproject IPDPs, the PMU will have overall coordination and financing responsibilities. The PMU of respective EA will prepare, implement, and monitor the IPDP. Since IP issues are sensitive, the PMU will ensure that a consultant/ Social cum-Resettlement Specialist (PMU) with knowledge and experience of working among IP groups is available for assisting in the planning and implementation of IPDPs for the Investment Program. The PMU will ensure that the specialist hired to assist the PMU in planning and implementation of IPDPs for subprojects is familiar with ADB policy and requirements for IPDPs.

F. IPDP Budget

20. The EA will provide sufficient resources to formulate and implement IPDPs in subprojects which will have impacts on IPs. It will implement the IPDP through its PMU. A detailed budget will be prepared by the PMU taking into account all activities associated with the formulation and implementation of IPDPs. Each IPDP will have its own budget. Such budgets will be an integral part of the subproject cost, and will be made available during subproject implementation. However, the EA, in advance, has to have the tentative budget ready for each financial year so that EA provides the budget on a timely basis in order to avoid any delay in the subproject implementation. The EA will be responsible for making the budget available to its PMU for implementation of IPDP.

G. Monitoring and Evaluation

21. Implementation of the IPDP will be monitored regularly. The PMU will establish a quarterly monitoring system involving the PMU staff, representative of affected IP groups, and nongovernmental and community-based organizations to ensure participatory monitoring arrangements. A set of monitoring indicators will be determined during IPDP implementation. The PMU will also prepare appropriate monitoring formats for effective internal and external monitoring and reporting requirements. Independent monitoring will be undertaken through nongovernmental or community-based organizations engaged by the EA/PMU with INRM concurrence to carry out external monitoring of the IPDP operations for the whole Investment Program. Monitoring will be carried out twice a year during Investment Program implementation. These reports will be submitted to both the EA and ADB for review. The EA through the PMU will be responsible for determining if any follow-up actions are necessary and ensuring any necessary actions are taken regarding the implementation of IPDPs.

Madhya Pradesh Power Sector Investment Program
Tentative Implementation Schedule of the Multitranche Financing Facility¹
(\$ million)

Year	April 2007	April 2007	June 2007	April 2008	April 2009
Total \$ 620	1st TRANCHE \$ 106	2nd TRANCHE \$ 45	3rd TRANCHE \$ 234	4th TRANCHE \$ 171	5th TRANCHE \$ 64
Transmission \$ 250	\$ 106 Evacuation of substations, system strengthening		\$ 144 Evacuation of substations, system strengthening		
Distribution East \$ 128		\$ 45 HVDS, substation protection, remote metering, 100% consumer metering, splitting of agricultural/domestic feeders, SCADA	\$ 20 Splitting of agriculture/domestic feeder, consumer metering, substation protection	\$ 63 SCADA, splitting of agriculture/domestic feeder, HVDS	
Distribution West \$ 103			\$ 50 HVDS, DTR metering, new lines 33kv and power transformers, R&M 33kv and 11kv lines, splitting agriculture/domestic load	\$ 53 HVDS, DTR metering, new lines 33kv and power transformers, R&M 33kv and 11kv lines, splitting agriculture/domestic load, IT enables services	
Distribution Central \$ 129			\$ 20 HVDS, Capacitor Bank	\$ 50 HVDS	\$ 59 HVDS, substation renovation, consumer metering, distribution transformer metering, system strengthening
Trading \$ 5				Non-physical investment \$ 5	
Non physical investment \$ 5					Non-physical investment \$ 5

¹ Time and amounts of tranches after the third tranche may be modified by agreement between ADB and INDIA.